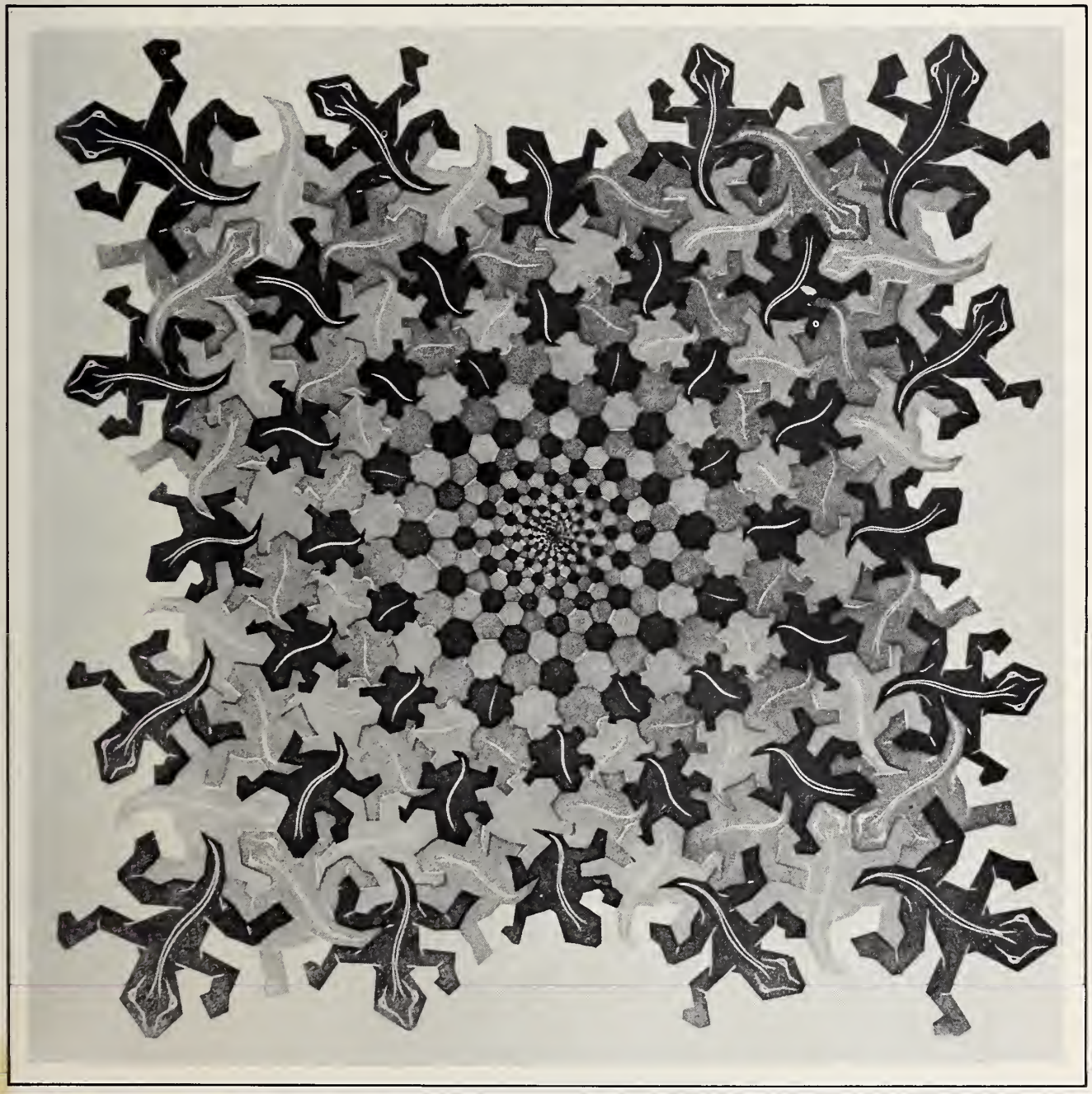
Research Issues 31

WOMEN AND DRUGS

National Institute on Drug Abuse



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

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WOMEN AND DRUGS

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1983

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Foreword

The critical issues involved in drug use and abuse have generated many volumes analyzing the "problem" and suggesting "solutions." Research has been conducted in many disciplines and from many different points of view. The need to bring together and make accessible the results of these research investigations is becoming increasingly important. The Research Issues Series is intended to aid investigators by collecting, summarizing, and disseminating this large and disparate body of literature. The focus of this series is on critical problems in the field. The topic of each volume is chosen because it represents a challenging issue of current interest to the research community. As additional issues are identified, relevant research will be published as part of the series.

Many of the volumes in the series are reference summaries of major empirical research and theoretical studies of the last 15 years. These summaries are compiled to provide the reader with the purpose, methodology, findings, and conclusions of the studies in given topic areas. Other volumes are original resource handbooks designed to assist drug researchers. These resource works vary considerably in their topics and contents, but each addresses an area of emerging concern in the research world.

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Preface

The goal of this volume is to provide researchers with an up-to-date survey of the literature concerning women and drugs. This is the second volume in the Research Issues Series dealing with the subject of drug use by women. The first volume, Drugs and Pregnancy, edited by Ferguson, Lennox, and Lettieri and published in 1975, was the fifth issue in the series. That volume explored the literature in an area that, up to that time, had probably received more attention than any other in the study of women's drug use. This volume, representing the direction this field has taken, significantly expands the range of studies from that of the earlier volume. The abstracts included here are intended to be faithful representations of the original studies, conveying what was done, why it was done, what methodology was employed, what results were found, and what conclusions were derived from the results.

Although journal articles are clearly in the majority of the items selected for inclusion, several pertinent books and book chapters are also abstracted. All the works included were chosen on the basis of the following general criteria:

- Empirical research studies with findings pertinent to the particular topic, or major reviews of theoretical approaches to the study of that topic.
- Published between January 1970 and the present, preferably in the professional literature, with the exception of certain older "classics" that merited inclusion.
- Not previously included in the Research Issues Series (with a few exceptions).
- Representative of the many social, psychological, and medical facets of the female drug abuse field.
- English language, with a focus on drug issues pertinent to the United States.

This volume is thus intended to be a collection of the most representative, significant research and theory on women and drugs published in the recent past.

The volume itself is broadly divided into the two topic areas of psychosocial concerns and physiological concerns. While these are extremely broad areas, these divisions were considered the most logical lines along which to categorize present research because the field has become so diverse in its choice of investigational areas. While a number of studies dealt with a variety of topics, each was classified according to major purpose and focus. The abstracts are arranged alphabetically within each section. An extensive supplementary bibliography of additional reading is included at the end of the volume. Indexes designed to meet the needs and interests of drug researchers are also provided and enable one to focus on specific topics within and across the two major categories.

An extensive and comprehensive literature search was carried out to identify materials for inclusion in this volume. Major clearinghouses, data bases, library collections, and special bibliographies were searched. In addition, numerous articles, chapters, and books were nominated for inclusion by NIDA's peer review group.

After a preliminary review of citations and annotations, to weed out obviously irrelevant materials, the body of collected literature was subjected to two reviews: one to ensure that materials met the selection criteria, and a second, carried out by a peer review group, to ensure that studies representative of the entire field were included. Each completed abstract was subsequently reviewed to ensure that it accurately reflected the contents of the study.

Researchers who served on the peer review panel, listed below, provided critical advice on the selection of articles and studies.

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Introduction

Drug abuse among women is not an isolated occurrence. Over half of the patients treated in hospital emergency rooms for drug-related episodes in 1980 were women. Although only 28 percent of the clients admitted to federally funded drug treatment facilities in 1980 were women, they represented significant portions of the clients in some drug categories. For example, women represented 51 percent of all persons treated in Federal treatment programs for tranquilizer abuse, 38 percent of persons treated for abuse of other sedatives, 35 percent of persons treated for amphetamine abuse, 34 percent of persons treated for barbiturate abuse, and 33 percent of persons treated for abuse of opiates other than heroin. Among high school seniors (Johnston et al. 1981), the proportion of each sex using any illicit drug suggests that use has been declining among males since 1978 (from 59 percent to 54 percent in 1981) while increasing slightly among females (from 49 percent in 1978 to 51 percent in 1981); that between 1978 and 1981 lifetime amphetamine use by females rose by 10 percent (from 23 to 33 percent) while use by males rose by 8 percent (from 22 to 30 percent); and that in the years since 1977 the percentage of females smoking one-half pack of cigarettes or more per day increased to equal that of males and, in 1981, exceeded the percentage of males smoking this amount (14 versus 13 percent).

These data notwithstanding, concern has been expressed for a number of years that inadequate attention has been given to the problems of female drug abusers. Critics have contended that treatment facilities are often insensitive to the unique needs of the female drug abuser, that attitudes toward female drug abusers have been forged largely from stereotypes and information based upon the experiences of male drug abusers, and that the scientific literature has focused almost exclusively on male drug abusers.

While it is not the intention of this volume to reply to these criticisms, the literature summarized in it should provide the reader with basic information from which an objective analysis of these criticisms could be initiated. A brief review of this literature reveals that beginning in the mid-1970s published studies concerning women and drug abuse began to expand considerably. Prior to this time, as noted above, most studies in the drug abuse field either did not include a female sample or, if the problems of female abusers were addressed, the conclusions drawn were generalized from the problems experienced by males, particularly with opiates. Those studies that did include females often portrayed them and their use of drugs as somehow more deviant and pathology-laden than males and their use of these drugs. As the focus of the drug abuse field began to expand beyond opiate use, however, researchers began reporting findings that suggested that the drug use patterns of females could not be ascertained merely by generalizing from studies of males, nor was it accurate to describe females as more deviant or pathological than males. Rather, studies began, and continue, to emerge that suggest that many of the problems of female drug abusers are neither less than, the same, nor more than those of male abusers but are, instead, unique to the female abuser and in need of their own point of reference.

Hallmarks of this new era of research have been both its breadth and its attention to the concept of drug abuse by females as a singular experience. Among the best examples of this dual orientation are the works of Marsha Rosenbaum with female opiate users (e.g., 1979, 1981); of Ruth Cooperstock (e.g., 1978), Linda Fidell, and Jane Prather (e.g., Fidell 1981 and Prather and Fidell 1978) with psychotropic drug use among women; of Loretta Finnegan (e.g., 1975), Mary Jeanne Kreek (e.g., 1977), Milton Strauss, Joanne Stryker, and their associates (e.g., 1974), and Geraldine Wilson and her associates (e.g., 1981) with the maternal-neonatal effects of drug use; of Walter Cuskey and his associates (e.g., 1974) concerning the epidemiology of drug abuse among women; of Patricia Sutker and her colleagues (e.g., 1981) with comparisons of personality characteristics of male and female drug users; and of Beth Reed and her colleagues at the Women's Drug Research Project (e.g., 1981) and George Beschner and his colleagues (e.g., 1981) with treatment issues.

The increased attention to the problems of female drug abusers does not, however, mean that researchers, treatment personnel, or consumers are now satisfied with the state of this field. A major criticism, exposed quite clearly in this volume, concerns what Beth Reed has termed the "physical telescoping" of investigations concerning the effect of drugs on women's health; that is, the overwhelming majority of the research on the health effects of drugs on women specifically concerns the effect of drugs on pregnancy and neonates. Reed addresses this issue quite succinctly when she states that in the drug abuse field, "Women still seem to be important largely when they are pregnant."[1] Gaps in the literature suggest numerous other issues that require research attention, among them identifying the range of problems associated both with the onset of female drug abuse and with motivations for entering treatment; developing methods of drawing women into treatment and then retaining them throughout the required regimen; distinguishing the different social and physical effects various substances may have on males and on females; distinguishing among the variations of female drug use patterns; identifying personality, attitude, and demographic characteristics from which length and degree of potential female drug use might be predicted; intensifying the study of sex roles and their relationship to drug use; investigating the growing concern with females' drug-related criminality; continuing attention to sex differences in physician prescribing practices; studying the family or couple relationships of female abusers and the alternately encouraging/discouraging role these relationships may play in the initiation or maintenance of female drug use; evaluating, while controlling for particular types and patterns of drug use, the effects of various types of treatment and aftercare approaches with female users; and identifying the unique strengths and resources of female drug users that may be used in prevention and treatment.

The research summarized in this volume is intended to be a survey of the variety of drug-related research with women, including some of the issues noted above, that has been conducted or initiated thus far. It should provide the basis, and perhaps the stimulus, for others to advance this vitally important field of study.

REFERENCES

Beschner, G.M.; Reed, B.G.; and Mondanaro, J.; eds. Treatment Services for Drug Dependent Women (Vol. 1), National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981. Pp. 1-24.

Cooperstock, R. Sex differences in psychotropic drug use. Social Science & Medicine, 12(3B): 179-186, 1978.

Cuskey, W.; Premkumar, T.; and Sigel, L. Survey of opiate addiction among females in the U.S. between 1850 and 1970. In: Cohen, C.; Robinson, S.; Smart, R.; et al. Psychotherapy and Drug Addiction. I: Diagnosis and Treatment. New York: MSS Information, 1974.

Fidell, L.S. Sex differences in psychotropic drug use. Professional Psychology, 12(1):156-162, 1981.

Finnegan, L.P. Narcotic dependence in pregnancy. Journal of Psychedelic Drugs, 7(3):299-311, 1975.

Johnston, L.D.; Bachman, J.G.; and O'Malley, P.M. Student Drug Use in America: 1975-1981. DHHS Pub. No. (ADM)82-1208. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981.

Kreek, M.J. The role of qualitative analysis of drugs and their metabolites in maternal-neonatal studies. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977. Pp. 67-73.

Prather, J.E., and Fidell, L.S. Drug use and abuse among women: An overview. The International Journal of the Addictions, 13(6):863-885, 1978.

[1]Reed, B.G. Personal communication to Thomas J. Glynn, 1981.

Reed, B.G.; Kovach, J.; Bellows, N.; and Moise, R. The many faces of addicted women: Implications for treatment and future research. In: Schecter, A.J., ed. Drug Dependence and Alcoholism. Vol. 1. Biomedical Issues. New York: Plenum Press, 1981. Pp. 833-847.

Rosenbaum, M. Becoming addicted: The woman addict. Contemporary Drug Problems, 8(2):141-166, 1979.

Rosenbaum, M. Sex roles among deviants: The woman addict. The International Journal of the Addictions, 16(5):859-877, 1981.

Strauss, M.E.; Andresko, M.; Stryker, J.C.; Wardell, J.N.; and Dunkel, L.D. Methadone maintenance during pregnancy: Pregnancy, birth, and neonate characteristics. American Journal of Obstetrics and Gynecology, 120(7):895-900, 1974.

Sutker, P.B.; Patsiokas, A.T.; and Allain, A.N. Chronic illicit drug abusers: Gender comparisons. Psychological Reports, 49:383-390, 1981.

Wilson, G.S.; Desmond, M.M.; and Wait, R.B. Follow-up of methadone-treated and untreated narcotic-dependent women and their infants: Health developmental, and social implications. The Journal of Pediatrics, 98(5):716-722, 1981.

PSYCHOSOCIAL RESEARCH

Areas of inquiry represented in this section include female drug abusers and their families; drug use among special female populations, such as nurses and prostitutes; the relationship of drug use to female criminality; optimum treatment facilities for female drug abusers; personality characteristics of female drug abusers; rehabilitation needs of female drug abusers; and patterns of female drug use. The diversity of these studies is representative of the significant expansion this field has experienced in the past decade.

Andersen, M. Personalized nursing: An intervention model for drug dependent women in an emergency room. Journal of Addictions and Health, 1(4):217-226, 1980.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Description
DATA COLLECTION INSTRUMENT	Ireton Personal Inventory Scale; energy diary
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	14

PURPOSE

At present, no effective drug treatment model exists for women who have urgent health care needs either related or unrelated to their drug dependency. The present study explores the health needs of drug-dependent women, describes the inadequacies of existing treatment programs, and presents a nursing practice model called "Personalized Nursing," which uses emergency rooms for health care delivery to drug-dependent women.

SUMMARY

Women have been found to have significantly more health problems than men upon admission to drug treatment programs. Typical problems are dental needs, genito-urinary infections, diseases of the nervous system, circulatory disturbances, and special health needs related to pregnancy. However, treatment programs are often not funded adequately to meet female clients' needs, and many women return to drug use.

Drug information networks report that drug-dependent women not enrolled in traditional drug-treatment programs are more likely than men to use hospital emergency rooms for their medical needs. In general, the medical community has shied away from treating drug-dependent women

because of doctors' uncertainty about laws governing the treatment of addicts and because of addicts' inability to keep appointments and maintain regimens.

An intervention model, the Personalized Nursing Project, for the drug-dependent woman was developed at the Mental Health Nursing Clinic of the University Health Center in Detroit. A pilot study was conducted beginning in September 1980, and future studies of the model's effectiveness are planned. The model is designed to provide for assessment of drug dependency problems, as well as for advocacy with the health care system and other social systems. The client's perception of his or her health care needs is the focus of the nurse-client relationship and intervention planning. Both the nurse and the client work actively to redefine the client's human-environmental field to promote health.

The first step of the model uses the Ireton Personal Inventory scale to assess perceived health and environmental interactions. Clients are also asked to evaluate the type of person they are and to list the satisfactory aspects of their lives. Clients are required to keep an energy dairy of their daily activities. Cardiac patients wear a Holter Monitor, and a physician compares their heart output with their activlty diary. Also included in the human-environment field assessment is one home visit by the nurse, who makes a further subjective and objective assessment of the client's health.

The next step is to develop a care plan. If the nurse does not agree with client-identified care goals, he or she should discuss the goals with the client. The client must decide whether or not the goals are to be changed. Following agreement on the focal content for the nursing sessions, a mutually agreeable plan involving assignments for both the nurse and the client is drawn up. Weekly sessions are planned for the client's home or the nurse's office. During weekly sessions, the nurse and client evaluate progress toward goals and plan new assignments.

After 8 weeks, movement toward goal attainment is measured. The Ireton scale is readministered and the energy diary is again maintained. The client and nurse review the pretests and posttests together and make plans for future health care.

All emergency room nurses can use Personalized Nursing concepts. Emergency room doctors or nurses can also refer patients to the Visiting Nurses Association. In a proposed study of Personalized Nursing for drug-dependent women, Visiting Nursing Association women are to be educated in total health assessment, personalized nursing, drug dependency, and advocacy techniques. The notion behind such training is to meet the health needs of drug-dependent women who are not particularly interested in decreasing their drug use. In this way it may be possible to change women's health perceptions and possibly even their drug use. Such a system could be applied in every city with a hospital emergency room.

CONCLUSIONS

The proposed Personalized Nursing model provides a means of satisfying the health needs of drug-dependent women who are not enrolled in treatment programs. At present, many of these women have no way of meeting their health needs. The model involves joint assessment of clients' perceived health care needs by the client and nurse, assignments by the nurse to improve clients' health awareness, and nurse advocacy for the client with the health care system and other social agencies.

Bahna, G., and Gordon, N.B. Rehabilitation experiences of women ex-addicts in methadone treatment. The International Journal of the Addictions, 13(4):639-655, 1978.

DRUG	Heroin; methadone
SAMPLE SIZE	16
SAMPLE TYPE	Outpatients in treatment
AGE	Young adults; mature adults (mean: 38.2)
SEX	Female
ETHNICITY	Black; white; Hispanic
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; retrospective survey
DATA COLLECTION INSTRUMENT	Interviews; program/clinical statistics
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	6

PURPOSE

Despite growing awareness of women's problems in society and the increasing numbers of female heroin addicts, little attention has been paid to the unique experience of female heroin addicts and their problems during rehabilitation. Even though 26 percent of the methadone patients in the New York metropolitan area are women, research in this area remains scant.

Women's experiences with heroin dependency and the process of rehabilitation were studied by means of indepth interviews with 16 female patients who had been in a methadone maintenance treatment program in New York City 1 year or longer.

METHODOLOGY

The 16 subjects were outpatients in methadone maintenance clinics affiliated with the Beth Israel Medical Center. Potential subjects were informed by letter of the study's purpose and were invited to participate. The first eight women from phase 2 of the rehabilitation process (when patients are engaged in useful activity) and the first eight women from phase 3 (when patients become socially productive) who were interested in participating constituted the study sample. The criterion of 1 year of treatment was chosen to allow the women a reasonable time to have

become stabilized on their methadone dosages and for any physical and psychological changes to have become relatively stable.

The sample included six blacks, nine whites, and one Hispanic, a composition similar to the total New York City methadone treatment population at that time. All came from lower and middle socioeconomic groups. They had completed an average of 11 years of schooling and their mean age was 38.2. All were hardcore addicts who had tried several times to give up heroin before entering methadone maintenance therapy. They had started heroin use at an average age of 21.4, with a range from 15 to 28 years.

Interviews were conducted jointly by two women and lasted from 2 to 3 hours each. Information was gathered about the subject's life before heroin use, during heroin addiction, and while on methadone. Questions covered work and welfare history and changes in health, sleep patterns, menstrual cycles, and side effects attributable to methadone. Open-ended questions covered women's feelings about their current lives, changes for better or worse, major accomplishments, most difficult adjustments, current goals, and suggestions for improving the methadone program. Data derived from interviews were corroborated by the outpatient clinics through monthly unit director's reports, social worker intake summaries, urinalysis, and information to counseling staff.

RESULTS

The first change the women noted upon entering treatment was the freedom from a 24-hour preoccupation with drug taking and drug seeking. In addition, the group had had extensive criminal records prior to entering treatment, with a total of 78 convictions. While in methadone treatment, an average period of 3.6 years, there had been no arrests in the group. Moreover, all of the 13 women who had engaged in prostitution to support their habits discontinued such activities once in treatment. However, one woman stated that she would have preferred to stay on heroin if it were legal and available.

While on heroin, the women experienced problems with sleep patterns, menstrual functioning, personal hygiene, and nutrition. All these problems were reduced during methadone treatment. However, many women reported side effects of methadone, including perspiration, constipation, tiredness, and decreased sexual drive.

Upon entering methadone treatment, work and employment resumed their conventional meanings rather than being merely the means for supporting the drug habit. The ex-heroin addicts had spent about 44 percent of their time employed and 36 percent of their time on welfare since entering methadone treatment. The women also developed outside interests, such as writing, crocheting, and attending college. A shift in social functioning away from antisocial and illegal activities toward normal social roles of involvement with families and coworkers also occurred, although with varying degrees of success.

While everyone in the group made definite gains in social functioning, state of mind, and general physical well-being, problem areas remained. The two greatest problems were maintaining motivation, especially in the absence of heroin's subjective effects, and loneliness due to their position between the heroin world and the "straight" world. The years in prison and the prostitution activities also had major effects on their self-image and feelings as women, while the physical scars heightened their sense of being different.

CONCLUSIONS

Treatment personnel should be sensitive to female drug abusers' special needs and difficulties in rehabilitation, and especially aware of the profound dislocation of feminine roles and self-image as a result of addiction. Since the women studied reported that they could discuss intimate matters more openly with women, it may be desirable to increase the number of female staff. Rehabilitation efforts should make their first priority helping the female ex-addict find and maintain housing, improve personal care and appearance, locate a job, and reconstruct family and home life. Being able to cope with these aspects of daily living is important to repairing self-esteem. Treatment expectations should also reflect each woman's desires for herself, with sensitivity to the low self-esteem and lack of skills and education that are barriers to a female patient's achievement of her full potential.

Ball, J.C.; Levine, B.K.; Demaree, R.G.; and Neman, J.F. Pretreatment criminality of male and female drug abuse patients in the United States. Addictive Diseases: an International Journal, 1(4):481-489, 1975.

DRUG	General
SAMPLE SIZE	42,293
SAMPLE TYPE	Addicts in treatment
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	Black; white; Puerto Rican; Mexican-American
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Admission interviews
DATE(S) CONDUCTED	1969-1973
NO. OF REFERENCES	9

PURPOSE

The association of drug abuse and criminal behavior has been the subject of considerable attention by criminologists and others in recent years. Researchers generally agree that drug abusers are more involved in criminal activities than the general population. However, the etiology of such behavior patterns, the reasons for concentration of crime and drug abuse in urban slum areas, and the nature of sex differences for both types of deviant behavior require further clarification. The present study investigates the extent of differences in criminal behavior of male and female drug abuse patients.

METHODOLOGY

The patient population selected for study consisted of the entire cohort of 42,293 drug abusers who were admitted to 50 treatment programs during the period from 1969 to 1973. The 50 programs were located in 38 cities within 23 States and Puerto Rico; they included most of the major available treatment modalities. Data were obtained from the Drug Abuse Reporting Program at the Institute of Behavioral Research at Texas Christian University. The data bank derived its information from personal admission interviews at each of the 50 programs.

RESULTS

About 80 percent of the study subjects were under 30 years of age; female abusers were slightly younger than the males. The onset of drug abuse typically occurred several years before admission for treatment. Two-thirds of the sample belonged to black, Mexican-American, or Puerto Rican minorities. Compared to males, a higher proportion of the female patients were white, and a lower proportion of females came from minority groups. At least 14 percent of the patients in all 50 programs were female.

Over four-fifths of the patients (81.7 percent) had been arrested prior to treatment. Arrest rates were higher for the East and West Coasts and appreciably lower for the Midwest and South. The majority of the programs reported that between 80 and 90 percent of their patients had been arrested, with only four programs reporting less than a 66 percent rate of arrest.

Marked differences were evident in prior criminality between male and female drug abuse patients. Male patients were more likely to have been arrested prior to treatment, were more apt to have had repeated arrests, were more often convicted, and were more often incarcerated than female patients.

Drug abuse patients of both sexes exhibited distinct patterns of criminal involvement. Almost a fifth of the patients had never been arrested, while 15 percent had been arrested more than 10 times. Within the drug abuse population, the smaller number of criminal convictions than arrests for both sexes is a reflection of plea bargaining, cooperation with authorities, the seriousness of the offense, extent of guilt, socioeconomic status of the offender, and prior criminal record. If time spent in jail is taken as an indicator of officially recognized criminality, male patients must be considered more deeply enmeshed in a criminal lifestyle than females. Half the male patients had a history of incarceration. However, females were less likely than males to be involved in criminal behavior leading to official penalties. Thus, only 30 percent of the female patients had been incarcerated for a month or more and only 6 percent for 3 years or longer. In contrast, 54 percent of the males had spent over a month in prison, and 20 percent, over 3 years.

The findings of this study do not support the hypothesis of greater deviance or pathology among female drug abusers than among male abusers. Males not only constitute the predominant population among drug abusers, but their proportionate involvement in crime is markedly greater than that of females.

CONCLUSIONS

Findings show that most of the drug abuse patients of both sexes have extensive histories of criminal activity. However, male drug abusers are more pervasively and seriously involved in criminal behavior than females. The treatment of persistent drug abusers requires considerable attention to penal rehabilitation, as well as to curtailing the illicit consumption of drugs.

Bell, D.S. Dependence on psychotropic drugs and analgesics in men and women. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 423-463.

DRUG	Psychotropics; analgesics
SAMPLE SIZE	Not applicable
SAMPLE TYPE	General population
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	189

PURPOSE

Any consideration of drug dependence among women must consider both the common aspects of the drugs used and the differences between males and females with respect to drug use. Unlike the distinctive contrasts between drugs, female and male drug dependence is generally similar, apart from the constantly changing statistics on incidence and prevalence.

This paper examines the relationship between drug use and dependence and reviews the literature on dependence on psychotropic drugs and analgesics in men and women. All drugs of dependence except alcohol, tobacco, and opiates are included. Psychotropic drugs include minor tranquilizers, sedatives, hypnotics, and stimulants. Minor tranquilizers, hypnotics, and barbiturates are classified as hypnotic sedatives, while stimulants are primarily cocaine and the amphetamines. Marijuana refers to the various forms in which cannabis may be used, including the more concentrated preparations such as hashish and the resin oil. The hallucinogens include LDS and such substances as mescaline, atropine, mushrooms, cacti, and other plants, such as nutmeg. Inhalants are also considered.

SUMMARY

Although drugs of dependence are diverse with respect to their chemical composition and range of effects, their common feature is the capacity to generate a subjective pleasurable effect. Consumption is distributed along a continuum, indicating that there is no basis for assuming fundamentally different motivating forces in dependent and nondependent users.

The feelings of pleasure or relief produced by these drugs create an unrealistically heightened self-confidence in the user. Men and women who use these drugs receive essentially the same reinforcing effect, but they differ significantly with respect to the specific circumstances precipitating drug use. While drug use in both males and females often involves issues of sexuality, the initiation of heavy drug use following childbirth or the loss of the spouse is of particular relevance to women.

Women use legal drugs more than men do, while men predominate among users of illicit drugs or of licit drugs diverted to illicit channels. As a result, the relationship between deviance and drug use is stronger among males; however, these females who become regular users of illicit drugs tend to show an even higher degree of deviance than males.

When new forms of psychoactive drug use occur, female users predominate in the early stages of licit drug use, and use by men may or may not increase at a later stage. For illicit drugs, early use is mainly by deviant males, but if the drug gains wide social acceptance, the association with deviancy declines and the sex differential among users tends to decline. Many studies show high correlations between maternal use of various psychotropic drugs and the use of licit or illicit drugs by their children.

Women use hypnotics, sedatives, and minor tranquilizers more than men as a result of widespread uncritical prescribing by physicians or ease of access over the counter. One such drug, chlormethiazole, has not been abused because physicians were alerted to the risk in time and have prescribed it responsibly. Women also predominate in the use of nonnarcotic analgesics, which can produce rewarding mood changes in regular users despite the general view to the contrary. The disproportionate representation of women among victims of analgesic nephropathy (renal papillary necrosis) and gastric ulcer corresponds to this analgesic use. When the widespread use of methaqualone as a street drug in Japan was stamped out, it was apparently replaced by a wave of analgesic abuse.

The stimulants demonstrate the same dichotomy of use patterns as methaqualone. Prescription use has been more common among middle-aged females, while street use has occurred mainly among young deviant males. Stimulant-related deaths among males result mainly from violence or accident, since large doses of stimulants can lead to a temporary paranoid psychosis and violence.

Marijuana provides an illustration of the transition from the early stage of use by deviant male groups to the stage of growing social acceptance and use by females. However, it has not yet reached the later stage in which some females use it more than males in certain age groups as has happened with tobacco. In contrast, LSD and other hallucinogens are used primarily by males and have not attained wide social acceptance in Western society. In those societies in which hallucinogens serve ritual or religious purposes, males are the main users.

CONCLUSIONS

Drug dependence is indivisible from drug use. It differs in degree rather than in kind and has as its basis the seeking of drug-induced pleasure or relief. Men and women who use dependence-inducing drugs derive essentially the same reinforcing effect, but differ significantly with respect to the specific circumstances precipitating drug use. The medical profession and governments should apply rather than deny the lessons learned from their past experience in this regard. One of the most important ways to prevent drug dependence among women may be to establish responsible and judicious prescription of psychoactive drugs.

Beschner, G.M.; Reed, B.G.; and Mondanaro, J.; eds. Treatment Services for Drug Dependent Women (Vol. I), National Institute on Drug Abuse. DHHS Pub. No. (ADM)81-1177. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981. Pp. 1-24.

DRUG	Narcotics; multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts in treatment
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review; theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	More than 100

PURPOSE

For the past decade, a great deal of information has been collected about the functioning of drug-dependent women, but the material has been widely scattered and not readily accessible in a single source. Consequently, there have been few attempts to apply this knowledge in treating drug-dependent women. For that reason, this collection of essays seeks to compile and integrate available knowledge on women, drug dependency, and related areas; to establish standards for services that chemically dependent women need; and to provide useful "how to" information as an aid to counselors and treatment programs in delivering new or improved services for female clients.

A major assumption underlying the book is that issues of drug dependency in women cannot be addressed without an understanding of the fundamental role that gender plays in defining individual identity, the structure of a person's lifecycle, and opportunities available. While large areas of overlap and similarities exist between men and women, they can also be described as living in fundamentally different cultures. Services to female addicts must thus be geared to particularly female needs, as many problems of drug-dependent women are related more to their being women than to their chemical dependency. Such factors as age, ethnicity and socioeconomic class, drugs of choice, and lifestyle are also crucial to the types of services rendered.

SUMMARY

A review of literature on women and drugs finds that women have been traditionally underserved in most drug treatment programs and have been relegated to subservient roles in therapeutic settings. Drug abuse treatment experiences for men and women must evolve in settings characterized by the absence of sexism and acceptance of the androgyny of men and women. Men and women should receive equal opportunities for vocational counseling and skills training, and women should have special group experiences to enhance female-female relationships. Treatment personnel should be supplied with accurate facts regarding the physiological and sociocultural bases of male-female differences and encouraged toward unbiased acceptance of both sexes.

A study of the comprehensive intake process describes steps in intake, various methods of completing an intake assessment, and appropriate methods for working with women experiencing a crisis and withdrawal from drugs. In the case of female addicts, special attention must be devoted in the intake assessment process to such factors as female physical-medical complications; psychological difficulties; problems in family situations and living arrangements; social, economic, and legal needs; and specific patterns of drug abuse.

In a paper on counseling of drug-dependent women, counselors are defined as limit-setters, advocates, treatment coordinators, educators, and therapists. In these multiple capacities, counselors must assess clients in depth, develop treatment plans, and find strategies for dealing with the resistance of drug-dependent women, which may take the form of feigned helplessness, missed appointments or tardiness, refusal to acknowledge problems, rationalization, or creation of some kind of crisis.

A discussion of community linkages describes how a program can decide which services they should deliver directly and which services should be obtained from outside resources. The need of programs to build relationships with other programs and to encourage forging of relationships between individual clients and other community service providers is stressed.

Health and medical services are crucial to drug-dependent women, who tend to have more medical problems than male addicts. Unfortunately, thorough medical assessment of female addicts at the beginning of treatment is rare. Programs have an obligation to provide such services. For that reason, a study describes techniques for acquiring health services and retaining physicians, strategies for coordinating health services, and specific medical forms necessary for the assessment and monitoring of patients. The reproductive problems of drug-addicted females, who tend to have pronounced problems with pelvic inflammatory diseases, infertility, and unplanned pregnancies because of their drug habits and their lifestyle, are also of concern.

An additional study describes the vocational needs of drug-dependent women, as well as techniques and agency contacts involved in designing an adequate vocational program. Many rehabilitation programs fail to recognize that ability to earn an independent income may be essential to rehabilitation, as many of the female addicts are receiving public assistance yet remain responsible for young children. Means of assessing client needs and of designing and implementing rehabilitation plans, as well as community linkages for vocational training and necessary followup procedures, are outlined.

Recent literature indicates that family therapy holds great promise as a treatment method for chemical dependency because of the degree of stress, estrangement, and enmeshment reported in families of chemically dependent women. Three major schools and two variations of major schools of family therapy are detailed to help therapists develop an approach suitable to their personal style and their clients' needs as well as to evaluate records. The models are the multigenerational approach, the strategic communication approach, the structural approach, ecological or network interventions, and multiple family group therapy.

The final studies in the collection are devoted to female addicts' relationships with their children. First, child care services are portrayed as a basic support service that can enhance the mother's relationship with her child and provide a link between the mother and community resources. Advice is given on locating child care services, assessing the quality of child care available, and working with female addicts on child care problems.

The last discussion describes how to organize, administer, and evaluate parenting programs for chemically dependent women and their children, as illustrated by the parenting program of the Pregnant Addicts and Addicted Mothers Program in New York City. Since many drug-dependent

women are intensely involved in raising children and in mothering, services to children and attention to parenting can build on this foundation and increase self-esteem. The curriculum for the program, the staff and physical setting required for such a program, and evaluation instruments for the program are described.

CONCLUSIONS

Current knowledge on drug-dependent women must be made available to treatment program staff if they are to deal successfully with concerns specific to female addicts. Areas in need of special attention in the treatment process are intake and assessment of female clients, counseling procedures, coordination of program and community services, special medical and health care to female clients, family therapy, special vocational training of unskilled female addicts, and development of child care services and parenting programs to assist children of addicts.

Beschner, G., and Thompson, P. Women and Drug Abuse Treatment: Needs and Services, National Institute on Drug Abuse. (ADM) 81-1057. Services Research Monograph Series. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981.

DRUG	Opiates; alcohol; barbiturates; tranquilizers
SAMPLE SIZE	547
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults
SEX	Female
ETHNICITY	Black; white; other
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Literature review; descriptive study
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Spring and summer of 1979
NO. OF REFERENCES	50

PURPOSE

In the early and middle 1970s, a number of activities were initiated in response to the growing concern about the quality of treatment services available to drug-abusing women. A series of conferences and the establishment of a Program for Women's Concerns by the National Institute on Drug Abuse in 1974 led to legislation in 1976 (Public Law 94-371) giving priority to the funding of women's treatment and prevention programs and requiring State surveys to identify drug abuse prevention and treatment needs of women. To assess the impact of efforts for improved female drug treatment, the present study reviews the treatment needs of women as identified in the literature and examines whether such services for women are currently provided.

METHODOLOGY

Survey data were gathered in the spring and summer of 1979 from 547 women in 21 drug-free clinics and 4 methadone maintenance programs having explicit policy and/or administrative mandates to address the range of special treatment needs for drug-abusing women. Most of the subjects were over 18 years old (86 percent). A total of 16 percent of the subjects in the drug-free modalities and 61 percent of the subjects in methadone maintenance programs were black; most of the remainder were white. The primary drug problems of the women in these programs

were opiates (35 percent), alcohol (24 percent), barbiturates (11 percent), tranquilizers (11 percent), marijuana/hashish (10 percent), amphetamines (5 percent), and other drugs (4 percent).

The final measurement instrument used to survey the 25 programs consisted of 18 separate items investigating demographics, drug use, and availability of treatment services. Questionnaire data were collected by telephone.

RESULTS

Women's treatment needs. Medical problems are common in female addicts. The most prevalent are infection, anemia, venereal disease, toxemia, hepatitis, preeclampsia, hypertension, and diabetes. Gynecological problems are especially common, probably because of the high frequency of prostitution among such women. Birth control services were frequently needed, as were dental services (in 42 percent of the cases) and optical services (in 38 percent of the cases).

Development of trust in a continued, sustained relationship with a skilled counselor or psychotherapist is essential for achieving positive changes in the behavior and lifestyle of all drug abusers. Female addicts, in particular, need to restore self-respect; to cope with depression, anger, and anxiety; and to handle practical problems. Treatment should extend to building a positive self-image, assisting in obtaining available financial aid and social services, involvement of the addict's family and a supportive environment in treatment, and legal counseling.

Employment rates among addicted women are extremely low. Clearly, services are needed in the area of vocational training, but little information is available on the types of training and job placement opportunities being offered to women in treatment. Many women in drug treatment view employment and economic security as the primary elements of successful rehabilitation.

A high percentage of women in treatment have dependent children. To raise their children, drug-abusing women must draw upon many resources, including their extended family. Provision of nursery care would free addict mothers to concentrate on treatment activities. Special parenting training could also aid female addicts in fulfilling their roles as parents.

Service availability. Survey data indicate that most of the women surveyed received basic drug treatment services such as routine medical examinations and drug counseling. About half were given psychological and family counseling, and one-third received skills assessment and educational counseling. Large percentages of female clients had not received other essential medical services such as gynecological examinations (54 percent), birth control counseling (74 percent), dental care (83 percent), and ophthalmological examinations (95 percent). Moreover, most clients did not receive vocational counseling (67 percent), job placement services (82 percent), and educational placement services (82 percent). Only a few methadone programs providing medical examinations and educational services for children attempted to serve the children of female addicts.

Services delivered varied significantly by type of program. Residential programs were much more likely to provide vocational services than outpatient programs. Outpatient co-sex programs were the least likely to furnish vocational and counseling services to help women function independently. Programs serving only women had larger percentages of clients involved in feminist, sex, nutritional, and family counseling than co-sex programs.

Many of the programs appeared to lack the financial and staff resources to establish a full range of services. This lack of services may also be attributed to absence of technical knowledge and capability to deliver the required services or even to the absence of real interest in the comprehensive services needed by women.

CONCLUSIONS

Female drug addicts in treatment need special services in the areas of counseling, employment training, medical care, and child care and nursery services. The number of programs providing special services to drug-abusing women is limited, and existing programs supply mainly medical examinations and drug counseling without much attention to the other service areas. These limitations may be ascribed to a lack of resources or a lack of interest in comprehensive women's services. To remedy the situation, drug programs designed to serve women must make a concerted effort to identify and to utilize existing community resources.

Beschner, G.M., and Treasure, K.G. Female adolescent drug use. In: Beschner, G.M., and Friedman, A.S., eds. Youth Drug Abuse: Problems, Issues, and Treatment. Lexington, Mass.: Lexington Books, 1979. Pp. 169-212.

DRUG	Multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Drug users
AGE	Adolescents
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Household, community, and school surveys; hospital/clinic statistics
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	50

PURPOSE

As with most aspects of their lives, adolescent girls' drug-taking behavior has been stereotyped. Their roles are paradoxical: on the one hand, they are viewed as having a less serious drug problem than boys; on the other, a girl with a drug problem is considered to be sicker than her male counterpart. The stereotypes have resulted from the unfounded notion that women are less stable and less responsible than men. The stereotypes have until recently also been encouraged by a lack of information on the extent and etiology of female drug use. This study investigates the nature and extent of the adolescent female's drug problem, forces leading to drug use by adolescent females, and treatment programs available to young female addicts.

METHODOLOGY

Study data derive from household, community, and school surveys; from hospital emergency rooms, crisis centers, medical examiners, and inpatient units administered and cosponsored by the National Institute on Drug Abuse; from data from treatment programs; and from existing literature.

RESULTS

The drug-use patterns of girls and boys under 18 years of age are quite similar, whether involving alcohol, hallucinogens, amphetamines, tranquilizers, or inhalants. According to six youth surveys, higher percentages of boys than girls use marijuana, while higher percentages of girls use barbiturates. Heroin and cocaine are rarely used by youngsters under age 18. Marijuana and alcohol use have been increasing for both boys and girls, while rates have stabilized for nonmedical use of prescription psychoactive drugs. Age of first use and drug use frequency vary little for boys and girls. There is little difference in drug mentions for hospital emergency rooms for boys and girls, once suicide attempts and gestures are identified.

Clearly, however, a substantial percentage of girls are using drugs, suggesting that drug use is no longer a male problem in individuals under age 18. The primary motivating factors in girls' drug use are related to the myriad pressures and forces that converge on young women during their adolescence. A major drive of the female adolescent is to gain independence from her parents and to become an autonomous adult. She is under pressure to become part of her peer group and is usually introduced to drugs by male peers.

For girls, as for boys, family pathology influences drug use. However, addicted girls tend to be more sensitive to their families' problem than boys, frequently have been abused by their parents, have had unsatisfactory relationships with their mothers, and have grown up in homes with heavy drinkers. Physical changes and the onset of menstruation, as well as contradictory social signals about sexuality, tend to create confusion, guilt, and rebellion in many girls. The loneliness and rebellion of adolescent girls may be pronounced if they have no adult friends with whom to share the experiences of growing up. Young female adolescent addicts are frequently maladjusted in three areas: family, school, and work.

Society's treatment response needs more planning and organization. Only about 27 percent of the girls in drug-free outpatient programs actually complete treatment. Girls who enter treatment have to contend with a number of inequities, misperceptions, and biases. Many drug treatment programs are not adequately structured or equipped to meet the special social, psychological, and medical needs of girls.

The findings suggest that the serious drug problems of girls must be recognized. All individuals and organizations concerned with the drug problems of young people must begin to understand the underlying problems that complicate drug use of young women. Any attempt to tailor a rational program of prevention and treatment for young women will be a difficult challenge. To meet this challenge, researchers must include young women as a discernible subsample in study populations. The weight of existing evidence indicates that there are differences between drug use patterns of boys and girls. The body of knowledge about usage patterns, motivations, and treatment outcomes must be enhanced and continually updated.

Public agencies with the responsibility for solving the drug problem and formulating public policy must begin to recognize young women as a distinct target population. Treatment agencies and their staffs must become better prepared to deal with the emotional, political, and physical components of drug use by young women. Finally, clinicians must become more knowledgeable about the physical development and concomitant problems experienced by adolescent females. They must either develop informed in-house resources or establish connections to professionals in the medical and mental health fields.

CONCLUSIONS

Drug use can no longer be considered exclusively a male problem in adolescents under age 18. Although girls' reasons for drug use are highly individual, many factors are related to distinctly female adolescent experiences in environment and development. Treatment programs and prevention efforts must thus take into consideration both the seriousness of the problem and the distinctness of the female adolescent target population. Further research is needed to identify specific problems of female adolescent drug users.

Binion, V.J. A descriptive comparison of the families of origin of women heroin users and nonusers. In: National Institute on Drug Abuse. Addicted Women: Family Dynamics, Self Perceptions, and Support Systems. DHEW Pub. No. (ADM) 80-762. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

DRUG	Heroin
SAMPLE SIZE	248
SAMPLE TYPE	73 addicts in treatment; 175 nonaddicts
AGE	Young adults (average: 25)
SEX	Female
ETHNICITY	Black; white
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Questionnaire; interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	52

PURPOSE

A number of studies have documented the importance of certain family patterns, such as the dominant mother and absent father relationship in the lives of young drug addicts, particularly males. Personal trauma and alcohol or drug addiction have also been found to be more prevalent in the families of such drug addicts than in the rest of the population. However, little is known about the female drug user as compared to her non-drug-using peer, and until recently many public and professional assumptions have been tempered by myths and theories. This study focuses more closely on psychosocial aspects of the family of origin of female heroin users and nonusers, their family structures, their relationships with their parents, their attitudes about their childhood, and their attitudes about themselves while growing up.

METHODOLOGY

The experimental sample consisted of 73 women enrolled in drug treatment programs in low income areas of Detroit, Michigan. The control sample of 175 women was recruited from a Michigan Employment Security Commission branch office that drew from similar low-income, inner-city communities in Detroit. Subjects in both groups were about 25 years old on the average. Racial

differences between the groups were not statistically significant; the addicted sample was 80.8 percent black and 19.2 percent white, and the nonaddicted sample was 70.7 percent black and 26.4 percent white. Women in the control group were more likely than the addicted women to have graduated from high school.

Questionnaires eliciting demographic, situational, and psychosocial information were administered to all subjects during personal interviews. The social history section of the questionnaire covered six general areas: living arrangements, perceptions of significant others, family interaction patterns, childrearing experiences, religious experiences, and self-perceptions as a child. Control group women were asked questions about their general feelings on the use of alcohol, medicine, and other drugs but were not questioned on drug treatment.

RESULTS

Family organization and interaction. A majority of both groups of women had lived in a large city from birth until age 16. The households of both groups had moved infrequently. Both groups of women were raised in similar family constellations until they were 12 years old, most often with both parents or less often with their mothers. Household sizes were also similar, with two to five members for 61.4 percent of the addicted women and one to six members for 67.4 percent of the control women. Both groups described their relationships with parents and siblings as very close; parents were reported to be on friendly terms. The two groups of women were fairly equally distributed across economic categories, with control women slightly more likely to report extreme conditions. Although descriptions of family life while growing up did not reveal any significant differences between addicted and control women, the educational levels of the two groups' mothers and fathers differed greatly. Parents of the control women were more likely to be college or high school graduates than parents of addicted women although parents of both groups held blue-collar jobs. Most women of both groups described their parents as loving but were more positive about their mothers than their fathers. The two groups felt that they resembled their mothers in neutral physical characteristics, positive personality traits, emotionality, or neutral personal traits, and their fathers in positive or neutral physical or personality traits. While both groups enjoyed activities with their mothers, they shared few activities with their fathers. On the whole, both samples cherished warm memories of their parents and their relationships with them.

Socialization issues. There were major differences in the ways the two groups of women were disciplined, with addicted women being significantly more likely to be made to do extra work, given a lecture, not being allowed to do something they wanted to do, or being screamed at. Addicted women were more likely than control women to feel that they received more punishment than other children, while nonaddicted women felt that they were punished less than other children. Moreover, control women were allowed to go out alone somewhat younger than addicted women but were less likely to have run away from home or to have left home for good before 18 years old. Most women in both samples attended church or Sunday school while growing up, and families of both groups were religious.

The majority of women in both samples viewed themselves as having been good children, but the addicted women were significantly more likely than control women to describe themselves as having behaved badly. Both groups reported having had no trouble making friends, having been popular with their peers, and having participated in numerous school activities. While the women in both samples had enjoyed school, the control group reported having had more teachers who treated them as special students. Moreover, addicted women were twice as likely as the control group to have quit school without a diploma, with boredom or drug use cited as the reasons.

Drug use and family problems. Family members of addicted women were more likely than those of the control group to have drinking problems. Addicted women tried marijuana before heroin, barbiturates, and amphetamines. The majority started on drugs when they were between 14 and 18 years old and were most frequently offered drugs for the first time by a friend (usually male) or a boyfriend. Approximately 54.3 percent used heroin the first time it was offered and 46.6 percent began using it regularly between 17 and 20 years old. Primary reasons given for heroin use were avoidance of personal and family problems, enjoyment, and association with users. Primary motives for entering treatment were displeasure at setting bad examples for their children and feelings of self-disgust.

CONCLUSIONS

The findings indicate that the drug treatment literature has grossly overstated the differences in family dynamics of heroin users and nonusers. Both test groups had enjoyed relatively happy, stable childhoods, often with both parents. Both groups were reared in extended family networks with family and neighborhood solidarity. Mothers of both groups were perceived as warm, relaxed, supportive parents; fathers were viewed somewhat less positively but were not rejected. While punishments of the two groups during childhood varied, addicted women were not physically punished more often than the control group. Such factors as blocked aspirations, encouragement from teachers, peer influences during adolescence, and alcohol problems within families may influence addiction, but absolute causative factors cannot be identified. While the family of origin of the addicted person must still be considered a significant factor in addiction, this study suggests that the notion of multigenerational transmission of pathology in the families of heroin users is a myopic and inaccurate view.

Brazelton, T.B. Effect of prenatal drugs on the behavior of the neonate. American Journal of Psychiatry, 126(9):95-100, 1970.

DRUG	Multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Users and their infants
AGE	Not applicable
SEX	Users: female; infants: both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	34

PURPOSE

Differences in infant behavior are the result both of the infant's genotype and of the interaction of the genotype with the environment. The first important environment in shaping the genotype's expression is intrauterine. The genotype itself is strongly influenced by prenatal factors. For example, insensitivity of the fetus to androgen at the cellular level during a critical period in development produces feminization of a male infant (i.e., individuals with male chromosomes but female appearance). The present study outlines the effects of drugs used by the mother on the development of the fetus.

SUMMARY

Drug abuse in the adolescent and adult female during pregnancy produces a variety of undesirable effects. Maternal ingestion of LSD results in infants with persisting chromosomal defects. One study found that spontaneous abortion is frequent in LSD users (around 50 percent), and major abnormalities were demonstrated in the fetuses post mortem.

Infants of morphine and heroin addicts display a variety of withdrawal symptoms, usually in the first week after birth, including restlessness, irritability, tremors, convulsions, sleeplessness, fever, gastroenteritis, yawning, and sneezing.

Aspirin given to the mother in large quantities just before birth causes a decrease in albumin-binding capacity and increases the danger of brain damage from hyperbilirubinemia in the infant. Moreover, tranquilizers such as reserpine, meprobamate, and chlorpromazine given to pregnant animals affect the birth weight and response to learning tasks of their offspring.

The ready transmission of barbiturates to the fetus from the mother is acknowledged. Selective tissue storage of depressant drugs is higher in the midbrain than in the circulating blood, and this selective storage lasts for as much as a week in the immature brain, affecting the central nervous system reactions and the midbrain-mediated behavior of the neonate for the entire time. Other routine maternal medication may affect newborn sucking behavior and impair behavioral states of newborns.

The early mother-infant relationship may also suffer from depressant drugs. Premedication given to mothers before delivery has a paradoxical action: the wide-awake mother tends to have depressed infants and vice versa. Whatever the cause of these effects, there can be little doubt that these drugs influence imprinting responses in both mother and infant. The routine use of premedication and anesthesia in pregnancy and delivery should be reevaluated because of its effect on early mother-infant interaction as well as its potentially lasting effect on their lives together.

CONCLUSIONS

Drugs used by mothers during pregnancy, including during both labor and delivery, have verifiable effects on newborns. These effects range from withdrawal symptoms by infants of heroin addicts to imprinting disturbances in the infants of mothers receiving medication before and during childbirth. Pediatricians and psychiatrists should work together to limit intrauterine and postnatal drug effects caused by maternal drug use.

Burt, M.R.; Glynn, T.J.; and Sowder, B.J. Psychosocial Charateristics of Drug-Abusing Women, National Institute on Drug Abuse. DHEW Pub. No. (ADM) 80-917. Services Research Monograph. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

DRUG	Multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	General population; clients of treatment programs
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Longitudinal survey; literature review; comparative study
DATA COLLECTION INSTRUMENT	Literature review; program/clinical statistics; surveys
DATE(S) CONDUCTED	1974-1977
NO. OF REFERENCES	110

PURPOSE

Women have been receiving increasing attention with respect to their drug abuse and their involvement in drug treatment programs. Numerous studies show that women differ from men in their rates and patterns of drug use and are underrepresented in drug treatment programs supported by the Federal Government. Opinions vary regarding whether these findings reflect women's lower incidence of opiate addiction or whether drug treatment programs are not structured to serve female drug abusers.

In developing a strategy to address female issues in the drug treatment field, the Services Research Branch of the National Institute on Drug Abuse initially elected to compile a comprehensive review of available information from studies and surveys, from existing data, and from the literature. This study is designed as a reference guide to the research on the characteristics of female drug abusers. The study aimed to identify, assess, integrate, and analyze all the available data on the characteristics of women's reported drug use patterns, demographic characteristics, and personality attributes, and to contrast the information with comparable data for males.

METHODOLOGY

National household surveys conducted in 1974-1975 and 1975-1976 were used as the basis for the discussion on the prevalence of drug abuse. The surveys were conducted by the George Washington University Social Research Group and the Response Analysis Corporation. To gather information on characteristics of male and female drug abusers, several large and small data systems were surveyed. The large-scale data systems included the Client Oriented Data Acquisition Process (CODAP), the Drug Abuse Warning Network (DAWN), the Polydrug Data Set, and the Drug Abuse Reporting Program (DARP). Small-scale data sets were from the Addiction Services Agency (ASA) in New York City, the Narcotics Treatment Administration (NTA) in Washington, D.C., and several other sources focusing on individual programs. The literature review included both published and unpublished documents.

RESULTS

Current use of illicit drugs is similar for males and females over age 18, except that males' use of marijuana is higher. However, significantly more males than females had ever used illicit drugs. No statistically significant differences exist in current nonmedical use of psychotherapeutic drugs, although significantly more females than males have ever used such drugs.

For youths aged 12 to 17, females and males report similar current use patterns of heroin, cocaine, marijuana, and hashish, but females report significantly less use of hallucinogens. Fewer females than males have ever used inhalants, marijuana, and hashish. The study's exclusion of medical use of psychotherapeutic drugs omits the consideration of a substantial proportion of the drug problem encountered by women.

Females in traditional treatment programs are slightly more likely than males to be under 21 years of age. However, this pattern is reversed in emergency room and crisis center facilities where females are more likely to be over 30 years of age. Females who die of drug overdoses are considerably more likely to be over age 36. Females entering treatment are less likely than males to be using heroin and more likely to be abusing psychotherapeutic drugs.

In comparison to male clients, females are slightly less likely to be black and substantially less likely to be Puerto Rican or Mexican American. Females are more likely than males to be or to have been married. While there are no sex differences in education, females entering treatment are much less likely than males to be employed. They are more likely to be dependent on others or on welfare for support and less likely to be dependent on illegal activities as their primary source of support. Females are also less likely than males to have been arrested or to have entered treatment involuntarily. Females in treatment are often responsible for dependent children.

CONCLUSIONS

Long-term opiate-oriented treatment programs may not be appropriate for a large segment of the female drug-abusing population. More women might participate in the drug treatment service system if these services were modified to meet their needs. The needs of women over age 26 and the needs of women who are seen at hospital emergency rooms and crisis centers should receive special attention.

Mental health services may be more appropriate than other approaches for women who require emergency medical treatment for drug problems. In addition, treatment programs for females must place more emphasis on vocational training oriented to females, child day care facilities, assertiveness training, increased educational support and opportunity, and social services. The stigma attached to female drug abuse and local attitudes and conditions should also be considered when attempting to encourage females to seek treatment.

Celentano, D.D.; McQueen, D.V.; and Chee, E. Substance abuse by women: A review of the epidemiologic literature. Journal of Chronic Diseases, 33(6):383-394, 1980.

DRUG	Alcohol; licit drugs
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Women
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	98

PURPOSE

Alcoholism and drug abuse present similar methodological and interpretive problems in research, have similar populations at risk, and have similar individual characteristics of users. Nevertheless, little attention has been paid to these similarities and little cross-fertilization has occurred in the work on these subjects.

Because Federal funding procedures have produced these separate domains of research, female substance abuse, an increasingly important public health problem with chronic disease implications, has essentially remained unaddressed at the level it deserves.

This literature review uses the term "substance abuse" to refer to alcoholism, abuse of legal drugs, and the combined use of alcohol and licit drugs. The effect of changes in female sex-role orientation (expected behavior or interaction style) on the prevalence of substance abuse is the central focus. The review examines (1) general methodological and definitional issues in population studies; (2) reviews of the prevalent literature on alcoholism, drug abuse, and combined use and abuse by women; and (3) a brief discussion of research directions emerging from the recent literature on sex roles.

SUMMARY

Definitional problems. Lack of consensus regarding definitions and measurement strategies has resulted in a lack of comparative and replication studies and much literature containing untested assumptions and definitions and measures that have not been adequately verified. No standardized procedure exists for distinguishing an alcoholic case. Even less agreement exists on the definition of drug abuse. Four definitions are (1) any use of drugs, (2) any nonmedical use of drugs, (3) using drugs to excess, and (4) use of anything that is addictive. The term "drug" is also variously defined. The epidemiologic measures of prevalence rates and incidences are also used in different ways in different studies.

Prevalence of substance abuse among women. Little is known about alcohol problems among women. Hidden drinking, asserted changes in prevalence rates, and the development of new roles for women are all factors of interest. Various studies estimate the prevalence rate of alcohol abuse among women as ranging from 0.4 percent to 21 percent. Hidden drinking among females due to the stigma of the drunken female is believed to cause these rates to be understated. Drug abuse literature has recently focused on women as a result of a high rate of psychotherapeutic drug use and suspected abuse among women. Few studies have dealt with simultaneous alcohol and drug problems.

The studies on licit drug use among women have uniformly found that more women than men use psychotropic drugs. However, most of these studies have focused on use rather than on women's unique problems. As with alcohol, the role of employment and the role status of "housewife" emerge as factors important for substance abuse.

The scant literature on combined alcohol and drug use either contains gross methodological flaws or displays a lack of knowledge of the field in which the researchers are not recognized as experts. The data that do exist indicate that the rate of self-reported alcohol abuse is higher among males than females, while the rate of abuse of prescribed psychoactive drugs is higher among women. Differences in the way physicians prescribe drugs for women probably account for a significant portion of the sex ratio differentials.

CONCLUSIONS

Little substantive knowledge exists regarding the epidemiology of substance abuse among women because women have tended to receive attention in the literature mainly when there is concern about their effects on family members and others. This outlook reflects the traditional American sex roles centering around the familial division of labor. However, the declining sex-role division and attitudinal changes have led to greater equality between the sexes. A logical outgrowth of these changes may be the increasing similarity in women's behavior to that currently attributed to men. Thus, women may develop similar social and cultural risk factors for many problems and illnesses, including substance abuse. Changing sex-role orientations may be associated with differential rates of substance abuse among women and the apparent increase in alcohol and drug use.

A new epidemiology of substance abuse is needed. This research should address the many existing substantive and methodological problems in order to provide a more realistic assessment of the extent of the problem of substance abuse among women.

Chambers, C.D., and Griffey, M.S. Use of legal substances within the general population: The sex and age variables. Addictive Diseases: an International Journal, 2(1):7-19, 1975.

DRUG	Barbiturates; tranquilizers; sedatives; alcohol; antidepressants; amphetamines; analgesics
SAMPLE SIZE	30,000
SAMPLE TYPE	General population
AGE	All ages
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	16 States and the District of Columbia
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	0

PURPOSE

The study seeks to determine the extent of legal drug use in the United States and to characterize those persons and drugs most likely to be involved. The statistical projections are meant to be reliable problem indicators rather than a full census.

METHODOLOGY

Data derive from more than 30,000 face-to-face interviews conducted within the general population of 16 States and the District of Columbia. Subjects are household residents and do not include individuals who reside in institutions or who do not have a permanent address.

RESULTS

Barbiturates. Use of barbiturates is widespread throughout the general population. More than 24 million people have taken barbiturates, 4.5 million on a regular basis and 9 million within the last 6 months. No more than 85 percent of the regular users of barbiturates obtain all their barbiturates with their own legal prescriptions, and no more than 75 percent of the regular users

use the drugs as prescribed. About 50 percent of regular users are also regular users of alcohol. Women of childbearing age are proportionately represented among the regular users of the drugs.

Nonbarbiturate sedatives. Used less frequently than barbiturates, nonbarbiturate sedatives are used by 4.5 million persons, a million recent users, and about 350,000 regular users. Only 70 percent of the regular users obtain all their drugs with legal prescriptions, and only about 70 percent of the regular users take the drugs as prescribed. One-third of all regular users also use another of the prescription psychoactive medications, such as barbiturates or minor tranquilizers. About 70 percent of the regular users of nonbarbiturate sedatives are also regular users of alcohol. Women of childbearing age are proportionately represented in this drug use group.

Minor tranquilizers. The anxiolytic sedatives known as minor tranquilizers are used by 20 million people, with 5 million regular users and more than 13.5 million recent users. About 90 percent of regular users obtain drugs with prescriptions, but only about 70 percent take them exactly as prescribed. Only about 15 percent of regular users concurrently use other prescription psychoactive drugs, and about 40 percent are also regular users of minor tranquilizers. Women of childbearing age are overrepresented among the regular users of these drugs.

Antidepressants. Antidepressants are the least prevalent of all prescribed psychoactive medications, with 3 million users, a million recent users, and 500,000 regular users. Most regular users (85 percent) obtain their drugs by prescription, but 20 percent do not use them as prescribed. About half of the regular users simultaneously use other prescription psychoactive drugs, but only about 20 percent are regular alcohol users. Women of childbearing age are significantly overrepresented among the regular users of these drugs.

Amphetamines. Amphetamines are frequently used with a variety of depressant drugs. Self-medication with amphetamines is common among housewives, students, and factory workers because of the drug's energizing and euphoric properties. "Pep pills," i.e., racemic amphetamine sulfate (Benzedrine) and dextroamphetamine sulfate (Dexedrine), are taken by about 6 million people, by 1.5 million recently, and 750,000 people regularly. Only about 30 percent of regular users obtain their drugs through legal prescriptions, and only a third of those who obtain drugs legally use them as prescribed. One-fourth of regular users also use minor tranquilizers; one-half use illegal drugs, especially marijuana; and one-half use alcohol. Women of childbearing age are somewhat overrepresented in this drug-use group.

Diet pills for depressing appetite are used by 12 million people, 3 million recently, and 1.5 million on a regular basis. Only 70 percent of the regularly used drugs are obtained by prescription, and only 70 percent of those are taken as prescribed. Regular users usually do not use other psychoactive drugs, but about half of all regular users may drink heavily. Women of childbearing age are greatly overrepresented in the regular use of these drugs.

Nonnarcotic analgesics. Analgesics, especially propoxyphene hydrochloride (Darvon) and pentazocine (Talwin), are used by 36 million people, 12 million recently, and 3,750,000 on a regular basis. Only about 70 percent obtain drugs by prescription, and only 75 percent take them as prescribed. Only 15 percent concurrently use other drugs, but one-half also use alcohol. Women of childbearing age are greatly overrepresented in this group of users.

Alcohol. Two-thirds of the population drink some alcohol, and 18 million people can be considered heavy drinkers. Heavy drinking is high among minority groups and persons in the lower socioeconomic classes. Women of childbearing age are overrepresented among alcohol users.

CONCLUSIONS

Certain generalizations can be made about individuals who turn to drug or alcohol use out of boredom, loneliness, or frustration. Women, whites, persons over age 35, persons in middle and upper socioeconomic groups, housewives, and white-collar workers are likely to cope through the use of medications, while men, blacks, persons under age 35, persons in lower socioeconomic groups, and skilled or unskilled workers cope with alcohol. Among those using medications to cope, men and younger persons use stimulants, while older persons and women use sedating and tranquilizing drugs. Women in the childbearing age range represent 12 percent of the total population but comprise 19 percent of all marijuana users, 25 percent of all social/recreational users of heroin, 18 percent of all cocaine users, and 18 percent of all heavy users of alcohol.

Chambers, C.D.; Hinesley, R.K.; and Moldestad, M. The female opiate addict. In: Ball, J.C., and Chambers, C.D., eds. The Epidemiology of Opiate Addiction in the United States. Springfield, Ill.: Thomas, 1970. Pp. 222-239.

DRUG	Opiates
SAMPLE SIZE	168
SAMPLE TYPE	Addicts
AGE	White: mean, 37; black: mean, 30.4
SEX	Female
ETHNICITY	White; black
GEOGRAPHICAL AREA	Lexington, Kentucky
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Hospital records; clinical and administrative notes and documents; individual interviews
DATE(S) CONDUCTED	June through December 1965
NO. OF REFERENCES	0

PURPOSE

From 1941 through 1965 Lexington Hospital in Kentucky was a principal center for the treatment of female opiate addicts. In that period, 14,866 females were admitted for treatment. The size of this population and the lack of information on female addicts motivated the authors of the present study to analyze these data. Extensive involvement with females undergoing medical and psychiatric treatment for their addictions produced an awareness of multiple, race-associated differences among women addicts. The involvement produced the frame of reference for this study, which seeks to provide comprehensive source data on female opiate addiction through a controlled race comparison.

METHODOLOGY

The study sample consisted of 168 female addicts admitted consecutively to the hospital at Lexington from June through December of 1965. The racial distribution of the women was 66.1 percent white and 33.9 percent black. The mean age of the white females was 37 years and that of the black females was 30.4 years. Data were taken from hospital records, clinical and administrative notes and documents, and individual interviews. Race was the independent variable; the dependent variables were social characteristics, addiction characteristics, and other deviancy characteristics.

RESULTS

In the area of social characteristics, findings show that black addicts were more likely to have been reared in a broken home and in a home where the mother pursued an occupational role outside the home, and to have had fathers whose occupational roles were blue collar. Blacks did not differ from whites in level of education. However, black addicts were more often residents of a Standard Metropolitan Statistical Area outside the South. Additionally, black women supported themselves through illegal activities more often than white women, and blacks were significantly more likely than whites to report intact marriages, although these marriages were more frequently common law. Black women were also considerably younger at the time of hospitalization than white addicts.

Analysis of addiction characteristics suggested that black addicts had been introduced to an illicit drug subculture through the use of marijuana, had first experimented with opiates in the company of their peers, had used heroin as their first opiate, preferred to use heroin above all other drugs, used heroin more frequently than any other drug, and were currently addicted to heroin that had been purchased from pushers. In contrast, white addicts characteristically did not use marijuana, most frequently attributed initial opiate use to medical or quasi-medical factors, and preferred legally manufactured drugs obtained from legal sources. In both races, intravenous injection was the preferred means of drug administration, and most addicts used sedative-hypnotics in addition to opiates. Most patients of both races admitted having undergone previous treatment, but the majority were being admitted to the Lexington facility for the first time. Blacks were more often than whites admitted as prisoner patients.

The addicts admitted to histories of other deviances, including selling narcotics (25 percent), prostitution (50 percent), adolescent arrest records (25 percent), and arrest records prior to first drug use (21 percent). Black addicts were more likely than whites to be narcotics pushers and prostitutes and to combine the two activities. Arrests for addicts who sold narcotics or engaged in prostitution were more frequent for blacks than for whites. White female addicts were usually diagnosed as having either personality pattern or trait disorders, while black females were diagnosed as having personality trait disorders or sociopathic disturbances.

CONCLUSIONS

Race must be considered an important variable in any attempt to formalize a theoretical frame of reference for addiction among females or in any attempt to construct a typology of female narcotic addicts. Blacks and whites differ significantly in childhood home status, occupational status, conjugal home status, and regional area of residence. Racial differences are also significant in how addicts become addicted, what drugs they use, how drugs are administered, how drugs are obtained, and what other deviancies are evident in their lifestyles.

Chambers, C.D., and Hunt, L.G. Drug use patterns in pregnant women. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis: Mosby, 1977. Pp. 73-81.

DRUG	Heroin; illicit drugs; multidrug
SAMPLE SIZE	Over 30,000 in general population; 34 pregnant addicts
SAMPLE TYPE	Pregnant addicts; women of childbearing age
AGE	Young adults; mature adults (range: 18-34)
SEX	Female
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Case study; descriptive study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1970-1975
NO. OF REFERENCES	17

PURPOSE

While the increasing problem of drug use in the United States has been widely discussed, little agreement exists on either the prevalence or the nature of the various types of drug use. However, experts concur that drug use of all types is increasing, that drug use is growing faster among women than among men, and that illicit drug use and nonmedical use of legal drugs are primarily problems involving young people. These findings are of particular importance to those who must confront the problems of drug use during pregnancy and in the newborn.

This report is based on extensive field investigations and household surveys to provide practitioners with descriptive and statistical information on three types of patients they can expect to encounter. The report includes data on (1) pregnant women who are addicted to heroin, (2) pregnant women who are extensive users of illegal drugs other than heroin, and (3) drug and alcohol use within the general population of women aged 18 to 34.

METHODOLOGY

During 1974 and 1975, field investigation techniques were used to collect the descriptions of pregnant women among the groups of addicts and users of heroin and other illegal drugs. Gen-

eral population household survey techniques were used to collect the data on the childbearing age cohort. The field investigations resulted in the identification of 34 pregnant drug addicts who were using heroin or other illicit drugs. During the general population surveys in 16 States and the District of Columbia, over 30,000 face-to-face interviews were conducted between 1970 and 1974. Findings were projected to the Nation as a whole.

RESULTS

Interviews of 12 active heroin addicts who were pregnant showed that active heroin users typically do not seek prenatal care during the first and second trimesters of their pregnancy. Once an active heroin user becomes pregnant, little conclusive planning occurs regarding the pregnancy, the birth, or infant care. Of the 12 women, only 3 were actively considering or had made plans to obtain abortions.

The number of pregnant women who are high-frequency users of illicit drugs other than heroin far exceeds the number who are addicted to heroin. Like the heroin addicts, these women typically had not sought any prenatal care, although the majority reported that they were planning to do so soon. Only 1 of the 22 women covered in this study was considering an abortion.

Within the general population of childbearing age, women are overrepresented in the use of barbiturates, minor and major tranquilizers, and amphetamine "diet pills." In addition, women in this age group are typically proportionately represented or overrepresented among those persons who are current and regular users of legal drugs, illegal drugs, and alcohol. About 1 million women in this age group regularly or currently use prescription nonnarcotic analgesics, while about 750,000 use prescription minor tranquilizers. About 585,000 are current or regular users of the barbiturates, and probably no more than three-quarters of these take the drugs as prescribed. About 675,000 women of childbearing age are current or regular users of prescription stimulants and appetite suppressants, and less than half take these drugs as they are prescribed. About 125,000 use prescription narcotics, and about 100,000 use prescription antidepressants.

Over half the women of childbearing age use alcohol, and about 3.23 million drink every day and often consume 5 or 6 drinks each day. At least 466,000 women in this age group are current or regular marijuana smokers, 130,000 are current or regular users of other hallucinogens, almost 100,000 use cocaine, and 90,000 are current or regular users of heroin. Women within this general age cohort are also the main consumers of nonprescription, over-the-counter sleep inducers, and tranquilizers. Between 750,000 and 1 million women of this age are regular high-frequency users of alcohol plus psychoactive drugs, while 4 times as many use alcohol heavily and psychoactive drugs infrequently.

CONCLUSIONS

The regular use of multiple psychoactive drugs in combination with regular consumption of alcohol is widespread among women in the general childbearing age range. Little conclusive evidence exists to suggest that such drug taking ceases during pregnancy, and no definitive information exists regarding the risks of such drug consumption.

Chein, I.; Gerard, D.L.; Lee, R.S.; and Rosenfeld, E. The female addict. In: The Road to H: Narcotics, Delinquency and Social Policy. New York: Basic Books, 1964. Pp. 299-319.

DRUG	Heroin; opiates
SAMPLE SIZE	32
SAMPLE TYPE	Female addicts and their parents
AGE	Adolescents; young adults (median: 18.5)
SEX	Both
ETHNICITY	White; black; Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Clinical observation; comparative study
DATA COLLECTION INSTRUMENT	Observations; interviews
DATE(S) CONDUCTED	September 1955 to March 1956
NO. OF REFERENCES	1

PURPOSE

The study investigates the nature of the female addiction process, the personal and familial characteristics of female addicts, and the role that addiction plays in their lives. Whenever possible, female subjects are compared to male subjects to illustrate differences in opiate addiction between the sexes.

METHODOLOGY

The clinical study sample consisted of 20 female patients admitted to Riverside Hospital from September 1955 to November 1956, through the hospital's screening clinic, which is operated in conjunction with the Narcotics Term Court of the New York City Magistrates' Court system. Subjects ranged in age from 17 to 20 years old, with a median age of 18.5. A total of 17 of the patients were addicted to heroin, in some instances supplemented by morphine or methadone. Of the 20 patients, 11 were black, 3 were Puerto Rican or of Spanish-speaking/Caribbean origin, 5 were ethnic whites, and 1 was mixed Puerto Rican and black. Data for the clinical study derive from observations made by the psychiatric treatment team and from 2 to 20 interviews with each patient.

The family study sample encompassed families of 22 female addicts who were patients at Riverside Hospital between November 1955 and March 1956. Of the patients from the family study, 10 were also in the clinical study. Data derive from two to four interviews of a parent or parents at home by specially trained second-year social work students.

RESULTS

The clinical study. The young female addict hospitalized in connection with her drug-use problem had already experienced prolonged and regular use of heroin or other opiates, starting at about 16 years of age. These young women generally used the drug because of its estimated or consciously experienced effects. First use in most cases occurred with one or more other female users, often the same age as the subject. None of them had purchased their first heroin, and the conscious reason for first drug use was most frequently curiosity. After continued use, all subjects had to spend increasing amounts of money to support their habits.

About half the subjects were cooperative and the other half angry and demanding. The remaining patients were uncommunicative. However, not even the compliant patients were aware that their lives had been disturbed even before addiction. In general, the female patients were far more demanding of the time and energy of the staff than were male patients. Additionally, most of the subjects had had considerable behavioral and academic problems in school, poor employment histories, and conspicuous behavior difficulties at home. Of the 20 interviewed, 11 had had pregnancies prior to addiction. Three of the patients were classified as overt schizophrenics, five as borderline schizophrenics, one as having an inadequate personality, five as sadomasochistic, four as angry and aggressive, and two as coolly psychopathic. Female addicts, unlike male addicts, did not define their lives in terms of aggression and hostility experienced as a pleasurable or justified reaction to mistreatment or frustration.

The family study. The families of the female addicts, like those of male addicts, were heterogeneous. Most exhibited some or predominantly pathogenic features. Parental relationships were discordant and at least one parent was absent from the parental home for a prolonged period. Mothers were the dominant figures in early childhood, but subjects did not receive warm, affectionate treatment from either parent, who generally either denied them gratification or overindulged them. Mothers were usually insecure and judgmental, while fathers were immoral figures engaging in criminal or impulsive activities. Both parents were usually distrustful or manipulative of authority figures. Such families appear to be more prevalent among female adolescent addicts than among female adolescents at large.

There were no significant differences between male and female addicts' families in family background factors leading to weak ego function or defective superego function among subjects. But female addicts had fewer background factors than males leading to lack of middle class orientation and to distrust of major social institutions.

Black female addicts appeared to be at a somewhat greater socioeconomic disadvantage than black male addicts, although black female addicts came from slightly better integrated families than black males. Both male and female addicts came from the city areas least suited for safe, comfortable living, but addicts' families were no more disadvantaged than other families in the community.

CONCLUSIONS

Female adolescent opiate addicts have serious maladjustment problems with school, work, and family even before addiction. They are usually introduced to drugs by female peers, try drugs initially out of curiosity, and are not naive about the personal and legal consequences of addiction. Hospitalization tends to be initiated through external forces, and the female patients have no insight into their own need for psychotherapy or vocational training. Female adolescent opiate addicts, as their male counterparts, appear to develop their difficulties in social adaptation and their psychopathology through immersion in a malignant familial environment.

Climent, C.E.; Raynes, A.; Rollins, A.; and Plutchik, R. Epidemiological studies of female prisoners. II: Biological, psychological, and social correlates of drug addiction. The International Journal of the Addictions, 9(2):345-350, 1974.

DRUG	Heroin
SAMPLE SIZE	66
SAMPLE TYPE	Incarcerated heroin addicts; incarcerated nonaddicts
AGE	Young adults
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Framingham, Massachusetts
METHODOLOGY	Comparative study; correlational study
DATA COLLECTION INSTRUMENT	Medical and psychiatric records; questionnaires; MMPI; psychiatric and medical exams
DATE(S) CONDUCTED	May 1970
NO. OF REFERENCES	1

PURPOSE

The study seeks to identify factors associated with heroin addiction among female inmates.

METHODOLOGY

The study was conducted during May 1970 at the Framingham Institution for Women in Framingham, Massachusetts, as part of a larger study. A total of 42 women judged to be heroin addicts at the time of commitment and 24 women who did not use illegal drugs were compared. Medical variables were measured with a medical neurological examination, dermatologic analysis, and a standardized medical questionnaire. Psychiatric variables were evaluated through examinations by a psychiatrist, the Minnesota Multiphasic Personality Inventory, and a review of medical psychiatric records. Social factors were tested with a standardized questionnaire and a review of criminal records. Various elements of the testing procedures were used to measure involvement in drug use, depression, and childhood neuroticism.

RESULTS

Predictably, heroin use was associated with birth in an urban setting and continued urban residence. The heroin group was younger than the nonuser group (25.3 versus 29.5 years), and significantly more heroin users than nonusers were under the age of 20 years. The user sample contained an almost equal number of Protestants and Catholics. Significantly more nonusers than users were divorced, but other marital statuses did not differ.

Heroin users reported fewer child guidance center contacts but more frequent adult psychiatric outpatient contacts. The groups were similar in numbers of psychiatric hospitalizations. No differences were apparent between the two groups on any of the measures used to evaluate depressive states. However, heroin addicts reported more suicidal thoughts and suicide attempts than nonusers.

There were no significant differences between the number of borderline or abnormal brain wave patterns between heroin users and nonusers. Nor were there significant differences on intelligence tests, frequency of birth problems, head trauma, seizures, neurological disorders, medical disorders in relatives, age of menarche, or menstrual patterns.

CONCLUSIONS

The major differences between heroin users and nonusers are that heroin users are likely to be younger, are less likely to be identified as problem children at an early age, and are more likely to be psychiatric outpatients and to have suicidal thoughts.

Heroin addiction appears to be perceived by the addict as an unpleasant state requiring psychiatric contact as an adult, and the lifestyle associated with it that leads to incarceration only compounds the problem. The pattern of life leading to prison is different for the heroin addict than for the nonuser; the nonuser is more likely than the user to have a lifelong history of antisocial behavior. The types of crimes for which the two groups are incarcerated also appear to be different. Thus, prison officials should consider that female heroin addicts are more serious suicide risks than other prisoners but may also be more receptive than nonusers to psychiatric help and rehabilitation efforts.

Colten, M.E. A comparison of heroin-addicted and nonaddicted mothers: Their attitudes, beliefs, and parenting experiences. In: Heroin-Addicted Parents and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1980. Pp. 1-18.

DRUG	Heroin
SAMPLE SIZE	345
SAMPLE TYPE	Addicted and nonaddicted mothers
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Detroit, Michigan; Los Angeles, California; Miami, Florida
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Structured interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	21

PURPOSE

Since the role of mother is central to almost every woman who holds it, women's functioning as mothers and their relationships with their children should be a central focus of research on adult women's psychosocial characteristics, life situations, and therapeutic treatment. Nevertheless, little attention has been paid to the meaning of the role of mother to the heroin-addicted women who are mothers. Most attention has been focused on the effects of addiction on fetuses and neonates. In addition, some authors have asserted that an addicted woman cannot be a good or even an adequate mother.

This study addresses some of the issues related to heroin-addicted mothers by comparing a sample of addicted mothers with a sample of nonaddicted mothers.

METHODOLOGY

Subjects were 170 females in treatment for heroin addiction in Detroit, Los Angeles, and Miami, and a comparison sample of 175 nonaddicted Detroit women who were located through that city's unemployment office. A total of 63.7 percent of the addicted women were in methadone maintenance programs and 36.3 percent were in therapeutic communities. The addicted and comparison

women did not differ in age, race, or employment status, although the comparison women had completed more years of school. A total of 70 percent of the addicted women and 49.7 percent of the nonaddicted women had children. Many more of the nonaddicted mothers were presently married.

All respondents were given structured personal interviews lasting 2 to 3 hours. Interviews were conducted by trained female interviewers. The interviews covered a broad spectrum of areas, including self-perceptions and attitudes, social supports, social histories, drug use histories, problems, parenting attitudes and experiences, and demographic characteristics.

RESULTS

The addicted women were significantly less likely to have their children living with them than nonaddicted women, although some of this difference may have reflected the number of addicted women who were living in therapeutic communities. Only 49 percent of the addicted mothers had all their children living with them, while 88 percent of the nonaddicted mothers had all their children living at home.

Addicted and nonaddicted women did not differ in their views of the ways in which having a child changes a woman's life or in their notions of the most positive and negative aspects of having children. However, addicted mothers expressed greater concern about certain negative outcomes for their children. They were more likely to think about their children becoming drug addicts, going to jail, and dropping out of school than were nonaddicted mothers. Nevertheless, the groups did not differ in the extent to which they worried about other problems such as alcoholism. They also spent similar amounts of time thinking about positive outcomes.

Addicted mothers were more likely to use verbal punishment and less likely to use physical punishment than nonaddicted mothers. The two groups were equally likely to restrict a child's activity or to assign extra duties as punishment.

One-fifth of the addicted mothers and none of the nonaddicted mothers perceived themselves as performing worse than most mothers. In contrast, 51 percent of the nonaddicted mothers and only 32 percent of the addicted mothers perceived themselves as better than most mothers. Nearly all the mothers in both groups reported that they enjoyed being a mother as much as or more than most mothers. A majority of both groups also reported that their children were the most important part of their lives. Most of the mothers in both groups also reported that they got along very well with their children.

A total of 42 percent of the addicted mothers reported themselves as able to discuss childrearing problems with their mothers, and 22 percent had discussed some aspect of the child's health in the month immediately preceding the interview. Nonaddicted mothers tended to report a greater availability of the child's father as a resource, while addicted mothers were much more likely to call on their own mothers for help. Only 15 percent of the addicted mothers reported that they were able to use the drug abuse treatment program as a place in which to discuss childrearing problems.

CONCLUSIONS

Addicted and nonaddicted women differ little in childrearing practices, although many addicted mothers express a greater concern than nonaddicts about their own ability to fulfill the mothering role. Because addicted mothers need to expand their bases of support, treatment programs should make efforts to help clients with their childrearing concerns. They should also develop referral strategies for selected childrearing issues.

Colten, M.E. A descriptive and comparative analysis of self-perceptions and attitudes of heroin-addicted women. In: Addicted Women: Family Dynamics, Self Perceptions, and Support Systems, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979. Pp. 7-36.

DRUG	Heroin
SAMPLE SIZE	523
SAMPLE TYPE	Addicts
AGE	Young adults
SEX	Both
ETHNICITY	White; black; other
GEOGRAPHICAL AREA	Detroit, Michigan; Los Angeles, California; Miami, Florida
METHODOLOGY	Descriptive study; comparative study
DATA COLLECTION INSTRUMENT	Interviews; scales for self-esteem, assertiveness, Machiavellianism, internality-externality, depression, anxiety, body image, and others
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	43

PURPOSE

Knowledge and understanding of the female substance abuser has been limited by the continuation of untested assumptions and unexamined stereotypes about addiction and women. The present study explores a number of the assumptions about female heroin addicts by comparing female addicts to male addicts and a female control group using measures of attitudes, beliefs, and self-perceptions.

METHODOLOGY

The samples consisted of 202 addicted males and 146 females from mixed-sex methadone maintenance and therapeutic treatment centers in Detroit, Los Angeles, and Miami, as well as a control group of 175 females from the same Detroit neighborhoods as the treatment center clients. The average addicted female subject was just under age 26, had not completed high school, was nonwhite (60 percent), was not currently married (81 percent), and was unemployed (84.9 percent). The average addicted male was 2 years older and more likely to be employed but did not differ significantly in years of school, race, or marital status. Comparison group women did not differ in age, race, or present employment status but were more likely to have finished high school, to be married, and to have been employed more steadily than the addict group.

All respondents were given face-to-face interviews lasting from 2 to 3½ hours. Measures for the study were self-esteem, Machiavellianism, internality-externality, depression, anxiety, counterdependency (i.e., discomfort with needs and concerns of others), assertiveness, sex-role identity, sex-role attitudes, and sex-role values. Many of the scales were developed by the Women's Drug Research Project at the University of Michigan. All measures used are described by Tucker et al. (1976).

RESULTS

In comparison to control women, addicted women are lower in self-esteem, higher in reported symptoms of depression and anxiety, more open to relationships, lower in both masculinity and femininity, and higher in assertiveness. Addicted women subscribe to traditional standards for role division between the sexes. They share a negative view of men with the control group.

The pattern of low self-esteem, depression, anxiety, and low masculinity and femininity may be attributed to the pressures of recently initiated treatment, the crisis state signalled by entry into treatment, the isolation and lack of social support experienced by addicted women, and the great number of life problems reported by these women. The women perceive the negative attitudes toward them and therefore tend to view themselves negatively.

The positive side is that female addicts are more comfortable with dependence, are no more Machiavellian than comparison women, and are equally assertive. They also exhibit social skills and a willingness to become involved with others.

Compared with addicted men, addicted women are lower in self-esteem, higher in anxiety and depression, less assertive, and have less sense of control over their lives. Addicted women are also less Machiavellian, are more open to relationships, have less traditional sex-role attitudes, and share negative attitudes toward female addicts. In a program oriented toward the needs of male addicts, women may be at a disadvantage.

The addicted women are more interested in interpersonal relationships than men and are more responsive to the feelings of others, but they have been taught to downplay these aspects of their personalities. Their devaluation of these characteristics is the result of the attitudes of the men that they come into contact with and of the realities of surviving in the drug culture. Treatment programs should develop these positive characteristics and train the women in skills that they will need.

Addicted women have their greatest difficulties in areas reflected by reactive measures; by measures of self-perception; and by feelings such as low self-esteem, depression, and anxiety, which are indicative of situational stress. The women tend to derive their feelings of self-worth from others, and the attitudes of others toward them are decidedly negative. However, their anxiety, low esteem, and lack of confidence, combined with health, economic, and interpersonal problems, may actually prompt the women to be receptive to drastic changes.

CONCLUSIONS

These results are only a preliminary step toward understanding the female addict. Researchers have yet to undertake the task of examining variations between female addicts. The attitudes and self-perceptions discussed here may vary considerably according to demographic characteristics such as ethnicity, age, and length and degree of substance abuse. They may additionally be affected by and also affect a woman's social relationships, her interactions with other adults, and with her children.

Also, it is not known yet which of these characteristics are related to or may be predicted from a woman's past history, which are definitely related to her present situation, and which of them may be the result of both past and contemporaneous experiences.

Further, some of these aspects appear to cluster together. By identifying these clusters through the formation of second-order indices, it may be possible to identify a variety of types of female addicts, each of whom have different needs and may respond best to different kinds of treatment.

Careful study of a variety of treatment modes and settings, taking into account these personality factors along with past history and present social situation, also needs to be done to develop greater understanding of the addicted female.

Cooperstock, R. Special problems of psychotropic drug use among women. Canada's Mental Health, 28(2):3-5, 1980.

DRUG	Psychotropics
SAMPLE SIZE	92
SAMPLE TYPE	Psychotropic drug users
AGE	Mean: 46
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Canada; United States; Great Britain
METHODOLOGY	Literature review; descriptive study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	29

PURPOSE

Numerous U.S. studies from the 1960s to the present have shown a 2:1 ratio of female to male users of psychotropics in general, with females more likely than males to be regular, steady users. The drugs accounting for the use differences between sexes are the minor tranquilizers and sedative drugs, particularly the benzodiazepines. Similarly high rates of use for females, especially for women aged 45 to 59 years, have been reported in a study in Oxfordshire, England. A Saskatchewan, Canada, study has established that tranquilizers, as well as other sedatives and hypnotics, are prescribed four times more frequently for women than for men. This Canadian presentation reviews the literature on special problems caused by the use of sedatives and tranquilizers and reports the results of a study on motives for drug use.

SUMMARY

Frequently the first problem that women encounter in using benzodiazepines is dependence, which may occur even at normal therapeutic dose levels. A second major problem, cross-addiction, is particularly acute for women. They are more likely than men to relate mental health and alcohol problems to physicians, who then often prescribe tranquilizers. Benzodiazepines and alcohol are the second most frequent overdose combination in both the United States and Canada.

A growing body of research documents the cognitive, intellectual, and psychomotor deficits resulting from use of various benzodiazepines. All five drugs of this group tested in a 1977 study are associated with adverse cognitive effects, even though the medical and legal professions do not consider that daily therapeutic doses of the drugs should interfere with mental competence. A wide variety of functions, including attention and vigilance, decisionmaking, learning and memory, and psychomotor performance are affected. There is also a highly significant association between use of minor tranquilizers and the risk of serious road accidents. For example, flurazepam, prescribed for sleeplessness, may cause visual-motor impairment after 7 nights of use. Most of these skill impairments occur only with continuous drug use at or above therapeutic dose levels.

Economic, social, and personal costs are also associated with drug use. Many anxieties brought to the attention of physicians result from work pressures, underemployment, and similar problems. When the problems are defined as inherent in the individual, pharmacological solutions become acceptable and easy.

Females' motives for drug use were explored in a survey done by the author of 68 benzodiazepine users, 76 percent of them women with fairly high educational levels. Lengthy letters were also received from 24 individuals with experiences to share. In general, use of any substance intended to dampen affect is a means of maintaining existing social systems. For women, the problems are commonly associated with traditional female roles, i.e., wife, mother, houseworker. Women describe their drug use as an aid in maintaining a caring, nurturing relationship to their spouses and children. Drug use is at times the result of women's frustration at being dependent economically on their husbands and of their feeling of being trapped in a family situation in which communication has diminished. In other cases, drug use is the reaction to intolerable home situations, such as alcoholism of a spouse, or to conflicts in the maternal role generated by a difficult infant or by extreme role strain and inability to comply with traditional expectations.

CONCLUSIONS

Use of psychotropics is more prevalent among women than among men. Such drug use in women is frequently the result of conflicts in their social roles, which can be diminished through structural changes in their lives. The question remains what alternatives are open to members of society in general and whether tranquilizers are adequate solutions to social stresses. Research is needed into physicians' understanding of this use of prescriptions and into the introduction of community-based programs as an alternative solution.

Cooperstock, R. Sex differences in psychotropic drug use. Social Science & Medicine, 12(3B): 179-186, 1978.

DRUG	Psychotropics
SAMPLE SIZE	30,353 (15,775 males; 14,578 females)
SAMPLE TYPE	Abusers
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Ontario, Canada
METHODOLOGY	Literature review; descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Government statistics; Ontario Insurance Agency Data
DATE(S) CONDUCTED	1970-1971; 1973-1974
NO. OF REFERENCES	33

PURPOSE

Numerous studies have demonstrated that women exceed men in their consumption of psychotropic drugs by a consistent ratio of 2:1. The present paper reviews the literature on sex differences in symptomatology, attitudes toward symptoms, drug-taking behavior, and the patient-physician relationship. It also describes the results of a longitudinal study on sex differences in psychotropic drug use.

METHODOLOGY

Data derive from official Government figures on the total number of men and women visiting physicians in Ontario, Canada, in 1973 and 1974 and from Ontario Insurance Agency Data on prescriptions for psychotropic drugs in 1970 and 1971 and in 1973 and 1974. On the basis of these figures, male and female utilization of physician services and types of prescriptions written for patients can be determined.

RESULTS

Studies show a consistent pattern over time and place of women reporting more neurotic illness than men and of males' presenting more personality disorders than women. Women appear to exhibit a greater sensitivity than men to emotional and bodily reactions, or at least more willingness to express discomfort. Women are also more likely than men to seek help for symptoms of anxiety and generalized discomfort. Housewives, the unemployed, and the retired are most likely to use physicians' services for symptoms such as headache and fatigue. Contrary to the theory that married women who work suffer role conflict and role-overload stress, findings show that employment has great positive effects on women's mental and physical health.

Psychotropic drugs are consistently prescribed more frequently for women than for men, especially in the 35- to 49-year-old age group, although the level of drug use for males and females over age 50 is similar. Drug consumption patterns of single women and of all adult men do not differ significantly. The largest single group of tranquilizer users consists of nonworking housewives aged 35 years and older.

Essential to the explanation of women's drug use is the relationship of female patients to physicians. Modern medicine has moved from the 19th-century penchant for locating all women's problems in their reproductive organs to attribution of female illness to the weak female central nervous system or psychological inadequacy. Physician's attitudes toward female patients are also influenced by the traditional male-female dominance in interpersonal relations. Significantly, physicians report that females are twice as likely as males to report some form of mental disorder with vague symptoms. In the course of the last decade, problems of living have often become medical problems to be treated in a physician's office.

The Ontario data indicate that almost twice the proportion of women as of men received prescriptions for psychotropic drugs in both time periods examined (i.e., 1970-1971 and 1973-1974), and a higher proportion of women than of men received multiple prescriptions for each drug class. Having once received a prescription for a psychotropic drug, women had a better-than-even chance 3 years later of receiving another such prescription.

A decline in the proportion of both men and women receiving prescriptions for any psychotropic drug was evident from 1970-1971 to 1973-1974. The extent to which mixed or hidden psychotropics (antispasmodics or anticholinergics) increased in popularity over the time studied cannot be assessed. However, the reasons for the decline in drug prescription rates probably lie in the decline of prescriptions for sedative-hypnotics and antidepressants and in a major drop in prescriptions for amphetamines and other anorexiants resulting from a change in Canadian law. The rate of prescription for minor tranquilizers remained remarkably stable.

CONCLUSIONS

Mental health professionals and the pharmaceutical industry have promoted a drug-taking model that has contributed significantly to the medicalization and technocratization of human existence. Furthermore, most of the psychotropic drugs have side effects, and drugs may interact when being used simultaneously, especially as few physicians know how to predict safe and unsafe combinations. Psychotropics also pose the greatest risk of suicide--not only do they lead the list of drugs used for suicide attempts, but they are prescribed most often to the patients most likely to misuse them.

Critical to the understanding of sex differences in drug use is an insight into the expansion of the medical model to ever broader areas of individual lives. This expansion, together with the pharmaceutical development of psychotropics, has sanctioned perpetuation of a culture-bound view of women and provided the tools that suppress rather than treat their problems.

Cooperstock, R. Psychotropic drug use among women. Canadian Medical Association Journal, 115(8):760-763, 1976.

DRUG	Psychotropics
SAMPLE SIZE	30,353
SAMPLE TYPE	Insurance plan members
AGE	All ages
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Ontario, Canada; cross-sectional
METHODOLOGY	Literature review; secondary analysis
DATA COLLECTION INSTRUMENT	Official statistics; insurance records
DATE(S) CONDUCTED	1970-1971; 1973-1974
NO. OF REFERENCES	26

PURPOSE

Many studies have shown that women's use of psychotropic drugs is about twice that of men. This ratio has remained unchanged over time and place. This paper presents data from several sources in order to illuminate the meaning of this ratio. Particular attention is given to a longitudinal study of psychotropic drug consumption in Ontario, Canada.

METHODOLOGY

Data sources included a review of recent literature, official statistics for Ontario, and the computerized records of a prescription insurance agency in Ontario. All prescriptions dispensed during 1970-1971 and 1973-1974 to the 30,353 individuals who were members of the insurance plan during both years were examined. Proportions of males and females receiving prescriptions for various categories of psychotropic drugs were determined.

RESULTS

Prevailing medical views of women conform to prevailing cultural attitudes regarding women's proper role. Modern medical views locate most women's problems in a weak central nervous system or psychological inadequacies. Changes in women's roles in society are commonly viewed as producing increased stress, which has resulted in increased psychiatric or psychosomatic illness and the consequent increased use of psychotropic drugs. Women have consistently reported more neurotic illness than men over time and place, while males predominate in personality disorders. Women also consistently report more symptoms of both physical and emotional discomfort than men and more frequently seek help for these discomforts.

With the same number of symptoms reported, men are less likely to take medicines than women, as shown by data from several countries. A New Zealand study also revealed that married women consistently received at least twice as many prescriptions for psychotropic drugs as either nonmarried women or men.

Physicians also have different perceptions toward men and women. Medical advertisements have been found to present pejorative attitudes toward female patients. A 1972 survey revealed that Scottish general practitioners viewed such problems as sleeplessness, general feelings of unhappiness, headache, and fatigue as strikingly more common among female patients than among male patients.

In Ontario, about five prescriptions per capita are dispensed each year, including just over one psychotropic prescription. The average prescription contains just under a month's supply of a drug. Over half of the visits to physicians were made by women; for every 100 visits made by males, 114 are made by females.

In 1970-1971, 18 percent of the males and 31 percent of the females received one or more prescriptions for a psychotropic drug. In 1973, the respective percentages were 14.5 and almost 24. In addition, more females than males in each period received multiple prescriptions. Moreover, 7 percent of the males and 15 percent of the females received a prescription for a psychotropic drug during both periods. Similar patterns were found for minor tranquilizers, sedative-hypnotics, and antidepressants. Thus, a person who had received a prescription for a psychotropic drug had a better than even chance 3 years later of receiving another such prescription. However, the overall prescribing of psychotropics declined between the two periods. Psychotropics other than tranquilizers accounted for this trend.

Both mental health professionals and the drug industry may have contributed to the psychic distress they seek to alleviate through drugs. Medical workers have seen many physical problems resulting from drug use, including side effects, dependence, and adverse effects of drug interactions. In addition, psychotropic drugs have become the most popular agent for persons attempting suicide.

CONCLUSIONS

The use of psychotropic drugs needs to be viewed in a perspective broader than that of individuals and their psychic difficulties. Sex differences do exist regarding the taking of psychotropic prescription drugs. Beyond these differences, it appears that certain life situations produce more illness and help-seeking behavior. The suggestion that contemporary women filling numerous roles have somewhat less illness and take fewer tranquilizers and sleeping medications than women filling the traditional housewife role calls into question the view that pressures from multiple roles are causing problems that lead to increased use of psychotropic drugs among women. The expansion of the medical model to include more aspects of people's lives and the development of psychotropic agents have influenced the medical profession by sanctioning traditional views of women and providing drugs to treat the "problems" seen in them.

Cooperstock, R., and Lennard, H.L. Some social meanings of tranquilizer use. Sociology of Health and Illness, 1(3):331-347, 1979.

DRUG	Tranquilizers
SAMPLE SIZE	92
SAMPLE TYPE	Users
AGE	Young adults; mature adults; aged (mean: 46; range: 23-74)
SEX	Both (76 percent female)
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Toronto, Ontario, Canada
METHODOLOGY	Retrospective survey; descriptive study
DATA COLLECTION INSTRUMENT	Group discussions; letters
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	35

PURPOSE

The growing use of tranquilizers, especially among women, suggests the need for an examination of the consequences of such use and the functions served by these drugs in social as well as pharmacological terms. This paper used a natural history approach in an exploratory study of the social and behavioral effects of the use of tranquilizers by both men and women.

METHODOLOGY

The study was conducted in Toronto, Ontario, Canada. The participants were volunteers who responded to a newspaper announcement asking for persons interested in discussing the consequences of their use of tranquilizers. A total of 68 persons took part in 14 group interviews emphasizing free discussions on the function of tranquilizers in relation to maintaining a given social role. The physical effects of tranquilizers were not a focus of the study. Both authors were present at the discussions, which lasted about 2 hours each and were tape recorded. A total of 24 individuals who could not participate in the groups but wanted to offer their experience wrote lengthy letters to the authors.

The groups ranged in size from two to eight people. The volunteers had a mean age of 46 with a range from 23 to 74 years; 76 percent were females. Most had either university or postsecondary technical training and were or had been married. Over half were in the labor force, while 25 percent described themselves as housewives. The informants matched tranquilizer users on such characteristics as sex and age but had higher educational and occupational attainments than the Canadian population as a whole.

RESULTS

The main themes involved in both initial and continuing use of tranquilizers revolved around the problems of social roles and role conflicts. While reasons for initial use varied widely, continued use was most often discussed in terms of its ability to allow subjects to maintain themselves in a role or roles they found difficult or intolerable without the drug.

The most common role strains and conflicts mentioned by females centered around their traditional roles as wife, mother, and houseworker. One woman said she took diazepam (Valium) so that she could cope with a demanding social role as hostess. A woman with four teenagers reported that she took diazepam to protect her family from her irritability. Another woman took diazepam as an escape from an unsatisfying family situation. Many women reported initial tranquilizer use following the birth of children and the attendant physical and emotional strains. Women who continued tranquilizer use over a prolonged period expressed clearly conflicting attitudes regarding their maternal role. Almost all of the women described situations of extreme role strain, inability to comply with traditional role expectations, and the feeling that they lacked the right to express their dissatisfaction and preferences. They saw their husbands as having other escape routes when marital difficulties or obligations became burdensome.

Tranquilizer use was also initiated as a response to the strain of adapting to a new role, whether related to loss through widowhood or through separation. Continuing use of tranquilizers could also be a learned habitual mode of reacting to stresses, as in the case of a woman who first took tranquilizers when her father died and then again later when she was divorced.

In contrast to females, males tended to use tranquilizers to control somatic symptoms in order to perform their occupational role. Work stresses or new strains brought on by a change in jobs were cited as common reasons for tranquilizer use.

Although some subjects saw no alternatives to their continued use of tranquilizers, others, particularly those who had already discontinued using them, discussed alternative solutions to their problems. These included both individual and structural solutions such as yoga, relaxation exercises, strenuous exercise, consciousness-raising, and self-help groups, as well as paid full-time or part-time employment and changes in marital relationships or type of employment.

CONCLUSIONS

The biomedical model of disease is inadequate in explaining continued tranquilizer use. The ability of some middle class persons to cease tranquilizer use during or after making structural changes in their lives raises the question of whether such alternatives are open to all members of society, including the poor and the elderly. If such alternatives are not available, the acceptability of tranquilizers as adequate solutions to social stresses is a moral and ethical issue needing examination. The physician-patient relationship and its relation to tranquilizer use and the role of social strains in tranquilizer use by chronically ill persons should also be studied.

Coppolillo, H.P. Drug impediments to mothering behavior. Addictive Diseases: an International Journal, 2(1):201-208, 1975.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicted mothers
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	14

PURPOSE

The study argues that the necessary and sufficient cause for vulnerability to addiction is in the psychological pathology of the individual and that this pathology originated from developmental problems. For that reason, a model is developed to describe impediments to mothering by female addicts that render subsequent generations vulnerable to addiction in their turn.

SUMMARY

According to the best available evidence, the child's autonomous equipment for survival at birth consists of some reflexes, physiologic homeostatic mechanisms, and sensory capacity to perceive external and internal stimuli. To thrive, the child must have immediately available an adult who can respond to the signals and signs that the infant emits when subject to need tensions. The adult who perceives the signs undertakes mothering functions by drawing on empathy, factual knowledge, and memories to gratify the infant's needs. Need tensions must be relieved, for in a primitive way infants learn that having something done to them is associated with the disappearance of bad feelings. In time the relationship with the nurturing person becomes more important than the nurturance itself. When a mother tends her newborn, she is reliving the gratification that she experienced with her own mother and is experiencing the pleasure of suc-

cessfully living up to an ego ideal of motherliness. The gratification transactions leave behind memory traces in both mother and infant that form the basis for attitudes such as hope, confidence, and optimism, and for dialog.

Derailment of dialog occurs when a child's signals find no resonance in the environment because factors in the mother impede response. Lethargy in oversedated newborns may precipitate self-doubts in the mother. Further, the bonding process between mother and infant may be interrupted by externally imposed barriers such as hospitalization. Studies suggest that mother and child must be available to each other in the period critical for the development of successful symbiosis.

Female addicts frequently have little conscious or unconscious experience with mothering through their own mothers. Furthermore, female addicts tend to seek only material gratification from their object relationships and thus are not sufficiently gratified to relate to the infant. Finally, the infant's withdrawal symptoms impair its ability to stimulate mothering activities. What suffers in mother and newborn is the necessary symbiosis by which the infant's psychological and biological survival is assured.

For management of such situations, decisions must first be made as to whether the mother should keep the child, whether the mother will require hospitalization for her addiction, and whether she can provide the proper environment for the child's healthy development. If the mother is to keep the child, the hospital staff should arrange early and repeated contacts between mother and child. At the same time, therapists should avoid personal and social value judgments regarding addiction. If the child has to be placed, steps must be taken to assure that even during withdrawal the infant is held and fondled in the nursery.

CONCLUSIONS

The effectiveness of psychological cures for the adult addiction syndrome has not been great. This is perhaps because therapists tend to ignore the long-past early damage resulting from inadequate mother-child bonding when both mother and child are using or recovering from the use of drugs. The best attack on drug addiction in the future may well be directed toward the prevention of psychological vulnerability in the individual and not toward massive programs of social reform.

Cuskey, W.R.; Berger, L.H.; and Densen-Gerber, J. Issues in the treatment of female addiction: A review and critique of the literature. Contemporary Drug Problems, 6(3):307-371, 1977.

DRUG	Heroin
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	109

PURPOSE

Statistics indicate that about 20 to 30 percent of the heroin addict population (estimated at 391,300 in 1975) is female. About 0.3 to 0.4 percent of every urban population consists of female heroin addicts. A fact of great relevance is that the majority of addicted females are of childbearing age, with about 93 percent between 15 and 35 years. Nevertheless, little attention has been paid to pregnant addicts or to addicts with children and the problems of neonatal addiction.

Many of the children born to addicts are stillborn, are addicted at birth, or die shortly after birth because of withdrawal. The lives of the female addicts themselves are also threatened. Even with increases in female addiction, females have been vastly underrepresented in federally funded drug treatment programs. In 1975, only about 21.8 percent of the estimated female addict population received treatment. To find explanations for this low level of treatment, the present study investigates the problems of treatment programs for female addicts as described in the literature, evaluates the treatment of females in therapeutic communities, and provides a profile of the female addict.

Recruitment barriers. A significant proportion of women are discouraged from entering treatment because of the restrictions on enrollment; many programs do not admit pregnant addicts or addicted mothers, and others require that every addicted person with whom the addict lives enter treatment. However, female addicts may have serious problems relating to men and are reluctant to undergo treatment with them. At the same time, very little is known about the process and implications of addiction among women. Most popular treatment models, including the physiological model, the social competence model, and the personality model, are based on premises about drug use and preconceived societal roles that may apply to men but not necessarily to women and their needs. Many therapeutic communities require a strong motivation to change as a prerequisite for admission. However, female addicts tend to be more depressed and more dependent than males and less inclined to change. Addict prostitutes frequently fail to see treatment as an attractive alternative to their drug world role.

Females who do enter treatment tend to be childless, to have sporadic incomes from sources other than prostitution, to be highly anxious, and to have been using drugs for longer than 5 years.

Retention barriers. The attrition rate in female addict programs is very high--almost 50 percent. Early terminations are attributed to the same reasons as the low entry rates (e.g., use of therapeutic techniques based on male-oriented models and to deterioration of mixed-group encounter sessions that end up as abusive attacks on female addicts). Discrimination against women is pervasive in most treatment settings, where female addiction is viewed as a function of sexual or interpersonal problems, women are placed in traditional female jobs, male staff members dominate treatment, women's sensitivities relating to their sexual practices are abused, homosexual women are humiliated, and male staff members sometimes proposition female addicts.

Problems particular to females are neglected. These problems include menstrual irregularities and obstetrical difficulties; potential danger to the health of infants of addicts; and psychological problems, including bad feelings about their bodies, insecurities about their intelligence, extreme anxiety, and lack of self-esteem. Women who drop out of treatment programs have a particularly high level of psychological disturbances, negative familial circumstances, severe forms of alcohol and drug abuse, and depression and identity diffusion. The likelihood of retention is increased through the use of women's groups and female counselors and by legal pressure when women have entered the program via the courts.

Program efficacy. The discussion of program effectiveness is complicated by methodological limitations of existing evaluative studies. These studies generally lack a clear conceptual model on which to build hypotheses, uniform definitions of variables and indicators, and adequate instrumentation and timing of measurement. Simple pretest/posttest designs do not measure long-term changes. Sample sizes are generally too small to warrant sweeping generalizations, and sample attrition introduces unwanted biases.

Existing outcome studies for female therapeutic community residents indicate that addicted females fare better in therapeutic communities than in methadone maintenance or drug-free outpatient settings and that a greater proportion of males than females reduce their opiate and nonopiate use. Females greatly reduce alcohol use, but more women than men use barbiturates, sedatives, amphetamines, and marijuana. In terms of antisocial behavior and criminal activities, women achieve greater success than men. However, no educational or skill advances are made by female addicts during treatment. Most remain unemployed after treatment, their emotional needs are unmet, and about one-third of the women still have heroin abuse problems. The current treatment modalities do not equip the female with survival skills necessary for drug-free existence and do not alter her basic psychological problems. Successful reentry into society requires aftercare in the form of material assistance, psychiatric counseling, reentry planning, and birth control information.

A model of female addiction. A conceptual model of female addiction is crucial to any future attempt to control the growing problem. The model notes that a number of family factors precede female addiction (e.g., low socioeconomic status, family disorganization, intrafamilial pathology, sexual abuse and seductive fathers, and physical and emotional battering). Early acting-out may be reflected in school behavior problems, early pregnancy, commission of illegal acts, running away, and psychological problems. The effects of a troubled childhood may appear as a full-blown deviant lifestyle between the ages of 16 and 20 years. Women are usually introduced to heroin by their peers, continue drug use to avoid withdrawal and find euphoria, and become

immersed in an addict life without job skills other than for prostitution. In this situation, they develop personality disorders, anxiousness, hostility, depression, sexual identity and self-concept disturbances, and low levels of self-esteem. Within these circumstances, addicted women are isolated and lonely, without an adequate social support structure.

CONCLUSIONS

Literature shows that despite the growing number of female addicts, treatment programs are not equipped to attract or retain the women in need of treatment. Most programs are male oriented and do not respond to the emotional or vocational needs of female addicts. Therapeutic communities are successful only in reducing female addicts' level of criminal activities and alcohol consumption. Successful programs would require extensive reentry assistance and vocational training.

The female addict is characterized by environmental and familial disturbances in childhood and acting-out behavior in adolescence, followed by a lifestyle of deviance--unemployment, criminality, psychological problems, and medical complications. Any future attempt to treat female addicts must be based on a viable conceptual model of female addiction.

Cuskey, W.R.; Premkumar, T.; and Sigel, L. Survey of opiate addiction among females in the United States between 1850 and 1970. In: MSS Information Corporation. Psychotherapy & Drug Addiction, I: Diagnosis & Treatment. New York: MSS Information Corp., 1974. Pp. 55-88.

DRUG	Opiates; multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	80

PURPOSE

Any discussion of female addiction must start with the obvious fact that females are different from males and that the interaction of addiction with these differences must have characteristic social, psychological, and physiological results. The differences are not only physical; they are also related to roles, functions, and freedoms of females in society and their ability to cope with the problems that addiction raises. There are also differences among various kinds of females and among individuals. Severe drug abuse tends to impose its own personality on that of the addict, particularly in America, where the cost usually imposes a criminal lifestyle. The crime patterns of women, too, are distinct from those of men. To provide some basic facts on patterns of drug addiction, the present study traces the history of female drug addiction from 1850 to 1970 and reviews social characteristics of female narcotic addiction, as well as its effects on family life and the offspring of addicts.

SUMMARY

History. In the period 1850 to 1921, drug addiction was even more common than at present, and female drug addicts outnumbered male addicts by two to one. Most addicts of both sexes were white. Most of the addicted, including the vast number who became addicted during the

Civil War, were helped to this condition by the medical profession. The highest percentage of female addicts started by taking opiates to relieve pain, rather than for euphoria or escape.

Opium was cheap and in widespread use in such commonplace medicines as cough remedies and cure-alls. Most of those addicted were respectable and health-conscious Americans, particularly women. The drug was even regarded as a respectable substitute for alcohol. Various types of Victorian women turned to patent medicines for relief from pain, tedium, and nervous tension, just as many women today use tranquilizers, barbiturates, and amphetamines.

The Harrison Narcotics Act of 1914 started the change that modified the patterns of American drug control. Drug clinics legally distributing drugs to addicts were closed, and women reduced their use of drugs, as they could no longer be obtained legally over the counter. A new pattern of illegal, black-market drug distribution was superimposed over the older legal system. In the period between the wars, opiate addiction declined, and opium became the preferred drug for both males and females.

In 1935, Federal drug hospitals were established at Lexington, Kentucky, and Fort Worth, Texas, giving the Federal Government a prominent role in drug control efforts. Emphasis was placed on prevention and control through custodial and punitive means rather than through treatment. Studies in this environment have shown that female addiction, like female alcoholism, tends to be either hidden or tied in with male addiction.

In World War II women did not become as involved in substance abuse as men. In 1952, the World Health Organization established formal definitions for addiction and habituation, which were then expanded in 1964 and 1968. It has since been determined that tranquilizers, antidepressants, amphetamines, diet pills, barbiturates, and opiates are commonly abused by females.

Behavior and social characteristics. Onset of addiction among females appears to have occurred at progressively younger ages over the period 1929 to 1970, particularly among blacks and other minority-group users. Addicts are predominantly from large cities, with over half of all female addicts from New York City. Minority members make up the majority of all addicts, but whites still predominate among women, although the gap is narrowing. As time passes, female addicts will become increasingly black, Puerto Rican, and Mexican American, with a higher national percentage of Catholics and nonbelievers.

The developing patterns of opiate addiction, particularly involving heroin, become manifest and intense in blacks before whites, in the poor before the well-to-do, and in males before females, but whites and females have been catching up in the last decade. The progression from marijuana to heroin or other hard drugs is also race- and religion-related, being associated predominantly with the urban pattern and black use. White women from the South still obtain their drugs from physicians, while almost 90 percent of black users are introduced to drugs by their peers. To the long-term female addict, opiates are no longer used for "kicks" but to prevent discomfort and withdrawal.

There is a great deal of evidence of deviance among addicts, and much of it precedes drug use. Addiction may be a way of coping with intolerable stress for maladjusted people. As addiction becomes more widespread and the ghettos deteriorate further, much of the blame for deviancy must be shifted from imperfections of personality to imperfections of environment. However, the incidence of personality disorders and psychological disturbances is high among female addicts even in childhood. On the other hand, female addicts commit fewer violent crimes than male addicts, as prostitution and dependence appear to be adequate means of supporting female addicts' drug habits. The rate of homosexuality is particularly high in female addicts.

Family life and pregnancy. Female addicts, like males, frequently come from malignant familial environments characterized by poverty, broken homes, psychopathology, and lawlessness. Regardless of whether addicts are reared by rich or poor parents, their homes are characterized by instability, emotional thwarting, and deprivation. Female addicts almost always have some history of alcoholism in their families. In such environments, physical health and proper nourishment have low priorities, and mental health is under constant siege.

Female addicts tend to have marital difficulties and seek out trouble by marrying other addicts with similar deviant backgrounds. Despite marital difficulties, female addicts do tend to get married at an ever increasing rate. Many of the marriages end in divorce, resulting in a

revolving-door sort of situation. Into this environment of poverty, disturbance, and pathology are born children who must try to build adequate personalities.

Female addicts rarely seek to maintain good health to insure healthy babies and have difficulty in mothering successfully. Labors of addicts tend to be premature and long in total length. Babies typically suffer from low birth weight and withdrawal symptoms. Many addict babies are miscarried, stillborn, or die soon after birth as a result of prematurity or the toxicity of the drugs themselves.

Nurses are a distinct group of female addicts who have access to drugs through their work. They are usually older than the average addict (about age 42) and commonly use meperidine hydrochloride (Demerol).

CONCLUSIONS

The history of female drug involvement and treatment is closely associated with society's attitudes toward drug use as reflected in the laws and law enforcement practices. Treatment is presently turning toward self-help and methadone maintenance. Even though the gaps between drug use by men and women and blacks and whites are narrowing, drug addiction in females continues to be closely associated with urban areas, poverty, disturbed homes and family life, and maladjusted personalities. This environment may be perpetuated in subsequent generations as a result of effects on infants of maternal addiction or as a result of inadequate mothering by addict mothers. At the same time, an emerging pattern of sedative hypnotic and stimulant abuse by middle class women seems to repeat the pattern of use in the late 19th century.

Cuskey, W.R.; Wathey, R.B.; Richardson, A.H.; and Densen-Gerber, J. Evaluation of a therapeutic community program for female addicts. Journal of Addictions and Health, 1(3):186-203, 1980.

DRUG	Multidrug
SAMPLE SIZE	304
SAMPLE TYPE	Addicted mothers in a therapeutic community
AGE	Young adults; mature adults (average age at admission: 23)
SEX	Female
ETHNICITY	Black; white; Hispanic
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Longitudinal survey; descriptive study
DATA COLLECTION INSTRUMENT	Sociological Autopsy; Tennessee Self-Concept Scale; Mother-Child Relationship Evaluation; and others
DATE(S) CONDUCTED	1974-1977
NO. OF REFERENCES	28

PURPOSE

The growing numbers of female heroin addicts, the larger numbers in the childbearing years, and the indications that a greater proportion are becoming pregnant and having children all constitute serious problems. More children are being born addicts, and both they and their mothers are at risk from the effects of addiction and the lifestyle accompanying heroin abuse.

The Odyssey House Mabon Parents' Demonstration Program (MPDP), begun in June of 1974 and continued through May of 1977, was designed to provide drug-free treatment to addicted mothers and their dependent children. The program was located on Ward's Island in New York City and could accommodate 40 adults and 40 children in a residential setting. This paper describes the program and the results of a before-and-after evaluation designed to test its effectiveness.

METHODOLOGY

The before-and-after evaluation was used to gather data at different times during the program and after clients had left the program. The pretreatment evaluation assessed antecedent family factors, episodes of acting out, and prior deviant lifestyles. Study instruments included the Sociological Autopsy, a 500-item interview instrument; two instruments for measuring deviant

behavior; a medical form; the Tennessee Self-Concept Scale; an attitudinal questionnaire; a mental status examination; and a Mother-Child Relationship Evaluation.

Cohort group analysis was conducted with treatment community subjects grouped in terms of the number of months of exposure to the treatment program. A followup group analysis was conducted for those who terminated or completed the treatment program by number of months exposed to the program. A total of 304 women were treated during the course of the 3-year demonstration project, although different and overlapping subgroups of the women completed different study instruments.

RESULTS

Program philosophy/requirements. The program operated on the philosophy that treatment and rehabilitation could best be achieved in a therapeutic community, where the client is relatively insulated in a closed community and continuous and multiple helping strategies are applied in a controlled environment. Apart from addiction status, the main criteria for admission were that the individual be pregnant or be a mother who wanted to have her child live with her during treatment. About three-quarters of the women were pregnant or brought a child into the program. Two-thirds of the women were heroin abusers; the others abused barbiturates, amphetamines, or cocaine. The average age at admission was 23 years. Almost half of the residents were black, 29 percent were white, and 13 percent were Hispanic.

Program phases. The program included three phases: the induction and motivation phase, the treatment phase, and the reentry phase. Initial referrals were voluntary or from the legal system, family or friends, and social agencies. Attrition during the first month approached 50 percent and was higher for voluntary patients than for the involuntary patients. Induction consisted of evaluations and the taking of the patient's history. Community residents interviewed the patient and gave her candidate-in status, in which she did manual work but had no voice in the running of the community. Group therapy took place daily. This phase lasted from 2 to 6 weeks.

The treatment phase, which usually lasted from 8 to 12 months, began with "the probe," in which the candidate-in had to prove her commitment to live by the Odyssey House philosophy and had to be approved by all of the probe's participants. During treatment, the patient progressed through three levels of increasing work responsibility in the community and continued therapy. The fourth level of responsibility marked the beginning of reeentry, which entailed specific personal obligations outside Odyssey House, as well as private therapy. Graduation from the program occurred after an average of 24 months.

Client pretreatment and admission characteristics. The women in the program had histories of many childhood family problems, including heavy drinking by parents, physical abuse, sexual abuse, sibling drug abuse, and parental arrests. Although one-fourth reported no difficulties in their childhood homes, the rest had high rates of prostitution, truancy, teenage pregnancy, running away from home, attempted suicide, and institutionalization. After the women began using drugs, separations, divorces, and criminal activity increased, while earnings from legitimate sources declined.

Evaluation outcomes. The longer the exposure and involvement in the therapeutic community, the greater the change toward less drug and alcohol use and less criminal activity. Other positive but minor changes included increases in employment, legitimate earnings, and self-perceptions of good health. The length of stay in the program was also associated with the development of more appropriate parental attitudes in the areas of acceptance, overprotection, overindulgence, and rejection. The patient's children who were tested had developmental profiles only slightly below those of normal children.

CONCLUSIONS

The women in the prgram had had much early exposure to personal trauma, family disorganization, and experiences with drugs among family members. The patients in the treatment community were less likely to use drugs and alcohol and less likely to become involved in criminal activities the longer they were exposed to the treatment program. Those who did become involved and were caught were likely to be terminated by the program. With more exposure to

the program, patients were also more likely to be employed and to earn more money, in part because they were generally not allowed to have outside work during the early treatment stages.

Dammann, G., and Ousley, N. Female polydrug abusers. In: Wesson, D.R.; Carlin, A.S.; Adams, K.M.; and Beschner, G.; eds. Polydrug Abuse: The Results of a National Collaborative Study. New York: Academic Press, 1978. Pp. 59-95.

DRUG	Multidrug
SAMPLE SIZE	300
SAMPLE TYPE	Drug abusers seeking treatment
AGE	Young adults; mature adults
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Intake questionnaires
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	0

PURPOSE

Studies on prescription rates for mood-modifying drugs indicate that women tend to be the major recipients. A general review of the literature suggests that abuse of tranquilizers and sedatives varies within the female population as a function of socioeconomic and marital status, with married women or lower income groups more likely than others to abuse drugs. The drug source also differs according to the age of the abuser, with older women and housewives more likely to secure drugs through a physician and younger and/or working women more likely to get them through nonmedical channels.

The disproportionate ratio of female to male "heavy" users of prescription drugs (2:1 in most studies) is attributed to a number of factors, such as women's tendency to have a negative view of themselves, to be more likely than men to express their distress, and to be more likely to take their complaints to a physician. In addition, physicians who commonly prescribe mood-modifying drugs when they are angry with patients or pessimistic about treatment outcomes tend to write more prescriptions to women, whom they identify as the most typical complaining patients. Finally, advertising for psychoactive drugs perpetuates the sex-role stereotyping associated with the use of these drugs.

The present study seeks to verify the findings in the literature by reviewing national statistics on female drug abuse.

METHODOLOGY

The data in this study on psychoactive drug abuse were collected through a variety of national reporting systems. The reporting systems are operated through nationally funded programs designed to treat mental illness (mental health centers), the abuse of drugs (Client Oriented Data Acquisition Process), alcohol (Alcohol Treatment Center Monitoring System), and drug episodes (Drug Abuse Warning Network). Data are restricted to people seeking treatment.

The primary instrument employed for the study analysis was the intake questionnaire, which solicits demographic data. Sampling biases result from the location and staffing patterns of the various programs, the criteria used to define various data elements, omission of certain data elements (e.g., number of children), and absence of criteria to differentiate use from abuse.

RESULTS

As general data on patterns of drug use indicate, women who seek treatment within polydrug projects are more likely to use barbiturates and sedative-hypnotics on a daily basis than are men, and men are more likely than women to have a pattern of illicit drug use. Both spouse-supported and welfare-supported women have a pattern of daily drug use, particularly of opiates, barbiturates, and psychotropics, and the motivation for such use is medication, not recreation. These women tend to use drugs in a solitary setting and to secure drugs through prescription sources.

For both the welfare-supported and spouse-supported groups, there is a self-perceived lack of vocational options. More than half of the spouse-supported drug abusers identify themselves only as housewives and another 16 percent as unskilled. More than 30 percent of the welfare-supported group consider themselves unskilled and another 12 classify themselves as housewives. The broad issue is not so much one of economic dependence as one of economic dependence coupled with poor resources to remedy the dependence. As a result, the woman who wants or needs to work has few options. The pattern of limited employment options coupled with economic need may be either a precipitant to or a result of drug use. In either case, the problem needs to be addressed as a critical treatment issue. One study, for example, found that the desire for paid employment among housewives, and not the role of "housewife" itself, was associated with the poorest physical and mental health, lowest educational levels, lowest income, and highest psychotropic drug use.

Men seen by the polydrug programs are more likely than women to indicate prior contacts with criminal justice agencies, and women are more likely to have had contact with mental health treatment providers. There are no sex-related differences in the use of emergency rooms or drug and alcohol abuse programs.

Only 21 percent of the female population has received no treatment prior to admission into the polydrug programs. The population of "hidden" drug users (i.e., those not yet identified and treated) is small, and the portion that is middle class is even smaller. This suggests that the hidden housewife drug user is not being reached by polydrug programs and that this user group might be better served through private physicians and hospitals, clinics, and community health programs.

Emergency room utilization by the female patient population is not strongly linked to suicide attempts. Instead, emergency room use reflects a number of overlapping problems such as drug overdose, medical crises secondary to drug use, and medical crises bearing no immediate relation to drug use. Emergency rooms are probably used by both male and female polydrug abusers in the lower income groups because of the prohibitive cost of private care.

The treatment history data of the female population suggest that polydrug abuse is a phenomenon that is seen by all major treatment systems and community service providers. For that reason, treatment systems, particularly community health centers, private practitioners, and emergency room personnel, should be trained to detect and treat drug problems.

CONCLUSIONS

National polydrug data suggest that there is no typical female polydrug abuser and that female polydrug users are not likely to fit the "middle class" stereotype. The image of the female polydrug user as a bored, middle class housewife abusing physician-prescribed pills must be altered, for the majority of abusers do not fall into this group. The female polydrug abuser generally lacks the educational and occupational background and employment history associated with middle class status. Treatment intervention modalities must thus range from job training and comprehensive medical care to reduction of the cultural stigma attached to drug treatment, which causes addiction to remain hidden. Further research is recommended on the prevalence of psychoactive drug abuse among female subgroups not included in drug treatment system data, on identification of abuse patterns among women seeking treatment in such settings as community mental health centers, and on the need for referral services in hospital emergency rooms.

Davidson, V., and Bemko, J. International review of women and drug abuse (1966-1975). Journal of the American Medical Women's Association, 33(12):507-518, 1978.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Not applicable
AGE	Not applicable
SEX	Female
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Worldwide
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	1966-1975
NO. OF REFERENCES	133

PURPOSE

During the decade from 1966 to 1975, research interest in the psychology of women increased. This paper reviews the international drug abuse literature on women during this time period, which coincides with the resurgence of the women's movement. It was chosen as the period of inquiry because of the expectation that the literature would reflect the movement's impact on scientific research.

A world search of scientific journals was conducted, using MEDLINE data bases, Excerpta Medica, Psychological Abstracts, and specialized bibliographies. Only articles that dealt with the female drug abuser were included, and literature omitting any discussion of the mother except as the producer of the infant was excluded. A total of 133 articles were found that dealt with the subject of women and drug abuse.

SUMMARY

No articles were found from Eastern Europe and the U.S.S.R., and only one appeared from the Far East. The literature from the United Kingdom, Australia, Western Europe, and the United States was generally similar until after 1970, when the American literature began to deal more

with the female drug abuser in relation to sex differences in health care delivery systems and differing needs. None of the other world literature reflects these changes, as the women's movement has been most fully developed in the United States.

Generating the list of 133 citations was a difficult task because of inadequate indexing in the relevant data bases. "Women" was a relatively new indexing term in the Index Medicus. In Excerpta Medica's section 40, entitled "Drug Dependence," the term "female" was seldom used and the term "women" was never used. Citations were found by tracking such clues as "maternal" and even "neonatal." Examination of Psychological Abstracts revealed no use of the terms "women" or "female," necessitating manual eyeball searching of lengthy sections on such general topics as drug abuse and heroin addiction. Other sources also either ignored women in their indexing or had few citations.

Over the decade, the research literature shifted in its main thrust. Early articles took little notice of the female drug abuser except as an epidemiological statistic and noted sex along with other variables such as ethnicity and age. Although women's function as a reproductive unit received increasing attention, reaching a peak in 1972, researchers took little interest in the mother-infant dyad or in the maternal portion of the unit. The woman was depicted as interesting only in her role as carrier of the fetus.

The characteristics of imprisoned female drug abusers received sporadic attention over the decade. About half the articles about female prisoners were done in England by P.J. d'Orban over a 4-year period.

The most exciting trend was the increasing interest in the female drug abuser as a woman, with attention to the patient's function as a wife, mother, and worker. A focus on women's needs began in 1971 and has increased over the last half of the decade. In 1974, half of the published articles on women and drug abuse dealt with special concerns of women, including such issues as mother/infant interaction, coping skills, specific treatment, and rehabilitation needs. The fact that these articles all come from the American literature underscores the importance of social changes occurring in this country in the context of the women's movement. However, the early literature reflected the apparent view that the male drug abuser was more representative of the whole group of patients.

CONCLUSIONS

Improved understanding of women's special needs will surely be reflected in the research in drug abuse. Among relevant questions are how family structures, childrearing, and childcaring are influenced by women's drug abuse and how patterns of drug abuse affect pregnancy, menstruation, and menopause. More work is also needed to identify stresses to which the female drug abuser is particularly vulnerable and to incorporate newer psychological, sociological, and psychiatric findings regarding women. Since the drug abuse literature seems to lag far behind other literature in terms of its interest in women, more female researchers may be needed to influence both the conceptualization of the problems and the final interpretations of the research findings.

Davis, R.C. Psychosocial care of the pregnant narcotic addict. The Journal of Reproductive Medicine, 20(6):316-322, 1978.

DRUG	Heroin; methadone
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Description
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	28

PURPOSE

The incidence of drug dependence in pregnancy appears to be increasing. Licit and illicit drug dependence in the pregnant patient presents the physician with a large number of medical, legal, psychological, and social complications. A multidisciplinary program emphasizing continuity of care is essential for the adequate management of most indigent, drug-dependent pregnant women.

This paper discusses treatment issues and the most successful recent treatment methods for these women. A program of chemotherapeutic and psychosocial support is outlined for managing the physical and emotional stresses that cause the pregnant addict to continue to abuse drugs, avoid prenatal care, and drop out of treatment.

SUMMARY

Pregnant women who are addicted to heroin are at high risk of anemia, infectious hepatitis, toxemia, venereal disease, and pelvic inflammation. Obstetric and neonatal complications are additional risks. Attempts at rapid medical detoxification with only brief or inadequate psychosocial support have generally resulted both in the women's avoidance of prenatal treatment and their return to the use of illicit drugs.

Methadone-maintained pregnancies have had a decreased incidence of premature and low birth weight infants, fewer medical and obstetrical complications, and significantly improved treatment retention rates in both prenatal and drug rehabilitation facilities. The neonatal withdrawal syndrome has increased in frequency, however, but its diagnosis is facilitated by the mother's being in treatment and knowing about the dosage. Where adequate psychosocial supports have not been available, however, methadone patients have often continued to use illicit narcotics and have been lost from treatment after the baby's birth.

To determine appropriate clinical and behavioral management methods and treatment goals, clinicians must assess a wide range of variables, including the patient's current pattern and history of addiction, housing conditions, sources of financial support, and quality of interpersonal and medical resources. Community variables, such as the availability and quality of street drugs, have an important bearing on whether or not ambulatory detoxification or even dose reduction is advisable. A coordinated multidisciplinary and flexible interagency approach emphasizing continuity of care is needed.

Needle puncture marks or early signs of withdrawal may be indicators of drug addiction among women not already in treatment, who are unlikely to volunteer information about their addiction. A team effort to reassure the woman about the availability of care and to enlist her as an ally in the treatment process should be provided. Although a wide range of methadone dose regimes and withdrawal techniques is used, most programs try to reduce methadone doses by the time of delivery.

By itself, methadone rarely induces any changes other than less participation in illegal activity. Interpersonal contacts and a support system that is sensitive to the patient's needs and emotional state are needed to produce more substantial behavioral changes. Patients' ambivalent feelings toward the fetus and irritability and depression associated with the discovery that change is not easy may result in missed appointments without the psychological support necessary to help in handling these feelings.

Multidimensional efforts to provide educational and emotional preparation for parenthood are also needed. Patients should have mothercraft groups available separate from those for nonaddicted patients. Individual, marital, or supportive family counseling should be provided for patients who are unable to benefit from group support. Economic and material assistance through such services as transportation and babysitting are also important aids in making treatment possible for pregnant patients.

Interagency staff training and coordination are also needed to develop an understanding of the problems and lifestyle of addiction and its treatment along with unexamined value assumptions that frequently undermine treatment efforts. Interagency, multidisciplinary inservice training conferences have improved continuity of care and treatment results. The involvement of ex-addict staff members in such conferences has both aided the communication of knowledge and served as a symbol of successful treatment. Such inservice training is an important ongoing supplement to more routine staff meetings at which patient care logistics and progress are reviewed.

CONCLUSIONS

A program of chemotherapeutic and psychosocial support for pregnant addicts should include the use of a drug such as methadone in order to make possible the psychosocial and medical aspects of prenatal care. Prenatal classes and groups should also be provided to educate patients and help them work through the issues related to drug use during pregnancy. Care should also include crisis intervention and counseling programs using both professionals and paraprofessionals and financial aid or transportation for patients. Drug program staff and hospital staff should also collaborate on management problems and on the elimination of prejudicial attitudes.

Densen-Gerber, J.; Wiener, M.; and Hochstedler, R. Sexual behavior, abortion, and birth control in heroin addicts: Legal and psychiatric considerations. Contemporary Drug Problems, 1(4):783-793, 1972.

DRUG	Heroin
SAMPLE SIZE	57
SAMPLE TYPE	Addicts in treatment
AGE	Range: 15 to 39
SEX	Female
ETHNICITY	Black; white; Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Clinical observation
DATA COLLECTION INSTRUMENT	Observations; therapy sessions
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	5

PURPOSE

The treatment methods used at Odyssey House, a drug-free, residential community treatment modality, is based on the premise that the abuse of drugs is only a symptom of an underlying antisocial personality and behavior disorder. A corollary to this central concept is that the antisocial behavior of the addict is manifest in all areas of interpersonal relationships.

This paper explores the antisocial sexual behavior of the female addict, her failure to use birth control devices, and her attitudes toward abortion. The paper also discusses the implications of these behavior patterns for treatment, prevention, and community education.

METHODOLOGY

The sample consisted of 57 former female drug abusers in treatment at Odyssey House in New York City. Of the sample, 27 subjects were white, 23 were black, and 7 were Puerto Rican. The female residents were interviewed in various group settings on past sexual activity, use of birth control methods, and incidence of abortion. Attitudes of the subjects were explored at length as part of the therapeutic process.

RESULTS

A high incidence of promiscuity and/or prostitution was revealed. The average age at first intercourse was 14.5 years, and histories of five sexual contacts per day for a period of years were not uncommon. Moreover, 37 percent of the subjects recounted homosexual experiences.

The attitudinal foundation on which birth control and abortion behavior are built is best termed "poor sexual identity." This prevailing constellation, delineated from the interviews, combines low self-esteem, hostility toward males, homosexuality coupled with brutality, and lack of heterosexual satisfaction.

Use of birth control at some time was frequent, suggesting that ineffective use arises from a lack of motivation, not lack of information. Patients lacked motivation to take positive steps toward control of the future and exhibited a fundamental desire to become pregnant as a means of becoming normal feminine women.

Oral contraceptives were used most often because of their availability and the lack of impulse control required. Few diaphragms and foams were used because they required planning and forethought. The low incidence of abortions signaled a desire to continue pregnancy, passive acceptance of life, and lack of self-concern.

The most characteristic personality traits of this group of patients were their profoundly low self-esteem and lack of female identity. The promiscuous sexual activity and the desire to become pregnant were expressions of a desire for warmth and for female identity. Lack of self-esteem was evident in the women's inclination toward relationships with males who abused them and in their involvement with homosexuality and bestiality.

While addicts sought to become pregnant to affirm their femininity, they lacked the control and ability to modify their behavior and to care for the child properly. The addict could not form an appropriate relationship and attachment to her child; she was at once hostile and overprotective. Essentially, the woman's only motive for having a child was to reassert her female ego.

Mandatory confinement, detoxification, and prenatal care appear to be the only means for protecting the unborn children of female addicts. Abortion is considered unwise, as it would further damage the addicts' weak esteem. To encourage the addict to use contraceptive devices correctly is a laudable goal, but given the antisocial behavior and attitude of the addicts it cannot be effected without therapeutic input.

Unfortunately, no means exist at present for controlling the behavior of the pregnant addict in the interest of the unborn child, except to the extent that certain particular aspects of her behavior are themselves illegal. Narrowly drawn, closely defined statutes in every State providing for compulsory commitment and treatment of pregnant addicts for the duration of the pregnancy are needed.

CONCLUSIONS

Birth control information or availability may have little effect on the actual prevention of pregnancy in addicted females, since the drive toward pregnancy is an underlying psychological dynamic. The protection of the unborn child requires a mandatory treatment law for pregnant addicts. Legalized abortion is not a viable solution as these patients have considerable resistance to termination of pregnancy. The protection of the child after birth merits court-appointed guardians.

d'Orban, P.T. Female narcotic addicts: A followup study of criminal and addiction careers. British Medical Journal, 4:345-347, 1973.

DRUG	Heroin
SAMPLE SIZE	66
SAMPLE TYPE	Incarcerated addicts
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	London, England
METHODOLOGY	Longitudinal survey
DATA COLLECTION INSTRUMENT	Prison/official records
DATE(S) CONDUCTED	1968-1972
NO. OF REFERENCES	12

PURPOSE

The relationship between narcotic addition and crime is a source of controversy, in part because of the wide variation in crime rates of narcotic addicts in different countries and because of changing patterns of drug abuse and crime within countries. Long-term followup studies of addicts who have committed crimes are of particular relevance to the subject of the relationship between drugs and crime.

This report describes the results of a 4- to 5-year followup study of 66 female narcotic addicts first examined in the Holloway Prison in London, England, between January 1967 and June 1968.

METHODOLOGY

The sample consisted of all women who were found on admission to be physically dependent on narcotics. Data from criminal records and from the Drugs Branch of the Home Office were used to determine their subsequent rates of crime, drug addiction, deaths, and admissions to hospitals. Continued personal contact was possible with 31 subjects who were readmitted to Holloway. A baseline followup study was carried out in September 1968 and the final followup was conducted in September 1972, with additional followup in each September during the study period.

RESULTS

During most of the followup period, between 50 percent and 60 percent of the subjects remained dependent on heroin or methadone. Only in the final year of followup was there any notable decline. At the end of the followup period, 36 percent were off narcotics, 32 percent were still addicted, and 15 percent had died.

Of the 63 subjects alive and still in Britain at the time of the baseline followup in 1968, 62 percent had committed a total of 137 further offenses during the subsequent 4 years of followup. Of these, 31 had returned to Holloway Prison at some time during the 4 years either on remand or to serve a sentence. Drug offenses and offenses against property were almost equally frequent and accounted for over two-thirds of all convictions. No evidence was found of a link between prostitution and narcotic addiction.

A significant association was found between continued commission of crime and continued addiction during the followup period. Addiction careers and criminal careers coincided in over three-fourths of the subjects, who tended either to continue displaying both forms of deviant behavior (46 percent) or to give up both (30 percent).

CONCLUSIONS

Generalizations about the link between crime and addiction may be true only in the limited context of a particular society and at a particular point in its history. Their association will depend also on the characteristics of the sample selected for study. For instance, in this study a significant association between addiction and crime in a sample of women from a penal institution was not unexpected. However, the association of narcotic dependence with delinquency in these women was not a temporary one but extended over a prolonged period of followup. Additionally, whether narcotic dependence or delinquency occurred first had no significant influence on the outcome. The only significant prognostic factor was the duration and extent of involvement in delinquency.

Narcotic addiction itself does not cause crime. Addiction and crime are parallel effects of common underlying personality and environmental factors that lead to socially deviant behavior. The close association between criminal and addiction careers found in this study is in keeping with this view.

Doyle, K.M.; Quinones, M.A.; Tracy, G.; Young, D.; and Hughes, J. Restructuring rehabilitation for women: Programs for the female drug addict. American Journal of Psychiatry, 134(12):1395-1399, 1977.

DRUG	General
SAMPLE SIZE	Not specified
SAMPLE TYPE	Staff of a residential therapeutic community
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Newark, New Jersey
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1974-1975
NO. OF REFERENCES	18

PURPOSE

There are two bodies of literature on the treatment of female addicts, one indicating that women do as well as men in existing programs, the other that women have needs that are not effectively met in traditional rehabilitation systems. Based on the latter premise, several programs have been initiated specifically to treat the female addict. To date, their retention rates have been low, staff turnover has been high, and posttreatment client outcome studies are incomplete. Because of these difficulties, the existence of programs directed solely at the female addict is in jeopardy. To promote understanding of the problems of these types of programs, the difficulties and adjustments of one therapeutic community are outlined as interpreted by the New Jersey Medical School's Division of Drug Abuse of the Department of Preventive Medicine and Community Health.

METHODOLOGY

The therapeutic community studied was Integrity House in Newark, New Jersey, with a capacity of approximately 125 clients and a treatment philosophy based on the Synanon/Daytop model. In response to a study critical of the program's ability to meet the needs of its female clients, several female staff members were hired in 1974 and 1975, and a greater emphasis was placed on

treatment programing specifically for female clients (phase I). After conflicts between male and female staff arose, a separate program was designed for the 18 female clients and an all-female staff was assigned (phase II). The phase II program developed its own set of problems, and it closed in November of 1976, with the remaining four clients returning to the coed program.

After the failure of the phase I program, all staff involved in the program during its 10 months of operation (10 men and 10 women) were interviewed using a structured, open-ended technique. The interviews were recorded and transcribed for analysis. In analyzing the interviews, researchers extracted all statements relating to pertinent areas; classified the subjects' sex, race, age, and position in the program; and tested the differences by each variable using the Cochran Q test for related samples.

A separate analysis was made of the phase II program by observing therapy groups, staff meetings, individual counseling sessions, and routine daily activities. This paper reports and compares the results of these two analyses.

RESULTS

The Integrity House program was plagued by significant differences in the perceptions of male and female staff during phase I. Female staff felt that their innovations in women-oriented program activities were important and effective clinical tools, but the male staff members viewed these changes as frivolous. Further, male staff insisted that a coed environment was essential to successful treatment, while the female staff asserted that success could be accomplished only in a separate, all-female program.

Phase II brought about a number of major changes. First, the Synanon model of behavior modification was abandoned in favor of a reason-based approach. The now all-female staff began to view their clients first as women and second as addicts, which unfortunately led to an overidentification between staff and patients. This, in turn, meant that staff and patient roles became confused, and treatment suffered. Motherhood was redefined as a responsibility rather than as a privilege as it had been during phase I, and frequent visits by children were encouraged instead of having to be earned. Emphasis was shifted from building a feeling of reliance on the treatment program to development of skills with which to succeed in the outside world. Finally, stereotypical women's activities were played down, and the women did a great deal of renovation work on the facility.

In this program (as in others), social services became confused with a social movement. The staff of phase II was so influenced by the uniqueness of the program that they transformed the center into a social cause. As a result, staff became sensitive to criticism from outside and inside the program, and they expected support from the clients they were supposed to be treating. But the clients' psychiatric problems and low self-esteem prevented them from being able to become advocates of the cause, and, lacking clear focus, the program eventually failed.

CONCLUSIONS

The success of women's residential treatment programs is hindered by the tendency of female staff to make the programs into social causes rather than to provide social services. Effective treatment requires further research on women's special needs and strengths and restructuring of existing programs to meet these needs and use these strengths. Special training needs to be devised for female staff to enable them to distinguish between their own ideals and the needs of their clients.

Eldred, C.A.; Grier, V.V.; and Berliner, N. Comprehensive treatment for heroin-addicted mothers. Social Casework, 55(8):470-477, 1974.

DRUG	Heroin
SAMPLE SIZE	20
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults (range: 20-38)
SEX	Both
ETHNICITY	18 black; 2 white
GEOGRAPHICAL AREA	District of Columbia
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Observation; interviews
DATE(S) CONDUCTED	Summer 1972
NO. OF REFERENCES	16

PURPOSE

Many male and female addicts, reportedly between 50 and 75 percent, have children, many of whom live with their parents. Children are an important force in their addict parents' lives, either as motivation for giving up drugs or as an additional strain at a time when parents, particularly mothers, need time for treatment. At the same time, the children of addicts are a concern in their own right, as their mothers' drug use may cause a number of problems ranging from congenital abnormalities to inadequate infant care and lack of social stimulation. Addiction in parents may even carry the lifestyle of drug abuse and criminality into succeeding generations.

The present study evaluates a comprehensive treatment program for addicted parents and their children that views the addicted parent and the children as parts of a single interaction process, with each family member affecting the lives of the others. The program intervenes at a point in the cycle when a need exists.

METHODOLOGY

The study sample was chosen from the methadone maintenance program of the Narcotics Treatment Administration of the District of Columbia Department of Human Services. Ten pairs of

clients were selected from those who needed and who had requested intensive family casework. The pairs were closely matched for sex, race, family size, and ages of children. Nine of the pairs consisted of women and one, of men. One of the pairs of women was white; the other pairs were black. The subjects ranged in age from 20 to 38 years and had been addicted for 2 to 7 years.

One member of each pair was randomly assigned to the treatment group; the other, to the control group. The 10 control group clients underwent the usual NTA treatment, which does not, as a matter of course, involve intensive family casework. Social services were available to these clients, but the clients had to take the initiative in securing them.

Each treatment group member was referred to a Social Rehabilitation Admnistration (SRA) caseworker, who immediately began to help secure services and to provide counseling, even in jail, if necessary. In the process the worker learned a good deal about the backgrounds of the clients and assisted them in meeting their emotional needs. An NTA counselor focused specifically on the drug problem. Clients remained at an induction center for 3 weeks until they were stabilized on methadone and were then transferred to a stabilization clinic. At both clinics, patients received regular drug counseling, daily at first and later at least twice a week. During the course of the project, the SRA caseworker and NTA counselors were in close contact, and monthly committee meetings were held during which cases were reviewed by the joint advisory committee.

RESULTS

Comparison of the progress of treatment clients and control clients 8 months after they had entered the NTA shows that treatment clients made significantly more clinic visits than control clients. The intensive family casework augmented rather than replaced casework. The opportunity to discuss personal, home, and family problems with caseworkers apparently contributed to the clients' greater involvement in the NTA program. In addition, the treatment group had only half the proportion of urine tests found positive for drugs than the controls, even though treatment clients actually submitted to more frequent urinalysis than did controls.

Treatment clients were enthusiastic about continuation of the project. An informal followup study of the treatment clients a year and a half later indicated that most were doing well; eight were drug free, four were employed, and four were occupied full time as mothers of young children. One woman and the only man were unstable and/or uncooperative.

Success of the program is attributed to use of a caseworker to solve identifiable, practical social problems; to maintenance of continued contact with the clients in their homes, hospitals, and even jails; and the actual dynamics of the process between the worker and the client. The approach appears to be particularly useful for heroin addicts who are mothers.

Further research is needed on measures of the effects of a mother's heroin addiction on her children and on changes that occur as the result of treatment. Programs might be enhanced by including halfway houses in which clients and their children could live apart from other addicts and where women could learn the skills necessary for caring for themselves and their homes.

CONCLUSIONS

Comprehensive family services incorporated in a drug treatment program have proved successful in dealing with the drug and personal problems of addicts, particularly female addicts. The outreach approach facilitates treatment of clients, particularly mothers of small children, in a variety of situations. The need for involvement of treatment personnel in solving the practical, interpersonal, and psychological problems with which the client must cope is emphasized.

Eldred, C.A., and Washington, M.N. Interpersonal relationships in heroin use by men and women and their role in treatment outcome. The International Journal of the Addictions, 11(1):117-130, 1976.

DRUG	Heroin
SAMPLE SIZE	158
SAMPLE TYPE	Addicts in treatment
AGE	Young adults (mean: females, 24.96; males, 24.94)
SEX	Both
ETHNICITY	Black; white
GEOGRAPHICAL AREA	District of Columbia
METHODOLOGY	Correlational study
DATA COLLECTION INSTRUMENT	Structured interviews; treatment program intake data
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	10

PURPOSE

Research and clinical reports have focused on patterns of the spread of addiction, on sex differences in the social milieu surrounding drug use, and on the interpersonal and family dynamics conducive to drug use or supportive of rehabilitation. This study attempts to incorporate these various approaches into a multifaceted examination of the importance of social or interpersonal factors in heroin use and drug rehabilitation.

METHODOLOGY

Data derive from interviews with 79 female clients and 79 male clients at the time of their intake to the District of Columbia Narcotics Treatment Administration (NTA), a city agency providing methadone maintenance, detoxification, counseling, and urine surveillance to Washington's heroin-addict clients. The female group includes significantly more white clients, significantly more clients between the ages of 20 and 29 years, and fewer teenagers than the male group.

The research instrument is a structured interview schedule. Its questions concern the social setting of the first and usual use of heroin, the living situation at selected points in the drug

history and presence in the household of other heroin users, the use of drugs by spouse or "friend," perceptions of the feelings of significant others about the drug problem, awareness of the role of others in the subjects' own addiction, efforts of others to encourage or discourage entry into treatment, and addicts' own efforts to influence others to avoid drugs. The interview schedule is administered immediately after intake interviews. Responses are grouped into categories, and those used in the data analysis represent consensus judgments by at least three of four judges. Intake counselors and normal NTA channels supply additional information.

RESULTS

Social circumstances. There are significant differences in the way men and women use and acquire drugs. Males are usually introduced to drugs by someone of the same sex, while most females are introduced to drugs by a male. A fairly large minority of women start to use drugs under the influence of another woman, but men rarely try or use drugs with women. Females are more likely than males to acquire drugs from someone else, often free, rather than buying them directly.

Living situation. At the onset of drug use, women are more likely than men to be living alone or with their children; men are usually living with parents or relatives. Also, men are more likely to fall into the "never married" category than females. These differences are probably attributable to the large number of male clients still in their teens in the sample and to the slightly higher mean age at which drug use began for women in the sample (20.67 versus 19.61 for males). Overall, the incidence of relationships with members of the opposite sex is the same for both groups. Furthermore, females are more likely than males to have lived with a current or previous heroin user while first attempting to withdraw from heroin use or during present or previous involvement with the NTA program. Women are also more likely than men to have spouses who are current or previous heroin users.

Interpersonal influences. Three-fourths of the combined group report that a spouse or friend of the opposite sex has urged them to give up drugs; half have been urged by other friends to give up drugs, and half have suggested that friends enter drug treatment. Only 16 percent had been dissuaded by others from entering treatment. Both sexes mention friends, spouses, and relatives as being the most unhappy about their drug use. However, female clients are more likely to mention their children as the most unhappy group. Family of origin or in-laws are considered by subjects to be the most helpful and same-sexed friends and other users, the least helpful in detoxification efforts.

A total of 49 clients belong to a supportive milieu group (i.e., live in a situation free of heroin users and supportive of treatment), while 67 clients belong to a nonsupportive milieu group (i.e., live with previous or current heroin users and have been discouraged from entering treatment). However, no relationship can be demonstrated between supportive or nonsupportive group membership and treatment progress. Only encouragement by opposite-sexed partners that clients enter treatment positively influences treatment length.

CONCLUSIONS

The social milieu surrounding heroin use varies as a function of sex. The tendency of both males and females to be introduced to drugs by males may have a probabilistic basis in the greater number of male heroin addicts in the population at large or may be the result of the power structure or status hierarchy implicit in male-female relationships. The significance of interpersonal influence variables for treatment outcome is rather ambiguous and requires further detailed exploration. However, clients undergoing treatment should be encouraged to give some thought to the role that other people play in their drug use and to understand that interpersonal influence, as a normal part of life, does not represent weakness on their part. With sharpened perceptions of their social environment, they might learn to manipulate the social variables in their lives to provide maximum support for rehabilitation efforts.

Eldred, C.A., and Washington, M.N. Female heroin addicts in a city treatment program: The forgotten minority. Psychiatry, 38(1):75-85, 1975.

DRUG	Heroin
SAMPLE SIZE	158
SAMPLE TYPE	Female heroin addicts
AGE	Young adults (mean: females, 24.96; males, 24.94)
SEX	Both
ETHNICITY	White; black
GEOGRAPHICAL AREA	District of Columbia
METHODOLOGY	Descriptive study; comparative study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	24

PURPOSE

A substantial gap remains between information available on male addicts and information relating to female heroin addicts. Mere inclusion of females in a study sample does not guarantee that issues relevant to their lives are adequately investigated. Concern with the stereotypical male addict may divert attention from traditionally female activities and may bias interpretations of the underlying causes of female drug use. Inadequacies in the research on female addicts are reflected in the treatment of female addicts. The present study seeks to increase the knowledge of female heroin addicts by providing a sketch of a group of women at the moment they enter a program for addiction treatment.

METHODOLOGY

Study data derive from 79 female clients and 79 male clients interviewed at the time of their intake to the District of Columbia Narcotics Treatment Administration. The mean age of the sample was 24.96 years for females and 24.94 years for males. The female group contained more clients between the ages of 20 and 29 years, fewer teenagers, and significantly more whites (11 percent for females versus 3 percent for males) than the male group. About 63 percent of both

groups had been admitted to the program previously, and 63 percent entered treatment voluntarily.

Counselors at the central intake facility administered a structured interview schedule permitting open-ended responses. Relevant areas of inquiry were current life situation, need for employment and schooling, care of children, use of drugs during pregnancy, contraception, and preferences regarding the sex of treatment personnel.

RESULTS

Significant differences between men and women were evident in their life situations and the social relationships within which drug use occurred.

Male and female addicts did not differ significantly in the mean number of years of heroin use or in the age at which drug use began. Males were generally introduced to heroin by a member of the same sex, and women, by a member of the opposite sex. Women were also more likely to use heroin with mixed groups than were men, who rarely used drugs with women. Further, females were more likely than males to have gotten their drugs from someone else rather than acquiring them themselves. About 40 percent of the female respondents had worked as prostitutes, the vast majority of them after having started heroin use.

More than half of both males and females had never been married. Males were more likely than females to be currently married, and the groups were equally likely to be living with members of the opposite sex.

Female clients were more likely than male clients to have children (73 percent versus 51 percent). While children of male clients tended to live with at least one of their parents, frequently their mothers, only slightly more than half the children of female clients were living with at least one parent. In addition, children of female clients were more likely than children of male clients to be unhappy about parental drug abuse. Of those who responded, 24 percent of the males and 40 percent of the females did not wish to have any more children. Yet the majority of the clients did not practice contraception consistently. A substantial number of clients were aware that heroin use during pregnancy could result in neonatal addiction, but many harbored misconceptions about other effects.

The majority of clients were unemployed upon entering treatment. Significantly fewer females than males were employed, and more females than males received public assistance, although most received no assistance. Neither male nor female clients expressed any strong preferences with regard to the sex of their physician or counselor.

CONCLUSIONS

The female addict tends to be unemployed and receiving no financial assistance, to be currently unmarried, to have children who may or may not be living with her, and to want no more children but not relying on contraception. Because the majority of female heroin addicts are mothers, problems related to children should play a larger role in the treatment of female addicts, if only to halt the cycle of poverty and addiction in succeeding generations. Possible measures might include provision of psychological support for mothers' parenting efforts, assistance in practical problems and childrearing, dispensing information on child care and the dangers of addiction during pregnancy, and day care centers. Female addicts should be included in all studies of addiction because of the potential impact of female addiction on succeeding generations, coupled with rising amounts of female addiction.

Ellinwood, E.H., Jr.; Smith, W.G.; and Vaillant, G.E. Narcotic addiction in males and females: A comparison. The International Journal of the Addictions, 1(2):33-45, 1966.

DRUG	Heroin
SAMPLE SIZE	111
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (average: 31)
SEX	Both
ETHNICITY	White; black
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Comparative study; descriptive study; clinical observation
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	October 1964 to March 1965
NO. OF REFERENCES	3

PURPOSE

Although most of the literature on addiction focuses primarily on males, the incidence of female addiction is large enough to require separate description. However, until now no basic source data have existed on female addiction with a controlled male comparison. This study aimed both to clarify the characteristics of female addicts and to identify areas in which female addicts might differ from male addicts.

METHODOLOGY

The study's subjects consisted of a representative sample of 100 patients chosen from among those admitted to the U.S. Public Health Service Hospital at Lexington, Kentucky, from October 1964 to March 1965. Psychiatrists interviewed all male and female admissions. The ratio of men to women was 4 to 1. To bring the number of females up to a level sufficient for comparison with the 81 men obtained, additional females were selected from the total admissions to reach a total of 30.

The structured interviews covered such topics as demographic data, social background, description of drug abuse, and medical and psychiatric history. Sex differences greater than 20 percent were considered to be significant at the 5 percent level.

RESULTS

The main difference noted between males and females was the wide discrepancy in numbers--there were four times as many males as females. Three-quarters of the subjects were raised in urban areas. Males came mainly from the Mid-Atlantic States, while females came primarily from the North Central States. For both males and females, 60 percent were white and 40 percent were black. The average age for both groups was 31 and the average number of children for both sexes was 1.3. More women than men were married or had common-law relationships.

The reasons given for starting drugs were similar for both sexes, with about two-thirds showing a subcultural motivation such as curiosity, the desire for pleasure, or the wish to be part of a gang. One-fifth stated that drug use began for medical reasons. Heroin was the drug of preference, and drugs were obtained mainly from fellow addicts. Men and women started drug use at about the same age, but women became addicted more quickly after starting. Men tended to have short abstinences of 1 year or less, while women were more likely to have had either no abstinences or longer abstinences.

Men often committed property crimes to support their drug habits, while women most often relied on prostitution. Although less than 10 percent of each group used drug sales as the main source of support, narcotic convictions were noted in one-half of the men and one-third of the women. In addition, two-thirds of both sexes were high school dropouts and had a high rate of truancy, but half subsequently received special training. About half of both groups had held jobs lasting as long as 2 years. A total of 70 percent of the women had not had a job in the last year, and one-third had held no regular job within 6 years, while men worked more often.

Most patients were the offspring of immigrants or black migrants from the South. One-fourth of all subjects' fathers were alcoholics, and mothers of most of the women were antisocial, criminal, and alcoholic. About 14 percent of the brothers of both groups were addicts. As adolescents, women had a greater tendency to identify with parental models than did men. About 20 percent of both sexes belonged to a gang.

About 40 percent of the sample came from broken families, but earlier separation of parents from each other and from the child occurred for the women. Women also experienced a high rate of incest and sexual relationships with stepfathers, older relatives, or mothers' paramours, which may account for the high incidence of frigidity and homosexuality among the females. Both men and women were markedly distant from others and stated that they could not trust others. Women were seen more often as neurotic and psychotic, while males were more often seen as having personality disorders and being sociopathic. Thyroid disorders and hypertension were high among females, while asthma and hepatitis were common in both groups.

CONCLUSIONS

More uniformity between male and female addicts was found than was expected based on clinical impressions. The far greater incidence of male addiction was probably due to men's greater tendency to join deviant or antisocial subcultural groups. The tendency for women to have less tumultuous adolescent rebellions than men was also reflected in the data by the higher percentages of adolescent arrests and reform school admissions in males than females, whose acting out is mainly of a sexual nature. Intrafamilial dynamics also played an important role in producing daughters with sexual disturbances and addiction, in that the mother-daughter relationship was either overprotective or cold, distant, and punitive, and fathers or surrogates were indulgent and seductive. Thus, male and female addicts were similar in demography, educational levels, parental origin, and the general pattern of drug use, but different in family dynamics and cultural factors that helped shape the imbalances in the numbers of male versus female addicts and the differences in addiction.

Escamilla-Mondanaro, J. Women: Pregnancy, children and addiction. Journal of Psychedelic Drugs, 9(1):59-68, 1977.

DRUG	Heroin; methadone
SAMPLE SIZE	Not specified
SAMPLE TYPE	Addicts in treatment
AGE	Mean: 26
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	San Francisco, California
METHODOLOGY	Clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	16

PURPOSE

Too often heroin addiction treatment programs describe the behavior of their clients in pejorative terms and then erroneously use these descriptions as diagnoses. When drug treatment programs fail to have an impact on addicts, the virulence of the junkie disease syndrome is put forward as a justification for failure. However, effective treatment programs can be developed only when the problems and needs of clients are taken into consideration. For that reason, the present study examines the characteristics and familial relationships of female narcotic addicts in treatment.

METHODOLOGY

The women discussed in the paper were enrolled in the Pregnant Addicts' Program in San Francisco. Data and impressions were gathered through individual and group interviews and discussions.

RESULTS

On an average, the women interviewed in this study had used heroin chronically for many years, were 26 years old, and had two and one-half children per family, an annual income of $2,000, 11 years of school, and no job skills. Most of the women were married or had stable relationships.

The triad of strict sex-role socialization, emotional neglect as an infant, and unrealistic expectations of performance by parents typifies the family dynamics under which addicted women grew up. The sense of failure and low self-esteem derived from the home experience is reinforced by society at large. The women lack cognitive and affective resources as well as a capacity for nonpharmacologically induced joy and playfulness.

The pregnant addict's spouse or partner is often involved in drugs; is usually not gainfully employed; and may steal, sell drugs, or pimp. The apparent aggressiveness and demanding stances of husbands mask their own feelings of worthlessness. They are obsessed with controlling their wives and children because that control is their only source of power.

Addicted women's pregnancies are usually not planned and frequently occur when they switch from heroin to methadone and normal ovulation resumes. The women usually carry out the pregnancies both because of their passivity and inability to act in the world and because of their perception of the rewards of pregnancy and parenthood. Many clients feel guilty during their pregnancies because of the potential for withdrawal symptoms in their newborn infants. Guilt feelings frequently interfere with bonding between the mother and child.

Addicted women frequently have unrealistic expectations about their pregnancies (e.g., that their mothers will finally understand them or that their husbands will get straight jobs and help at home). Often, the effects of methadone interfere with the ability to see reality. Pregnant addicts frequently have difficulty dealing with the normal discomforts of pregnancy and demand higher methadone doses.

The marriage of the pregnant addict is often seriously affected by the birth of her infant. The presence of a baby in need of constant care creates distance between husband and wife, and new stresses may develop if the husband feels compelled to increase illegal activities as a means of providing for his new offspring.

The addicted parents' collision with reality comes in the nursery when they encounter the baby they have created and the effects of the drugs they have used. The baby experiences withdrawal in the form of poor feeding, irritability, crying, and inconsolability. When the parents see the baby experiencing withdrawal, the husband often blames the wife. Normal mother-child bonding is disrupted because of the extensive care required by the infant and because of the negative reactions of infants in withdrawal to normal mothering. This begins a vicious cycle of mutual rejection and distance.

Methadone mothers feel a need for their infants to grow up rapidly and start to give them love but are ill-prepared to cope with dependent infants. They are obsessed with spoiling the child and toilet training, yet they expect babies to be quiet and not to demand excessive attention. They rarely provide their small children with stimulating experiences and discipline them excessively for exploratory behavior.

Therapy should attempt to get at the real feelings of the addicted mothers through such techniques as role playing and videotapes followed by discussions. All programs should include family planning counseling, prenatal care, and nutritional counseling. Treatment modalities should be evaluated to establish which approaches are safest for the unborn. Cooperative child-care centers can give methadone mothers opportunities to learn new skills. Mothers should also be trained in child care and taught how to handle irritable infants. Home visits by staff members can alleviate some of the stresses of the first few months.

CONCLUSIONS

Addicted women suffer from strict sex-role socialization, emotional neglect as infants, and criticism and punishment for failing to live up to their parents' excessive demands. Social oppression, sexism, racism, and classism reinforce the early familial messages. Both society and family

foster alienation, dependency, low self-esteem, lack of self-confidence, and a diminished capacity to enjoy life. Without adequate intervention, these women will reproduce their family environment with their own children. Moreover, children of all types of addicts are at high risk both from deficiencies in mothering and from placental transfer of drugs.

Most existing treatment programs fail to diagnose female addicts' problems and batter their self-esteem still further. Drug treatment programs that emphasize the drug and addiction should be replaced by comprehensive health programs that allow addicts to feel comfortable in seeking assistance.

Fanshel, D. Parental failure and consequences for children: The drug-abusing mother whose children are in foster care. American Journal of Public Health, 65(6):604-612, 1975.

DRUG	Heroin
SAMPLE SIZE	44
SAMPLE TYPE	Children of drug-abusing mothers
AGE	Children (mean: 2.98 upon entering foster care)
SEX	Both
ETHNICITY	Black; white; Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Secondary analysis; comparative study
DATA COLLECTION INSTRUMENT	Interviews; questionnaires; intelligence tests; projective tests
DATE(S) CONDUCTED	1966-1971
NO. OF REFERENCES	13

PURPOSE

The professional literature has paid insufficient attention to the consequences for children whose mothers are heroin users. Instead, society's focus has centered largely on the criminal activity associated with drug abuse and the accompanying deterioration of urban life. From a larger longitudinal study of children who had entered foster care in New York City, 44 children of 33 mothers who were severe drug abusers were identified for further study. These children were studied with respect to their developmental progress, including their cognitive abilities, personal adjustment, and school adjustment patterns.

METHODOLOGY

The 44 cases emerged from a total sample in the larger study of 624 children from 467 families. Three research teams had focused on the children, their families, and the agencies serving them in parallel studies that ran for a 5-year period. The development of children who remained in foster care had been compared with those who returned home to determine whether remaining in long-term care is associated with deterioration in cognitive capacities and/or in personal and social adjustment. This study compared the 44 children of drug-abusing mothers with the remaining 580 children in the longitudinal study. Areas of comparison included background

characteristics, discharge, turnover in foster care, cost of foster care, and developmental status. Developmental areas covered included preplacement status, intelligence, emotional condition, behavioral characteristics, symptomatic behavior, and school adjustment.

RESULTS

The children of drug-abusing mothers were more likely to have been born out of wedlock and to be on public assistance. Most foster care placements in both groups occurred voluntarily, and 86 percent of the drug-abusers' children and 68 percent of the other children entered foster care via placement in institutional settings. Minority group members were disproportionately included among the drug abuse group.

A total of 70 percent of the drug abusers' children were still in foster care after 5 years, compared to 21 to 44 percent of children entering care due to mothers' mental illness, neglect or abuse, or other reasons. The children of drug-abusing mothers also experienced more turnover in care--they experienced an average of 2.64 placements, compared to 1.95 placements for the other children. Additionally, the mean costs of care were higher for the children of drug-abusing mothers than for the other children.

Preplacement physical problems were similar for both groups, while the children of drug-abusing mothers had fewer emotional problems, due largely to their younger age at entry into care and better development status. The two groups were similar in intelligence levels at entry and did not show a loss in cognitive capacity in the sample. No significant differences existed between the two groups on specific symptoms concerning emotional maturity, body and bowel control, fears, psychosomatic reactions, and aggressiveness.

In contrast, the drug sample children were significantly poorer than the other children in school adjustment, as rated by teachers. Evidence from official records also showed that the drug-abusing mothers, with few exceptions, behaved in an almost totally disabled manner as maternal figures and were rarely involved in long-range planning for their children. Visits to their children were erratic, and they were considered the worst of all parents in the study.

CONCLUSIONS

Children of drug-abusing mothers tend to be locked into foster care at a disproportionately high rate. They also suffer greater numbers of changes in care settings, although their adjustment over time appears no less problematic than that of children who were separated from their families because of other factors in their life situations. Three issues regarding these children merit further consideration: (1) whether resources could be made available for more intensive treatment of the mothers' addiction problem; (2) whether early termination of parental rights would be an appropriate approach to the problem presented by these women; and (3) whether closer working relationships between agencies offering foster care services and those with expertise in addiction services are needed.

Farkas, M.I. The addicted couple. Drug Forum, 5(1):81-87, 1975-76.

DRUG	Heroin
SAMPLE SIZE	26
SAMPLE TYPE	Addicted couples in treatment
AGE	Median: males--22; females--20
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Program/clinical statistics
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	3

PURPOSE

The family can be viewed as a network of interlocking relationships formed by the ties of blood and marriage. The ability of the parts of the family to act as a single organism producing a state of equilibrium is called family homeostasis. As the nuclear family struggles to maintain its identity in a hostile environment, it draws strength from the individual members who ideally contribute to the development of homeostasis. The ability to maintain homeostasis within a family unit is best achieved through the mutual sharing of a common interest or activity. For the drug-addicted couple, drug use may be the catalyst that cements the parts of that family unit into a single whole. A differential response to treatment by the two partners may reduce marital closeness. Further, lack of any mutual common interest outside the drug use activity may contribute to remission into drug use for couples in treatment.

This study focused on quantifiable activities of partners in treatment and these factors' relationship to some possible treatment outcome indicators. In contrast to research focusing on changing activity within the addicts' home environment when treatment is initiated, this research concentrated on the treatment activity itself. It was hypothesized that couples who experienced family homeostasis would continue in treatment longer than those who did not.

METHODOLOGY

The subjects were 26 couples who voluntarily entered primary methadone treatment between June 1972 and January 1973. Couples included either legally married spouses or those who had had stable or monogamous living arrangements for at least 1 year prior to entering treatment. The couples were matched for age, educational attainment, and length of heroin use. The patients were compared in terms of treatment status and its relationship to marital status, living arrangements, and no-show days.

RESULTS

Both partners were actively engaged in treatment at the time of the study in 62 percent of the cases, while one partner was actively in treatment in 23 percent of the cases and both partners were inactive in 15 percent of the cases. In over 81 percent of the cases in which both partners were actively engaged in treatment they were legally married and living together. In contrast, only 6 percent of the group actively engaged in treatment consisted of those who were married and separated.

Over 78 percent of the couples who entered treatment simultaneously were both actively engaged in treatment, as opposed to 42 percent who entered treatment independently. Over 86 percent of the couples who were legally married and living together had similar no-show days, while the percentages were 6.7 percent and 57.7 percent, respectively, for those who were married and separated and for those who were living together but not married. In addition, 75 percent of the couples in which both partners were actively involved in treatment had the same no-show days, whereas over 83 percent of the couples in which only one partner was in treatment had different no-show days.

CONCLUSIONS

A mutuality of interest exists between partners when they are both involved in treatment. These couples, without outside help, have established the beginnings of homeostasis within their family unit. Establishment of family homeostasis for couples who enter treatment for narcotic addiction may produce positive treatment outcomes, although treatment centers rarely establish either specific treatment programs or activities that might strengthen or encourage family homeostasis among their couple patients. By determining which interests or activities encourage or strengthen family homeostasis, treatment professionals can design programs for couples in treatment that go far beyond simply placing the partners into the same therapy group.

Ferrence, R.G., and Whitehead, P.C. Sex differences in psychoactive drug use: Recent epidemiology. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 125-201.

DRUG	Multidrug; tobacco; alcohol
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Not applicable
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	United States and Canada
METHODOLOGY	Secondary analysis; literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	142

PURPOSE

The significant increase in the use of illicit drugs during the late 1960s and early 1970s stimulated the collection of a sizable body of data on drug use throughout North America. Recently, there has also been an increased interest in sex differences in various types of behavior. This interest is undoubtedly tied to elevated consciousness about the status of women in our society.

In the study of patterns of drug use in the last decade, a number of theoretical frameworks have been developed to generate hypotheses about the nature of sex differences in drug use. The four most useful models involve (1) the theoretical concepts of deviance based on socialization experiences as they are manifested in sex roles; (2) the diffusion of innovation model, which describes the diffusion process following the introduction of a new substance or process; (3) the social network model, which ties together regularities in the social behaviors of acquiring and using drugs; and (4) the socioeconomic model, which relates socioeconomic status to drug use.

Many problems exist regarding the collection of data on drug use, but the two major sources of potential error with regard to sex differences are sampling procedures and the reporting process. Sampling problems tend to lead to underrepresentation of male drug users, and thus reported sex ratios are lowered.

The present study analyzes studies on drug use in Canada and the United States, especially with regard to sex differences in the nonmedical use of psychoactive drugs other than alcohol.

METHODOLOGY

The 90 surveys reviewed include more than 500 respondents each. Surveys with biased samples and with low rates of response have been omitted. Two types of data are focused on: general population surveys of youths and adults that have been conducted nationally at intervals in both the United States and Canada and high school surveys that were repeated at three or more points in time.

RESULTS

The principal phases in the history of drug use are the drug crisis of the late 1960s and early 1970s, the peak use period for many illicit and some licit drugs (1972-1974), and a period of mixed patterns (1975-1978).

Data show major sex differences in the use of most drugs; the differences persist over time. Sex differences are more extreme for adults than for youths. Sex differences thus appear to be a somewhat less important factor in determining levels of drug use among young people than among adults. Over the past decade, the rank order of sex ratios for the use of various drugs has remained roughly the same.

Contrary to prevalent beliefs, the rates of use of most drugs are not increasing rapidly, and no evidence exists that patterns of drug-using behavior among women and men are becoming more alike. Rates of use of only two drugs, marijuana and cocaine, appear to be increasing, but the magnitude of the increase is unclear. Trends in the use of sedatives and minor tranquilizers are remarkably similar across the United States, Canada, and Western Europe, with the use by females being about twice as high as the use by men.

Data tend to support the hypothesis stemming from the deviance model, which suggests that the traditional stereotypes of sex-role behavior do characterize the use of drugs. Males have higher rates of illicit and nonmedical drug use and are more likely than females to use drugs regularly. Females are more conservative in their use of drugs and engage in less deviant behavior when they acquire and use drugs. Findings suggest that decriminalization of any drug, however, could produce higher use rates among females.

As had been hypothesized for the diffusion of innovation model, males have higher initial rates of use of all drugs examined except tranquilizers. Their use of these drugs tends to peak earlier than use among females for those drugs that appear to have completed the diffusion phase, with the exception of tranquilizers. Male college students have the highest tranquilizer use in the earlier years and adult women, the earliest tranquilizer use.

The social network model, strongly supported by the findings in most cases, views drug use as a social phenomenon that involves the introduction of new users to drugs by those who have already begun use. Males, who control the production and distribution of drugs, influence the extent to which females obtain and consume drugs and the circumstances in which this occurs. The most common context is a dating situation or a medical consultation. This model accounts for both the higher rates of the use of most drugs by males and the gap in time between use by males and females. Certain social changes, such as change in the legal status of a drug, controls on prescription drugs, an increase in women in the medical profession, and male and female peer-group relations can also affect the availability of drugs to women.

According to the socioeconomic model, drugs are a commodity, and drug use is a product of sex differences in socioeconomic access to this commodity. Although data were limited, there appears to be a relationship between cost and sex ratios for use. Unless the fairly constant disparity between incomes for men and women decreases, there will be little change in sex ratios for the use of costly drugs and in sex ratios for the frequent use of all drugs except those covered by prescription plans. Still, the influx of women into the labor market will increase their disposable income and possibly alter patterns of female drug use. Furthermore, any increases or decreases in the cost of a particular drug relative to disposable income could potentially alter patterns of drug use among females.

Each of the four models of sex differences in drug-using behavior contributes to an increased understanding of the variation in patterns of drug use between women and men and has implications for social research and policy.

CONCLUSIONS

Traditional stereotypes of sex-role behavior characterize the use of drugs. Sex differences in the use of certain drugs are declining, but contrary to some findings, sex differences are not a disappearing phenomenon. Much evidence exists that rates of drug use are increasing faster among women than among men. The slight increase in sex ratios for use among young people that has occurred since 1974 may indicate a reversal of the trend toward declining sex ratios. Continued research on the effects of psychoactive drugs and interaction among these drugs on women, as well as on men, is essential if health damage is to be prevented. Efforts should be made to measure total psychoactive drug use, as well as alcohol use.

Fidell, L.S. Sex differences in psychotropic drug use. Professional Psychology, 12(1):156-162, 1981.

DRUG	Major and minor tranquilizers; sedatives and hypnotics; antidepressants; stimulants
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Psychotropic drug users
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	17

PURPOSE

Although psychotropic drugs have strictly physiological indications for use (e.g., minor tranquilizers to relieve muscle spasm), they were developed and are used most frequently to alter the affective state of individuals. The mood-modifying drugs include minor and major tranquilizers, sedatives and hypnotics, antidepressants, and stimulants. Because women are more involved with drugs in these categories than are men, the present article explores the relationship between sex differences and the extent, origin, and persistence of their use.

SUMMARY

According to estimates, at least half of all adult women have used psychotropic drugs at some time for medical purposes. Over two-thirds of the prescriptions for psychotropic drugs are written to women. Diazepam is now the most heavily prescribed drug. Although advertised as an antianxiety agent effective in treating depression, evidence suggests that different effects on women may be produced at different stages of the menstrual cycle, with antianxiety produced premenstrually but restlessness produced during the postmenstrual phase. The actual use of psychotropic drugs may be underestimated because many drugs not categorized as psychotropics contain psychotropic compounds and because nonprescription use of the drugs is high. While

nonmedical and over-the-counter use of the drugs is approximately equal for men and women, more psychotropics are prescribed for women than men by physicians. Interestingly, prescription use is longer term and more consistent than nonprescription use.

The view that minor tranquilizers and psychotropics in general are safe and underutilized has been questioned on the grounds that the drugs promote symptom reduction rather than problem resolution, that the safety of the drugs is doubtful, and that the drugs have been linked with an increase in suicide and attempted suicide by women using them.

Although the etiology of sex differences in the use of psychotropic drugs is complex, sex stereotypes appear to play a significant role in the prescription and use of drugs. One of the more consistent findings in the mental health area has been that women report more mental health symptoms than do men. The outcome of the difference appears to be a higher probability that psychotropic drugs will be prescribed for women. If the differences in mental health are real, then the use of drugs appears justified. Otherwise, the use of drugs to such an extent is questionable.

Indirect evidence suggests that cultural stereotypes regarding women and men encourage physicians to attribute women's symptoms to psychological and psychosomatic differences and to attribute those of men to organic imbalances. Similar symptoms may thus lead to different diagnoses, depending on the sex of the patient. Psychotropic drugs may also be prescribed when the physican has been unable to diagnose the patient's problem and can think of no other alternative for helping the patient cope.

Physicians are influenced both by what is reported and by how it is reported: symptoms reported stoically are taken more seriously than those reported emotionally. Stereotypes tend to produce stoicism in the medical behavior of males and emotionality in the medical behavior of females.

Sex stereotypes may also contribute to persistence in the use of psychotropic drugs. Low self-esteem has been identified as the one reliable correlate of both drug and alcohol abuse. People who feel that they are not worthwhile cannot resist the temptation of chemical relief which in turn increases feelings of worthlessness. Growing acceptance of drugs also facilitates persistent use. The woman with dysfunctional patterns of use may continue using drugs simply because no one recognizes her problem for what it is, especially if the medication is prescribed. Furthermore, health professionals may be reluctant to recognize drug abuse in a middle or upper middle class woman because of sex stereotype notions regarding the morality of women in society. Finally, psychotropic drug use may also persist because sex stereotypes permit women to be dependent on authority figures such as physicians.

Resistance to alternatives to psychotropic drug use is likely to be high because of belief in the medical model. People have become accustomed to relying on medical professionals and expect chemical intervention. Moreover, the profit motive does not encourage either the medical establishment or pharmaceutical houses to endorse alternatives to psychotropic drug use. Professional psychologists have special responsibilities to monitor drug use, as their clients in treatment are vulnerable and susceptible to the attractions of psychotropic drugs.

CONCLUSIONS

Congruence between several aspects of the female sex stereotype and indicators for use of psychotropic drugs suggests that women are more exposed to the potential benefits as well as the dangers of these drugs. Women consistently report more mental health symptoms than men, and physicians are more likely to prescribe psychotropic drugs for control of women's symptoms than for control of men's. Such factors as low self-esteem and dependence may contribute to the persistence of drug use by women. It is incumbent on mental health professionals to guarantee that the scales tip in favor of beneficial use of drugs.

Fidell, L.S. Sex role stereotypes and the American physician. Psychology of Women Quarterly, 4(3):313-330, 1980.

DRUG	Psychotropics
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Patients
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	68

PURPOSE

The American woman makes approximately five visits a year to a physician. The present study reviews evidence for and against the proposition that health care delivery is affected by sex-role stereotypes. Specifically, the author examines medicine as a social enterprise, historical trends in medical treatment for women, sex-role stereotypes in medicine, the medical interview, drug prescribing practices, and the feminist self-help movement.

SUMMARY

From the medical sociologist's perspective, medicine is practiced in a social context and is no better insulated from cultural values than is law or education. Diagnoses rendered by physicians have considerable social implications for patients. Rights and obligations of patients and others are determined in part by how a particular set of symptoms is defined. When categorizing symptoms into diagnoses, physicians excercise considerable social, economic, and political power.

The treatment of women by the medical profession has varied from time to time depending on prevailing beliefs about the nature of women. Aristotle, Greek and Roman practitioners, and medieval medical practitioners believed in the inferior and alien nature of women. Women's role

in procreation was minimized and their poor health was attributed to the "vagaries of the wandering womb." Before the middle of the 18th century, birth was considered too debasing for a man's participation, and midwives handled birthing procedures. Male physicians entered the field in the 19th century with the introduction of sophisticated procedures taught only in medical schools and with recognition of the potential profit to be gained from deliveries. As women's claims to equality increased during the 19th and 20th centuries, many physicians became adamant about the ill effects of educating women. Surgical procedures at the turn of the century included clitoridectomy as a cure for masturbation, nymphomania, and orgasm, and removal of normal ovaries to cure insanity.

Statistics show that women in the United States presently live 9 years longer than men, suggesting that women are healthier. However, women in high-stress occupations are suffering death rates and stress-related illness rates comparable to those of men in similar positions. Women also suffer from health hazards that are directly related to sex-role stereotypes, such as requirements for weight control and beauty. Medical practice and medical education must be cognizant of the changes in women's roles if risks to younger women are to be recognized.

Women stand in a special relationship to medicine because of their reproductive capacity. However, power differences are readily recognizable between the all-knowing physician and the patient in search of help. Consistent with widely held cultural beliefs, certain disorders of female reproduction (e.g., labor pain) are thought by physicians to originate psychosomatically, with rejection of femininity posited as the underlying problem. Sex-role-related differences in the delivery of medical care seem to operate in the direction of minimizing or ascribing to neurosis the symptoms of a female patient. In medical interviews, women tend to present a greater number of symptoms with psychological impact than do men. Although some researchers attribute this tendency to emotional instability in women, it appears more likely that women are trained to be the socioemotional experts in a family and to report mental and physical symptoms for themselves and others.

The little literature available on physicians' attitudes toward female patients shows that physicians believe female patients to be more mentally disturbed, to have more social problems, and to be less stoic than men during illness. Physicians are also more likely to consider that women, more than men, provide unreliable information.

A patient's sex may influence the prescribing behavior of physicians. Although drugs are prescribed to men and women in proportion to the number of physician visits for each sex, women receive 73 percent of the prescriptions written by physicians, usually internists or general practitioners, for such psychotropic medications as tranquilizers, sedatives and hypnotics, stimulants, and antidepressants.

Prescribing procedures are strongly related to attitudes. A physician's attitudes toward prescribing mood-altering drugs to a patient are more strongly connected to the physician's social values than to background. Better educated, progressive, congenial physicians are less likely to prescribe mood-modifying drugs than are physicians who are pessimistic about the treatment outcome or angry with the patient. Several studies report that physicians are prepared to prescribe mood-modifying drugs to housewives in the belief that they do not need to be alert for their jobs, but they are reluctant to do so for students.

Stereotypic notions about women are reinforced in medical school training, textbooks, and medical advertising. Little attention is devoted to female sexuality, and women's psychological illnesses and need for mood-modifying drugs are emphasized.

In direct tests for sexism in preliminary diagnoses, it was found that physicians do not ascribe psychogenic rather than organic diagnoses more frequently to women than to men. Differential treatment appears to occur when patient behavior interacts with physician expectations during the medical interview. The manner in which patients present symptoms may prove to be the crucial factor, and in their judgments of women, physicians may be reacting to learned sex differences in symptom presentation.

CONCLUSIONS

Some physicians hold stereotypic views about female patients that predispose them to make psychogenic diagnoses. The stereotypic view of some physicians is reinforced by the mode of

symptom presentation of some women, which often includes mention of numerous psychologically relevant symptoms. Male-female differences in symptom presentation appear to stem from sex-role-related training and not from real differences in physical and mental health. Excessive surgical procedures and excessive prescription of mood-modifying drugs are consistent with major historical trends in the medical treatment of women. To eliminate sexism in medical practice, improved education of both physicians and patients, reduction of patient-physician power differences, provision of alternative treatment facilities, and evaluation of the efficacy of treatment procedures are recommended.

File, K.N. Sex roles and street roles. The International Journal of the Addictions, 11(2):263-268, 1976.

DRUG	Heroin
SAMPLE SIZE	62
SAMPLE TYPE	Addicts
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Descriptive study; theoretical/critical review
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	10

PURPOSE

Female addicts are known to use many legal and illegal techniques to obtain narcotics. They may work, steal, rob, prostitute, deal drugs, have drugs given to them, burgle, or otherwise be involved in a constant hustle.

Several studies indicate the usefulness of examining the heroin distribution system as a basis for determining the roles involved in addict subcultures. Studies of the division of labor surrounding the lines of heroin distribution and consumption have identified seven major roles adopted by addicts and have generally agreed on certain major roles adopted by females.

This study created and tested a typology consisting of five roles for female addicts.

METHODOLOGY

The theoretically derived typology included three major roles identified in the literature: Seller (Dealer), Hustler, and Worker (those maintaining at least a part-time legitimate job). Bag Follower, a person attached to a dealer to support her habit, was thought to be a sufficiently

distinctive role to warrant inclusion as well. The Dependant role, which is typified by economic and drug-provision dependency on some other person, completed the typology.

A combination forced-choice and open-ended question interview instrument was designed to elicit detailed information on subjects' means of support, hustling patterns, and instances of arrest. Responses on arrests were compared with police arrest records.

Seventy consecutive female admissions to a citywide intake and referral center for narcotic addicts were approached with the interview instrument by trained counselors. Of these, 8 declined to be interviewed or were otherwise lost to the study, leaving a total of 62 subjects.

RESULTS

The most frequent role was Hustler (56.5 percent), which included prostitution, shoplifting, burglary, and robbery. Almost one-fifth of the addicts worked at least part time, and slightly less could be best described as housewives (Dependants). A total of 8 percent were mainly Sellers, almost always involved in a dealing partnership with a male. Only 3.2 percent were Bag Followers.

CONCLUSIONS

Comparison of these data with equivalent data on males suggests a strong degree of sex typing by role. For example, Bag Followers are all females. Moreover, males tend toward Seller roles, while females tend toward Dependant roles. However, the roles of female addicts are neither stable nor mutually exclusive.

A general status ordering of street roles appears to exist for female addicts. Bag Followers and Sellers are high status roles, whereas Workers and Dependants are marginal roles that involve only the consumption of narcotics. Furthermore, differential risk factors accrue to the various female roles and may account for female addicts' tendency to marry addicted males. Female addicts may assume risks regarding police arrest in exchange for protection by males against dangers within the drug culture. Finally, female addicts appear to be departing increasingly from the male-dominated role structure by working alone or forming lesbian relationships.

The typology proposed here needs to be validated through replication in other settings. However, it does reflect a better understanding of the street addict subculture and how street roles may impinge on treatment outcome.

Finnegan, L.P. Women in treatment. In: DuPont, R.L.; Goldstein, A.; and O'Donnell, J.; eds. Handbook on Drug Abuse. Rockville, Md.: National Institute on Drug Abuse and Office of Drug Abuse Policy, 1979. Pp. 121-131.

DRUG	Psychotropic medications
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts in treatment
AGE	Not applicable
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review; theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	24

PURPOSE

The prevalence of both licit and illicit psychotropic drug use by women in general, and specifically by pregnant women, indicates that the phenomenon represents a significant problem to be recognized and addressed by health care delivery systems. The present study reviews recent trends in drug use by women in the United States, the prevalence of various kinds of drug abuse, and the negative consequences of drug use to health and social well-being. In addition, the views of the medical community on rehabilitation and treatment of female drug abusers and areas for research are outlined.

SUMMARY

Psychotropic drug use has always been approximately two times higher for women than for men. The high incidence of psychotropic drug use in women has been attributed to women's greater likelihood of perceiving emotional problems and bringing them to the attention of a physician. Physicians, in turn, expect women to be more expressive and to need mood-modifying drugs more than men.

The majority of women using opiates are of childbearing age. Despite advances in fetal pharmacology, physicians continue to prescribe drugs to pregnant women without considering the side effects. The vast majority of pharmacologic agents used in pregnancy, however, are self-prescribed by the women. A great deal of research has focused on infants of addict mothers, especially those on methadone, but results on the effects of methadone on infants are inconclusive.

Most of the published information available on heroin addiction describes male addicts. Studies that have been done on women show female drug abusers to be unemployed, not receiving financial assistance, and responsible for more children than male addicts. Female addicts, when compared to their nonaddicted counterparts, demonstrate lower self-esteem, anxiety, depression, an intense need for relationships, and higher assertiveness, factors that may, in fact, be assets in treatment situations.

In general, women are more likely to resort to pills to cope with stress than men, who most often use alcohol. It is assumed that women will use more recreational drugs, as men do now, when women assert greater freedom in their own lives. Physiologically, it appears that women metabolize drugs somewhat more slowly than men and experience longer lasting and more intense effects than males. In pregnant women, drug use poses the danger of both congenital physical abnormalities and damage to the infant's behavioral and intellectual development. The type and severity of the adverse effects of a given drug depend on such factors as dose and pregnancy stage, but a wide variety of drugs are known to cause severe effects. Heroin, methadone, barbiturates, and other drugs are reported to cause abstinence syndrome in newborns.

The Women's Drug Research Coordinating Project has summarized social factors affecting female addicts that are relevant to the management of addiction in women. According to project findings, women are socialized differently from men, derive their status from men, are more stigmatized than men for deviant behaviors, are expected to play key family roles, are given the primary responsibility for birth control, have more medical problems than men, have fewer and less lucrative vocational options than men, are perceived differently from men by the criminal justice system, and have often been abused sexually. Results indicate that women's programs must try to identify sexism in male and female clients and staff, to develop new intervention techniques, and to recognize the nature of the women's relationship with the men in their lives. Programs must also provide special education programs and women's services, assist in meeting basic survival needs, and evaluate their own effectiveness. Both family therapy and programs with child care for client mothers can be used effectively for therapeutic intervention.

Drug use by women can produce such health effects as gynecological infections, tetanus, menstrual abnormalities, and diminished fertility. Numerous obstetrical complications occur in pregnant addicts because of lack of prenatal care and the effects of the drug on the fetus. The birth weights of infants born to addicted mothers tend to be very low, prematurity is common, and mortality rates are high.

The pregnant woman who abuses drugs must be designated as high risk and warrants special care, including addiction and obstetrical management and psychosocial counseling. Care of the addict may involve drug-free therapeutic communities, methadone detoxification, or methadone maintenance. Infants born to drug-abusing mothers must also be considered high risk and should be admitted to an intensive-care nursery for observation. Psychosocial counseling should be given by an experienced social worker who is aware of medical needs as well. An outreach program should continue social and medical support after release of the mother and infant from the hospital. The mother's parenting skills should be evaluated before release. Finally, mechanisms must be developed to monitor the infant's development after discharge from the hospital.

Basic research in the areas of prevention, identification, rehabilitation, treatment, and education for pregnant and nonpregnant addicts is badly needed. The research should include excellent methodology with appropriate control groups but should exclude value-based interpretations and nonrepresentative samples. Longitudinal analysis should be performed, and comparisons should be made between supportive and nonsupportive treatment environments.

A number of questions concerning the development of female addicts' children should be addressed, such as whether such services as followup programs, preschool programs, parent education, adoption placement, and community agency assistance contribute to the normal cognitive and social development of such children. Further research is also needed on heroin and methadone effects on addicts' lifestyles, new treatment modalities for drug-dependent mothers,

dietary habits of pregnant addicts, therapeutic modalities for neonates undergoing withdrawal symptoms, mothering practices of women who have abused drugs, and development of outreach programs for addicted mothers and their infants.

CONCLUSIONS

Use of addictive drugs, especially of psychotropic drugs, by women has increased. In view of the fact that the majority of women who abuse drugs are of childbearing age, the potential physical and developmental effects of maternal addiction on offspring should be of special concern as such abuse could prove detrimental for generations. As female drug abusers' drug habits are related to roles assigned by society to women, treatment programs must be developed to satisfy the particular needs of female addicts. Further research is necessary on the development of addicts' children and the effects of treatment on their development, as well as on the behavior of addicted mothers.

Gerstein, D.R.; Judd, L.L.; and Rovner, S.A. Career dynamics of female heroin addicts. The American Journal of Drug and Alcohol Abuse, 6(1):1-23, 1979.

DRUG	Heroin
SAMPLE SIZE	30
SAMPLE TYPE	Addicts
AGE	Young adults (mean: 27.6)
SEX	Female
ETHNICITY	White; black; Mexican-American
GEOGRAPHICAL AREA	San Diego, California
METHODOLOGY	Descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1975
NO. OF REFERENCES	37

PURPOSE

Few studies have focused on social behavior and heroin use among women. The existing studies indicate that the pattern of opiate use has changed among American women in the 20th century; that race and geography have been differentiating factors in the patterns of women's drug involvement; and that significant others, especially family members, have often had a strong influence on the lives and drug use patterns of female addicts.

This study focused on the interaction between addicted women's drug careers and their involvement in conventional living, especially family life. The respondents, who were primarily urban, white, and reliant on methadone and other drugs besides heroin, represented a recently emergent and as yet little-studied drug-abusing group.

METHODOLOGY

Heroin use histories and related institutional involvements were obtained from 30 female heroin addicts who were patients at the County of San Diego/University of California Narcotic Treatment Program. The 30 women were all subjects in a larger stratified random sample designed to

match the program's entire population on major demographic and treatment variables. They had a mean age of 27.6 years and were predominantly white.

Structured interviews were conducted by intensively trained, college-educated, nonheroin users. The interview schedule covered psychosocial areas including family, friends, living arrangements, personal goals, self-image, drug use, employment, and illegal activities, as well as 27 separable aspects of the treatment program. All but two interviews were tape-recorded and transcribed with the subjects' consent. Additional data were obtained from the treatment agency.

RESULTS

About half of the subjects were currently using heroin, although many of them claimed to be using it only sporadically. Urinalysis tests conducted over a 1½-year period showed that those subjects identifying themselves as heroin users (the "current consumer" group) tested morphine-positive while in treatment nearly 2½ times more often than those claiming abstention (the "current abstainer" group). This points to a basic pattern in the respondents' long-term behavior, namely, an underlying orientation toward the use of heroin.

In each case, the first use of heroin occurred between the ages of 13 and 24, at an average age of 18. It usually occurred in fairly casual, routine circumstances among friends or in the family. Both current and longitudinal heroin use were strongly related to whether the initial heroin trial occurred with peer group friends or with family. When the initial company included intimate others--blood relatives, husbands, or more-than-casual lovers--most users reported current heroin consumption and recorded morphine-positive urines. Those who first used heroin with intimates present showed a common pattern of curiosity, accessibility, and eventual progression to being "strung out." However, the progression to long-term consumption seemed to occur only if intimates displayed a neutral or positive attitude toward the respondents' use of heroin. Intimate others were also the precipitants in 60 percent of all treatment episodes. The duration of such episodes was nearly double that for self-precipitated admissions.

Current consumption patterns were influenced considerably by family members. For all the abstainers, members of the immediate family were integral to the respondents' reasoning about abstinence. Family relationships could also work to promote continuation of drug use, as family problems underlay some respondents' perceptions of their need to rely on heroin.

CONCLUSIONS

The women in the sample defined their current social identities mainly in terms of family and intimate relationships and generally had developed few social resources or supports beyond these immediate ties. Whether currently using or currently abstinent, respondents uniformly accounted for their current pattern of use with reference to lovers or kin. Initial use and the seeking of treatment were also strongly related to the influence of intimate others.

Results support the hypothesis that kinship roles are centrally important to this population in that they mediate the psychopharmacological effects of heroin at many points in addict careers. In addition, the strong relationship of the circumstances of the initial heroin trial to the later consumption pattern showed that the patterns and priorities of the adult American lifestyle are formed largely during adolescence and that family influences have longer term effects than do adolescent friends. In female addict careers, kin group relations remain prominent. Later influences on consumption are extensions of the influences that affect the first consumption.

To reduce the problem of female addiction, strategies to counter the formation and continuation of heroin-oriented couples and families and to foster the formation and survival of abstinent families have the most promise. Research and policy should focus on the actions of intimate others during the young woman's adolescence.

Gioia, C., and Byrne, R. Distinctive problems of the female drug addict: Experiences at IDAP. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse: National Drug Abuse Conference 1974. Cambridge, Mass.: Schenkman, 1975. Pp. 531-538.

DRUG	Heroin; methadone
SAMPLE SIZE	67
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults (mean: males, 31.3; females, 29.9)
SEX	Both
ETHNICITY	48 black; 15 white; 4 Spanish
GEOGRAPHICAL AREA	Illinois
METHODOLOGY	Retrospective survey; comparative study
DATA COLLECTION INSTRUMENT	Interviews; questionnaires
DATE(S) CONDUCTED	1972-1973
NO. OF REFERENCES	None

PURPOSE

Only about one-fourth of the people seeking treatment in the Illinois Drug Abuse Program (IDAP) between 1968 and 1973 were female. Studies of addiction have also been largely male oriented. This study aimed to identify the distinctive characteristics and problems of the female addicts in the Illinois program.

METHODOLOGY

Random samples of both males and females, including staff and patients at 12 IDAP clinics, completed questionnaires or interviews. The questionnaires, which were completed by 78 persons, were administered in the fall of 1972. Interviews of 35 persons were conducted in the summer of 1973. Thirty-one of the interviews were recorded. Results are reported for 67 patients in the sample.

RESULTS

Almost all of the patients had been heroin users, and about 80 percent of the men and 68 percent of the women were on methadone. The 39 male patients averaged 31 years of age, while the 28 female patients averaged almost 30 years. Most subjects were black or white; a few were Spanish. About one-fifth of the females and two-fifths of the males in the questionnaire sample had completed high school, while the women who were interviewed had somewhat more education than the men who were interviewed. Over half of the males were employed, while few of the females were working.

Although women remained in treatment in IDAP at about the same rate as men, two-fifths of the women claimed to have left the program and returned, compared to only 10 percent of the men. Several women used the question about leaving the program to express dissatisfaction with it. In contrast, the male patients interviewed, especially those on methadone, seemed reluctant to express dissatisfaction with the program. However, their sense of dependency on the program could have made it difficult for them to speak negatively of it.

All the patients who were interviewed said that the program had helped them. The majority of the women, but none of the men, mentioned that methadone was the most important aspect of treatment for them. Therapy groups and counselors were named by most men and some of the women as the most helpful aspect of the program. Four of the men and only one woman mentioned informal contact with other clinic members as an important aspect of treatment, indicating slightly more camaraderie among male members than among female members.

A distinctive pattern emerging from the interviews with most of the women was the ambivalence toward things or people that potentially could help them. For example, one woman mentioned that methadone was the part of the program that helped her the most, but later in the interview insisted that it kept her from being able to function or get a job. Other women voiced similarly contradictory views about methadone. Moreover, some women expressed ambivalence toward other aspects of treatment, such as the counselors or the encounter groups.

A woman's departure from the program and subsequent return was another expression of this ambivalence. The help offered may have seemed threatening to these patients and prompted flight from dependence on the program. Upon gaining a greater sense of independence, the woman might feel comfortable in seeking help again.

CONCLUSIONS

The typical female addict in the IDAP program is black, single, and has children who do not live with her. She is unemployed and lacks both vocational skills and education. Her inability to get a job parallels her inability to form stable love relationships. In addition, she is an isolated person and suffers from loneliness both in and away from the program.

While males tend to view the counseling and contact with other patients as the most helpful parts of the program, the female in treatment tends to view methadone as the most beneficial aspect. These attitudes are probably a continuation of patterns developed prior to treatment. Female drug abusers' ambivalent attitudes appear to be related to their distinctive problems. However, women's expressed need for both dependence and independence represents potential sources of strength. Treatment must eventually consist of recognizing and integrating these two needs.

Gossop, M. Drug dependence, crime and personality among female addicts. Drug and Alcohol Dependence, 3(5):359-364, 1978.

DRUG	Heroin; methadone; barbiturates; sedatives; multidrug
SAMPLE SIZE	37
SAMPLE TYPE	Addicts
AGE	Adolescents; young adults (most between ages 16 and 28)
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	London, England
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Interviews; Eysenck Personality Questionnaire
DATE(S) CONDUCTED	1976
NO. OF REFERENCES	11

PURPOSE

The relationship between criminal behavior and personality factors among drug-dependent groups is not yet fully understood. Although several studies show addicts to have elevated scores on the psychoticism (P) and neuroticism (N) scales of the Eysenck Personality Questionnaire, they have also shown that addicts score lower than controls on the extraversion (E) dimension despite Eysenck's prediction to the contrary.

In addition, female drug addicts and female criminals have received relatively little research attention. This study investigates the personality correlates of female addicts, many of whom had been convicted for drug-related, violent, and other offenses, attending a drug clinic in London, England. It was predicted that the convicted females would score higher on the E dimension than the nonconvicted females.

METHODOLOGY

The study's 37 subjects were receiving treatment at the Drug Dependence Outpatient Clinic of the Maudsley Hospital in London during 1976. All subjects were seen individually in the clinic

and were asked to complete the Eysenck Personality Questionnaire. Subjects were also interviewed to determine their self-reported criminal history. Only formal convictions were recorded.

RESULTS

Most of the subjects were between 16 and 28 years of age. A total of 16 were dependent on heroin or methadone, 6 relied primarily on barbiturates or other sedatives, and 15 were multiple-drug abusers for whom there was no primary drug of dependence. A total of 20 subjects had at least 1 conviction. Of these, 15 had been convicted of at least 1 drug-related offense and 14 of non-drug-related and nonviolent crimes. Only four subjects had been convicted of any violent crime.

The personality scores of the entire sample were high on the P and N dimensions and low on the E and lie scales. The criminality scale, which is derived mainly from the P and N scale items, showed no differences between convicted and nonconvicted subjects on any of the four offense categories.

Several results supported the prediction that convicted female addicts would score higher than nonconvicted subjects on the extraversion dimension. For both total offenses and nondrug/nonviolent offenses, extraversion scores were significantly higher for the convicted group than for the nonconvicted group. A slight, nonsignificant difference was found in extraversion between convicted and nonconvicted subjects in the drug offenses category. Oral drug users scored significantly higher on the neuroticism scale and on the composite criminality scale than did intravenous users. Extraversion was positively correlated with the total number of convictions, with the number of convictions for drug offenses, and with convictions for other offenses.

CONCLUSIONS

Although the results appeared to confirm Eysenck's prediction that criminals should be more extraverted than noncriminals, the mean E score of the convicted group is very close to that of the general female population of this age. Since Eysenck's theory relies on the assumption that extraverts are more likely to show antisocial behavior through their lower conditionability, the issue of why the convicted addicts did not score above the general population norms on extroversion remains puzzling. However, the E scores of addicts may reflect impulsivity rather than sociability, and impulsivity may be more relevant to criminal behavior than sociability. Alternatively, either or both of the unusually high P and N scores of addicts may interact with extraversion in such a way that criminal behavior is more likely even when E scores are not particularly high.

The positive correlation between the number of drug convictions and other convictions suggests either a tendency among addicts who are most involved in using drugs to also engage in other, non-drug-related criminal activities or an increased detectability or social visibility of certain addicts.

Finding a relationship between personality factors and addiction or criminal behavior does not imply that other social factors are either ineffective or of only secondary importance. This study merely examines one aspect of female criminality and drug addiction that has been much neglected.

Harris, S. Mothers in methadone programs need day care. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman, 1975. Pp. 415-417.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicted mothers
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Description
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	0

PURPOSE

In the United States, drug treatment services have often been designed for and instrumental in reducing drug-related crime. Since females do not usually resort to violent crimes, drug treatment programs have generally been geared to the needs of men. Moreover, addicted mothers are at a marked disadvantage because they cannot live in therapeutic communities or, when being treated on an outpatient basis, frequently must take their children with them to counseling sessions. For that reason, the present study argues in favor of child care arrangements for addicted mothers.

SUMMARY

Only 3 of the 49 outpatient drug treatment programs in Detroit, Michigan, have child care services, and there are no plans to include this much-needed service in treatment designs of existing programs. However, optimal service could be afforded addict mothers by providing day care, which simultaneously serves to free mothers' time and to train deprived mothers in child-rearing techniques. Interruptions by children can be seriously disruptive of treatment sessions, greatly hindering any expected levels of achievement. Furthermore, the constant exposure to adult problems may have negative effects on children's future behavior.

An on-site day care facility with a professional staff of 1, a total population of 40 children, a maximum 3-hour visit per child, and approximately 20 operating hours a week can be run for under $9,000 a year. This price includes rent, staff, insurance, and furnishings. Further, not all treatment programs need to provide day care. Addicted mothers could be deliberately directed only to those contractual drug treatment agencies receiving funds for these services. Local social services offices could assist in the effort.

CONCLUSIONS

Establishment of day care services in drug treatment centers could improve the effectiveness of resources in effort, time, and money presently expended on the rehabilitation of addicted mothers.

Huba, G.J.; Segal, B.; and Singer, J.L. Organization of needs in male and female drug and alcohol users. Journal of Consulting and Clinical Psychology, 45(1):34-44, 1977.

DRUG	Alcohol; marijuana; multidrug
SAMPLE SIZE	1,095
SAMPLE TYPE	College students
AGE	Young adults
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Kentucky
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Jackson's Personality Research Form
DATE(S) CONDUCTED	1973 and 1974
NO. OF REFERENCES	29

PURPOSE

Several recent studies have contrasted persons who use drugs and alcohol with nonusers on a variety of personality variables. The differences that have been found have related to an underlying dimension, externality, which is a generalized susceptibility to social pressure and a corresponding need for stimulation. These studies have shown quantitative differences along the same psychological dimensions but have not addressed qualitative differences that might suggest different organizations of personality variables in users and nonusers or in males and females.

This study used factor analysis to determine whether the basic personality needs as postulated by Murray (1938) have a stable organization across individuals who differ in their sex and patterns of drug use.

METHODOLOGY

Jackson's Personality Research Form (PRF), an inventory measuring 14 of Murray's (1938) needs, was administered to 1,095 college students from an Ivy League university and a large State university in Kentucky in the falls of 1973 and 1974. The scale measured 14 needs and 1

response tendency. The variables analyzed were the needs for achievement, affiliation, aggression, autonomy, dominance, endurance, exhibitionism, harm avoidance, impulsivity, nurturance, order, play, social recognition, and understanding, and the scale for infrequent responding.

Each subject also completed a questionnaire about drug and alcohol use. Responses to this questionnaire were used to classify individuals as those who had used neither alcohol nor drugs, those who had used alcohol but not drugs, those who had used marijuana (and, in most cases, alcohol), and those who had used a variety of drugs including marijuana. The total sample was then divided by usage pattern and by a combination of year of testing and sex to yield eight approximately equal but overlapping subgroups of several hundred individuals each. Data for each group were then factored using the method of maximum likelihood.

Additionally, six maximum likelihood factors were extracted from the correlation matrix for the total sample and rotated to approximate oblique simple structure using the direct quartimin algorithm (Jennrich and Sampson 1966) with Kaiser (1958) normalization. After each of the subgroup factor matrices were alined to the total matrix, factor similarity coefficients were calculated between all pairs of corresponding factors.

RESULTS

The factor pattern matrices for male and female samples were quite similar. Moreover, the pattern of correlations among the primary factors found in each analysis was stable across subgroups. The factors represented the need for group membership, extroversion, tendency to impulsive action, achievement motivation, need for a bohemian lifestyle, and desire for organized social play. The generalized achievement motivation and the playfulness dimension were less stable than the other four factors.

CONCLUSIONS

With minor exceptions, the factor structure of the PRF is stable across the sexes and across different types of substance users. Results suggest that the organization of motivational tendencies in college students is the same for both sexes and for different types of substance users. However, the generalizability of these results to older men and women or to chronic users of drugs and alcohol is unknown. This study does demonstrate that moderate and relatively short-term use of a variety of drugs and alcohol is not associated with the reorganization of motivational patterns in a large and reasonably heterogeneous sample of college students.

James, J. Prostitution and addiction: An interdisciplinary approach. Addictive Diseases: an International Journal, 2(4):601-618, 1976.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Prostitutes; addicts; addict-prostitutes
AGE	Not specified
SEX	Female
ETHNICITY	Black; white
GEOGRAPHICAL AREA	A West Coast city
METHODOLOGY	Literature review; ethnographic study; comparative study
DATA COLLECTION INSTRUMENT	Interviews; observations; MMPI; WAIS Vocabulary; Halstead Category Test; Trail Making Test; Tactual Performance
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	28

PURPOSE

The involvement of women in criminal activity has been increasing rapidly over the last decade. Heroin addiction among women is frequently cited as a causative factor of the general increase in crime. The connection between addiction and prostitution has frequently been mentioned, but the dynamics of the relationship have not been carefully examined. The present report provides a review of research on the relationship between addiction and prostitution, presents results of the author's multidisciplinary approach, and outlines an interdisciplinary framework for the resolution of questions on the interactive dynamics of the two illegal activities. This area of study has been neglected because of the preponderance of male addicts, the negative attitude of researchers toward subject areas relating to sexuality and women, the dearth of female researchers, and bias on the part of both sexes.

METHODOLOGY

Multiple convergent measures were used in this analysis of 100 prostitutes, addicts, and addict-prostitutes. The subjects completed questionnaires and were interviewed in depth. Field work was conducted in their homes and in the jail, and a psychological test battery was administered.

RESULTS

Almost all of the available criminological and sociological studies list prostitution as the most obvious criminal support system used by female addicts. Clinical literature suggests that prostitution operates both as a criminal support system and as an expression of personal needs for warmth and relief of isolation. Most reports conclude that the problems of female drug abusers are interpersonal. However, researchers refer to addict-prostitutes' lack of female identity without realizing that it is their femaleness that makes prostitution a viable support system. None of the published anthropological studies of addicts deals with females, and the few reports on prostitution do not discuss addiction.

Regardless of the discipline, all research confronts major difficulties on the issue of femaleness. Added to the limited amount of research on either prostitution or addiction are the stereotypes applied to women' sexuality and the double standard of expected sexual behavior. In failing to examine the problem from multiple perspectives, the separate disciplines have not explained the situation.

Data on the 100 subjects show a definite interaction between the onset of addiction and entrance into prostitution: almost an equal number of subjects report addiction before prostitution as report it after prostitution. Correlations with demographic factors indicate that younger women get involved in drug addiction first and then turn to prostitution as a support system. Black women are more likely than white women to have been addicted prior to prostitution. Moreover, addict-prostitutes state that their drug use increases with their involvement in prostitution because the drugs make it easier to work, increase their relaxation and stress resistance, and can be readily purchased. As interviews show, prostitutes separate themselves from addiction and addicts separate themselves from prostitution. The woman who combines both does so primarily because of the need for money to support drug use and secondarily because of increased availability of money and drugs.

Ethnographic observations reveal another side of the prostitute and addict-prostitute subcultures. The styles of the addict-prostitute and nonaddicted prostitute are different. The addict cares little about her clothing, is on the street with her man, rarely works with other women, is careless about her customers and whom she steals from, and is often arrested. Professional prostitutes are careful about their clothing; consider having a man with them "low class"; work with other women; and are careful about customers, stealing, and the police. Prostitutes constantly draw a line between themselves and addict-prostitutes, reinforcing the ethnographic observations. Even the jargon used differentiates prostitutes from addict-prostitutes.

Psychological tests may confirm these differences. Prostitute-addicts appear to score higher than addict or prostitute groups in stored memory, problemsolving tasks, abstract conceptual abilities, and symbolic understanding, while prostitutes appear to have better social competence, at least on certain tests. An overall sociological interpretation of results suggests that the primary commodity women have to exchange in the addict subculture is sexual access. The interaction between addiction and addicts' concept of sexual access as a commodity makes prostitution the most reliable and available means of support. As previous studies have reported, the dynamics of entrance into prostitution depend in part on the individual woman's perception and rejection of her sexual self-respect. She is defined by her sexual reputation from an early age along a "whore-madonna" scale. The step into addiction for the prostitute is socially a step further along the "whore" end of the spectrum and represents not economic pressures but total loss of control and sexual self-respect. In contrast, the entrance into addiction first and then prostitution represents an adaptation to economic necessity.

CONCLUSIONS

The choice of addiction is a potential step toward prostitution because of prostitution's viability as a support system. Prostitution is also a potential step toward addiction because of the emotional pressure and the proximity of narcotics. However, many women have no intention of combining the two areas. These women must be viewed in the context of the sex-role expectations for women in America, which affect their identity whether they are prostitutes, addicts, or both. The tentative findings indicate that changes in prostitution laws cannot be realistically made in isolation from changes in narcotics laws unless the addict-prostitute is recognized as an offender separate from the prostitute.

James, J.; Gosho, C.; and Wohl, R.W. The relationship between female criminality and drug use. The International Journal of the Addictions, 14(2):215-229, 1979.

DRUG	Multidrug
SAMPLE SIZE	268
SAMPLE TYPE	Addicted offenders; nonaddicted offenders
AGE	Young adult (mean: 25)
SEX	Female
ETHNICITY	White; black
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Retrospective survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1974-1976
NO. OF REFERENCES	9

PURPOSE

Drug abuse has long been cited as a major cause of property crime in the United States. Although much research has focused on the relationship between drug use and crime among males, little has been written on this relationship in females. The cost of illicit use of addictive drugs requires a regular, substantial income, which few women can earn from legal jobs. The cost of regular use of illicitly obtained nonnarcotic drugs is less, but use of these drugs also can lead to involvement in criminal activity.

This study examines the relationship between female addicts and addiction-related crimes (addict support systems) and the relationship between nonaddict female offenders and drug and property violations (nonaddict support systems).

METHODOLOGY

Subjects were 268 women who were interviewed in a large study of female offenders conducted between 1974 and 1976. The women included 70 nonaddict prostitutes; 66 addict-prostitutes; 68 addicts; and 64 nonaddict, nonprostitute female offenders. Both addicts and addict-prostitutes

were users of heroin or opiates. Other drugs included stimulants, hallucinogens, and marijuana.

Each of the women was asked to discuss the details of her juvenile and adult arrests, her criminal activity that did not lead to arrest, her legal and illegal support systems, her approximate income from all sources, and her approximate expenses. Questions were asked about the nature of each crime, the specific charge, the disposition in court, the motivation for criminal involvement, the specific drug, and the amount and nature of drug involvement in each offense.

RESULTS

About half the sample had been arrested as juveniles, but drug involvement was not a factor in most juvenile arrests. Drug taking, however, was a frequent juvenile activity.

The majority of the adult women had been involved in criminal activity as juveniles prior to drug use. First arrests for substantive adult crimes occurred after drug involvement. Among addicts and addict-prostitutes, the first arrests usually occurred a few months after the onset of addiction. Addict-prostitutes and prostitutes had the greatest number of adult arrests. Involvement in adult and juvenile criminal activity was greatest for addict-prostitutes; they were involved in more forgery, larceny, shoplifting, and other offenses than were subjects in the other three categories. A total of 69 percent of the prostitutes and 43.5 percent of the female offenders cited money as the primary motive for involvement in criminal activities. Addicts and addict-prostitutes were much more likely to be involved in drugs when arrested as adults than were the other groups. When drugs were involved in arrests, opiates were most common for addicts and addict-prostitutes.

When subjects were asked to rank the importance of various activities in their illegal support systems as adults, prostitutes and addict-prostitutes reported that they depended mainly on prostitution. Nonprostitute addicts depended heavily on drug sales as their major illegal support, with shoplifting and larceny as the next most important sources of support. Female offenders used a wide range of sources of illegal support, including drug sales, shoplifting, and forgery.

The income for each category of offender was primarily illegally obtained. The reported incomes for the year prior to the interview were essentially middle class, with a mean of $19,500. The main source of illegal income was drug sales for nonprostitute addicts, drug sales and forgery for female offenders, and prostitution for addict-prostitutes and prostitutes. Many women included the cost of drugs for use and resale as drug costs in their account of monthly expenses. The cost of drugs ranged from 43.4 percent of monthly expenses for prostitutes to 77 percent for addict-prostitutes.

CONCLUSIONS

The adult lifestyles were clearly determined by factors other than juvenile drug and criminal experience. In the adult sample, it was not possible to associate a specific crime with the use or abuse of a specific drug. Only heroin and other street-purchased addictive narcotics appeared to be closely associated with crime committed to purchase drugs. The type of crime committed seemed to be determined more by opportunity and skill than by the specific drug used. All four groups reported drug costs as a major percentage of their monthly expenses, although the amount spent on drugs for personal consumption was not separated from the amount spent on resale, and some confusion existed about the financial estimates. Actual incomes were probably higher than the reported amounts.

Like male offenders, female offenders turn to activities that are easily available, provide a satisfactory return, are within their skills and opportunities, and carry the lowest risk of arrest. Drug use becomes involved in their lifestyle and is supported by it but does not dictate specific criminal activities beyond the need for a reliable cash income.

Kandel, D.B.; Davies, M.; and Raveis, V.H. "Women and Drug Use: Social Strains, Coping and Psychological Functioning: A Pilot Study." Final Report of NIDA Grant No. DA 01931. New York: Columbia University and New York State Psychiatric Institute, 1981.

DRUG	Multidrug
SAMPLE SIZE	237
SAMPLE TYPE	Women in the general population; women in mental health or drug abuse treatment
AGE	Young adults; mature adults (range: 18-54)
SEX	Female
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	White Plains, New York
METHODOLOGY	Retrospective survey; multivariate analysis; comparative study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1979
NO. OF REFERENCES	294

PURPOSE

This study considered the use of drugs among women in relation to aspects of their psychological and social functioning and through a significant portion of the life span. In addition, comparative data on women in two types of treatment institutions, a methadone clinic and an outpatient mental health clinic, were obtained.

Thus, the study was built on knowledge regarding the unequal distribution of social strains in various social roles, individual variations in coping strategies, changes in the configuration of roles over the life cycle, socialization practices as they affect women's personalities and psychological resources, and women's greater susceptibility to depressive symptomatology and reliance on the medical care system. Factors associated with the use of different types of drugs were examined. Drug use included the use of socially accepted and recreational drugs like alcohol, illicit drugs such as marijuana, and medically prescribed drugs such as tranquilizers.

METHODOLOGY

Study data were gathered by means of structured personal interviews averaging 2 to 2½ hours in length. The interviewing took place from May 20 to August 20, 1979. A sample of 197 women was obtained in White Plains, New York, and was designed to be representative of the general population of women aged 18 through 54 years. The other groups of women studied included a sample of 20 women from a methadone treatment center and a selected sample of 20 women from an outpatient mental health clinic. These clinics served the same community as the general population sample. Most of the findings reported are from the general population sample.

The interview schedule included questions on life history, drug history, and respondents' background and intrapersonal characteristics, including values and attitudes. As far as possible, the interview schedule made use of items in prior drug, fertility, and labor force surveys. The interviewing was carried out in consultation with the New York Office of the National Opinion Research Center, University of Chicago.

The women in the methadone clinic sample were younger than those in either the community sample, in which most were aged 26 to 44 years, or the mental health clinic sample. The majority of all three samples were white, with blacks constituting the next largest group. Small numbers of Hispanic, Oriental, Asian, and Native American women were also included.

The relationship between patterns of drug use and feelings of psychological well-being was measured among the women in the community sample. Drug behavior in relation to measures of role-specific strains and stresses, especially those associated with the occupational, marital, and household roles, was also examined for this sample.

RESULTS

The use of minor tranquilizer/sedatives showed a consistent positive pattern of association with strains and stresses in each of the roles studied and with the two measures of psychological distress. The associations seemed to be slightly higher in the family roles than in the occupational role. The only other positive associations were between household strains and stresses and marijuana use and cigarette smoking, between the stress of being single and cigarette smoking, and between parental stress and alcohol.

Of the three roles, the household role was most strongly associated with the use of a variety of drugs in cases where women experienced strains in the role. Cigarette smoking was related to increased numbers of psychosomatic symptoms. The role-specific strains most highly correlated with the use of minor tranquilizers included time overload, lack of control, and depersonalization in the occupational role; nonreciprocity and depersonalization in the marital role; and noxious environment and inadequacy of rewards in the household role.

Strains relating to interpersonal relations were those most strongly related to depressive symptomatology. Strains most strongly associated with drug behavior were interpersonal strains in the marital role and strains resulting from situational conditions in the occupational and household roles.

Examination of the relationships between strains associated with various social roles and the effectiveness of potential coping mechanisms, including drug use, in relieving these strains, showed that most coping mechanisms studied, including the use of alcohol and tranquilizers, had detrimental rather than positive effects. No consistent differences were found between the active coping strategies, which were supposed to be effective, and passive ones, although there were exceptions involving specific roles, specific strains, and specific coping mechanisms. For example, the passive coping mechanism of using positive comparisons was somewhat effective in reducing depressive moods resulting from marital and occupational strains. The active mechanisms of advice-seeking and optimistic action appeared to be effective with respect to depressive moods in the household role. An unexpected finding was that women who reported using active coping strategies also reported greater use of drugs and alcohol; drug use had been previously hypothesized to be a passive coping strategy.

CONCLUSIONS

On every criterion under consideration, women in the two clinic samples, especially those in the mental health clinic, seemed to be at a disadvantage compared to women in the community sample. Clinic women were more isolated socially and had less involvement in sustained intimate relationships than the other women. They were also more likely to experience physical health problems and low socioeconomic resources.

Socially experienced strains were strongly related to various indicators of lack of psychological well-being, but the coping strategies used appeared not only to be ineffective but also to make worse the conditions they were supposed to alleviate. The women tended to use minor tranquilizers and sedatives more than any other substance when they experienced these strains, but these drugs did not appear to relieve the distress. The women reporting strains on their roles as housewives used the greatest variety of substances.

The small size of the sample and resource limitations prevent the development of definitive conclusions on the issues studied. More complex causal models should be tested, and a comparable sample of men should be studied.

Lawson, M.S., and Wilson, G.S. Parenting among women addicted to narcotics. Child Welfare, 59(2):67-79, 1980.

DRUG	Narcotics
SAMPLE SIZE	127
SAMPLE TYPE	Addicted mothers and their infants
AGE	Addicts: not specified; offspring: neonates, infants (up to 1 year)
SEX	Addicts: female; infants: both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Texas
METHODOLOGY	Longitudinal survey; descriptive study
DATA COLLECTION INSTRUMENT	Program/clinical statistics; hospital records
DATE(S) CONDUCTED	1974-1977
NO. OF REFERENCES	21

PURPOSE

Drug addiction in women can pose a threat to the physiological and/or psychological well-being of their children. The growing extent of this problem is demonstrated by the statistics from two hospitals in New York and Philadelphia. These data show that the number of infants experiencing withdrawal soon after birth had risen from 1 in more than 150 in the 1960s to more than 1 in 30 in the early 1970s.

Growing awareness of the neonatal withdrawal syndrome has made clinicians aware that extreme irritability, inconsolable crying, trembling, vomiting and diarrhea, extreme hunger, and inability to feed properly may indicate neonatal abstinence. The mother's history, lifestyle, or the presence of needle marks may suggest the existence of drug abuse.

Comprehensive care during pregnancy, birth, and throughout infancy is needed to reduce risks to the infant. Such care should include a strongly structured program of drug treatment, medical services, and psychosocial services. However, the question of the infant's fate after discharge from the hospital remains. The hospital treatment period gives staff the opportunity to prepare the parents for the baby and to evaluate the mother's attachment to the child and her ability to cope with the infant.

The most well-documented study on how addicted women function as parents and the consequences for their children is the 1966-1971 foster care study conducted by the Jewish Association of New York. Its findings indicated that addicted mothers had longstanding and numerous problems and were disabled in their childcaring function earlier than the mothers of children placed in foster care for other reasons. The study raised the issue of whether early termination of parental rights may be in the children's best interests if restoration of mothers to a more adequate level of functioning is deemed impossible.

While success of comprehensive treatment programs for the addicted woman during pregnancy has been reported, participation in such a program does not assure a competent, attentive mother. This study presents preliminary observations on parenting based on a longitudinal study of narcotic-addicted mothers and their children. The parenting and caretaking practices of the addicted population are reported during the infant's first year.

METHODOLOGY

From July 1974 to July 1977, 67 mothers addicted to narcotics and 57 matched control mothers agreed to the followup of their newborn infants until age 6 in a child development research project. The babies were all born at the same Texas hospital. Social and drug histories were obtained by the social workers. The mothers received supportive, therapeutic contact during prenatal visits, during the hospital stay, and after hospital discharge. Home visits were conducted, and telephone advice was given. The 64 drug-affected children (1 set of twins) and 63 addicted mothers who remained in contact with the project for at least a year are included in this report.

RESULTS

A total of 35 of the mothers received methadone treatment during pregnancy, although 4 resumed heroin and/or other drug abuse prior to delivery. All except three continued to abuse heroin and/or other drugs while on methadone. At least two of these women had serious psychopathology. A total of 14 of the 28 women who received no treatment for addiction also sought no prenatal care.

Of the 64 children, including 1 pair of twins, 23 were abandoned by their mothers. Five were abandoned prior to their discharge from the hospital nursery and four others were "given to friends" within 2 to 30 days after hospital discharge. Fourteen women abandoned their babies due to the handicap of their own addiction, 7 were imprisoned for drug-related offenses, 1 died of a drug overdose, and 1 gave her baby away because she suffered from psychopathology in addition to her addiction.

Factors indicating a high risk of neglect and abandonment for those infants released to their parents included lack of drug treatment, lack of prenatal care, previous children not under the mother's care, no legal income, no regular residence, and mother's uncooperativeness or lack of involvement in nursery care. The number of years addicted and the number of drugs abused were not found to be indicative of higher risk. Seven-tenths of the women who abandoned their children had three or more risk factors, compared with only 5 percent of those who cared for their own infants.

A total of 13 of the infants abandoned in the first year were kept by another family member, usually the maternal grandmother, while 10 were placed with nonfamily foster parents. Of these 23 children, 9 were adopted or placed in legal custody awaiting adoption. Many of the 17 being cared for by their single mothers were under the care of a relative who gradually became the more consistent and responsible caretaker.

CONCLUSIONS

A mother's efforts to obtain treatment for pregnancy and addiction are predictive of her capacity for caring for her infant. The mother's involvement with the infant during hospital care is also an important predictive factor. Factors such as lack of a stable residence or regular legal income indicate a disorganized "street" lifestyle and the need for close monitoring at least during the infant's first year. Alternatives to full parental custody should be sought when the Rothstein

risk factors, such as the mother's age being under 18 or over 30 years, long-term drug use, drug use while on methadone, unstable home situation, and inability to rear previous children, are present.

Since no general policy exists regarding infants' dispositions at the time of hospital discharge, supportive contact through protective services or through ongoing intensive casework should be provided to the addicted families of newborns. Although prediction of outcomes in individual cases is difficult, social workers and medical staff must assess behavioral and circumstantial indicators that, seen in combination, show the child to be at high risk for neglect.

Lawson, M.S., and Wilson, G.S. Addiction and pregnancy: Two lives in crisis. Social Work in Health Care, 4(4):445-457, 1979.

DRUG	Multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Houston, Texas
METHODOLOGY	Clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	49

PURPOSE

While a pregnant addict may find that concern for her newborn baby provides a strong motivation to stop using drugs, she may also deny the possibility of serious effects on the infant because such an admission would produce distressing guilt feelings. In addition, the woman's own emotional problems and her transient, survival-oriented lifestyle may result in her not seeking medical care until delivery. Such attitudes and behaviors hinder her realistic planning for a baby.

Medical facilities must be equipped to intervene in the most supportive way possible to promote the infant's survival and the mother's capacity to be a parent. This paper seeks to demonstrate that comprehensive care for the addicted mother may improve the infant's condition at delivery and upon release to its home environment. Comprehensive care is defined as interdisciplinary teamwork that coordinates psychosocial, medical, and drug treatment at one facility or in outside agencies with interacting staff and program. The article emphasizes points for intervention by the team of social workers, working with patients and other team members in the critical moments during pregnancy and delivery. The discussion is based on the authors' experience in the Maternal Narcotics Addiction and Child Development research project at Jefferson Davis Hospital in Houston, Texas.

SUMMARY

Chemical dependence in pregnancy has become a major health problem over the last 20 years. Addicts' erroneous belief that heroin and methadone produce temporary infertility and their focus on obtaining drugs produce little concern for preventing conceptions. Perinatal morbidity is common in the infants of untreated narcotics addicts. Neonatal withdrawal symptoms can be life-threatening if not properly treated. Appearance of withdrawal symptoms is a signal for medical staff to seek a drug history or signs of drug abuse from the mother if this information is not already known. The first signs of withdrawal are usually an anxious expression, overactivity, tremors, and inconsolable crying. Prompt care is needed to reduce activity and skin abrasions and to control dehydration. Although methadone may also result in withdrawal symptoms, it is still recommended for treating heroin addicts as detoxification is usually unsuccessful.

Combining obstetrical care with personal, supportive services and frequent contacts by social workers and drug treatment staff could motivate pregnant addicts to seek prenatal care. Such a program would result in a less stressful birth, more normal development of the newborn, and greater coping ability in the mother. One case example from the 62 addicted families being followed by the authors shows that addicts thus helped can be motivated even to change their living situations to ones supporting their resolve to stay drug free.

Although heroin is the most serious drug of abuse among pregnant women, other drugs such as alcohol are also abused and involve withdrawal symptoms. The psychological problems associated with drug addiction require that patients receive intensive support to stabilize themselves and to cope with life's demands. Addicted mothers have low opinions of themselves and need understanding and support rather than resentment and rejection. A case history illustrates the need for support from medical staff and social workers.

After the baby's birth, a social worker or medical staff member sensitive to the addict's special handicaps can accompany her on nursery visits and help her touch, hold, look at, and feed her baby to promote maternal-infant bonding. Without such support, the mother may react inappropriately to the baby's illness and may develop a disorganized system of mother-child communication. The social worker may also help the mother and father to admit feelings of fear, guilt, and dislike of the fretful baby and can help them move on to caring for their newborn and to continue visiting.

Addicted mothers may have unrealistic fantasies regarding their children's effect on their lives and may repeat for their children the same conditions that initiated them on the road to addiction. In addition, dulled perceptions due to drugs reduce the mother's awareness of the child's needs and her own capacities to meet those needs.

The social worker helps interpret the patient's needs for the medical staff and the baby's medical developments to its family. The social worker should also direct the mother to drug treatment if she is not already in it. Regular counseling meetings during and after pregnancy help a mother develop trust, admit realities, and strengthen her ego and also make the mother more likely to keep appointments. Voluntary commitment to the comprehensive care program is deemed essential for the program's success. The social worker should use the infant's hospital stay to observe the mother's interest and to evaluate her parenting capabilities. The social worker must also see a relatively stable residence during home visits in order to evaluate and prepare the mother before the infant's release from the hospital. Home visits also give information that might be needed if protective custody is sought for the child.

The worker's notes on the hospital charts and consultations with the medical staff can also sensitize other staff to the infant's whole environmental situation and help them plan for discharge. Social workers can buffer hostile attitudes of some hospital personnel toward addicted parents. They should also be aware that the mother's involvement with the infant during its hospital stay can be predictive of her child care; those who don't visit their babies or who are uncooperative often abandon their babies before 6 months. Protective agencies are mandated to intervene in cases involving children in withdrawal. In such cases, mothers can gradually earn rights of full responsibility for their children by making the changes mandated by the caseworker.

CONCLUSIONS

Drug treatment combined with strong psychosocial support, individual attention, counseling, and medical care is necessary to improve the prognosis for the infant's health and the mother's parenting. Such support may result in the use of this crisis time to the mother's benefit and in bringing stability to the child's life either through the mother's improved capacities or through alternative caretaking.

Levine, D.G.; Preston, P.A.; and Lipscomb, S.G. A historical approach to understanding drug abuse among nurses. The American Journal of Psychiatry, 131(9):1036-1037, 1974.

DRUG	Alcohol; opiates; pentazocine (Talwin); meperidine hydrochloride (Demerol); sedative-hypnotics
SAMPLE SIZE	12
SAMPLE TYPE	Addicted nurses
AGE	Young and mature adults (range: 27-56)
SEX	Female
ETHNICITY	White
GEOGRAPHICAL AREA	Lexington, Kentucky
METHODOLOGY	Correlational study
DATA COLLECTION INSTRUMENT	Interviews; Critical Events Form
DATE(S) CONDUCTED	December 1972 to May 1973
NO. OF REFERENCES	8

PURPOSE

Reliable information on the prevalence of drug abuse among medical personnel is scarce, although estimates based on informal reporting reveal a substantially higher risk for physicians than for the general population. Medical personnel differ from the general population of drug abusers in their abuse of particular drugs. Nurses, in particular, are frequent abusers of meperidine hydrochloride (Demerol) and pentazocine (Talwin) because the addictive properties of these drugs were slow in being recognized.

The present study examines the relevant social and psychological forces that have led to the evolution of drug abuse by a group of nurses.

METHODOLOGY

Data derive from a sample of 12 registered nurses who used drugs illicitly and who volunteered for admission to the National Institute of Mental Health Clinical Research Center in Lexington, Kentucky, during a 6-month period ending in May 1973. Most of the data were obtained in structured interviews covering personal and family history, educational and employment history, health, finances, sexual history, and history of drug abuse. This information was supplemented

with a Critical Events Form outlining significant changes in individuals' major life areas on a year-to-year basis and with facts gleaned from daily group therapy.

Subjects were all white women ranging in age from 27 to 56 years, with an average age of 40. They had been using drugs illicitly for 1 to 24 years, with a mean of 5 years. Job turnover of subjects had been high (average: 11 jobs) because of drug-related problems.

RESULTS

Subjects' medical histories were characterized by an extensive lifelong use of medical services. All but one had had surgery in childhood or adolescence. By the time of the study, subjects averaged 6.1 medical procedures, with a total of 200 hospital stays. A total of 10 patients had been in outpatient psychiatric treatment and 8 of them had been hospitalized for psychiatric reasons, although only one-third had ever been treated for drug abuse.

Half of the subjects reported histories of severe alcoholism, preceding the use of drugs by several years. Three-fourths of the subjects were cigarette smokers. Drugs abused were exclusively prescription drugs. Eight subjects had used opiates extensively (but not heroin), nine had used sedative-hypnotics, four had used amphetamines, and six had used Talwin. However, only four subjects had developed a physical dependence on drugs. Additionally, the most favored class of drugs abused was the opiates, and all subjects who indicated this class mentioned Demerol specifically. Five of the six subjects who had used Talwin considered it to be one of their main drugs. Morphine and Dilaudid were mentioned in a few cases.

CONCLUSIONS

The patterns of drug abuse among nurses reflect their personal and professional attitudes toward mind-affecting substances: "medicines" are acceptable, while illicit "drugs" are not. In the nurses' view, the switch from alcohol to medications is an improvement because the medications are legitimate therapeutic agents.

Medical histories of these subjects suggest that sustained commitment to a medical orientation may predispose an individual to seek relief from career and personal problems by using drugs. The cases examined all reflect a struggle against medical dependence, and nursing as a career choice appears to be an attempt at mastery through identification. Such persons encounter serious difficulties in becoming self-reliant, and they must come to grips with the basic problem of dependency conflicts played out in a medical metaphor.

Levy, S.J., and Broudy, M. Sex role differences in the therapeutic community: Moving from sexism to androgyny. Journal of Psychedelic Drugs, 7(3):291-297, 1975.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts in treatment
AGE	Not applicable
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	22

PURPOSE

Despite the fact that women make up a significant proportion of drug users, little is known about the attitudes and practices affecting women in drug abuse treatment programs. However, evidence is mounting that sexist attitudes and practices in therapeutic communities for drug abusers are common. The present study outlines observable discriminatory practices and specific problems of women in drug treatment programs as documented in literature and observed in practice.

SUMMARY

Studies indicate that women in drug treatment programs have particular problems--responsibility for raising young children, the dual roles of women who are both mothers and heads of households, and a social environment that is nonsupportive. Feminist researchers argue that women should be treated by other women until they are able to define their own sense of self and feminism.

Studies of a therapeutic community and of a methadone maintenance program show that attitudes toward women in treatment reflect the views of the general society. For instance, women believe that it is harder for them than for men on the street, while men believe that it is easier for

women. Both men and women believe that treatment in a therapeutic community is harder for women than men and that men are more prone to violent crime than women. Data also indicate that men and women receive different treatment and that most of the staff believe that these differences are justified. Women are seen as more dependent, more emotional, and sicker than men, and job assignments are made with a stereotyped view of the sexes. These attitudes differ little between male and female staff members. Moreover, female staff appears to be less perceptive in dealing with female clients than with male clients.

Additional findings from these studies indicate that female patients are more concerned than men about their lack of job training and education. In general, males view their problems in terms of competence and striving, while females face problems in intrapsychic and interpersonal areas. Women entering therapeutic communities are frequently faced with negative self-feelings and physical problems, such as pelvic inflammatory disease and dysmenorrhea. Thus, at the beginning of treatment, newly admitted women should undergo gynecological and physical examinations conducted by sensitive individuals in a nonthreatening atmosphere.

As most treatment communities are male oriented, little room remains for female clients seeking validity within the confines of conventional femininity. Radical feminist treatment may be a valid alternative after female patients are able to identify their true feelings to themselves, but most staff members are reluctant to accept the feminist approach. Sexual biases are also evident in the tendency of male patients to probe female patients for all details of any sexual activity, in the ban on seductive behavior by women but not by men, and in the usefulness of physical attractiveness in manipulating staff. These biases are a barrier to a meaningful exchange between male and female patients about their real feelings and motives.

Inroads can be made to solving problems involving sexism by hiring more female personnel and assuring that those hired are willing to put in long hours on occasion. Situations in which male staff spies on female staff are to be avoided, and female clinicians should perhaps be hired and trained as a group. Both male and female staff should receive attitudinal training and consciousness-raising instruction by outside specialists.

CONCLUSIONS

Rigid distinctions in cultural beliefs concerning sex differences must be eliminated in therapeutic communities that orient treatment toward a male mentality and male stereotypes. Recognition of a nonsexist definition of human traits (i.e., androgyny) may free both men and women to experience the full range of their human capacities.

Levy, S.J., and Doyle, K.M. Attitudes toward women in a drug abuse treatment program. Journal of Drug Issues, 4(4):428-434, 1974.

DRUG	General
SAMPLE SIZE	130
SAMPLE TYPE	Addicts in treatment; treatment staff
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Newark, New Jersey
METHODOLOGY	Comparative study; descriptive study
DATA COLLECTION INSTRUMENT	Attitudes toward Women Scale; treatment program surveys for residents, staff, and agency
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	12

PURPOSE

Although women constitute a significant portion of the treatment population, little is known about the attitudes and practices affecting women in drug abuse treatment programs. To improve that situation, the present study collects information from the staff and residents of a single therapeutic community program and explores the social-psychological variables for women in treatment as a management/clinical issue rather than a political one.

METHODOLOGY

The study sample consisted of 34 staff members (25 males and 9 females) and 96 residents (73 males and 23 females) of Integrity House, Inc., a large drug-free therapeutic community program in Newark, New Jersey. Measurement instruments for the staff were a "Treatment Program Survey--Staff" questionnaire and the Attitudes toward Women Scale. Residents completed the "Treatment Program Survey--Residents" questionnaire. The executive director completed an agency census questionnaire entitled "Treatment Program Survey--Agency."

RESULTS

The differences between males and females on both staff and resident levels reflect attitudes and practices that are more universal to society than unique to the therapeutic community. Males predominate on the general staff, the clinical staff, and especially the executive staff. Furthermore, staff members perceive female residents as different from males (i.e., more emotional, more sensitive, limited in their biology, needing to please men, and implicitly sicker than men). Greater emphasis is placed on interpersonal relationships for women and on competence or striving for men. Staff consider a stable relationship with a member of the opposite sex a prerequisite to successful program completion for women, while for males the emphasis is on realistic job plans. Thus, staff perceptions mirror general beliefs about differences in male-female roles in society at large.

Decided discrepancies are evident between residents' concerns and staff perceptions of their problems. For example, female residents' negative feelings about their bodies, suicide attempts, and feelings of ignorance were not perceived as major problems by staff. Moreover, there were no significant differences between male and female staff on the Attitudes Toward Women Scale. The two groups differed only in men's more conservative attitudes toward marital relationships and obligations. Although staff members believed that women were given the same work assignments as men, apportioned assignments actually reflected traditional male-female differences, as did expected job assignments on the outside.

Resident males were evenly divided as to whether treatment is harder for men or for women. Female residents felt that treatment is somewhat more difficult for women. Both male and female residents believed that it is more difficult for men on the street; the law is supposedly harder on men, while women can get by in the drug scene by being prostitutes. In reality, the number of males and females arrested is about the same. Drug use patterns of men and women are similar, although men start using drugs at an earlier age than women, and women use more barbiturates than men. Additionally, residents stated that women's rights are discussed less frequently in the treatment program than other topics, although staff disagreed. Overall, both staff and residents reflected the situation in society, turning a deaf ear to women's problems.

CONCLUSIONS

Behavior of staff in therapeutic community programs often tends to suppress the aspirations of women and to disregard the unique problems of women both in society and in the therapeutic community. Any tangible gains to be made by and for female clients in therapeutic communities must include the entire staff and their social and clinical practices. Female staff members must have a role in management and clinical policymaking, and male staff must undergo attitudinal training on the rights, roles, and special problems of female clients. Double standards in sexual behavior, employment, and education are to be avoided.

Lex, B.W. "Significance of Addicts' Mates in Rehabilitation." Final report of NIDA grant No. 1-R01-DA-02325-01. Belmont, Mass.: Harvard-McLean Hospital, 1981.

DRUG	Heroin
SAMPLE SIZE	12
SAMPLE TYPE	Current and former male addicts and their mates
AGE	Young adults; mature adults (range: 20-38)
SEX	Both (6 males and 6 females)
ETHNICITY	White
GEOGRAPHICAL AREA	Boston, Massachusetts
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Personal Adjustment and Role Skill Scales; Katz Adjustment Scales; and others
DATE(S) CONDUCTED	1979-1980
NO. OF REFERENCES	12

PURPOSE

Field studies and clinical reports describing relationships between male chronic heroin addicts and their female mates have raised many questions about the personal lives of heroin addicts. However, as most studies derive from a variety of disciplines, information on this issue is limited in focus and difficult to interpret.

An extensive followup study of addicts reports that girlfriends, wives, and children are most often named as crucial in the maintenance of abstinence. This study analyzes characteristics of addicts' mates to obtain information about the rehabilitation process that can be generalized to other aspects of addicts' lives.

METHODOLOGY

The study sample consisted of six white males known to be active or former "hard core" heroin addicts and their female mates. All addicts had at least a 2-year history of heroin addiction and relationships with their present mates that had lasted 6 months or longer and appeared likely to endure. Both female and male partners agreed to participate. Subjects were white, mostly Roman Catholic, and in their twenties and thirties.

The representative case method was used to epitomize certain characteristics. Cases represented were couples with the male partner using heroin daily, couples with the male partner abstinent from heroin for more than 6 months, and couples with the male partner in treatment for heroin addiction. Drug use histories of all subjects were evaluated according to the operational criteria established by the Research Diagnostic Criteria and the Diagnostic and Statistical Manual of Mental Disorders. All male subjects fully met the criteria for current or past Narcotics Use Disorder and Opioid Dependence Disorder.

Data were obtained through 20 hours of at-home and telephone interviews and through a battery of tests (the Personal Adjustment and Role Skill Scales, the Katz Adjustment Scales, the Wessman-Ricks Personal Feeling Scales, and the Pattison Psychosocial Kinship Inventory). Depending on the nature of a variable and the type of frequency distribution, appropriate parametric or nonparametric tests were used. For nonparametric tests, contingency tables with chi-square and associated statistics or Fisher's Exact Test were employed. To detect the strength of hypothesized relationships, Pearson Product Moment correlation coefficients were calculated between the ratings of partners, weighting by the variable "heroin use status."

RESULTS

Current opiate use status was a key variable distinguishing the couples in the sample: the current addiction status of both partners tended to be similar. All of the male subjects, whether currently using heroin or not, shared marginal economic status; only one of the six households was supported by legitimate employment of the male. All of the three males abstinent from heroin appeared to have attached themselves to females who were prepared to achieve upward mobility via planning, diligence, and hard work. In contrast to the mates of males currently using heroin, none of the mates of males currently abstinent from heroin showed signs of clinical depression during the course of the study. While a lack of intracouple congruence on ratings of mood was evident for couples using heroin, abstinent couples were likely to concur on dimensions of mood assessment. The mates of abstinent males reported more desirable traits in their partners and were less dissatisfied with their partners' social activities and contribution to household management than were mates of heroin users.

Certain generalizations can be made from consideration of the characteristics of partnerships formed by the three abstinent males. All of the mates were good "hustlers," experienced in life but making constructive use of their knowledge and skills. The women were more emotionally stable than their mates and were free from depression; their stability served as a model in coping and as a basis for encouragement. Each woman maintained a household that provided a social context incorporating a meaningful social role for the former addict. The nontraditional social roles of these women left a gap in household functioning that could be readily filled by the former addict. In the process of assuming domestic responsibilities, the former addict learned to meet expectations in a less demanding environment than the competitive anonymity of the workplace. By temporarily assuming nontraditional social roles, the former addict could act more traditionally as a protector of women and children. By participating in a domestic unit, the former addict was "domesticated" in an environment that provided an alternative to criminal behavior. Thus, attainment of ascribed social roles is one way in which a former addict can build a foundation for attaining new social roles, such as becoming employed.

CONCLUSIONS

The findings from the study suggest dramatic differences between addicted and abstinent couples. However, further systematic study of family environments of such couples and couples' participation in activities outside the drug culture is needed. On the basis of the present results, it appears that by grafting themselves onto domestic units, abstinent addicts enhance their own chances for survival and for social and economic success. However, the strategy may also be just another sort of "hustle" through which abstinent addicts only temporarily maintain a semblance of an ordinary life. As none of the relationships in the study had been legitimated by marriage, former addicts may be attempting social roles that can be readily discarded. However, at least some of the men made long-term plans with their mates, indicating their desire or need to sustain these relationships. Self-domestication via attachment to a particular sort of mate may be an accommodation between street life and the demands of mainstream American life, as well as an acknowledgment of the inadequacy of the usual forms of treatment.

Linn, L.S., and Davis, M.S. The use of psychotherapeutic drugs by middle-aged women. Journal of Health and Social Behavior, 12(4):331-340, 1971.

DRUG	Prescription psychotherapeutic drugs; over-the-counter drugs
SAMPLE SIZE	99
SAMPLE TYPE	Middle-aged women
AGE	Mostly mature adults
SEX	Female
ETHNICITY	95 percent white; 5 percent Oriental
GEOGRAPHICAL AREA	Los Angeles, California
METHODOLOGY	Descriptive study; correlational study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	15

PURPOSE

Medical sociology contains a concept called "illness behavior," which states that different kinds of people in different social situations perceive, evaluate, and act upon symptoms of illness in different ways. Illness behaviors have been related to social and cultural factors such as age, sex, social class, and ethnic background and to other factors such as degree of stress, social participation, or social integration into the community.

The use of drugs can also be viewed as a means of acting on recognized symptoms. Concern is currently growing over the use of drugs to alter mood or mental state and includes attention to the use of legal drugs by adults. The use of psychotherapeutic drugs is an important social, as well as medical, issue over which opinions are divided.

The present study was designed to define the prevalence of psychotherapeutic drug use within a population of middle-aged women and to analyze such drug use in terms of social, cultural, medical, and environmental factors. Three propositions were investigated: (1) women who use psychotherapeutic drugs will be more likely to recognize and define themselves as having health problems and to use the services of physicians more often; (2) women who use psychotherapeutic drugs will be more likely to have social or cultural ties to groups or institutions that have greater concern with health and health problems; and (3) women who use psychotherapeutic

drugs will be more likely to occupy social positions that are less integrated into the general cultural milieu, as well as to report more frequent social and psychological stress.

METHODOLOGY

The subjects were 99 women from Los Angeles who were selected from listings in neighborhood telephone directories, contacted by letter, and finally telephoned in order to arrange a home interview. Refusals and the unavailablity of subjects in many households necessitated resampling to obtain the 99 usable interviews. The subjects were mostly white, married, English-speaking, and over 30 years of age. A total of 17 percent were Catholic, 33 percent Protestant, 34 percent Jewish, and 15 percent of other religions or no affiliation.

The interviews were presented as a survey of attitudes toward health. No initial references were made to drugs. The first dealt with respondents' social and cultural characteristics, while the second phase dealt with the extent of respondents' discussions of health with their family or friends as well as how often they mutually discussed or recommended medications. The third and fourth phases dealt with respondents' subjective assessment of their health and their patterns of psychotherapeutic drug use.

RESULTS

A total of 48 percent of the women were currently taking one or more prescription psychotherapeutic drugs. A total of 26 percent of the drug-using women took drugs daily; 31 percent, once or twice a week; and 43 percent, less frequently. The drug being taken was recommended by a physician in 84 percent of the cases, a pharmacist in 4 percent, a relative in 6 percent, and other sources in 6 percent. Overall satisfaction with the drugs' effectiveness was high. Only 7 percent of the women took over-the-counter drugs other than aspirin. More frequent drug use was associated with the symptoms of nervousness and sleeplessness, while less frequent use was associated with depression, lethargy, or weight change.

Women who used psychotherapeutic drugs were more likely to have had ties to groups that placed greater emphasis on health or concern with health problems. These were most likely to be Jewish; least likely to be Catholic; and more likely to have reference groups in which discussions about health, health problems, and medication were more frequent. Social class and educational background were not significantly related to drug behavior.

Women who used psychotherapeutic drugs were also more likely to have recognized or defined themselves as having chronic health problems, to have used other kinds of medication, and to have used the services of physicians more frequently. However, such medical factors had a meaningful relationship to use only among Protestant women. Similarly, the prevalence of psychosocial problems was related to the use of psychotherapeutic drugs for all women, but the relationship was meaningful only among Protestant women when religion was taken into account. In addition, women who used psychotherapeutic drugs were not less likely to be integrated into their communities, with club membership, religious and community activity, and employment providing testimony to this.

CONCLUSIONS

Psychotherapeutic drug use among females cannot be explained adequately by a single factor. Medical and psychological factors seemed to be important in understanding the drug behavior of Protestants, but among Catholics and Jews, cultural factors seemed to be of primary importance. However, findings should be interpreted with extreme caution since the sampling was neither systematic nor random.

Maglin, A. Sex role differences in heroin addiction. Social Casework, 55(3):160-167, 1974.

DRUG	Heroin
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts
AGE	Not applicable
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review; case study; clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	14

PURPOSE

The limited amount of attention given to female addicts may be a source of the common assertion that women are much less amenable to treatment than men. The author, a social worker in the Methadone Maintenance Treatment Program at Mount Sinai Hospital in New York City, discusses the sex role differences between female and male addicts, with emphasis on implication for the treatment of female addicts.

SUMMARY

Making opiates illegal ended the 19th-century pattern of equal numbers of male and female addicts as heroin became less respectable for women to use. Possible reasons for the currently lower rates of heroin addiction among women include less pressure to experiment, the more sheltered lives led by women, and the especially negative image associated with female addiction. Nevertheless, some women do become addicts both for the same reasons as men and for such reasons as the pressures of sexism and as a substitute for sex.

Most female addicts are introduced to drugs by males. Dependency on males is a common pattern and sometimes takes such extreme forms as following male partners' leads regarding drug use

and drug rehabilitation. Nevertheless, lesbianism is prevalent among female addicts, including those who are married. Opinions vary regarding whether addiction precedes or follows lesbianism. Although prostitution and lesbianism do not always accompany addiction, causal connections among these categories exist for some people.

Some special biological problems arise from female addiction. Female addicts often stop having their menstrual cycles, sometimes for more than a year. No medical consequences have been discovered, although addiction can produce anxieties about physical well-being and the ability to bear children. Potential consequences for the newborn infants of addicted women are also a source of concern, although existing evidence indicates no serious impairment beyond transient withdrawal symptoms. However, a child can become a burden to an addict mother and, by adding to the addict's guilt and shame, can act as a motivation to continue heroin use.

Therapists generally consider female addicts to be less accessible to rehabilitation efforts than male addicts. Therapists lack information about female addicts' lifestyles as relatively little research has been done in this area. Moreover, the large number of female addicts pressed into prostitution see rehabilitation from the drug world as a less attractive alternative than the steady income they can earn through prostitution. In addition, sexist attitudes in society make female addicts less amenable to treatment, since they will still face the public label of the "fallen woman" even after treatment.

The emotional burden placed on ex-addicts to start a new kind of life is also greater for women than for men. Furthermore, homosexuality of many female addicts presents another obstacle to drug rehabilitation efforts, since most treatment programs require clients to give up homosexual sex at the same time they give up drugs. Other obstacles involve the efforts of many, if not most, programs to produce traditional social conformity among women, their failure to address many women's child care responsibilities, and the refusal of male partners to enter treatment.

CONCLUSIONS

Treatment of both female and male addicts poses many problems for therapists. The female addiction cycle needs to be studied to gain more precise information about the nature and relative importance of these problems. Such research should also correct the current tendency to view addicted women as unaccountably more difficult to treat. Although the extra difficulty in treating women is real, it is not the fault of the client but the result of greater societal pressures on female addicts than on male addicts. The therapist's first task should be to clarify and understand these forces, so that progress in therapy will not occur only by accident.

Mandel, L.; Schulman, J.; and Monteiro, R. A feminist approach for the treatment of drug-abusing women in a coed therapeutic community. The International Journal of the Addictions, 14(5):589-597, 1979.

DRUG	General
SAMPLE SIZE	Not specified
SAMPLE TYPE	Addicts in treatment
AGE	Adolescents; young adults; mature adults (average: 25; range: 17-43)
SEX	Females
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Southern California
METHODOLOGY	Clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	7

PURPOSE

According to a number of sources, treatment for female drug addicts has been based on techniques that were derived from rehabilitation of men. However, many of the problems of female addicts are closely related to the more general problems of being women in a discriminatory society. Additionally, many female addicts claim that sexist attitudes were a contributing factor to their addiction.

Treatment programs frequently continue to abuse the sexuality of female addicts. For that reason, programs have been established exclusively by and for women. This paper describes work with female addicts in an all-woman feminist awareness group within the framework of a coed drug-free therapeutic community in California.

METHODOLOGY

The therapy group met 1 to 2 hours a week over a period of 16 months, with between 10 and 20 women in attendance. Women ranged in age from 17 to 43 years (average: 25). Approximately 57 percent were white, 33 percent black, 7 percent Spanish-surnamed, and 3 percent

Asian. Most were Southern Californians from working-class families, had high school educations, were or had been married, were mothers, and had resorted to prostitution for self-support.

The goals of the group were to encourage the women to communicate honestly, to develop their self-respect as women, to increase their self-esteem, to examine the societal factors contributing to their situation, to explore the relationship between their early childhood experiences and their present lifestyles, and to learn to make responsible health decisions. The women were educated in nutrition, exercise, birth control, and sexuality through films, didactic presentations, and readings. The treatment philosophy was eclectic, drawing on transactional analysis, reality therapy, and more traditional approaches. Techniques employed ranged from role playing to body awareness exercises and value clarification. Two 24-hour marathons proved to be successful, intensive learning experiences.

RESULTS

The group resisted therapy initially as a result of opposition from male residents, the women's fears of self-disclosure and ambivalence toward change, and suspicion about the supervising professionals from outside the therapeutic community. The resistance was countered by encouraging regular attendance and focusing on therapeutic exercises to reduce fears. Critical problems that emerged as a result of the ongoing group process were a lack of leadership among the women residents, the women's difficulty in changing their self-concept as "dope fiends," their guilt about touching each other physically, and conflicts in their sexual role identities.

The 16 months of intervention produced freer communication among the women and a deep sense of trust. Communication improved between men and women. Interest increased in good nutrition, exercise, and protection against venereal disease and unwanted pregnancies. The sense of alienation among the women was reduced, and some gains were made in self-esteem and self-respect. The women began writing a proposal for a child care center so that they could obtain help in their mothering roles. Clear differences were evident between women who had participated in the group for a long period of time and those who had not.

CONCLUSIONS

The feminist therapy group is an effective treatment modality for drug-abusing women in a residential center. The development of indigenous leadership is crucial to the group process; development of multiple groups and indigenous leadership on lower group levels would facilitate continuity and accommodate varying awareness levels. Group success depends on the gradual movement of intervention from less threatening into more threatening areas, the potential for patients to model themselves after outside consultants, and appropriate training and experience of consultants.

Moise, R.; Kovach, J.; Reed, B.G.; and Bellows, N. A comparison of black and white women entering drug abuse treatment programs. The International Journal of the Addictions, 17(1):35-49, 1982.

DRUG	Opiates; multidrug
SAMPLE SIZE	Approximately 582
SAMPLE TYPE	Addicts in treatment
AGE	Young adults (mean: mid-twenties)
SEX	Female
ETHNICITY	Black; white
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Interviews; Client Oriented Data Acquisition Process
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	23

PURPOSE

The present study investigates the extent and nature of difference between black and white women entering two treatment modalities, therapeutic communities and methadone maintenance programs. The purpose of the study is to establish the different causes and consequences of addiction for different groups of women. Race is taken as the criterion of difference because it is easily measured and is related to differences of class and culture in American society that may be relevant.

METHODOLOGY

The sample consisted of 200 white and 382 black women representing 26 drug treatment programs in 5 geographically diverse urban areas. It was collected as part of two research studies conducted by the Women's Drug Research Collaborative Project and includes women entering both all-women demonstration programs and mixed-sex drug abuse treatment programs. Data were collected from interviews with clients within a few weeks of entry. For a few variables, national Client Oriented Data Acquisition Process data were also used for other drug programs in the same general areas. Comparisons made include demographic and treatment characteristics, current environment, family background, initial drug use, current drug use, and criminal activities.

RESULTS

White women entering the two types of treatment programs were less likely than black women to be using heroin. Black women were more likely than white to enter methadone maintenance programs, while white women were equally likely to enter either type of program. More white women than black had dropped out of school before the 11th grade and more also had some college education. More white women than black reported some legal involvement and were therefore under greater legal pressure to enter treatment.

White women were more likely than black to have been married at some time in their lives, although no significant differences were apparent in the types of sexual partnerships black and white women were involved in at the time they entered treatment. Partners of addicted women of both races were themselves likely to be using drugs. Black women reported having more children than did white women.

Less than 5 percent of either black or white women had been employed continuously during the 2 years prior to admission. About half of each group had had no employment at all during this time. About two-thirds of both groups received no financial help; the largest source of support was welfare or other benefits. Although the pattern was not consistent across regions and programs, whites were more likely to live on illegally obtained funds and blacks to rely on welfare.

White women were likely to rely on private physicians, outpatient mental health facilities, and lawyers and not to use any community professional services, while blacks tended to take advantage of social services and outpatient medical clinics.

A large proportion of the white women in the treatment programs came from Catholic homes. Most of the black women came from Protestant homes. White women were more likely than black to have mothers who abused alcohol or had psychiatric problems or to have other members of their immediate family who had had problems with alcohol abuse. Black women were somewhat more likely than white to identify their sisters as drug users.

In all five cities investigated, white women were younger than black women when they started using drugs. Black women were more likely than whites to use heroin the first time they used a drug and to have obtained their first drug as a street purchase. White women were more likely than black to have begun with psychotherapeutic drugs, but black women were more likely than white to be using heroin in combination with marijuana or cocaine and no other drug. Further, white women were more likely to be using other combinations of drugs involving opiates (e.g., barbiturates or amphetamines). White women were also more likely than black to have used several types of drugs, to use heroin intravenously rather than "snorting," to have overdosed on drugs, to have experienced a drug-related hospitalization, and to have attempted suicide in the 2 years prior to admission.

Racial differences with respect to prostitution by white and black women vary with regions and programs, but overall percentages are nearly the same. Significantly more white women than black have been involved in dealing drugs, have been arrested for dealing, and have one or more sexual partners involved in dealing. White women were more likely than black to commit property and nonviolent victim crimes and especially likely to have been convicted of these crimes.

Members of both groups were similar in their relative isolation; their maintenance of ties with members of their families of origin or other relatives; their lack of education, job experience, or professional identity; and their lack of financial assistance and consequent entrapment in a deviant lifestyle.

The differences between women of the two races require differentiated intervention procedures. Black women's likelihood of having more children than white women, for instance, affects success of treatment, depending on whether or not the treatment has a child-oriented approach. A particularly significant difference is the higher degree of psychopathology among white female addicts than among black. Heroin and other illicit drugs tend to be less available in white communities than in black, and thus a higher level of personal and familial difficulty may have to occur for white women to start using these drugs. Among black women, heroin may be more the result of economic and social deprivation. Treatment must in the one case focus on psychological programs and in the other, on programs to encourage social and financial independence.

CONCLUSIONS

Significant differences exist between white and black women admitted to methadone maintenance programs and therapeutic communities, although the groups are similar with respect to living situation, financial dependency on others, and unemployment. White women are more likely than black women to experience disturbances within their families of origin, to begin drug use at an early age, to overdose, to use a variety of drugs, to attempt suicide, to become involved in criminal activities, and to become attached to drug-abusing partners. Black women are more likely than white women to have child care responsibilities. Treatment programs must accommodate these differences in their approach to treatment.

Moise, R.; Reed, B.G.; and Conell, C. Women in drug abuse treatment programs: Factors that influence retention at very early and later stages in two treatment modalities. The International Journal of the Addictions, 16(6):1295-1300, 1981.

DRUG	Opiates; methadone
SAMPLE SIZE	524
SAMPLE TYPE	Addicts in treatment
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Not specified
DATE(S) CONDUCTED	1975 to 1977
NO. OF REFERENCES	1

PURPOSE

Some women who enter drug abuse treatment programs do not stay long enough to be incorporated into the program, and many do not remain long enough to derive real benefits. The present study identifies some characteristics that predict how likely women are to be incorporated into treatment and how likely they are to continue once incorporated.

METHODOLOGY

Data were gathered on 524 women from 4 therapeutic communities and 4 methadone maintenance programs between 1975 and 1977, as part of the Women's Drug Research Collaborative Project (WDR). Two of each group were demonstration programs and two were comparison programs. For some variables, data from the national Client Oriented Data Acquisition Process (CODAP) were available to be used as a check on the general validity of patterns. Analyses of client characteristics associated with incorporation and retention were performed separately for women in therapeutic communities and in methadone maintenance programs. The pattern within each of the eight program groups was also examined.

RESULTS

A woman entering a methadone maintenance program was much more likely to be incorporated and retained in treatment than was a woman entering a therapeutic community (89 versus 59 percent). By the end of 4 months, 66 percent of the women originally entering methadone maintenance programs were still in treatment, compared with 38 percent in therapeutic communities.

Client characteristics most frequently associated with incorporation or retention were involvement in prostitution, parents' deviance, types of drugs used during the 2 years prior to admission, legal pressure, arrests, and education. In therapeutic communities, women who lacked a high school degree were less likely to be incorporated into treatment in both WDR and CODAP samples. In methadone maintenance programs, women using self-medicating drugs along with opiates were less likely to be incorporated in treatment in both samples. Women with a history of arrests for property or victim crimes were less likely to be retained in methadone maintenance programs (only in the WDR sample), while women who used nothing but opiate drugs during the 2 years prior to admission were less likely than those who used other drugs to be incorporated in therapeutic communities (in the WDR sample only).

In methadone maintenance programs, women who entered under legal pressure were much less likely to be incorporated: 21 percent left before completing 1 month, as compared with 9 percent not entering under legal pressure. In therapeutic communities, women who entered while under legal pressure were somewhat more likely than others to be incorporated but less likely to be retained during the next 3 months of treatment.

In all four methadone maintenance programs, women who had been prostitutes were less likely than those who had not to be incorporated and retained. Few women arrested for prostitution entered mixed-sex therapeutic communities, and few who entered stayed.

Therapeutic communities for women, however, admitted a large number of women with histories of arrests for prostitution and were able to keep them as long as other women. A combination of a residential setting and sensitivity to women's issues may be required to treat women who have been involved in prostitution.

In seven of the eight program groups, women who reported that their fathers abused substances or had psychiatric problems were less likely to be retained. In six of the eight program groups, women who identified their mothers as having one or more of these problems were also less likely than those who did not to be retained. Demonstration programs, particularly family-oriented demonstration programs, were better able to handle this group of difficult clients than the comparison programs.

Different types of programs attracted different types of women, depending on such factors as whether the program could accommodate women with children. The program that was more selective of the clients admitted contained fewer women who were using self-medicating drugs, had been involved in prostitution, reported that their parents had problems, or entered treatment under some form of legal pressure than did other programs. The retention rate in this type of program was high, while programs admitting more difficult clients had lower retention rates. One demonstration therapeutic community, however, had a large number of poor-risk clients and high retention rates. The success was attributed to the small size and the female orientation of the program.

CONCLUSIONS

Incorporation and retention rates of addicted women in treatment are higher for methadone maintenance programs than for therapeutic communities. Analysis of factors associated with incorporation and retention shows that characteristics of women unlikely to stay in treatment vary across programs. The most important characteristics for retention in all programs are former involvement in prostitution, parents' level of deviance, and circumstances of entrance into the program (i.e., whether legal pressure was a factor). Treatment techniques such as family therapy, parenting training, and sensitivity to stigmatization of some groups of addicted women could improve retention rates. As one successful program illustrates, intensive intervention and a small setting may be helpful in the treatment of some types of difficult clients.

Murphy, L., and Rollins, J.H. Attitudes toward women in co-ed and all female drug treatment programs. Journal of Drug Education, 10(4):319-323, 1980.

DRUG	General
SAMPLE SIZE	134
SAMPLE TYPE	92 addicts in treatment; 42 staff members
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New England
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Attitudes toward Women Scale
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	9

PURPOSE

Despite extensive literature on drug abuse in recent years, little attention has been devoted to the female addict and even less to her treatment in rehabilitation programs. The research that has been conducted indicates that men and women in treatment programs share traditional sex role stereotypes with mainstream American society. Furthermore, treatment methods have not been modified to suit the needs of women. The present study seeks to shed light on the situation of women in drug-treatment programs by comparing sex-role attitudes in coed treatment programs with those in an all-female treatment program.

METHODOLOGY

The coed treatment program sample consisted of 80 residents (60 males and 20 females) and 38 staff (22 males and 16 females) of Marathon House, the largest drug rehabilitation community in New England. The female treatment program sample (at Caritas House) encompassed 16 subjects, 4 female staff members and 12 female residents. All subjects completed a personal data questionnaire and a short version of Spence and Helmreich's Attitudes toward Women Scale (AWS), a Likert-like scale with statements about the rights and roles of women.

RESULTS

The only significant difference between the samples on the basis of the personal data questionnaire is that the volunteer treatment rate is higher in the all-female program (67 percent) than in the coed program (14 percent). The AWS indicates that female staff at Marathon House have a more liberal attitude toward women's roles than do male staff and that female residents have a more liberal attitude toward women's roles than do male residents. The scores of Caritas House and Marathon House staff are almost identical, as are scores of the residents of both. Overall, female staff and residents have more liberal views toward women's roles than male staff and residents. However, the all-female adolescent residents are somewhat more traditional than the coed female adolescent residents. Surprisingly, exposure to an all-female staff at Caritas House does not have a more liberalizing effect on the attitudes of Caritas House residents.

The more traditional attitudes toward women held by male staff are also reflected in their general control of administrative positions within Marathon House residences. Only two females as compared to eight males are in supervisory positions at Marathon House. These data are consistent with those found in other drug treatment programs. Moreover, women who enter treatment are educationally and vocationally disadvantaged, and as the literature suggests, they are pressed to pursue interpersonal and intrapersonal relationships rather than their educational and vocational needs.

CONCLUSIONS

Women in drug treatment programs have a more contemporary attitude toward themselves and other women than do men. The positive side of the liberal attitude of female staff is the role model possibilities that they may offer patients. The negative side is the hindrance of male-female interaction. Attitudes that are persistent throughout society have thus been brought into the therapeutic community. Therefore, attitudinal training for staff members on rights, roles, and special problems of female clients is recommended.

Obeso, P., and Bordatto, O. Cultural implications in treating the Puerto Rican female. American Journal of Drug and Alcohol Abuse, 6(3):337-344, 1979.

DRUG	General
SAMPLE SIZE	46
SAMPLE TYPE	Addicts in treatment
AGE	Adolescents; young adults (range: 16-30; median: 19)
SEX	Female
ETHNICITY	Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	5

PURPOSE

Little literature is available on the ethnic backgrounds of Puerto Ricans in treatment and the possibility that sociocultural differences could affect their treatment outcomes. Research on Puerto Rican women in this context is nonexistent. For that reason, the present study describes the cultural traits specific to this ethnic group and their inherent effect on the women. The goal is to aid the drug abuse worker who is involved in the overall treatment of Puerto Rican female drug users.

METHODOLOGY

Data derive from interviews with 46 women in two Puerto Rican drug programs in New York City. An open-ended questionnaire was administered to subjects, and their responses, which averaged 1 hour in length, were recorded. A simple frequency analysis model was used to detect similarity in patterns of response.

Of the women interviewed, 60 percent were born in New York; the remainder were born in Puerto Rico and migrated to New York at the average age of 4. Subjects ranged in age from 16 to 30 years (median age: 19) and were members of relatively large families.

RESULTS

The typical Puerto Rican adult is raised in a traditional, firmly structured world based on respect for others, for the hierarchy of the community, and for parents. The culture is dominated by a belief in the established order and recognition that each person has a place in the system. Males exercise authority over the family, and wives are to be responsible, faithful, submissive, obedient, and humble. At the heart of the culture is the family, and a network of companion parents for the family buttresses the system. Important family values are respect, dignity, sentimentalism, and fatalism. Religion for the Puerto Rican consists, like the family, of close, intimate, personal relationships with the saints and various manifestations of God. Puerto Ricans have been influenced by Catholicism, Protestantism, and spiritualism.

Since the Americanization of Puerto Rico beginning in the early 1950s, the traditional roles of the family and the husband and wife have undergone changes. Women have found it easier to find jobs and earn higher salaries, representing a blow to male pride. The concept of the extended family has also begun to erode. Puerto Rican adults have found it difficult to accept mainland permissiveness toward children, especially unmarried girls. A rift has thus developed between parents with traditional attitudes toward behavior and children educated in modern American schools.

Survey results show that subjects have experienced significant negative influences in their immediate family environment, e.g., an unwanted pregnancy, an unstable marriage of parents, or a lack of normal role models. Many women have favorable relationships with their siblings. Most have become pregnant by age 16, have had the child taken away because of drug use, and are in treatment to regain custody of the child. Women feel that Puerto Rican men place women in subordinate roles but hold them in high esteem. They think that distinct qualities set them apart from non-Puerto Rican women, but there is no consensus on the specific qualities. More than half believe that Puerto Rican women are misunderstood. Moreover, most have been introduced to drug use by peers. However, religion serves as a means of dispelling drug use, and the reaction to the culturally oriented Puerto Rican treatment program is overwhelmingly positive. The women expressed the desire for more female staff members and more vocational training.

CONCLUSIONS

The problem of the Puerto Rican female drug user is threefold. On one level, she faces the same pressure as all Puerto Ricans in adjusting a Puerto Rican value system to the American culture. On a second level, she is subject to the pressures of cultural traditions and values imposed upon her as a Puerto Rican woman. Finally, she must deal with the same problems encountered by other drug abusers. If Puerto Rican female drug abusers are to be treated successfully, those assisting them must be aware of the ramifications of their cultural traditions, values, and customs.

Prather, J., and Fidell, L.S. Sex differences in the content and style of medical advertisements. Social Science & Medicine, 9(1):23-26, 1975.

DRUG	Prescription drugs
SAMPLE SIZE	423
SAMPLE TYPE	Drug advertisements in medical journals
AGE	Not applicable
SEX	Not applicable
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Observations; content analysis
DATE(S) CONDUCTED	1968-1972
NO. OF REFERENCES	13

PURPOSE

Women receive 60 percent of the prescriptions for all drugs and 67 percent of the prescriptions for psychoactive drugs. Women are also much more likely than men to obtain psychoactive drugs from a physician; men tend to obtain them from less legitimate sources. Obtaining psychoactive drugs from a physician rather than from other sources has been shown to lead to longer and more consistent drug use. Thus, it is important to understand the variables that encourage or discourage a physician from prescribing psychoactive drugs.

A recent study revealed that physicians consider drug advertisements to be an important source of information about drugs. Although the exact extent of this influence has not been directly measured, its potential influence is great.

This study examined the content of drug advertisements from four leading American medical journals to determine if the content and style were related to the sex of the patient portrayed.

METHODOLOGY

The sample of advertisements was taken from the New England Journal of Medicine, California Medicine, the Journal of the American Medical Association, and the American Journal of Psychiatry. One issue from each journal for each year between 1968 and 1972 was selected randomly from the complete set of issues for that year. All the advertisements from each issue of each journal were tabulated.

Illustrations or verbal descriptions were examined to determine whether or not the advertisement specifically referred to the sex of the patient for whom the drug was intended. For advertisements for which the patient's sex could be ascertained, information was collected regarding the drug name; drug company; symptoms of the disease for which the drug was advertised; illustrations and verbal descriptions of the complaint for which the drug was appropriate; and age, race, and social class of the persons portrayed in the advertisements. If the patient's sex could not be determined, information was collected regarding the type of ailment (psychogenic or nonpsychogenic).

RESULTS

Of the 423 sex-identifiable advertisements, 48 percent portrayed females as patients and 52 percent portrayed males as patients. Two-fifths of the advertisements related mainly to psychogenic symptoms and three-fifths to nonpsychogenic symptoms. For advertisements portraying women, 59 percent belonged to the psychogenic category, versus only 41 percent of the advertisements portraying men. Psychoactive drug advertisements, particularly those showing a female as the patient, showed greater appeal to emotion than advertisements for drugs in other categories. Women tended to be portrayed in ages from 20 to 40 years, while men were shown at a greater variety of ages. No advertisements showed a woman as the physician, but nurses were always shown as women. Many advertisements acknowledged that the role of housekeeper/housewife may be frustrating and suggested psychoactive drugs for relief of symptoms. Captions tended to reinforce the notion that women have less serious organic health problems than do men. Finally, the medical problems of women were sometimes shown as causing irritation to the family or the physician.

CONCLUSIONS

Females were often shown as the patient in advertisements for psychoactive drugs but not out of proportion to women's usage of these drugs. Further research is needed to determine whether the advertising companies are adjusting to physician/patient behavior or whether physicians and patients are adjusting to expectations aroused by advertising. Since such advertising is restricted by Food and Drug Administration guidelines and principles governing advertising in American Medical Association journals, the different images of women and men created in the advertising may be given special credibility. Thus, scientific evidence is needed to justify these advertising techniques. Moreover, the mirroring of cultural stereotypes regarding men and women in these advertisements may result in a higher incidence of misdiagnosis and treatment for members of both sexes than would otherwise be the case.

Prather, J.E., and Fidell, L.S. Drug use and abuse among women: An overview. The International Journal of the Addictions, 13(6):863-885, 1978.

DRUG	Heroin; marijuana; psychotropics
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Drug users
AGE	Not applicable
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	72

PURPOSE

The use and abuse of heroin, marijuana, and psychotropic drugs by women has been largely neglected in both research and literature. The present paper documents this lack of information by presenting an overview of drug literature dealing with women's use of those three major drug categories.

SUMMARY

Heroin. In the last decade the use of heroin among women has increased more rapidly than among men, and about 20 percent of all known addicts are women. The average female heroin addict is white and from a blue-collar background. Addicts report poor relationships with their mothers but good ones with their fathers. They frequently lack high school educations, are currently or formerly married, and engage in prostitution or other illegal activities to support their habits.

Heroin use is usually attributed to personality traits such as aggression and independence, to the psychological reinforcement resulting from the drug high, or to the need to gain acceptance from a peer group. The female user tends to become involved with narcotics in her mid-twenties, after introduction to drugs by a male companion. In contrast to men, women tend to use a variety of drugs, rather than just heroin.

Treatment for such women is frequently inadequate. They often do not receive birth control counseling, special health care for pregnancy, or child care services at treatment centers. Job training, career counseling, and job placement are also insufficient, and treatment staff is male-oriented and may be sexually abusive. In comparison to men, fewer women enter treatment, retention rates of women are lower, and women experience a lower success rate.

Marijuana. The most recent studies of marijuana reveal that sex differences in use patterns are rapidly disappearing and are less pronounced among adolescents than adults. However, women still tend to use less marijuana than men and to begin using it at a later age. Marijuana users in general are less religious, more politically liberal, and more unorthodox in their lifestyles than nonusers. Users' families are often not intact and react indifferently to children. Furthermore, the relationship between academic performance and marijuana usage remains inconclusive. Both male and female users tend to major in the liberal arts and select nontraditional careers, and female users date more frequently and are more sexually active than female nonusers.

Use of marijuana by both men and women correlates positively with the use of psychotropic drugs obtained from nonmedical sources. There appears to be a strong association between parents' and children's use of psychotropics. A mother's use of psychotropics is more strongly associated with her daughter's use of marijuana than her son's. Having a best friend who uses marijuana, however, is more influential on adolescent drug use than having a parent who uses alcohol and/or psychotropics.

Peer groups and close friends introduce male and female users to marijuana. Both male and female users usually obtain their marijuana from men, although women are usually given their marijuana. The current popularity of marijuana among young adults of both sexes is attributed to the rebellious, cynical, nonconforming lifestyle of the group; to depression and loneliness or a desire for tranquility and introspection; or to problem behaviors such as frustration and low achievement. For women, marijuana use appears to be associated with low achievement expectations. In general, reasons for marijuana use do not differ significantly between men and women.

Psychotropics. Twice as many women as men are users of psychotropic drugs. Women often begin taking amphetamines, minor tranquilizers, or antidepressants in their twenties and continue through middle age. Overuse of these drugs has led to increasing rates of suicide among women, and they are the most frequent suicide method used by women. Males usually take stimulants in their twenties and minor tranquilizers in their middle years, followed by sedatives and barbiturates in later years. The psychotropic drug user in general tends to have emotional disorders and many vague health problems. Whether marital status correlates to psychotropic drug use remains inconclusive.

The distinction between legitimate and illegitimate use of psychotropic drugs is difficult to define because legally prescribed drugs may be abused. Thus physicians who prescribe these drugs may unwittingly become the legitimate source of illegitimately used substances. Physicians contribute to drug abuse by prescribing multiple drugs, recommending excessive dosages, and issuing repeated prescriptions. The psychotropic drug user may also obtain drugs by stealing doctors' prescription pads, borrowing drugs from friends and family, buying drugs on the street, and stealing from friends' medicine cabinets.

Psychotropic drug abuse in women is attributed to society's encouragement of women to express emotional stress and to alleviate it with drugs; to neurotic depression, housewives' frustration, or interrupted psychological growth; and to sensation seeking.

CONCLUSIONS

In all areas of drug use, there is little information gathered on female drug behavior. The female drug user is often portrayed as deviating from stereotyped, innately feminine roles without researchers' being aware of their biases. In all three of the drug categories examined, men were frequently involved in women's introduction to and continuing use of drugs. However,

the role of the male-female relationship in perpetuating drug use merits further investigation. In all realms of drug use there are insufficient programs for education, treatment, and counseling. Research is critically needed on treatment methods suitable for female drug abusers.

Reed, B.G.; Kovach, J.; Bellows, N.; and Moise, R. The many faces of addicted women: Implications for treatment and future research. In: Schecter, A.J., ed. Drug Dependence and Alcoholism. Vol. 1. Biomedical Issues. New York: Plenum Press, 1981. Pp. 833-847.

DRUG	Heroin; methadone; multidrug
SAMPLE SIZE	656 total; 566 reported on in this paper
SAMPLE TYPE	Addicts in treatment
AGE	Not specified
SEX	Female
ETHNICITY	Black; white
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Retrospective survey; comparative study
DATA COLLECTION INSTRUMENT	Program admission forms
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	13

PURPOSE

Although research on addiction has begun to focus on women, much of it concentrates on gender differences among addicts and treats addicted women as a single group. This approach overlooks important subgroup differences that have both treatment and policy implications.

This study, conducted by the Women's Drug Research Coordinating Project, analyzes drug use in a sample of addicts to determine differences among racial groups and subgroups.

METHODOLOGY

Data were collected from clientele at the time of admission into 26 drug abuse treatment programs in 5 cities, including methadone maintenance programs and therapeutic communities. A three-page, precoded admission form gathered data on demographic characteristics; living arrangements; source of support; number of pregnancies, births, and abortions; criminality; family problems; marital and cohabitation status; previous treatment admissions; and drug use.

The 656 women included 193 whites, 373 blacks, and 90 from other racial groups. The results reported here are for the white and black groups only.

RESULTS

While a majority of women of both races entered methadone programs as opposed to inpatient or residential programs, black women entered outpatient programs more frequently than white women. White women were more likely than black women to use private professional services.

The percentage of women who had never been married was higher for blacks than for whites. Among those who had been married, whites were more often divorced and blacks were more often separated. More black women than white women had children, and black women had more children. Black women also had proportionately more of their children living with them. White women reportedly were more likely than black women to have had mothers with psychiatric problems or alcohol problems. The percentages of women who had attempted suicide were 29.2 for whites and 10.1 for blacks. Whites also had higher overdose rates for the first drug ever used, the most preferred drug, and for other drugs.

Within each racial group, subgroup differences were found. For example, the less educated white women were more likely to have been separated or divorced, more likely to have been involved in prostitution, and more likely to have attempted suicide. The small group of black college-educated women also appeared to be different from other blacks in terms of greater employment and other factors, although the group's size was too small to determine statistical significance. White Catholics appeared to be similar to other white female addicts, but black Catholics were more likely than other black women to be married or living with a cohabitant, less likely to have children, and more likely to be supported by a cohabitant or through drug dealing.

Five patterns of drug use were found: heroin only, heroin plus recreational drugs, other opiates, heroin plus nonopiate drugs, and drugs other than opiates. Black women were more likely to report using heroin only or heroin and recreational drugs. White women were more likely to report other opiate use or heroin plus nonopiate drug use. In both races, women who were dealers were more often multiple drug users. White dealers tended to use heroin with nonopiates, while black women dealers used recreational drugs with heroin. White women entering women's demonstration treatment programs were more likely than white women in other programs to report using heroin only.

CONCLUSIONS

No single entity called "female addiction" exists. Causes and correlates of addiction are likely to vary considerably from subgroup to subgroup. In any analysis of drug use among women, different racial groups must be treated separately at some point of the analysis. Discrete patterns of drug taking must also be developed, including the types and mixtures of drugs and if possible, historical and situational information about the ways drugs are taken. Studies must collect information about life areas important for understanding women, such as the numbers and living arrangements of children. Key client characteristics should also be identified by type of treatment program. Large and diverse samples and/or the regular use of a common core of items are needed to permit comparisons of data from separate studies.

Reed, B.G., and Leibson, E. Women clients in special women's demonstration drug abuse treatment programs compared with women entering selected co-sex programs. The International Journal of the Addictions, 16(8):1425-1466, 1981.

DRUG	Heroin; methadone; marijuana; cocaine; nonopiates
SAMPLE SIZE	476
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults (mean: 25-26)
SEX	Female
ETHNICITY	Black; white
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Questionnaire; program records
DATE(S) CONDUCTED	September 1975 to September 1976
NO. OF REFERENCES	5, plus bibliography

PURPOSE

In late 1973 and early 1974, the Services Research Branch of the National Institute on Drug Abuse (NIDA) funded four women's drug treatment demonstration programs. The programs differed widely in size, policy orientation, staffing patterns, and other important dimensions. The Women's Drug Research Coordinating Project (WDR) was established to work with the four demonstration projects in developing intake and release forms and in collecting and analyzing patient data. WDR was also charged with facilitating assessment of these programs by investigating the nature of client populations. To this end, the present NIDA-sponsored study compared client characteristics and responses to an admission form from all four of the women's demonstration programs with those from the traditional comparison programs. A bibliography of literature on chemically dependent women is included.

METHODOLOGY

The study sample consisted of 476 clients enrolled between September 1975 and September 1976, either in one of four women's demonstration programs (two of them therapeutic communities and two outpatient methadone maintenance programs) or in the comparison programs. The demonstration programs varied somewhat in services provided and in the makeup of the staff. These

programs were located in New York City, Boston, and Detroit; program size varied considerably. Comparison programs were selected on the basis of general modality and location.

The study subjects encompassed 101 white women and 250 black women from the demonstration programs and 42 white women and 83 black women from comparison programs. The average age of the subjects was between 25 and 26 years old.

The WDR admission form contained 220 specific items on such issues as needs of drug-addicted women, demographic information, employment and illegal activities, and patterns of drug use. The questionnaires were administered by program staff shortly after intake. Analysis was conducted separately for blacks and whites. The chi-square statistic (and occasionally a t-test) was also used to test for differences among programs.

RESULTS

Data strongly suggest that programs offering special services for women do attract and serve populations of women differing from those who enter more traditional programs.

Women of both races who entered the women's demonstration programs seemed to be isolated from potential sources of support compared to those entering co-sex programs. Women in demonstration programs had fewer social and financial resources available to them than did those entering co-sex comparison programs, and fewer used institutional and social services. Involvement in criminal activities and arrests for drug dealing were rarer among women in demonstration programs than among women in comparison programs.

Compared to white women entering women's co-sex comparison programs, demonstration program women had fewer years of education, fewer legal jobs, fewer property and nonviolent crimes, and more involvement in and arrests for prostitution. White women in comparison programs reported more drug overdoses, more use of marijuana and heroin-barbiturate mixtures, and more involvement of family members with drug/alcohol or psychiatric problems than demonstration program white women. Additionally, more demonstration than comparison women had sex partners who use drugs.

Black women entering demonstration programs reported fewer drug treatment program admissions over the 2 years preceding this admission than black women in comparison programs. They also reported lower family income levels, greater dependence on welfare, less reliance on illegal activities, and less cohabitation with sexual partners. The two groups were similar in criminal involvement.

Women of both races in feminist programs tended to live in an isolated situation and to be financially responsible for the costs of their houses or apartments.

The findings imply that women in both demonstration and comparison programs need job-readiness and skills training, assistance in arranging child care, and training in child care and homemaking. Women's demonstration programs need to focus particularly on development of alternatives to social isolation, parenting training and child care, remedial education activities, development of meaningful lifestyles, and care for those involved in prostitution. Comparison programs require family counseling for the large group of white women with psychological problems and high deviance levels in their families of origin and services for multidrug users.

Future research on other programs designed for women will be necessary to determine whether the patterns of differences found in these programs are replicated in other settings and whether patterns of needs are being met by the programs.

Staff in both single-sex and co-sex programs need to be more aware of cultural differences among women in their programs and of the particular characteristics and needs represented among women in their programs. Staff of women-oriented programs should have diverse backgrounds and be sensitive to women's needs and knowledgeable about family and vocational rehabilitation. Staff advocacy work must counteract stigmas and stereotypes associated with female addicts that interfere with treatment. Staff training must be regular and extensive. In such programs, linkage with other agencies, involvement of family members, and higher levels of resources than in traditional programs are needed.

CONCLUSIONS

Demonstration programs that offer special services to women serve different populations from traditional programs. Black and white women in women's programs differ from those entering traditional programs in the type and degree of social and financial support, use of community resources, living arrangements, patterns of criminal involvement, and drug use. The services in women's demonstration programs, in particular, must be geared to the particular needs of the female client groups served. Policymakers and agency managers need to be sensitive to the different dynamics of programs so that appropriate management models can be adopted and sufficient environmental support obtained for the agency.

Rementeria, J.L., and Marrero, G. Drug-addicted family (mother, father, and infant): Some sociomedical factors. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis: Mosby, 1977. Pp. 245-259.

DRUG	General
SAMPLE SIZE	227
SAMPLE TYPE	Addicted mothers
AGE	Adolescents; young adults; mature adults (mean: 23.6)
SEX	Female
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; retrospective survey
DATA COLLECTION INSTRUMENT	Hospital records; interviews
DATE(S) CONDUCTED	1972-1976
NO. OF REFERENCES	1

PURPOSE

Various sociomedical factors in the life of a drug-addicted woman minimize the integrity of her family and threaten its very survival. The end result is the production of a second generation in a socially chaotic situation and the risk of social problems in the future.

Families with drug-addicted mothers often lack the essentials of normally developing families, such as financial stability, pleasant living quarters, acceptance by friends and neighbors, ancillary support from parents and close relatives in crisis situations, and prospects for a brighter future. To increase the chance for survival of family units lacking these factors, all of the social and medical forces must collaborate on a plan that will assist and support the family unit so that the family can function without outside support.

This study aimed to obtain information on the sociomedical problems of the drug-addicted mother and her family. Data were gathered on 227 drug-addicted mothers in 2 inner city areas of New York City.

METHODOLOGY

The subjects lived in the Tremont area of the Bronx and the Fort Greene area of Brooklyn. The sample included 126 black mothers, 87 Puerto Rican mothers, 13 white mothers, and 1 Asian mother. The sample was representative of the racial composition of the areas involved. Data were obtained from hospital records and interviews. Comparison groups of various sizes were also obtained for some of the data categories.

RESULTS

The data show that the addicted mother is usually single or living in a common law marriage. Most have not finished high school, and most depend on public assistance for financial support. Parental family influence and exposure was totally missing or incomplete in the early formative years in about 30 percent of the mothers, and over one-fifth had been involved in prostitution. Addicted mothers averaged 4.5 years of hard drug use, were usually multidrug users, and started their habit out of curiosity. Drug use in parental family members was common, as was heavy drinking or alcoholism. About half of the addicted mothers had few or no prenatal clinic visits.

In about three-fifths of the cases, the father of the addicted infant was or had been an addict. Over half of the fathers had been in prison, and only 15 percent gave financial support to the infant's mother.

Infants appeared to be more susceptible to the sudden infant death syndrome and the battered child syndrome than was a comparison group of the national population. About 20 percent of the infants were not returned to the biological mother but were placed in foster care programs. Moreover, about 40 percent of previous children of these mothers were found to be in the care of someone other than the mother. Six of the mothers physically abused or abandoned their own children or other children.

Fewer than half of the fathers were living with the mothers when the infant was born. Two-thirds of the families with two or more children involved two or more fathers.

CONCLUSIONS

Most families with drug-addicted mothers have many problems that work against their survival. Social workers, counselors, physicians, nurses, relatives, and others coming into contact with the family should try to give all help possible, especially if the possibility exists that part or all of the family unit can remain intact. Accomplishing this will improve the future prospects of the infants born into these families.

Robins, L.N., and Smith, E.M. Longitudinal studies of alcohol and drug problems: Sex differences. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 203-232.

DRUG	Alcohol; multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Drug and alcohol users
AGE	General population
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review; comparative study
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	60

PURPOSE

The literature on the etiology and natural history of alcoholism and drug addiction in women is limited. Longitudinal studies are particularly useful for addressing these questions, but the majority of longitudinal studies of alcohol and drug abuse are confined to males. The relative lack of such studies on women's drug and alcohol abuse and the small samples of women heavily involved with drugs or alcohol in the few existing studies mean that considerably less is known about the causes of women's substance abuse than about men's. To summarize the information that is available, the present study reviews those longitudinal studies that report on the use and abuse of alcohol and illicit drugs by females and males. Types of studies considered include longitudinal studies of normal children and adolescents, which are confined to young populations and cover a brief span of time; followups of general adult populations; and followup studies of persons with drinking and drug problems at the onset of the study.

SUMMARY

Patterns of drug and alcohol use. In every general population sample followed with respect to alcohol use or problems, women have been found to have a lower rate than men, especially for

frequent or problem use. Prevalence rates for women's drinking and drug problems are difficult to determine, however, because of definitions that vary from study to study.

Nevertheless, it is clear that rates of alcohol use for both females and males are now very high before the end of high school and well before the age at which alcohol can be legally purchased. Rates of use are somewhat lower for young men than for young women, although rates of problem use are considerably higher for males. Marijuana use is less common than drinking, but rates are also high among the young in recent studies, and sex differences in use tend to be very small or nonexistent. Rates vary with the date of the study and the age of respondents, but region and social class have little effect.

Studies of special populations clearly confirm general population studies with respect to the relative immunity of women from alcohol problems. They also confirm studies of adolescents, which show much less striking sex differences in the use of illicit drugs than in alcohol problems.

There is general agreement that women are becoming more like men with respect to moderate drinking, cigarette use, and occasional drug use. As heavy drinking becomes less distinctively male, women will lose their current relative immunity from substance dependence. Kandel has shown that licit and illicit drug use form a Guttman scale for high school students, beginning with beer and wine and progressing to hard liquor and cigarettes, then marijuana, pills, and finally heroin. The scale applies for both boys and girls, but whether men's and women's ages of risk for beginning various drugs are the same is unclear.

Both longitudinal and retrospective studies show, however, that the earlier drinking begins, the more likely it is to lead to alcohol problems. Drug and alcohol problems often terminate spontaneously, and the differences between the rates of recovery for men and women are not very great. Rates of problem drinking converge as men and women age. In part, this convergence is due to the later onset of problems for women and the fact that so many young men's drinking problems dissipate in their thirties. Finally, male drug and alcohol users are not only more likely than female users to use with high frequency, but they also seem to use a greater variety of drugs.

Men come to treatment more frequently than women. It is unclear whether this results from the male orientation of treatment facilities or from spontaneous remissions among women.

Predictors of drug and alcohol use. Little relationship has been noted between demographic factors and drug use, except that older females are more likely to use marijuana and high-school dropouts are more likely to use heroin. Drinking, however, is associated with youthfulness, Catholic religious affiliation, service worker professions, and urban residence. Among women, blacks drink more than whites, and divorcees drink more than married women.

In the initiation into the use of alcohol and drugs, girls more often conform to interpersonal role models, whereas boys are more likely to engage in the behavior as part of a complex of mildly deviant activities. For both boys and girls, interpersonal influences are more important than psychological factors in predicting experimentation. Within families, such factors as parents' drinking habits and parents', especially mothers', negative personalities are correlated to alcohol use.

Determinants for the onset of alcohol and drug problems differ for men and women. While males with drinking problems tend to be impulsive, rebellious, and deviant even before the onset of drinking, women who become alcoholic have been more submissive, depressed, and withdrawn. Personality predictors for drug problems are far less clear-cut and often contradictory.

Consequences of alcohol and drug abuse. A number of studies suggest that women's lives may be less disrupted than men's by alcohol and drugs. However, the advantages of drug- and alcohol-dependent women in social adjustment as compared with men seem to be only in those areas that can be explained by women's later age at onset of use or by differences in sex roles found in society at large. There is no evidence that mild drug use has adverse social consequences for either sex.

As compared with the general population, alcoholics and heroin addicts have greatly increased death rates. The increase is even more striking for women than for men since female addicts' death rates are reported to be higher than men's, while in the general population women's rates are much lower than men's.

CONCLUSIONS

Longitudinal studies confirm the cross-sectional observation that men have more drinking and drug problems than women, but they also suggest that differences are narrowing and may disappear in time. Thus, the studies add support to the view that research into prevention and treatment of women's alcohol and drug abuse must increase to confront a growing problem. Childhood behavior and family backgrounds are less correlated with substance abuse for women than for men, making it unlikely that high-risk young women can be effectively identified and treated.

Still, similarities in the frequency and course of drug use are greater than differences: for both sexes substance abuse appears to be associated with early deviance, origins in deviant families, and association with user peers. The order in which drugs are used is similar in women and men, and heavy use leads to similar rates of problems.

Rosenbaum, M. Sex roles among deviants: The woman addict. The International Journal of the Addictions, 16(5):859-877, 1981.

DRUG	Heroin
SAMPLE SIZE	360
SAMPLE TYPE	Addicts
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	White; black; Mexican-American
GEOGRAPHICAL AREA	California
METHODOLOGY	Comparative study; retrospective survey; multivariate analysis
DATA COLLECTION INSTRUMENT	Questionnaires; program/clinical statistics
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	11

PURPOSE

Although the term "oppression" has been overused in the study of sex roles, some groups of women do experience both psychological and economic oppression. Female heroin addicts are triply handicapped because of economic oppression, sexual oppression, and addiction.

This paper examines the ways in which sex affects the career of the woman who is an addict. The study's hypothesis is that sex roles play a significant part in the course of addiction.

METHODOLOGY

The analysis was part of a larger study of 1,049 men and 199 women who had been committed to the California Rehabilitation Center for drug-related crimes. Data were gathered by means of questionnaires organized around the addicts' life histories. Each woman in the present study was matched to a man with identical demographic characteristics. Each sample included 180 cases.

Over half the sample was white, while one-fifth was Chicana and one-fifth, black. Most of the white women were in their early twenties, while blacks and Chicanas tended to be older. The whites tended to have more education than the other groups and were mostly middle class, while the other groups tended to be working class.

RESULTS

Women commonly began using heroin later than men and became users through a man. Over 78 percent of the women claimed they had a spouse who was an addict, and over half these male spouses had started using heroin first. Few of the couples started using heroin together.

After becoming addicted, the women associated mainly with other addicts and made addiction the focal point of their lives. Data from another study showed that women also assume a dependent role in the actual physical administration of heroin and that only one-third had ever shot heroin alone.

Women's habits were larger than men's habits in both cost and quantity. Possible reasons included women's orientations as dependent consumers rather than as providers, women's greater tolerance for drugs, and women's ability to use prostitution to earn money. Forgery was also a common female hustle due to the ease with which women could succeed at it by exploiting their common image of innocence.

Women in the sample volunteered for treatment more than men. This phenomenon appeared to be related to women's traditionally passive role; the group most concerned with masculinity, Chicano men, had the lowest rate of voluntary treatment. Female Chicanas demonstrated this "feminine" help seeking at much the same rate as white women. Black men and women, however, had similar rates of volunteering for treatment.

About two-thirds of the white and Chicana women had low self-concepts, confirming research that argues that the stigma of deviance is more permanent and damaging for women than for men. However, two-thirds of the black women had high self-concepts. However, women's self-images decreased as the size of the habit increased. Self-sufficiency and a manageable habit resulted in a high self-concept for women but not significantly so for men.

CONCLUSIONS

Female addicts are similar to "straight" women in that assimilation into the world of their male partners is considered "feminine." After having been introduced to heroin by a man, the woman tends to immerse herself into his world and becomes an addict in much less time than taken by most men. Women's more costly habits also relate to female sex roles, which determine the nature of women's hustles to obtain money. Moreover, women tend to seek treatment, whereas seeking help is often stigmatizing for a man. Overall, addiction had major impacts on women's sense of identity and self-worth.

Treatment professionals should recognize the importance of feelings of self-worth in relation to eventual abstention from opiates. Offering job training to female addicts would help them expand their life options and develop the independence needed for feelings of self-worth.

Rosenbaum, M. When drugs come into the picture, love flies out the window: Women addicts' love relationships. The International Journal of the Addictions, 16(7):1197-1206, 1981.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (range: 20-53; median: 28)
SEX	Female
ETHNICITY	White; black; Latina; other
GEOGRAPHICAL AREA	San Francisco, California; New York City
METHODOLOGY	Retrospective survey; ethnographic study
DATA COLLECTION INSTRUMENT	Depth interview/life history method; observations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	6

PURPOSE

Women who become addicts usually have had little focus and commitment in their lives prior to addiction. To take part in the heroin life, a woman must give up activities and life options that do not relate to obtaining and using heroin. Heroin becomes the needed focal point and provides both excitement and commitment. The heroin life threatens both women's occupational options and their love relationships with men.

This paper examines the relationship between heroin use and love relationships, based on interviews with 100 women addicts in the San Francisco Bay area of California and in New York City.

METHODOLOGY

The sample included 95 female addicts living in the San Francisco Bay area and 5 from New York City. The sample was obtained by posting notices in high drug use areas, the city prison, and a variety of treatment facilities. The snowball method was also used to locate members of neighborhood worlds and friendship groups. The women were primarily active, noninstitutionalized heroin users. They were 43 percent white and 38 percent black and also included 14 Latinas, 1 Asian, 1 Native American, and 3 Filipinos. The women ranged in age from 20 to 53 years, with a median age of 28.

The depth interview/life history method was used as the main data collection technique. The interviews were voluntary and lasted from 2 to 3 hours. Demographic statistics were also gathered. Field work in San Francisco consisted of visiting some of the women in their homes and accompanying them on their rounds in their communities.

RESULTS

The women who were part of a love relationship usually had mates who were either addicts or ex-addicts. The heroin world was the commonality the couple shared and the basis of understanding between them. However, sexuality was almost absent in the typical addict-couple, caused by a lack of interest and an inability to perform as a result of heroin's effects. Many women claimed that the fixing routine, especially when their partner administered the heroin, replaced intercourse, as did the sensuality and sharing aspects of taking heroin together. Neither partner missed sexual intercourse, and partners developed a brother-sister relationship.

Drugs ultimately undermined relationships, however. Heroin became the focal point of the relationship and eroded other aspects of affection or mutuality. In addition, the heroin life disrupted traditional sex-role boundaries and caused dissatisfaction in the couple. For example, women could often earn money through prostitution while men could not. This differential earning power became a source of conflict, as the man resented his dependence on the woman and the woman felt exploited if the man was not working.

The unscrupulousness that periodically characterizes nearly all addicts further undermined relationships. One partner might take the other's money or heroin supply or pawn something of value. Alternatively, one partner might gain access to heroin without sharing it with the other. Disagreements over how money was to be earned, how heroin was to be divided, and how money was to be spent became an increasing source of conflict and ultimately resulted in nearly constant arguing. As a result, most addict-couples' relationships could not be sustained. The end result tended to be the dissolution of the relationship, a bitterness on the part of the woman toward men in general, and the woman's reluctance to develop any future traditional marital or quasi-marital relationships with men.

CONCLUSIONS

Treatment of female addicts should focus on developing job and career skills conducive to an independent lifestyle rather than on establishing traditional sex-role orientations. To achieve this goal, treatment staff should be trained in job counseling so that they can help female addicts to restructure their lives in constructive directions.

Rosenbaum, M. Women addicts' experience of the heroin world: Risk, chaos, and inundation. Urban Life, 10(1):65-91, 1981.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (median: 28)
SEX	Female
ETHNICITY	White; black; Latin; others
GEOGRAPHICAL AREA	San Francisco, California; New York City
METHODOLOGY	Ethnographic study
DATA COLLECTION INSTRUMENT	Depth interview/life history method
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	54

PURPOSE

A series of ethnographic studies have portrayed the heroin addict as an active, self-respecting individual rather than as the down-and-out degenerate popular in the media. However, the studies provide no substantive analysis of women's experience in the heroin world. The bulk of research on female addicts has focused on medical and reproductive issues, demographic and epidemiological information, criminality among female addicts, and life histories of women addicts as subsets of larger populations. This study explores the ethnography of female heroin addicts, including the general heroin lifestyle, the adjustment of female addicts to risk and chaos, and the effects of risk and chaos on her identity.

METHODOLOGY

The sample interviewed consisted of 100 female addicts, 95 residing in the San Francisco Bay area of California and 5 living in New York City. The women were primarily active, noninstitutionalized heroin users. The sample was procured through the posting of notices in high drug-using areas, the city prison, and a variety of treatment facilities. The snowball method was used in locating members of neighborhood worlds and friendship groups.

The sample was 43 percent white and 38 percent black, and there were also 14 Latinas, 1 Asian, 1 Native American, and 3 Filipinos. The ages of the women ranged from 20 to 53 years, with a median of 28 years. Thirty-four percent were single; 23 percent, married; 24 percent, divorced; 15 percent, separated; and 4 percent, widowed.

All interviews were voluntary, and a $20 remuneration was paid to each respondent. The depth interview/life history method was used as the primary data collection tool. The interviews touched on all aspects of the women's lives, with a focus on their drug-using careers. Demographic statistics were also collected.

RESULTS

Many features of the heroin lifestyle are common to both men and women. The similarities in basic activities are the result of the illegality of heroin use and fluctuating patterns of availability. The addict lifestyle centers around the taking of heroin, for the purpose of alleviating withdrawal symptoms and/or for getting high. The cost is high, and as a consequence, the vast majority of women resort to illegal occupations at some point in their heroin careers. The female addict usually begins her day with withdrawal symptoms, must hustle to get a "fix," and must find a place and a person to inject her heroin. The high from the heroin lasts about 4 hours, and then the cycle repeats itself.

Each heroin-related activity is inherently risky and chaotic. Illegal hustling activities often bring arrest and incarceration, and impure drugs and equipment pose health risks. Whereas men may derive high-status positions because of their willingness to engage in risk, women get no such benefits because of the societal emphasis on women's being rather than doing. The risk involved in the heroin lifestyle produces chaos, and the activities that are part of the addict's life make the establishment of a structured routine nearly impossible. An addicted woman's hustling patterns are sporadic, and her skills are never developed in any particular direction. Drug supplies may be unreliable and there are no holidays from drugs. Moreover, women have deeper veins than men and may therefore have more difficulties injecting heroin.

Inundation is one result of the structural factors of risk and chaos in the heroin world. The individual's interests and activities are absorbed and encapsulated as a result of the attempt to structure safe social networks to minimize risk and the ultimate time consumption with heroin. Addicts must avoid individuals who are not known to be a part of the drug scene or "all right." A separate social world forms, composed almost exclusively of addicts.

The addict world is similar in social structure to the world at large. For women, deriving high status in the addict world is difficult since addicted women often have to support their habit through prostitution and are thus stigmatized. This may mean violating their strongest codes, which require them to take care of their children and not to steal from close friends and family. When the female victimizes her children and family, she is remorseful and stigmatizes herself, realizing that she has become a stereotypical "low life junkie." Eventually, the primary identity of the woman supporting a habit becomes that of an addict.

A crucial feature of the addict stratification system is its temporariness and fluidity: an addict may be on the top one moment and fall to the bottom in the next. When this happens, the female addict must exploit any source available to her until she gets back on her feet. Because of her recognition of the fluidity of the addict world, she will not tolerate looking down at other addicts who happen to be on the bottom at the moment. The longer female addicts identify with junkies as their entire world, the more difficulty they have leaving that world, which is isolated, insulated, and without a sense of camaraderie.

The bulk of the woman's activities focus around heroin, leaving little time for fulfilling responsibilities in other areas. The pursuit of heroin is a driving, unending force upon the woman who lives in a social world whose totality is heroin. Time inundation in heroin prevents addicted women from taking care of what society views as their business, their children.

CONCLUSIONS

The lifestyle of the female addict is one in which the chaos inherent in heroin addiction causes her continuously to go through changes and move from the top to the bottom of the social

system in the addict world. If a woman loses her drug sources and gets sick from withdrawal, she becomes unscrupulous and careless. She neglects her children and may even lose them entirely if she is arrested. The risks of the heroin routine force addicts to insulate their world and to narrow their associations exclusively to other addicts. Holding down a legitimate job is almost impossible in the chaos of heroin life, so the majority of women resort to illegal work to support themselves. More than any other factor, the female addict's inability to fulfill her mothering responsibilities destroys the nonaddict identity that might make it possible for her to escape the heroin world.

Rosenbaum, M. Becoming addicted: The woman addict. Contemporary Drug Problems, 8(2):141-166, 1979.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (range: 20-53; median: 28)
SEX	Female
ETHNICITY	White; black; Latina; others
GEOGRAPHICAL AREA	San Francisco, California; New York City
METHODOLOGY	Retrospective survey; ethnographic study
DATA COLLECTION INSTRUMENT	Depth interview/life history method
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	26

PURPOSE

Some researchers focus on preexisting motives, such as instant achievement, psychological support, and thrill seeking, as the rationale for those who experiment with heroin and other drugs. Others believe that initiation into drug use is a social process and could take the form of challenging play.

The existing literature on women's motivation for initial use of narcotics focuses on psychiatric explanations. It views female heroin addicts as sicker than their male counterparts and as using narcotics as a response to escapism, immaturity, and incomplete psychosexual development.

The present research was based on sociological assumptions and searched for social patterns and processes that could explain drug use. Psychiatric and psychological variables that might motivate a woman to use heroin were also considered. The study focuses on women's experience with addiction. It describes female addicts' social worlds and their patterns of initial experimentation with heroin. The apprenticeship stage in the process of becoming addicted was also explored, including the timing; drug use patterns; perceptions of addictive symptoms; and, finally, the crucial factor--the joys of heroin.

METHODOLOGY

A sample of 95 female addicts from the San Francisco Bay area and 5 from New York City was obtained through the posting of notices in high drug-using areas, the city prison, and a variety of treatment facilities. The snowball method was also used to locate members of neighborhood worlds and friendship groups. The study population included 43 whites, 39 blacks, 14 Latinas, 1 Native American, and 3 Filipinos. The women ranged in age from 20 to 53, with a median of 28.

All interviews were voluntary, and respondents were paid $20. The interviews lasted between 2 and 3 hours each and covered all aspects of the women's lives, with a focus on their drug-using careers. Project personnel also collected demographic statistics and did field work in San Francisco. They talked with addicts in high drug-using areas, visited some addicts in their homes, and accompanied them on their "rounds," including treatment facilities, "scoring" places, and "shooting galleries."

RESULTS

Initial experimentation with heroin is the natural extension of activities in various social worlds. Such experimentation can be a "hippie trip," an expected part of the high school or neighborhood outlaw world in working and lower class neighborhoods, or an extension of the "fast life" of the criminal world. It can also be part of a love relationship in which a trusted partner is a regular user of narcotics. Individual motivation often includes the belief that involvement with heroin expands viable life options and that it may provide entry into a world that appears more attractive and rewarding.

Becoming addicted is a rather slow process for the beginning user. The majority of people who try heroin do not become addicted. To experience heroin to the fullest, the novice user must use the drug continually over an extended time period. These continual attempts to derive the fullest euphoria from the drug help explain the process of becoming addicted. In addition, the intense excitement of a new drug draws people into prolonged and persistent use.

A long period of intermittent use tended to precede persistent daily use among the women in this study. Most users believed that they were immune from becoming addicted. Most of the women had become addicted during the years from 1968 to 1975, when heroin was plentiful and of high quality in San Francisco.

The manner of taking heroin was important to the women. Women who entered heroin use through the hippie scene often used heroin by snorting it, whereas those entering via the criminal world had often injected heroin or other substances. Changing from inhalation to a needle represented an important symbolic break between the world of counterculture drug users and the junkie world.

Many women claimed that they did not know they were addicted until they felt flu-like symptoms when unable to get drugs and were told by friends that they were experiencing withdrawal. This feeling of sickness did not deter these women from yearning for the "high" experienced on heroin. The women studied enjoyed describing the joys of heroin, which included both social, psychological, and physiological benefits. The social side of heroin addiction was characterized as exciting; fun; filled with money, material goods, activity; and something to look forward to every day. The "high" included the immediate rush of sensation, relief of bodily and emotional tension, and a feeling of well-being.

CONCLUSIONS

Women vary in their patterns of entry into heroin use. The physical and psychological euphoria associated with heroin use is greater than that associated with alcohol, marijuana, barbiturates, amphetamines, or psychedelics. Understanding users' perceptions of this overwhelming sense of well-being is crucial to understanding the heroin addiction process.

Rosenbaum, M. Difficulties in taking care of business: Women addicts as mothers. American Journal of Drug and Alcohol Abuse, 6(4):431-446, 1979.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (median: 28)
SEX	Female
ETHNICITY	White; black; Latina; others
GEOGRAPHICAL AREA	San Francisco, California; New York City
METHODOLOGY	Retrospective survey; ethnographic study
DATA COLLECTION INSTRUMENT	Depth interview; life history method
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	22

PURPOSE

One of the major differences between male and female addicts is their respective responsibilities. While for male addicts "business" involves heroin-related work, addicted women with children define their main responsibility as their children and experience a conflict of interest between their "work" (heroin) and their mothering roles. Although an extensive body of medical literature is available on the physiological aspects of addict mothering, there is little sociological or social-psychological information about the mothering process. For this reason, this study examines the feelings and conflicts of female addicts through pregnancy and birth, motherhood under addiction, incapacities in mothering, and disappearing options after long-term addiction.

METHODOLOGY

The study sample consisted of 100 addicted women, 95 from San Francisco, California, and 5 from New York City. Of the total sample, 70 were mothers. The women were active, noninstitutionalized heroin users procured through posting notices in drug using areas, prisons, and treatment facilities, as well as through neighborhood networks. The group was 43 percent white and 38

percent black; also included were 14 Latinas, 1 Asian, 1 Native American, and 3 Filipinos. The ages of the women ranged from 20 to 53, with a median of 28.

The depth interview/life history method was used as the primary data collection tool. Interviews, conducted on a voluntary basis for remuneration, were taped, lasted 2 to 3 hours, and touched on all aspects of women's lives and drug careers. Demographic statistics were collected, and project personnel did field work in San Francisco, visiting women in their homes and accompanying them on their rounds. The perspective of symbolic interactionism and the method of grounded theory guided both data collection and analysis.

RESULTS

Fertility, pregnancy, and birth. Changes in heroin quality and availability as well as in addiction patterns may affect addicted women's fertility. Although addicts may occasionally miss a menstrual period, this cannot be counted on for birth control. Often pregnancy is not detected until other signs are present, sometimes as late as the seventh month. A strong ethic among women in the heroin world is that it is not acceptable to remain addicted while pregnant. The women in the sample express their contempt for women who do so. Those who do continue using heroin justify their use with the rationales that heroin will have already done its damage to the fetus by the time the pregnancy is discovered (too late for a simple abortion) or that withdrawal later in pregnancy is more dangerous than continuing use and giving birth to an addicted baby.

Addicts' newborns are often premature, with low birth weights, and in some cases withdrawal symptoms. Mothers are often treated with disdain by hospital staffs and physicians because of their addiction and their failure to seek normal prenatal care. Frequently, the normal mother-child bonding process is interrupted because the baby must be detoxified. These factors, together with the mother's guilt, lack of family support, and sense of failure, may spiral her further into drug use.

Mothering while addicted. The mother who can maintain a heroin habit and take care of her children is afforded respect in the heroin world. Women are best able to cope when their child care responsibilities force them to control their drug use. Combining using and mothering is a source of pride to women addicts, and a few are able to establish a routine incorporating their children's needs with their own. But the world of heroin is unstable, and a woman without money for her habit may be unable to care for children, especially when she is withdrawing from drugs because she can't obtain any. Addicted mothers may be forced to perform illegal street work for money, leaving very small children unattended. Furthermore, the psychoactive effects of heroin can render the mother functionally absent; in the euphoric state she cannot carry out routine mothering tasks.

Women addicts often lose their children and experience guilt, failure, and shame. The loss of the children can be voluntary or involuntary, and children can be placed temporarily in homes of relatives, foster homes, or even juvenile institutions. As addicts tend to view their children and motherhood as their singular claim to worthiness, their greatest responsibility, and the essence of their responsibility, removal of their children can be devastating and lead to uncontrolled heroin use.

Realization of dwindling options. Women addicts often begin their careers in drugs with relatively reduced options. They are poor and belong to racial minorities. Their educational and occupational opportunities are limited. Motherhood is one of the desirable options in terms of social worth, yet it is often seen as a "given" until threatened. The motherhood role may be threatened by the mothers' abusive behavior, prolonged separations from their children due to drug behavior and prison terms, or the mothers' fear of rejection by children who disapprove of their lifestyle. Other women fear that their children will accept them as role models and become addicts themselves.

CONCLUSIONS

Although in the early stages of addiction, men and women fare similarly, women with children have a decided disadvantage in later maintenance stages, because heroin-related business cannot be their central concern. Because children and mothering are central to the female addicts' feminine identity, loss of their children arouses intense feelings of guilt and failure. Their very

womanhood is threatened. At this point in the women's career, they realize that their motherhood options are being funneled, and that the sacrifice for heroin is getting close to their own person, identity, and sense of self. In this state, they can gear themselves to abstinence from heroin. While the option of a viable family life remains, female addicts are in an optimal frame of mind for abandoning their addiction careers.

Rosenbaum, M., and Murphy, S. Getting the treatment: Recycling women addicts. Journal of Psychoactive Drugs, 13(1):1-13, 1981.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicts
AGE	Young adults; mature adults (range: 20-53; median: 28)
SEX	Female
ETHNICITY	White; black; Latina; other
GEOGRAPHICAL AREA	San Francisco, California; New York City
METHODOLOGY	Retrospective survey; ethnographic study
DATA COLLECTION INSTRUMENT	Depth interview/life history method
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	43

PURPOSE

This paper examines the treatment process as it is experienced by female heroin addicts. The treatment scene, modes of treatment, and structural problems encountered by women desiring treatment are examined. Difficulties experienced by women in treatment, the disillusionment these women may experience, and ways in which they subsequently treat themselves and use treatment facilities are also described. Finally, the paper discusses harmful aspects of treatment and how repeated recidivism stemming from the treatment's structure serves to lock women into the heroin life.

METHODOLOGY

A sample of 95 female addicts from the San Francisco Bay area and 5 from New York City was obtained through the posting of notices in high drug-using areas, the city prison, and a variety of treatment facilities. The snowball method was also used to locate members of neighborhood worlds and friendship groups. The study population included 43 whites, 38 blacks, 14 Latinas, 1 Asian, 1 Native American, and 3 Filipinos. The women ranged in age from 20 to 53 years old, with a median of 28 years.

All interviews were voluntary, and respondents were paid $20. The interviews lasted between 2 and 3 hours each and covered all aspects of the women's lives, with a focus on their drug-using careers. Project personnel also collected demographic statistics and did field work in San Francisco, talking with addicts in high drug-using areas, visiting some addicts in their homes, and accompanying addicted contacts on their "rounds" in their communities.

RESULTS

The "treatment scene" has grown sharply in the last decade. Although treatment's goal is to eliminate the use of heroin, this goal is not being met. As a result, treatment has become part of the heroin life and a drug phenomenon of its own. It functions as a bridge between addict and nonaddict lifestyles. Being a staff person at a treatment facility can be a perfect compromise for an ex-addict.

Detoxification and methadone maintenance are the two basic treatment modalities available to the addict today. Detoxification programs began with hospital programs and have expanded to include therapeutic communities and free clinics. Methadone maintenance programs, which were first opened in 1963, aim either at gradual detoxification or at stabilization on methadone for an indefinite period.

Problems encountered by female addicts in relation to treatment programs include limited space, inadequate facilities, and the credibility problem posed by advocacy of drug-free lifestyles by persons who are not themselves drug free. In addition, the physiological problems encountered by women, especially those on methadone, have made treatment difficult. Moreover, the problem of sexism in treatment has disillusioned many women.

The methadone routine, which involves such problems as spontaneous sleepiness and sexual difficulties, has caused many women to become disillusioned. This daily routine can make it difficult for addicts to lead normal, productive lives. Women often drop out or violate the rules of methadone maintenance programs. They may resort to self-treatment and obtain prescription drugs on the basis of complaints about insomnia or arthritis. Other women begin to use treatment facilities for avoidance of prison, controlling their habit, and polydrug abuse, rather than for their intended purposes.

The problems of treatment, addict disillusionment, and subsequent alternative use of the facilities produce much recidivism among abstaining addicts. The women in the sample who had been in treatment usually had had several such experiences. Lack of jobs and exposure to other addicts in treatment facilities prevented the women from removing themselves physically from the heroin world, although they felt that such removal would be necessary to end their use of heroin. Overall, methadone maintenance kept these addicts in the heroin world.

CONCLUSIONS

Treatment has become an integral part of the heroin scene in the last decade. Although it is occasionally used by addicts who sincerely want to end their heroin use, it is more often used as a middle ground between addiction and abstinence. The women studied here suspect the motives of treatment personnel and attach little seriousness to their own motives for going to treatment. Thus, they knowingly use treatment with no sincere attempt at long-term abstinence.

Treatment facilities can be used for long-term abstinence if three conditions are present: (1) the addict's commitment to cleaning up; (2) physical removal from opiate-use environments; and (3) availability of an alternative, viable, and desirable lifestyle. One condition without the others is ineffective. Thus, live-in treatment facilities, either equipped for detoxification or opiate-free, work better than other modalities (i.e., methadone maintenance). Moreover, for women who are mothers, treatment facilities without accommodations for children are worthless. Hence, treatment in its present form is not very helpful to addicted women. Treatment must meet these three conditions and must also assure that any drugs used are less harmful than heroin itself.

Rosenthal, B.J.; Savoy, M.J.; Greene, B.T.; and Spillane, W.H. Drug treatment outcomes: Is sex a factor? The International Journal of the Addictions, 14(1):45-62, 1979.

DRUG	Multidrug
SAMPLE SIZE	13,268
SAMPLE TYPE	Abusers
AGE	Adolescents; young adults; mature adults
SEX	Both
ETHNICITY	White; black; other
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Secondary analysis; multivariate analysis; comparative study
DATA COLLECTION INSTRUMENT	Program/clinical statistics; Client Oriented Data Acquisition Process
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	8

PURPOSE

Studies on the treatment of drug abusers suggest that women experience differential treatment during their rehabilitation due to a variety of social prejudices. Discussions of the role assumed by male therapists and descriptions of various treatment environments raise issues regarding the importance of the sex role in treatment. In designing services for the treatment of women, it is important to know whether women require different types of treatment, whether they fare as well as males in terms of treatment outcome, and whether they respond more positively to female counselors than to male counselors. Other areas of importance are whether sustained drug use produces different psychological and physical problems in men and women and whether women exhibit different patterns of use and abuse.

To answer some of these questions, data were obtained from the national Client Oriented Data Acquisition Process (CODAP). These data were used to examine the impact of sexual differences on treatment outcome and to identify and describe variables that differentially affect outcomes for males and females in drug treatment programs.

METHODOLOGY

A random sample of 13,268 individuals was generated by computer from the 146,681 clients in the Historical Clients File of CODAP. This file included admission and discharge information on clients discharged from federally supported drug treatment programs during the first three quarters of 1975. The sample was found to be representative of the total file at the 99 percent confidence level.

Two categorical relationships were examined: the relationship between treatment outcome and sex and the differential effects of demographic characteristics, measures of treatment history, and patterns of drug abuse on treatment outcomes for males and females. The term "treatment outcome" refers to the variable "Reason for Discharge" on the CODAP discharge form and reflects the reason given by the program for treatment termination. In assessing differences in independent variables, it was decided to regard 0 to 4 percent as negligible, 5 to 9 percent as small, 10 to 19 percent as moderate, and 20 percent or more as a large difference.

RESULTS

Only small percentage differences were found to exist between males and females. For example, 43 percent of males and 44 percent of females left treatment on their own initiative, while 22 percent of males and 24 percent of females completed treatment. A total of 21 percent of both males and females were transferred or referred to other agencies.

The magnitude of sexual differences within age categories was negligible, and the patterns of differences in treatment outcome were similar for males and females. The differences were greatest for the two youngest age groups in that 48 percent of the females and 42 percent of the males under age 18 and 49 percent of the females and 43 percent of the males aged 18 to 20 left the treatment program prematurely. Similar negligible differences in treatment outcome were seen within racial categories, employment status categories, and educational status groups. Negligible sexual differences also were found when prior treatment experience, length of time in treatment, and admission status were related to outcome.

Somewhat larger differences were found regarding the primary drug of abuse at admission. A higher percentage of males than females used opiates, while females were more often abusers of barbiturates and sedatives. Marijuana use was similar for males and females. Treatment outcomes did not show much variation between males and females within categories of frequency of use of primary drug or in treatment outcome categories of the most frequently occurring drugs.

CONCLUSIONS

The authors' summary states, "the sexual differences in treatment outcomes, though minimal as discerned through analysis of CODAP data, are nonetheless real. They are also important in planning treatment for women since they can stimulate additional issues concerning heterogenicity among addicts in general and among addicted women in particular. Though diverse interpretations can be applied to the data, one significant conclusion might be that a higher level of motivation is evidenced by women to complete treatment than by men. Characterizations of women as dependent, frivolous, self-centered, and otherwise inferior can justifiably be presumed as damaging to women's concepts of themselves. Nevertheless, the data presented in this study indicate equal prospects for treatment completion among "unequal" groups. Women, therefore, might be thought to not only do as well as men relative to treatment outcome but, in light of the societal pressures which must be overcome, to surpass them."

In conclusion, the authors caution, "Finally, it must be remembered that while useful in examining rates of completed treatment, national aggregated data such as CODAP cannot determine the special treatment needs of women or measure the impact of specific interventions oriented toward meeting these needs."

Saxon, S.; Kuncel, E.; and Kaufman, E. Self-destructive behavior patterns in male and female drug abusers. American Journal of Drug and Alcohol Abuse, 7(1):19-29, 1980.

DRUG	Heroin (60 percent); marijuana; other
SAMPLE SIZE	114
SAMPLE TYPE	Suicidal addicts
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Orange County, California
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Interviews; Suicide History Information Form
DATE(S) CONDUCTED	August 1976
NO. OF REFERENCES	18

PURPOSE

Researchers are just beginning to explore the relationship between drug abuse and suicide. To contribute to this research trend, the present study explores sexual differences in the self-destructive behavior of individuals, particularly heroin addicts, requesting treatment services from the Orange County (California) Department of Mental Health's Division of Drug Abuse Services. Data are collected on subjects' suicide attempts, suicidal thoughts, and on potentially destructive acts, such as driving under the influence.

METHODOLOGY

The sample consisted of 114 persons (76 males and 38 females) who received drug abuse services from the Orange County Department of Mental Health during August 1976. They were interviewed during intake conferences according to a defined protocol, the Suicide History Information Form. Heroin was the primary drug for 60 percent of the users, and marijuana, for 22 percent. More than half the sample reported nonsuicidal overdoses.

RESULTS

Men and women in the study sample reported different profiles of self-destructive behaviors. The incidence of drug abuse is three to four times as high in men as in women, perhaps because of differing patterns of social acceptance for such behavior. However, only twice as many men as women requested treatment services. Self-destructive behaviors differentiated by sex reflect the particularly strong value placed on traditional, socially condoned sex-stereotyped behavior, personal insecurity, and discomfort with those behaviors for members of the subculture.

While 66 percent of female heroin abusers reported considering suicide, only 36 percent of the men admitted having had suicidal thoughts. However, accidental overdoses are significantly more common in men than in women (66 versus 34 percent), indicating that men are probably less willing than women to admit that overdoses were suicide attempts. Female heroin abusers attempt suicide more often than men, but men are more successful in committing suicide, possibly because women are willing to signal the need for help through suicide attempts and men are less likely to seek help.

Differences between male and female addicts are also evident in other areas of behavior. A total of 76 percent of the males and 24 percent of the females reported having been the driver in an automobile accident, and 69 percent of the males and 31 percent of the females reported being arrested for driving under the influence of drugs or alcohol.

The study population used methods in their suicide attempts that differ from those used in the California population as a whole. Men in the study sample employed firearms and explosives proportionally less frequently and drug overdoses more frequently than the general population. Contrary to assumptions in the literature, drug abusers do not usually attempt suicide with their primary drug of abuse.

CONCLUSIONS

The study confirms the generally established research findings that women, whether they are addicts or not, tend to think about and to attempt suicide more than men. In addition, males and females present different profiles of self-destructive actions. Drug abusers also have patterns of suicidal behavior different from those found in the general population. Male heroin abusers experience more nonsuicidal overdoses than female abusers and are more frequently arrested for driving under the influence or are more often involved in traffic accidents than females.

Drug abusers are clearly a high-risk suicide-attempt group. Therefore, treatment personnel need to be aware of the dynamics of suicide, the clues to suicide, and the clinical management of suicidal clients. A modest theory of suicide should be developed that might lead to avenues for further research.

Schuckit, M.A., and Morrissey, E.R. Drug abuse among alcoholic women. American Journal of Psychiatry, 136(4B):607-611, 1979.

DRUG	Multidrug
SAMPLE SIZE	293
SAMPLE TYPE	Alcoholics in treatment
AGE	Young adults; mature adults
SEX	Female
ETHNICITY	White; Native American; black; other
GEOGRAPHICAL AREA	Seattle, Washington
METHODOLOGY	Retrospective survey
DATA COLLECTION INSTRUMENT	Interviews; clinical records
DATE(S) CONDUCTED	1976
NO. OF REFERENCES	21

PURPOSE

Misuse of prescription drugs may be common, especially in multidrug users and alcoholics. Most alcoholics come to their family physician with medical or emotional complaints such as sleeplessness, anxiety, or lethargy. This pattern is said to be more common among alcoholic women than alcoholic men. Physicians may prescribe hypnotics, antianxiety medications, or stimulants to deal with these complaints. However, all these drugs have extremely limited potential benefits and extremely high risks to alcoholics.

This study examined 293 women in an alcoholic treatment center to document the nature and dimensions of the problem of drug abuse among alcoholic women.

METHODOLOGY

The 293 subjects were drawn from 339 consecutive admissions to the King County Detoxification Facility in Seattle, Washington, in 1976. All but those who refused, were too psychologically ill, or signed out were approached by a trained interviewer within 24 hours of admission. Systematic material was collected on social and developmental histories, psychiatric syndromes as defined by Woodruff and associates, alcohol and drug use patterns, and family history of

psychiatric disorders. All data were obtained from self-reports, but the patients' clinical records were reviewed if the interview contained inconsistencies. Alcoholism or drug abuse was defined as the occurrence of a major life problem, such as marital separation or loss of a job, related to the use of a substance.

Women in the sample were divided into four groups for purposes of data analysis. Those who reported abusing antianxiety drugs, barbiturates, amphetamines, or opiates were separated from those who had not. Drug abusers were subdivided into those who abused prescription drugs and those using only street drugs. Nonabusers were divided according to whether or not they had received prescriptions for analgesics, hypnotics, antianxiety drugs, or stimulants. The chi-square test and Student's t-test were used to compare groups.

RESULTS

Two-thirds of the women had received prescriptions for drugs of potential abuse, usually hypnotic and antianxiety drugs. One-third of the women admitted abusing substances; most of these subjects obtained prescriptions for potential drugs of abuse while they were actively abusing drugs.

The two drug-abusing populations were relatively young (mean ages: 36.8 and 25.9), the least likely to be married, and the most likely never to have been married. These two populations also had more severe alcohol histories than the nonabusers. They were more likely to drink daily, more often reported binges, and had higher rates of all alcohol-related difficulties, including blackouts. Both of the drug-abusing populations took multiple drugs, with the prescription-drug abusers more likely to abuse depressants or opiates but not stimulants. Subjects with histories of drug abuse were less likely to receive an alcoholic label and more likely to be noted as antisocial personalities or drug abusers. Almost all antisocial and drug-abusing women were secondary alcoholics. Drug-misusing women also reported more suicide attempts and early antisocial problems and had received more psychiatric care than nonabusers.

CONCLUSIONS

The average alcoholic is a middle class worker or housewife consulting the physician for physical or emotional problems. Thus, physicians may have difficulty diagnosing alcoholism in them. These people, who constitute one-third of the hospitalized general medical or surgical patients, are at high risk for abuse of hypnotics, antianxiety drugs, stimulants, and analgesics. The first three of these drugs should almost never be prescribed to outpatient alcoholics, and analgesics should be prescribed only with great care.

Schultz, A.M. Radical feminism: A treatment modality for addicted women. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse: National Drug Abuse Conference 1974. Cambridge, Mass.: Schenkman, 1975. Pp. 484-502.

DRUG	Alcohol; multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Case study; clinical observation; theoretical/critical review
DATA COLLECTION INSTRUMENT	Observations; program/clinical statistics
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	None

PURPOSE

A radical feminist approach to treatment and rehabilitation of addicted women challenges the accepted and traditional methods of treatment and seeks to gain for women the right to be treated for who they are and not for who male-dominated traditions and professions think they should be.

This paper states the case for a radical feminist approach to addicted women by drawing on the author's personal life experience, her first attempt to gain treatment rights for women in a rehabilitation center, and her current experience of 2 years in a drug treatment and rehabilitation program for young adults, where she is now the Director of Therapy. The paper also presents conclusions about how the radical feminist approach for women can be translated into a nonsexist approach for all addicted people.

SUMMARY

Author's life experience. In the author's male-oriented family, the boys went to college and the girls went to business school with the expectation that they would get married. Since the author did not see herself as a secretary or housewife she was confused over how to determine her

career and identity. She decided to become a model, but the pressures of trying to stay thin enough to fulfill the Madison Avenue fantasies of slender women led to starvation diets, diet pills, nervous breakdowns, psychiatric treatment by males, suicide attempts, and the use of drugs. The loss of her hair through a mistake in the bleaching process resulted in the loss of the last vestige of her fragile identity. Alcoholism followed. She met her future husband in a drying-out clinic for alcoholics, recovered from alcoholism, married, and took on the role of a housewife. Her increasing boredom with that role led to work as a cotherapist in marathon experiences for interested Alcoholics Anonymous members who were looking for further growth.

These experiences, reinforced by her own experiences with a male psychiatrist, led to her realization that female alcoholics are overly aggressive and angry and have doubts about their adequacy as women.

First attempt to gain treatment rights for women. The treatment community in which the author worked for 18 months had 13 women in a community of 110 men. The women were split into different treatment groups rather than viewed in terms of their own needs. They were used for kitchen work, as hostesses at community gatherings, and as sex role models for the men in therapy groups. This situation maintained the societal isolation of women from one another and prevented them from identifying with other women in a positive way.

The author worked to establish an all-women therapy group led by a female therapist who would be a role model, providing strength, compassion, and competence. The special concerns of minority group members and mothers were recognized in the therapy. The numbers of women in treatment and the treatment completion rates increased dramatically. However, as a result of the author's demands for certain treatment rights for women, the male community reacted and the author was asked to leave. A male coordinator took over the women's unit and male therapists were included in the women's therapy groups. As of March 1974, the number of women in treatment had dropped from a peak of 33, when the author was there, to 14, its original level.

Current experience at TODAY, Inc. The status of women at TODAY, Inc., in October 1971 was typical of most treatment programs in that both the staff and the board lacked women and women were being taught a new set of behaviors to please males. The author's husband was the director and had become aware of women's needs through prior experiences. A female therapist was hired, separate male and female therapy groups were established, and extensive communication regarding women's needs took place with staff and residents.

An important component of TODAY's self-help concept is the Slip Group, which teaches women to deal with their feelings in a positive way. The program includes a work structure, in which residents are given increasing degrees of responsibility in the kitchen, housekeeping, maintenance, and public relations departments. Women are also taught to develop a sense of identity and self-worth by means other than their attractiveness to males. The program also deals constructively with the special problems faced by addicted women who are also lesbian, as these women's needs for a sense of self-worth, self-confidence, and self-direction are much the same as those of other women with addiction problems.

As the program progressed, the issue of whether treatment for men needed modification emerged. The realization grew that men's traditional identity was being accepted and that men were being deprived of the freedom of expression being given women. When female cotherapists no longer took part in men's therapy sessions, greater freedom of expression of negative feelings, especially toward women, resulted.

CONCLUSIONS

It is the author's opinion that a radical feminist approach is the appropriate treatment modality for addicted women. This approach can be translated into a nonsexist approach for all addicted people. Data collected by the author's treatment program for the 1972-1974 period showing that success with males compares favorably with that of other programs and that success with females is exceptional suggest that the radical feminist approach works. Of the women who came to TODAY for treatment, 68 percent are free of drugs and living responsible lives, and 88 percent of the women who completed the entire residential program are successful.

Singer, A. Mothering practices and heroin addiction. American Journal of Nursing, 74(1):77-82, 1974.

DRUG	Heroin
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Nonaddicted mothers of addicts; addicts
AGE	Adolescents; young adults
SEX	Both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Ethnographic study; clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	1967-1970; 1971-1972
NO. OF REFERENCES	13

PURPOSE

Mothers of ghetto youths who become addicted do not seem to understand how or why their children's addiction occurred. Observations of addicted youths and work with adolescent, nonaddicted mothers as they cared for their infants and young siblings indicated that characteristics of addict functioning appear to be related to some of the childrearing practices of these mothers. These observations were based on the author's 9-month internship as a group therapist in a drug rehabilitation center, Reality House, in New York City and work as director of a day program for pregnant adolescents from some of the heaviest drug use areas in New York City.

SUMMARY

For some young ghetto males, addiction serves as an initiation into adulthood. It may also be a repetitive suicidal attempt resulting from the chances of an overdose and caused by an extremely negligent attitude toward self-preservation. This suicidal pattern is the inverse of the sense of hope and competence that should result from normal childrearing practices and socialization, which promote the development of individuation.

Addicts can be fixed developmentally at the infant's level of symbiosis with the mother, at the subsequent individuation level in which the ability to provide for survival needs is developed, or at the adolescent period when gender identity and sex-role fulfillment are developed. Addicts use heroin to avoid the difficulties inherent in progressing through these normal phases, and thus postpone occupying any responsible adult role.

Recurring psychodynamics among addicts, based on addicts' own statements, are the inability to accept authority of others or to take responsibility for their own actions. Apathy, resistance to change, desire for instant gratification, inability to plan for tomorrow, and complete obliteration of sexual and somatic feelings are further characteristics.

Nonaddicted adolescent mothers often use childrearing practices that unintentionally socialize their children into the drug culture. The child-care practices of the mothers seen in the day program were remarkably similar. Feeding was scheduled either by the clock or by the mother's preference; the babies were not permitted to discover their limits with respect to appetite, satiation, and gratification. The babies' efforts to feed themselves or explore food or utensils were hindered because they were messy or time-consuming. The restraining of babies' arms also limited the learning process.

Although the babies spent much time with their mothers and other caretakers, their relationships were parallel rather than interactive or mutual. Mothers fed, diapered, and scolded their babies but did not play or talk with them or supervise their crawling or play with other children. Babies and toddlers were expected to stay in one spot and not explore, request attention, or make their presence known. Babies were also expected to go to sleep despite activity in the room and to wear clothing chosen for appearance rather than for the babies' needs.

Toilet training was begun before the end of the child's first year, with physical punishment and negative facial and verbal reactions as the means of gaining compliance. Mothers dressed and bathed their babies and toddlers and discouraged any attempts by infants to help themselves. Immediate obedience to the word "no," reinforced by physical punishment, was a universal requirement. Age-specific behaviors such as throwing a toy to the floor or showing anxiety on meeting strangers were viewed as bad and as reflecting poor mothering.

Although the mothers appeared to want their babies, they continually ignored their children's strivings, feelings, and needs. This style of mothering was the major element that could lead to the early loss of a sense of competence or even prevent its development. While the babies grew well physically, somewhere between the 12th and 24th month they became and stayed depressed. Their self-suppression appeared to be a forerunner of chronic depression.

From ages 5 to 7 the children were suddenly expected to know how to behave and to control themselves and others, but they had not been allowed to acquire these skills as they grew. This abrupt change could be the beginning of the intense craving of the addict to be cared for without any strings attached.

CONCLUSIONS

Although none of these young mothers were raising their children with the expectation that the children would become addicts, their childrearing practices seemed to curtail the development of hope and mastery, to make dependence a virtue, and then to suddenly propel the children into responsibilities for which they were not prepared. These practices also place strains on the development of sexual identity, with the result that heroin addiction may be adopted as a form of escape from sexual desire and functioning and an initiation into an asexual male world. These observations and conclusions are supported by many other sources in the literature.

Self-help groups and formal institutions that are making efforts to resocialize addicts represent a worthwhile investment, although the resocialization process is a lengthy one. Still, efforts at primary prevention are urgently needed. Helping women understand the effects of their childrearing practices may do the most to foster the development of hope and mastery in themselves and their offspring, since attitudes and behaviors acquired in childhood are the strongest and least apt to change. Mothering practices that will permit growth, hope, competence, and individualism should be encouraged.

Staats, G.R. Sexual differentiation among marijuana users: Reality or inaccuracy. The International Journal of the Addictions, 14(8):1163-1170, 1979.

DRUG	Marijuana
SAMPLE SIZE	134
SAMPLE TYPE	Users
AGE	Males: mean, 23.4; females: mean, 21.7
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Whatcom County, Washington
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	1973
NO. OF REFERENCES	14

PURPOSE

Recreational marijuana use has received increasing attention in research. However, a number of research areas remain controversial, particularly male-female differences in use patterns. The present study surveys marijuana users to establish whether and what sort of differences exist between male and female users' patterns.

METHODOLOGY

The study sample consisted of 134 individuals, 83 males and 51 females, living in Whatcom County in Washington State. All individuals admitted having used marijuana at least once. Data were collected with self-administered questionnaires during the spring of 1973. Mean ages were 23.4 and 21.7 for males and females, respectively. Most respondents (70 percent) were single, 91 percent had more than 12 years of education, and more than half (62 percent) were students. Of the total sample, 11 percent were classified as infrequent users, 42 percent as occasional users, and 47 percent as regular users. Females were likely to be infrequent (16 percent) or occasional (49 percent) users, while males predominated as occasional (37 percent) or regular (54 percent) users.

RESULTS

Most subjects reported first use between age 17 and 18; 30 percent initiated use after age 19. By 18 years of age, 61 percent of the males had begun use while the respective female proportion was 82 percent. More males (37 percent) than females (17 percent) started using after age 19.

No significant sexual differentiation was observed in usage patterns. Almost all subjects (96 percent) described "joints" as the major administration method. There was also no significant sexual differentiation regarding supply sources. Women were likely to know none or up to four dealers (60 percent), while males were likely to know five or more (43 percent). Similarly, little sexual differentiation was found regarding dealer accessibility in the community.

Concerning marijuana acquisition, significant sexual differences were observed. Compared to women, males were more likely to purchase marijuana personally and were more hesitant to rely on friends as their only source. Males were most likely to acquire marijuana, in decreasing order, by purchase, by gift, and by purchases made through others. Women were least likely to make purchases themselves and more likely to acquire their marijuana as gifts or as purchases made by others. Significant sexual variation was observed among subjects who had sold marijuana and who had brought it with them when visiting other using friends. Males were far more likely than females to have sold drugs and were more likely than females to take along marijuana when visiting using friends.

No significant sexual differentiation was found for marijuana's effects on social relationships. Of the male subjects, 68 percent had initiated fewer than seven individuals in marijuana use; males tended to introduce friends to marijuana more frequently than females did. Males were also more likely than females to express concern that other users knew about their use.

CONCLUSIONS

Few aspects of marijuana use are sexually differentiated. However, in contrast to females, males are significantly more likely to make personal purchases and are more hesitant about having friends as their only marijuana source, perhaps because they wish to maintain their self-sufficiency. Males are also more likely to have sold marijuana. Furthermore, males are more likely than females to bring along marijuana when visiting friends but are also more concerned about other users' knowing about their use. Caution must be exercised when examining data on male-female differences in drug use because of research and sampling problems.

Steer, R.A., and Schut, J. Moods of pregnant and nonpregnant heroin addicts. The International Journal of the Addictions, 15(8):1279-1283, 1980.

DRUG	Heroin
SAMPLE SIZE	328
SAMPLE TYPE	Pregnant and nonpregnant addicts in treatment
AGE	Mean: 25.86
SEX	Female
ETHNICITY	29.6 percent white; 70.4 percent black
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Profile of Mood States
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	4

PURPOSE

In recent years the number of treatment programs for pregnant heroin addicts has risen. Although substantial literature covers the treatment of fetal complications produced by the mother's heroin use, approaches to treating the psychological effects of heroin-addicted women have been underemphasized. The mother's emotional distress during pregnancy may be associated with difficult delivery, premature birth, and mental retardation, as well as the woman's future mothering style. The present study seeks to ascertain whether the mood levels of pregnant heroin addicts differ from the moods of heroin-addicted women who are not pregnant.

METHODOLOGY

The study sample consisted of all 328 heroin-addicted women admitted to the Drug Abuse Rehabilitation Program of the West Philadelphia Community Mental Health Consortium over a 2-year period. Of this group, 52 pregnant women were eligible for the Pregnant Addict Program. The total sample was 29.6 percent white and 70.4 percent black. With regard to marital status, 43.9 percent were single, 25.6 percent were married or cohabiting, 18.9 percent were divorced, 8.8

percent were separated, and 2.7 percent were widowed. The primary means of support was medical assistance in 74.1 percent of the cases, and only 5.8 percent were employed at the time of admission. The mean age was 25.86 years, the mean educational attainment level was 10.95 years, and the mean number of arrests was 3.67. The mean age for onset of heroin use was 20.26, and 84.1 percent had been admitted for previous treatment of drug abuse. Only 9 percent were using drugs other than heroin and methadone.

Women's moods were assessed with the Profile of Mood States instrument during the course of clinical intake. The instrument measured tension-anxiety, depression-dejection, confusion-bewilderment, fatigue-inertia, anger-hostility, and vigor-activity.

RESULTS

No significant differences emerged between the test scores of pregnant and nonpregnant addicts, but the mean difference between pregnant and nonpregnant addicts' levels of tension-anxiety did approach significance. The female addicts described negative affects comparable to those of patients diagnosed with psychiatric disorders, such as anxiety reactions and depression.

CONCLUSIONS

Pregnant heroin addicts' mood levels are comparable to those of nonpregnant heroin addicts. A slight trend toward elevated tension and anxiety in pregnant women requires further confirmation. The negative affect levels of both pregnant and nonpregnant female heroin addicts suggest that they require further psychiatric care in addition to the basic treatment for drug abuse. As past research shows that pregnant women experiencing negative affective arousal may develop delivery complications, moods of pregnant addicts should be carefully monitored. Drug rehabilitation programs must have staff trained in cognitive-behavioral methods of stress reduction. Further research on the moods of pregnant and nonpregnant addicts is needed to establish whether such moods as depression cause difficult deliveries or postnatal problems.

Suffet, F., and Brotman, R. Female drug use: Some observations. The International Journal of the Addictions, 11(1):19-33, 1976.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Users
AGE	Adolescents; young adults; mature adults
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	18

PURPOSE

While some studies have examined male-female differences in rates and patterns of drug abuse, scant attention has been paid to developing theories to explain these differences. Theoretical and empirical research on the relationship between sex roles and patterns of drug use is all the more important as women are attempting to change their social status and are asserting their right to greater freedom of lifestyle. The present report summarizes findings of research to date on sex differences in drug use patterns.

SUMMARY

Findings regarding initiation of drug use indicate that females usually learn how to use drugs from males, regardless of the type of drug involved. Men also tend to acquire drug-using habits from other males. Furthermore, men are more likely than women to use drugs for recreational purposes. However, the proportion of females using drugs for recreation is increasing, especially among the younger population.

In contrast to these patterns of recreational drug use, women are more likely than men to be users of psychotherapeutic drugs. The use rate of psychotherapeutics is also higher among

women than among men. For stress relief, men are more likely than women to use alcohol and women are more likely than men to use psychotherapeutic drugs. This use pattern is evident in teenagers as well as adults--high school girls are more likely than high school boys to have used sedatives and tranquilizers. In addition, women turn to heroin more often than men to find relief from personal disturbances.

According to research on the lifestyles of drug users, female heroin addicts hold values that are remarkably traditional and conventional. In contrast, female college student users of marijuana are less conventional than nonusers in both values and behavior. Female heroin addicts are frequently forced into prostitution to support their habits. This is not surprising, considering that most female heroin addicts are isolated from normal sources of social and economic support. The consequences of female addiction may spread beyond the addict herself and have serious effects on the newborn infants of addicted women. Effects on infants may take the form of below-normal birth weight, neonatal addiction, or high infant mortality rates.

Surveys suggest that women's drug use patterns will tend to approximate those of men as their lifestyles become freer and less conventional. The relaxed lifestyle is characterized by liberal political and sexual attitudes, by a strong emphasis on cultural and esthetic pursuits, and by distrust of authoritarian social arrangements.

CONCLUSIONS

The use of recreational drugs by women will increase as women assert their right to greater freedom in their private lives and rebel against the double standard of personal behavior. The use of psychotherapeutics serves as a device for perpetuating women's unequal social status, relieving manifestations of strains felt by women without removing underlying causes. Social equality for women should reduce the level of pill use. However, the strains of the workplace may produce new types of pill or alcohol use among women. It is impossible to say whether the female opiate addict population will increase or decrease over time, but certain women will continue to enter the addict world, running the risks of prostitution and drug-endangered pregnancies. Such risks can be reduced only by development of new intervention programs and provision of opportunities for good housing, education, and satisfying work.

Sutker, P.B.; Archer, R.P.; and Allain, A.N. Psychopathology of drug abusers: Sex and ethnic considerations. The International Journal of the Addictions, 15(4):605-613, 1980.

DRUG	Opiates; barbiturates; amphetamines
SAMPLE SIZE	428
SAMPLE TYPE	Abusers in treatment
AGE	Not specified
SEX	Both
ETHNICITY	White; black
GEOGRAPHICAL AREA	New Orleans, Louisiana; Charleston, South Carolina
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Minnesota Multiphasic Personality Inventory; Shipley Institute of Living Scale
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	13

PURPOSE

Research on sex differences in personality characteristics, attitudinal sets, and personal values among drug abusers have tended to support the hypothesis that female drug abusers are more psychologically deviant than male drug abusers. However, some recent research has indicated that men and women do not differ on personality dimensions following admission to treatment. While studies have consistently shown differences between black and white drug abusers, few studies have simultaneously examined both sex and race variables. Those that have been done have varied in their measurement techniques, instruments, time of measurement, or consistency in design across geographical areas.

This study used a cross-validation approach to explore potential differences in the degree and type of psychopathology among sex and race subgroups of 428 drug abusers applying to 2 geographically distant treatment programs.

METHODOLOGY

The subjects included 178 applicants to the Narcotic Addict Rehabilitation Act (NARA) Program administered by the Department of Psychiatry and Neurology, Tulane University School of

Medicine in New Orleans, and 250 applicants to the drug abuse program administered by the Franklin C. Fetter Health Center in Charleston. Up to 99 percent of NARA and 75 percent of Fetter applicants reported a history of opiate addiction greater than 2 years, while the rest admitted chronic use of barbiturates and amphetamines. The admissions to treatment were all involuntary.

The NARA sample consisted of 72 white males, 85 black males, 13 white females, and 8 black females. The Fetter sample consisted of 126 white males, 59 black males, 53 white females, and 12 black females.

Data were collected by means of the Minnesota Multiphasic Personality Inventory (MMPI) and the Shipley Institute of Living Scale, which were routinely administered as part of program admission. The subjects were categorized by diagnostic criteria outlined by Meehl to separate profiles into invalid, normal, and abnormal categories, with those defined as abnormal further divided into psychotic, psychoneurotic, and conduct disorder classes. Analyses of covariance and chi-square procedures were used to compare subgroups on scale elevations and types of psychopathology.

RESULTS

Personality characteristics were highly similar across treatment programs, and applicants were characterized by antisocial, passive-dependent, and psychotic symptomatology. Men and women differed little in the extent or type of psychopathology, although female drug abusers exhibited greater tendencies to admit personal faults and to express psychological problems. White drug abusers were more antisocial, behaviorally deviant, and neurotic than blacks, but subgroups did not differ in type of psychopathology. Overall, 54 percent of the addicts were classified as abnormal, 25 percent as normal, and 21 percent as invalid. Sixty percent of the abnormal group were classified as having a conduct disorder, while 24 percent were classified as neurotic and 16 percent as psychotic.

CONCLUSIONS

Men and women showed no differences on clinical dimensions or types of psychopathology. Neither sex could be said to be more psychopathological in reference to their normative sex group than the other. Results support views that female psychopathology has often been exaggerated by specialists in drug abuse and other treatment fields in a manner consistent with sex-role stereotyping within the general society. Possible trends in the treatment process that discriminate against women need to be corrected, since such discrimination may reduce efforts at job placement and development of career skills for female clients.

Blacks demonstrated lower levels of neurotic and antisocial psychopathology than whites. When viewed in the context of other research, these results suggest that there are important differences in personality, motivation, drug use, and value system characteristics between black and white drug abusers. These differences point to areas that should be explored carefully in the design of treatment and research strategies.

Sutker, P.B.; Archer, R.P.; and Allain, A.N. Drug abuse patterns, personality characteristics, and relationships with sex, race, and sensation seeking. Journal of Consulting and Clinical Psychology, 46(6):1374-1378, 1978.

DRUG	Opiates; multidrug
SAMPLE SIZE	84
SAMPLE TYPE	Abusers in residential treatment
AGE	Young adults (mean: 24.29)
SEX	Both
ETHNICITY	White; black
GEOGRAPHICAL AREA	Louisiana
METHODOLOGY	Multivariate analysis
DATA COLLECTION INSTRUMENT	Sensation Seeking Scale; MMPI; Shipley Institute of Living Scale; Background Information Questionnaire
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	14

PURPOSE

Research on the psychological characteristics of drug abusers has focused on sex and race differences but has generally not fully explored potential interactions of race and sex in influencing drug use patterns or associated personality characteristics. The present study was designed to address this area of limited investigation and to examine relationships between levels of sensation seeking, drug use patterns, and personality characteristics of chronic users of illicit drugs.

METHODOLOGY

Subjects were 84 drug abusers in residential treatment at Odyssey House Louisiana. The sample included 38 white men, 18 white women, 22 black men, and 6 black women, a breakdown representative of program composition. About 57 percent were addicted to opiates at program entry, while 19 percent were users of stimulants, 14 percent were users of depressants, and 5 percent used other drugs. Admission to treatment was nonvoluntary in over 90 percent of the cases.

Data were collected by means of (1) the Sensation Seeking Scale (SSS), a forced-choice questionnaire measuring individual differences in preferred optimal level of stimulation; (2) the Minnesota Multiphasic Personality Inventory (MMPI); (3) the Shipley Institute of Living Scale, a measure

of verbal comprehension and problemsolving skills; and (4) the Background Information Questionnaire (BIQ), a structured instrument to obtain information about personal history and patterns of drug use. Comparisons were made between sex and ethnic subgroups on personality and drug use variables using analysis of covariance and chi-square procedures for subjects classified into high, medium, and low sensation-seeking groups.

RESULTS

Drug abuse subgroups defined by race differed significantly on SSS variables, and whites scored higher than blacks on thrill seeking, adventure seeking, and total SSS. Sex differences in sensation seeking were limited, with men scoring higher than women only on thrill and adventure seeking. Race and sex MMPI comparisons showed no differences between men and women, but whites produced higher scores on several of the scales than did blacks. Blacks were characterized by less psychopathology, use confined to fewer drug categories, and later drug use than whites. Use patterns were basically similar for women and men.

Sensation-seeking levels were significantly related to drug use patterns. High and medium sensation seekers reported earlier and more varied use of drugs than low sensation seekers. Although the reason for first drug or opiate use and drug of choice did not vary as a function of SSS classification, the reason for first alcohol use differed across groups. Among low sensation seekers, 62 percent remembered their first use of alcohol as motivated by the influence of others, whereas 67 percent of high sensation seekers attributed their initial use of alcohol to pleasure and curiosity.

CONCLUSIONS

Race is an important factor to consider in understanding drug abuse phenomena, but gender may be of limited value in predicting personality or drug use patterns for users of illicit drugs. In contrast to earlier results of other studies, results of this investigation suggest that female drug abusers are no more psychologically deviant than men in reference to their normative sex group. Thus, the issue of sex-specific personality differences cannot be resolved without further comparisons across treatment and nontreatment conditions. Except for thrill and adventure seeking--a cluster of items reflecting desire to engage in outdoor sports or activities--women and men were basically similar on sensation-seeking measures. Moreover, although women used fewer categories of drugs, they did not differ from men in age at first drug use, frequency of drug use, or drug preference.

Results support the hypothesis that there is a close relationship between sensation seeking, other personality dimensions such as sociopathy and neurotic involvement, and drug use patterns. Findings suggest that motives for drug use vary depending on such critical variables as race, sensation seeking, neurotic involvement, and sociopathy. Chronic drug use may be associated with exaggerated needs to reduce unpleasant internal states or to seek out external sources of stimulation. Using these assumptions, specific therapeutic packages might be matched with client personality characteristics and drug use patterns, and treatment outcome could be assessed.

Sutker, P.B.; Patsiokas, A.T.; and Allain, A.N. Chronic illicit drug abusers: Gender comparisons. Psychological Reports, 49:383-390, 1981.

DRUG	Opiates; multidrug
SAMPLE SIZE	154
SAMPLE TYPE	Abusers in residential treatment
AGE	Adolescents; young adults; mature adults (mean: 24; range: 16-46)
SEX	Both
ETHNICITY	White; black
GEOGRAPHICAL AREA	Louisiana
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	MMPI; Adjective Check List; I-E Locus of Control, Attitudes toward Women, Sensation Seeking, and Shipley and Raven scales
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	27

PURPOSE

Much of the literature on female drug abusers reflects common stereotypes about women. Investigators have reported that female drug abusers are more seriously maladjusted than their male counterparts or have more psychopathology. Studies of attitudes toward male and female drug abusers in treatment have tended to support the notion that women are the "sicker" of the client groups.

This study explored the hypothesis that female illicit drug abusers are more psychologically deviant than their male counterparts. The study is a replication and extension of previous work with a focus on comparisons between groups of men and women similar in ethnic composition, education, intelligence, and time in treatment.

METHODOLOGY

The subjects were 154 illicit drug abusers in residential treatment at Odyssey House Louisiana, a therapeutic community. The groups included 11 black and 22 white women and 42 black and 79 white men. The subjects ranged from 16 to 46 years in age, with a mean of 24 years and an average of 5 months in Odyssey treatment. The gender groups were similar in age, education, time in treatment, and racial composition.

Data were collected by means of the Minnesota Multiphasic Personality Inventory (MMPI), the Sensation Seeking Scale, the Adjective Check List, the Internal-External Locus of Control Scale, the Attitudes toward Women Scale, and the Shipley and Raven measures of problemsolving. Subjects also completed structured interviews to provide personal and social history information, including information on patterns and motives for drug and alcohol use.

RESULTS

Men and women were highly similar on measures reflecting the extent and type of psychopathology and motives for and patterns of drug use. MMPI profile patterns were remarkably similar for female and male drug abusers. However, women differed from men on several of the Adjective Check List dimensions. Women scored significantly higher on self-confidence, autonomy, and aggression and significantly lower on the number of adjectives checked, defensiveness, and heterosexuality. Gender groups did not differ on sensation seeking or locus of control variables, but women produced higher scores than men on Attitudes toward Women. No differences were found in the number of categories of drugs used, age at first illicit drug use, age at first use of opiates, drug preferences, and motives for drug and alcohol use. Social influence/peer pressure was the most frequent motive for both genders for first use of alcohol and drugs, while experience seeking/curiosity was the dominant motive across gender groups for first opiate use.

CONCLUSIONS

Data provided no support for the assumption that female drug abuse clients are more psychologically disturbed than their male counterparts. Such thinking perpetuates yet another negative female stereotype and may produce unfortunate therapeutic consequences. However, findings are not in conflict with assumptions that women share specific therapeutic needs that are associated with biological and/or learned differences. Future research should focus on the needs that female drug abusers share as a function of illicit drug use, the lifestyles associated with it, biological similarities, or other factors, and on the treatment approach appropriate for meeting those needs.

Tucker, M.B. A descriptive and comparative analysis of the social support structure of heroin-addicted women. In: Addicted Women: Family Dynamics, Self Perceptions, and Support Systems, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979. Pp. 37-76.

DRUG	Heroin
SAMPLE SIZE	523
SAMPLE TYPE	Addicts in treatment; nonaddicts
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Detroit, Michigan; Miami, Florida; Los Angeles, California
METHODOLOGY	Descriptive study; comparative study
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	40

PURPOSE

When viewing the addictive process and its psychological as well as physical consequences, it is apparent that social relationships figure prominently in the phenomenon. However, little research has been devoted to the supportive social relationships of drug users, particularly women. The literature that is available suggests that interpersonal relationships within families, marriages, and friendships have a profound effect on drug use. This study seeks to define the extent and adequacy of female addicts' social relationships and their coping mechanisms.

METHODOLOGY

The study samples consisted of a group of 146 women in treatment for heroin addiction in Miami, Detroit, and Los Angeles; 202 men in treatment for heroin addiction in coed treatment centers in these cities; and 175 women from the same neighborhoods in which many of the treatment centers were located, representing a nonaddicted, socioeconomically similar comparison group. A questionnaire was administered to all subjects.

RESULTS

Addicted women were more likely to be separated from spouses, were less likely to have friends in their neighborhoods, and more often reported feelings of loneliness than both nonaddicted women and addicted men. The addicted women seemed to be relatively more isolated, with certain critical potential supportive relationships less available to them. At the same time, however, the women did have friends, about half had meaningful romantic involvements, and half had same-sex best friends. However, the women themselves tended to view their social support systems as unsatisfactory.

When potentially supportive relationships existed, they were similar to those of the comparison groups except in two areas. Addicted women were more likely than comparison women but only as likely as comparison men to exchange practical rather than emotional support with best friends. The addicted women were also particularly dependent on their mothers for child-rearing support and financial aid.

Coping strategies of addicted women were not strikingly different from those of the other groups. The women had faced significantly more problems in the month preceding the interview than either of the other groups and had more potentially stressful social linkages than nonaddicted women from similar environments. However, they were as likely as anyone else to seek help for problems, and mothers reported as many supports for child care as the comparison women. When dealing with social stress, addicted women tended to use nonsocial/internal coping mechanisms, unlike the other groups. Finally, addicted women, like the comparison group members, were primarily dependent on family and partners for social-emotional needs (e.g., persons to talk to and to spend time with).

CONCLUSIONS

Further studies of addicted women should examine the relationship between social support measures and the other major areas addressed in the study: attitudinal and personality variables, family of origin and social history, and the demographic and drug-use variables. These analyses require a good composite index of support versus isolation. Other directions for further research are longitudinal analyses of socially supported and isolated individuals in treatment, comparisons between supportive and nonsupportive treatment environments, and investigation of alternatives to individual treatment (e.g., family therapy and treatment for couples).

Tyler, J., and Thompson, M. Patterns of drug abuse among women. The International Journal of the Addictions, 15(3):309-321, 1980.

DRUG	Heroin; marijuana; amphetamines; barbiturates; and sedatives
SAMPLE SIZE	14,428
SAMPLE TYPE	Addicts in treatment
AGE	Not specified
SEX	Female
ETHNICITY	Black; white; Spanish-speaking
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Multivariate analysis; secondary analysis
DATA COLLECTION INSTRUMENT	Client Oriented Data Acquisition Process
DATE(S) CONDUCTED	1976
NO. OF REFERENCES	12

PURPOSE

Despite the need for factual data, research on the drug abuse behavior of females has been minimal. Studies that are devoted to female drug abusers generally compare female with male abusers or black with white female addicts. No comparative data exist to show differences in female demographic variables or drug abuse patterns across sex cohorts for white, black, and Spanish-speaking women.

Because of rapid rises in incidence rates, research on both minority and nonminority female drug use has become a priority. Policymakers and program managers must be aware of female drug abuse patterns to facilitate development of effective prevention, diversion, and treatment programs. For this reason, the present study explores primary patterns of drug abuse for heroin, marijuana, amphetamines, barbiturates, and sedatives in relation to age at first use and education for white, black, and Spanish-speaking women.

METHODOLOGY

The sample of 14,428 female clients admitted to federally funded drug treatment centers during the third quarter of 1976 was selected from data presented in the Statistical Series Quarterly

Report. This report is a compilation of information from the Client Oriented Data Acquisition Process.

Tables were generated by cross-tabulating each of the variables of race, education, and age at first use. Subpopulations were thus defined and the order of drugs abused determined within each subpopulation. To examine similarities between subpopulations, confidence intervals constructed around the proportion of drug abuse in sets of two subpopulations were compared for overlap.

RESULTS

Study findings verify that the age of first drug use by females is dropping and that young females are developing adverse behavioral patterns during their adolescent years when social development is critical. Within each age-at-first-use category heroin is the most widely abused drug. The most pronounced heroin abuse occurs for all races in the group that began using heroin at 19 to 20 years old. The lowest level of heroin abuse is evident in the group that began using the drug at age 15 or younger. Marijuana is the second most commonly abused drug among women who were 15 years old at the onset of drug abuse, and sedatives are the second most used drugs among women who began using drugs at age 26, followed by barbiturates, amphetamines, and marijuana.

For the majority of women at all educational levels, heroin is the primary drug of abuse. Women with 10 to 12 years of education exhibit the highest frequency of heroin abuse, while women with 9 years or less of education include the smallest percentage of heroin abusers. For women with fewer than 12 years of education marijuana is the second most commonly abused drug; for women with 12 or more years of education, sedatives are in second place. Educational data correlate with age-of-first-use data.

Heroin is the most commonly used drug among white, black, and Spanish-speaking women admitted to Federal drug treatment programs. However, white women use heroin significantly less than either black or Spanish-speaking women, regardless of age at first use. Marijuana is the second most widely abused drug in all three racial groups and is used most frequently by white women.

CONCLUSIONS

Young women are becoming involved in drug abuse at increasingly early ages, with the highest heroin abuse currently among women who began using drugs between 19 and 20 years old. Thus, continued investigation into the vitally important area of women and drug abuse patterns is needed to alert program managers to existing trends in abuse. Primary prevention must focus on developing community-based, socially acceptable alternatives to drug taking. Drug information must be provided to adolescent women at a time when women are being encouraged to shed stereotypes of former role expectations and to broaden their aspirations. Treatment staff training and treatment programs should stress advocacy for the female drug abuser and such cost-effective methods as the aftercare model of treatment.

Wechsler, H., and McFadden, M. Sex differences in adolescent alcohol and drug use: A disappearing phenomenon. Journal of Studies on Alcohol, 37(9):1291-1301, 1976.

DRUG	Beer; wine; hard liquor; multidrug
SAMPLE SIZE	1,737
SAMPLE TYPE	Junior and senior high school students
AGE	Adolescents
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Massachusetts
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	November 1974
NO. OF REFERENCES	15

PURPOSE

Numerous studies conducted in the 1950s and 1960s found greater alcohol use among males than among females. In recent years, however, the margin between the sexes has narrowed considerably, as shown by several studies. A 1974 national survey of high school students indicated that the proportion of girls who drink alcohol has begun to approach that of boys, although the amount consumed on each occasion is less for girls than for boys. This study examined current sex differences in the extent and frequency of use of alcohol and illicit drugs among adolescents in eastern Massachusetts.

METHODOLOGY

The study population consisted of a sample of about one-fifth of the students in grades 7 through 12 in two eastern Massachusetts communities. City A is a semi-industrial city, predominantly middle class and lower middle class. Town B is more residential and mainly middle class to upper middle class. Questionnaires were distributed in a random sample of classrooms at each grade level. A total of 1,737 of the 1,751 students present in these classrooms on the November 1974 study date returned usable questionnaires.

The anonymous self-report questionnaires were administered by volunteer high school students who had taken part in a training session. Questions concerned the types of alcohol and drugs consumed and the frequency of consumption. Responses of high school (grades 9-12) and junior high school (grades 7-8) students in each community were analyzed separately by sex. Differences were significant at the .05 level or beyond on the chi-square test.

RESULTS

In Town B, no significant differences were found between the sexes in the use of beer, wine, or distilled spirits. In City A, boys more frequently reported drinking beer (89 percent versus 82 percent), while girls more often reported drinking wine (75 percent versus 60 percent). In neither community did boys and girls differ in the reported use of distilled spirits or in the overall use of alcohol. In both communities, junior high boys more frequently reported drinking beer and wine than did junior high girls, although reported use of distilled spirits did not differ. Use of any form of alcohol was reported by a higher proportion of boys than girls, although this difference was statistically significant only in Town B.

There were no statistically significant sex differences in frequent use of wine or distilled spirits among senior high school students in either community. Frequent use of beer was greater for senior high boys than for girls in Town B. It was also greater for junior high boys than for girls in City A. The numbers of students who had been intoxicated were generally similar for both sexes, although more senior high girls than boys in Town B reported intoxication on wine and distilled spirits, and more junior high boys than girls in City A indicated intoxication from any form of alcohol. Results were generally similar for frequent intoxication. Drinking patterns differed between the sexes in high school in that girls were more likely to have been drunk on distilled spirits and more boys than girls had been drunk on beer or wine only. Drinking patterns showed no sex differences for junior high students.

In grades 9 through 12, girls were more likely than boys to use amphetamines, barbiturates, and strong pain killers in Town B and amphetamines and strong pain killers in City A. The use of LSD, marijuana, cocaine, hashish, mescaline, and methaqualone (Quaalude) was higher, although not significantly so, for high school girls than for boys in Town B, while in City A, girls surpassed boys in the use of barbiturates, cocaine, mescaline, and opium. A significantly greater proportion of multiple-drug users were girls. No significant sex differences were found in drug use among junior high school students.

CONCLUSIONS

Few consistent differences were found between boys and girls in patterns of alcohol consumption. The differences were largely confined to the use of and intoxication from beer in junior high school students. Where differences existed in the use of wine and distilled spirits, girls in grades 9 through 12 exceeded boys in their use and intoxication. Boys did not significantly exceed girls in the use of any illicit drug.

Findings are consistent with the results of other recent studies of adolescents, which suggest that the margin of difference between the sexes is decreasing with respect to reported alcohol use. This trend represents a marked change from the findings of students done only a decade earlier. Examination of school dropout rates for both sexes showed that they did not affect the results. Further examination of sex differences in the drinking patterns of young adults and an older population is needed.

Weissman, J.C., and File, K.N. Criminal behavior patterns of female addicts: A comparison of findings in two cities. The International Journal of the Addictions, 11(6):1063-1077, 1976.

DRUG	Narcotics
SAMPLE SIZE	380
SAMPLE TYPE	Addicted arrestees
AGE	Young adults (mean ages of various subgroups: 22.4 to 28.6)
SEX	Female
ETHNICITY	White; black; Hispanic
GEOGRAPHICAL AREA	Denver, Colorado; Philadelphia, Pennsylvania
METHODOLOGY	Comparative study; descriptive study
DATA COLLECTION INSTRUMENT	Official records
DATE(S) CONDUCTED	1973-1974
NO. OF REFERENCES	10

PURPOSE

The few existing studies of crime and drug addiction in females have generally concluded that addicted females either become prostitutes or commit crimes against property. However, a recent study of 227 consecutive addicted female arrestees in Philadelphia resulted in the identification of four distinct criminal behavior patterns: Prostitutes/Criminals, who are prostitutes who commit serious crimes; Prostitutes, who do not have a history of serious crime; Criminals, who have a history of serious crime but are not prostitutes; and Bag Followers, who are not prostitutes and commit only minor offenses. These behavior patterns were found to be associated with distinct groups of female addicts as defined by such other characteristics as race.

The present study tested the Philadelphia findings by using equivalent data on narcotics-addicted female arrestees in Denver during late 1973 and early 1974. The study also introduced a third racial group, Hispanics, into the previous black-white typology, which had been found to have strong explanatory power.

METHOD

All relevant records of the Denver TASC (Treatment Alternatives to Street Crime) jail screening unit for arrests of females occurring during late 1973 and the first 8 months of 1974 were examined. Data were obtained on age, race, and current narcotics use. The total sample of 153 subjects included 37 whites, 65 blacks, and 51 Hispanics. The Denver sample was compared to the Philadelphia sample of 227 female arrestees in terms of race and prostitution, race and criminal offenses, race and mean number of arrests, prostitution and criminal offenses, and prostitution and mean number of arrests. The validity of the four-part typology developed using the Philadelphia data was assessed.

RESULTS

Race is significantly associated with arrest for prostitution in both cities. Only 20 percent of whites in the Denver and Philadelphia study populations had ever been arrested for prostitution, compared to almost 50 percent of blacks. Only one in five of Denver's Hispanic females had ever been arrested for prostitution. In Denver, black addicted females were more often charged with all offenses than either white or Hispanic addicted females. The pattern for Hispanics was closer to the pattern for whites than for blacks.

Addicted females in Denver tended to have been arrested far more often than those in Philadelphia. The arrests of white and black addicted females in Denver for drug possession and sales were twice that of their Philadelphia counterparts. Denver females also had higher arrest rates for all property offenses than did Philadelphia females. However, the Hispanic pattern in Denver for each offense category was close to, but consistently higher than, the arrest averages for the Denver whites. The two cities were similar in the overall relationship between race and prostitution but not in the relationship between prostitution and a wide range of offenses. The Denver mean arrest figures for prostitutes and nonprostitutes for narcotics and property offenses were higher than those in Philadelphia, although the averages for the other offenses were similar. Denver prostitutes were arrested more often than nonprostitutes for narcotics, crimes against the person, and other offenses, but they were less often arrested for property offenses.

The typology produced from the Philadelphia data was regenerated for the Denver addicts, although the distribution of Denver female addicts among the four groups differed from the distribution found in Philadelphia. Prostitutes/Criminals and Bag Followers had proportionally fewer members, Prostitutes had about the same proportion, and Criminals had proportionally many more members in the Denver sample than in the Philadelphia sample. However, the relation between race and group persisted. Blacks were most likely to be found in the Prostitute/Criminals group and least likely to be in the Bag Follower group, while the reverse pattern was found for white and Hispanic female addicts. Mean ages for the different groups also differed for the two cities. However, mean total arrests for each group were similar to the results in Philadelphia.

CONCLUSIONS

Contrary to expectation, female addicts do not necessarily become prostitutes or engage in other criminal behaviors. Rather, they have four distinct criminal behavior patterns, which are typical of different groups of female addicts and are not stages in a single socialization pattern involving drugs, prostitution, and crime. The hypothesis that prostitution is the "hustle of choice" among female addicts is refuted by the data. In addition, the findings reveal an association between race and the incidence of prostitution arrests, which is similar in both cities' samples.

This conclusion is limited by the nature of the sample, consisting of female addict arrestees who voluntarily submitted to jail interviews, in that it is highly specialized and may not be representative of the general population of criminal female addicts. The research design also limited collection of certain important variables, such as the age of onset of addiction and family history. Nevertheless, these findings from two geographically separated cities indicate the existence of multiple patterns of criminality among the female addicts studied.

Wellisch, D.K., and Steinberg, M.R. Parenting attitudes of addict mothers. The International Journal of the Addictions, 15(6):809-819, 1980.

DRUG	Heroin
SAMPLE SIZE	100
SAMPLE TYPE	Addicted and nonaddicted mothers and nonmothers
AGE	Adolescents; young adults; mature adults
SEX	Female
ETHNICITY	White; nonwhite
GEOGRAPHICAL AREA	San Francisco, North Hollywood, and Los Angeles, California
METHODOLOGY	Correlational study; multivariate analysis
DATA COLLECTION INSTRUMENT	Parent Attitudes Research Instrument
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	19

PURPOSE

Most of the literature on addicted mothers and their children has focused on the physical care and physiological difficulties of infants who have been born addicted. Few studies have tried to assess mothering patterns and child responsivity beyond the immediate postnatal period, perhaps because of the difficulties in gaining rapport with and cooperation from addicts. The existing studies of mothers' attitudes have revealed, however, that while addicts want to keep their babies, they also resent them and may fail to care for them.

This study used the Parent Attitudes Research Instrument (PARI) developed by Schaefer and Bell (1958) to assess the parenting attitudes of addict mothers in comparison with the attitudes of addict nonmothers, nonaddict mothers, and nonaddict nonmothers.

METHODOLOGY

Parental attitudes of addicts and nonaddicts were examined in a single-factor design with age and race as covariates. The study population consisted of 4 subsamples with 25 members each. The addicted mother sample was obtained from the Heroin Detoxification Section of the Haight-Ashbury Free Medical Clinic in San Francisco. The nonaddicted mother sample and the nonaddict,

nonmother sample were obtained from the General Medical Clinic of the North Hollywood Free Medical Clinic in California. The addict-nonmother sample was obtained from a methadone clinic in Los Angeles. All groups were matched as closely as possible in terms of socioeconomic status in that the clinics were all public and served lower socioeconomic populations.

While the nonaddicted groups were either older or younger than the addicted groups, the groups were similar in education and in their generally unemployed status. The addicted and nonaddicted mothers did not differ significantly as to number of children, children's ages, or children's living location. Religious training and current religious affiliation were similar for all groups. However, the groups did differ in racial composition--a majority of addicted mothers were nonwhite, while nearly all of the other groups' members were white.

A total raw score was calculated for each woman on each of the 23 PARI attitude subscales and was used to compute a 23 X 23 Pearson Product-Moment correlational matrix. Factor analysis with interaction was used to examine the data. An Analysis of Covariance Adjustment (Kirk 1968) was used to control random variation of participant age and race.

RESULTS

The only factor that significantly discriminated between groups was "authoritarian overinvolvement." This factor was comprised of seven subscales: excluding outside influences, seclusion of the mother, intrusiveness, ascendancy of the mother, acceleration of development, breaking the will, and avoidance of communication.

Both age and race were related to this factor, on which the older and nonwhite participants ranked higher than did the others. Addicts also scored higher on this factor than nonaddicts, and mothers ranked higher than nonmothers. The effects of mothering and addiction proved to be additive, making addicted mothers extremely high on this scale.

CONCLUSIONS

Results appeared to validate Singer's clinical observation that addict mothers tend to consider babies as objects to be possessed rather than as individuals with their own rights. These attitudes are perhaps best understood not in terms of addicts' current parenting attitudes but in terms of their past nuclear family experiences, which have been described in other studies as involving a dominant and overinvolved mother and a distant father.

Findings also suggest that addicted mothers' feelings, attitudes, and behaviors toward parenting should be assessed at intake. A triadic approach to treatment is also recommended. This approach would include (1) education, with lectures on children's physical and psychological development; (2) skills training, with modeling in a small group setting; and (3) psychotherapy in a supportive small group setting, with emphasis on the mother's own nuclear family. Staff involved in such therapy must have the attitude that existing skills and knowledge, however minimal, should be the basis for further development. Staff should be trained in both information and attitudes.

Development of followup criteria to assess changes in parenting attitudes and behaviors and changes in the child's cognitive and emotional state is also needed. Further research on both general child development and the moral development and childhood psychopathology in the children of addicted mothers is also recommended.

Wilson, G.S.; Desmond, M.M.; and Wait, R.B. Follow-up of methadone-treated and untreated narcotic-dependent women and their infants: Health, developmental, and social implications. The Journal of Pediatrics, 98(5):716-722, 1981.

DRUG	Heroin; methadone
SAMPLE SIZE	125 mothers; 127 infants
SAMPLE TYPE	Untreated heroin addicts and their infants; methadone-treated addicts and their infants; drug-free mothers and their infants
AGE	Mothers: mean, 24.4 to 26.7; infants: neonates
SEX	Mothers: female; infants: both
ETHNICITY	White; black; Hispanic
GEOGRAPHICAL AREA	Houston, Texas
METHODOLOGY	Longitudinal survey
DATA COLLECTION INSTRUMENT	Interviews; medical records; laboratory reports/examinations; Bayley Scales of Infant Development; Infant Behavior Record
DATE(S) CONDUCTED	August 1974 to July 1977
NO. OF REFERENCES	18

PURPOSE

Programs that provide both methadone maintenance treatment and obstetrical management have been shown to improve the narcotic-dependent woman's use of medical and supportive services during pregnancy and to reduce obstetrical risk. The primary advantages to the fetus have been decreased fetal wastage and improved intrauterine growth. These advantages may be offset, however, by the relatively more severe and prolonged neonatal abstinence syndrome reported in infants of methadone-treated women.

To ascertain both positive and negative effects of maternal methadone use on the neonate, the present report compares the health, neurodevelopmental course, and home environment during the first postnatal year for infants of methadone-treated women with infants of two control groups--narcotic-dependent women not enrolled in methadone treatment programs and drug-free mothers of infants.

METHODOLOGY

The study subjects were 68 narcotic-dependent women who received obstetrical care at a Houston, Texas, public maternity hospital between August 1974 and July 1977. Enrollment in the study

corresponded with the time of registration for obstetrical care and varied from 8 weeks gestation to delivery. Controls matched for maternal age, race, socioeconomic level, marital status, and duration of gestation at the time prenatal care was initiated were selected from the obstetrical service.

All subjects were organized into three groups: (1) 29 untreated heroin-dependent mothers who delivered 30 infants, (2) 39 methadone-treatment mothers who delivered 39 infants, and (3) 57 drug-free mothers (the controls) who delivered 58 infants. About 30 percent of each group was Hispanic, and most subjects were in their twenties.

All subjects were followed prenatally in a weekly high-risk obstetrical clinic at Jefferson Davis Hospital in Texas. Project staff provided medical care, counseling, and supportive services relative to pregnancy, but treatment for drug dependency was not provided.

Medical and obstetrical histories were obtained by structured interviews and reviews of medical records. A profile of drug use during pregnancy was developed through detailed drug histories and was confirmed for all subjects by qualitative screening of urine for the presence of a variety of drugs. Obstetrical complications were rated by the system devised by Hobel (1977), with the use of drugs eliminated as a risk factor. Infants with birth measurements below the 10th percentile by Lubchenco's criteria were designated as small for gestational age.

While in the nursery, all infants were examined daily for signs of withdrawal. Infants were also evaluated at 1½, 3, 6, 9, and 12 months of age. Tests included physical examinations; ratings of observed tremulousness, irritability, and activity levels; behavioral and health histories; and a social service interview. At 9 months the Bayley Scales of Infant Development was administered and the Infant Behavior Record was completed. The stability of the family responsible for the infant was rated jointly by the nurse, social workers, and pediatrician.

RESULTS

Methadone-treated mothers continued to consume a variety of psychoactive drugs, both illicit and prescribed, in addition to methadone. The reported or confirmed use of tobacco and other psychoactive medications was less common among untreated drug-dependent women than among those receiving methadone. The groups did not differ on their obstetrical risk scores or on the incidence of preterm delivery.

Birth size and neonatal morbidity did not differ for infants in the methadone-maintained and untreated drug-dependent mother groups. However, infants of methadone-treated women were significantly smaller than the infants of drug-free controls and were often small for gestational age. Although the incidence and severity of neonatal abstinence syndrome was similar for untreated drug dependents and methadone-treated drug dependents, the duration of withdrawal was longer for methadone-treated drug dependents. Moreover, neonatal infections were more common among the methadone-maintained group than among drug-free controls. One infant with major birth defects was identified in each of the drug-dependent groups.

The nature and incidence of medical problems did not differentiate drug-exposed and drug-free groups, but rehospitalizations were more common among infants of drug-dependent parents. Accidents were also frequently reported by methadone mothers. On measures of somatic growth, the methadone-treated group did not differ significantly from either drug-free or untreated drug-dependent groups. Following the subsidence of acute withdrawal, the examining physician observed no intergroup differences in the incidence or degree of tremulousness, irritability, or consolability. However, excessive crying and delay in establishing a quiet sleep pattern were more frequently reported by caretakers of methadone babies than by those of drug-free controls. These problems were not significantly greater among the untreated group than among the methadone group. Four infants had discernible handicaps at 1 year. All four were children of the untreated addict group.

Results of the Mental Developmental Index were in the normal range for all groups. The mean Psychomotor Developmental Index for the methadone group, although in the normal range, was lower than in the untreated group and significantly below that of drug-free controls. Fine motor coordination of methadone infants was similar to that of the untreated group but significantly poorer than that of drug-free controls. In addition, methadone infants were rated on the Bayley Infant Behavior Record as less attentive than drug-free controls.

At 1 year of age, all drug-free control children and 80 percent of methadone infants were living with their parents. Of the untreated drug-dependent women, 48 percent had relinquished responsibility for their child's care.

CONCLUSIONS

During the first year of life, the health and somatic growth of methadone children did not differ significantly from infants in the control group. The high accident rate reported by methadone mothers reflects an exaggerated concern for the health and safety of their infants. Despite their concern, methadone mothers are unable to comply effectively with recommendations and need extensive support.

Behaviorally, methadone infants are more difficult to care for than infants of drug-free controls but less difficult than the infants of untreated addicts. Methadone infants do not have a tendency toward major neurodevelopmental handicaps and are less hypertonic than the infants of untreated drug-dependent subjects. However, subtle signs of neurodevelopmental dysfunction are equally common in both drug groups and significantly more common in methadone children than in drug-free controls. Such findings may be indicators of potential learning or behavioral deviance at school age.

The most substantial benefit associated with methadone treatment may be the mother's ongoing involvement in the care of her own child. Participation in a methadone program may provide for the addicted woman a framework for a more organized life, which becomes the nucleus for better future family orgaization. Although involvement in child care cannot be generally equated with good parenting, methadone mothers compare favorably with drug-free controls on ratings of family stability. Moreover, their children do not differ from socioeconomic controls on measures reflecting abuse, deprivation, or impoverished environment during the first year of life.

Wotring, C.E., and Schmeling, D. Mood altering drug abuse: The perceptions of middle age women concerning the use and abuse of prescription drugs. Journal of Drug Education, 7(2):123-131, 1977.

DRUG	Barbiturates; amphetamines; sedatives; tranquilizers
SAMPLE SIZE	68
SAMPLE TYPE	Middle class women
AGE	Young adults; mature adults; elderly (mean: 46)
SEX	Female
ETHNICITY	99 percent white
GEOGRAPHICAL AREA	Tallahassee, Florida
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Interviews; questionnaires
DATE(S) CONDUCTED	1975
NO. OF REFERENCES	10

PURPOSE

Several national and regional studies have indicated the existence of a group of middle-aged, middle-class females who use drugs obtained by prescription, including amphetamines, barbiturates, tranquilizers, and sedatives, for reasons other than those for which the drug was prescribed. This study was designed to determine the incidence and characteristics of prescription and nonprescription drug use among such women in Florida. The report, which presents a segment of the study's findings, focuses on this group's perceptions concerning the use and abuse of prescription mood-altering drugs, as well as their perceptions of their community's drug abuse treatment and prevention programs.

METHODOLOGY

A small purposive sample was constructed containing 68 middle-aged, middle class women who were felt to represent the target audience of prescription drug abusers, drug users, and nonusers. All women were selected from middle class and upper middle class areas of Tallahassee, Florida. A 2-hour in-home interview was conducted with each woman during the first 3 weeks of May 1975, using middle-aged females as interviewers. Subjects were mailed a second questionnaire in July 1975, to which 48 responded.

The interviews covered drug use, social and psychological makeup, information sources on drugs and personal problems, media habits, attitudes toward drugs, personal agendas, demographic characteristics, and evaluations of local treatment and prevention programs. The second questionnaire included questions from the first interview to allow for test-retest reliability assessment. Respondents were categorized as drug abusers, users, or nonusers according to whether they reported taking prescription drugs more often than prescribed, as often or less often than prescribed, or not at all. These three groups were then compared with respect to their responses to the various items on the questionnaires.

The majority of the respondents were housewives, and 90 percent were currently married. Most had children. The average age was 46, and average household income was between $20,000 and $25,000 per year. Nearly all of the sample members were white. A total of 28 subjects, or 41 percent, had taken a prescribed mood-altering drug within the past 2 years. Five, or 12 percent, of the users and 7 percent of the sample were defined as abusers. A total of 40 subjects were defined as nonusers. The sample appeared to be fairly representative of middle-aged, middle class females, especially in terms of drug use.

RESULTS

The three groups showed differences in their perceptions of the importance of drug use and of other issues, but the differences were not significant. Abusers appeared more concerned with personal problems and less concerned with the use of drugs, while the opposite was true for nonusers. Perceived drug use in immediate families and families of origin did not differ significantly among the three groups.

About half of the respondents described the middle-aged female drug abuser as insecure, lonely, unhappy, depressed, bored, or needing help. Over half the sample defined drug abuse and irresponsible drug use as taking drugs for nonmedical purposes (escaping), overuse, or being dependent on drugs. All felt that drugs and alcohol were similar in terms of abuse or irresponsible use. In general, the women seemed fairly clear on what drug abuse means and why it occurs. The three groups were similar in these perceptions.

Responses regarding perceptions of the community's drug treatment and prevention programs were also similar for the three groups. When respondents were asked to rate the programs in terms of credibility, importance, and success, they tended to characterize the programs more as important than as credible or successful.

CONCLUSIONS

These women seemed to understand that prescription drugs can be abused by middle-aged women and also seemed to understand why females might abuse such drugs. However, the few differences among perceptions of abusers, users, and nonusers could indicate that the problem of drug abuse is viewed as someone else's problem; the whole issue of prescription drug abuse is not a priority problem to these women. However, the sample's small size and potential lack of representativeness limit definitive conclusions. Nevertheless, the findings did suggest that public service campaigns directed at this population should spend less time making them aware of the problem of drug misuse among the middle aged and more time on trying to make them internalize the problem and see it as being of higher priority.

PHYSIOLOGICAL RESEARCH

The research reviewed in this section offers descriptions of many of the known physiological problems encountered by female drug abusers. The literature in this field of inquiry is heavily biased in favor of studies of the effects of drug use on pregnancy and neonates. While the studies abstracted here reflect that tendency, an attempt has been made to include a variety of studies dealing with the non-pregnancy-related physiological problems that may be encountered by women who use drugs. The extensive literature exclusively concerning the effects of female drug use on neonates was not considered for inclusion except where the study provided a focus, however limited, on the mother's drug use and its effects on her as well.

Andersen, M.D. Health needs of drug dependent clients: Focus on women. Women and Health, 5(1):23-33, 1980.

DRUG	Heroin; methadone
SAMPLE SIZE	205
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults
SEX	Both
ETHNICITY	Cross-cultural
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Comparative study; longitudinal survey
DATA COLLECTION INSTRUMENT	Program/clinical statistics; interviews; laboratory reports/examinations; questionnaire
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	25

PURPOSE

Anecdotal reports from drug abuse programs have indicated that addicted women have more extensive and severe health needs than do addicted men. As part of the National Women's Drug Research Project, funded by the National Institute on Drug Abuse, this study was designed to investigate these reports. It attempted to document the health problems of women in drug abuse treatment programs, to examine health treatment services and their outcomes, and to compare the health problems of women with those of male addicts.

METHODOLOGY

A literature review was conducted to identify the primary medical problems associated with the use of heroin and methadone. Twenty health records were randomly selected from each of 10 heroin treatment programs in 4 urban areas of the United States. The programs included therapeutic communities and outpatient methadone clinics, some of which dealt with women only and some of which treated both sexes. Records for 13 women and 7 men were chosen from programs treating both men and women. The total sample included the 205 health records of 139 females and 66 males.

A questionnaire on which to record health and treatment data was also developed and pilot tested. Specific study questions covered the sample's demographic characteristics, the validity of the data, comparisons of health problems of men and women, the relationships between health problems and the history of drug use, and the programs' capabilities to treat clients' health problems.

Addicts' common use of McDonald's fast food restaurant spoons as a unit of measurement for heroin was the basis for defining the quantity of heroin used. To identify the purity of heroin, uncut 2 to 4 percent heroin was called "street dope," 6 percent was called P-dope (pure, personal stock, private stock, and the like), and 10 percent was considered pure or raw dope. The subjects' health was studied at admission and during their subsequent stay in the treatment program.

A total of 102 clients were enrolled in residential therapeutic communities, and 103 were enrolled in outpatient methadone clinics. The sample was 51 percent black, 40 percent white, 8 percent Hispanic, and 1 percent Asian. Four-fifths of the sample were 30 years old or younger. All but 4 percent of the sample were heroin users.

RESULTS

Health problems identified in the literature as associated with heroin addiction include acute hepatitis, cardiovascular disease, chromosome damage, diabetes, gastrointestinal disorders, gynecological disorders in females, hepatic cirrhosis, infection, trauma, and venereal disease. Numerous health abnormalities have also been identified during methadone treatment. Most of these studies have focused mainly on male populations.

A total of 96 percent of the examined males and 87 percent of the examined females had at least one health problem at admission. The average was 3 problems, but some had as many as 30 to 40 problems at admission. At admission, 29 percent of the examined sample had dental problems, 36 percent of the women had circulatory problems, and 45 percent of the women had genitourinary problems. After admission and during treatment, dental and genitourinary systems remained major health problems for this group of clients.

Drug-dependent women had more health problems after admission than did men. They also had more examinations and health treatments and their health expenses incurred outside the drug program cost more than did those of drug-dependent men. Some contributors to the ill health in this sample were prostitution, past drug history, and the number of changes in the clients' life situations.

Only 28 percent of the initial symptoms and 36 percent of the diagnosed medical problems were noted as having been treated during the clients' stay in the drug rehabilitation program. Many of these were treated outside the drug program itself. Most health problems identified at admission were not treated. Methadone programs, which are required to have physicians and nurses, were much better equipped to treat clients' health needs than were residential drug treatment programs. Few of the programs had the capacity to treat health needs more complex than a cold or the flu. None of the programs could provide dental care, gynecological care, or treatment of eye disorders.

CONCLUSIONS

While the number of health problems noted for drug-dependent women and men are substantial, women tend to have more. Since it is clear that drug treatment programs generally provide less complete physicals for women and have more difficulty treating the conditions they do identify, treatment staff should pay more attention to a client's health. This is particularly important because clients whose basic health needs are not met will find it difficult to work on long-term personal goals. All drug treatment programs should make provisions for screening, recording, referring, and following up health problems, especially for female clients. All female clients should receive initial and yearly pelvic exams. In addition, clinical nurse specialists and medical specialists should be hired on a retainer basis to effect good referral followup for the largest areas of health concerns. Future studies should document the relationship between unmet health needs and drug treatment completion, to provide a basis for increased funding to meet the health care needs of addicted clients.

Blinick, G.; Inturrisi, C.E.; Jerez, E.; and Wallach, R.C. Methadone assays in pregnant women and progeny. American Journal of Obstetrics and Gynecology, 121(5):617-621, 1975.

DRUG	Methadone; heroin
SAMPLE SIZE	35
SAMPLE TYPE	Pregnant heroin addicts and their infants
AGE	Young adults; mature adults (range: 19-38)
SEX	Addicts: female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations; hospital records
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	22

PURPOSE

Observations of the clinical aspects of methadone treatment of heroin addiction in pregnant women have demonstrated that women maintained on methadone do have normal menstruation, ovulation, pregnancy, and delivery. In the newborn baby, the main problems are those of prematurity and the withdrawal syndrome.

The transfer of many drugs across the placenta has already been described. The present study was designed to assess whether methadone crosses the placental barrier and can be found in fetal fluids.

METHODOLOGY

Specimens were collected from both random patients in methadone maintenance programs and a few street methadone patients. The specific and sensitive method for the quantitative determination of methadone in samples of adult, fetal, and newborn biologic fluids involved the preparation of the sample by a multistep solvent extraction procedure followed by quantitative analysis through the use of gas-liquid chromatography.

Samples of amniotic fluid were collected by amniocentesis or the vaginal collection of clear amniotic fluid at the time of rupture of the membranes. A sample of maternal plasma was taken at the same time. Umbilical cord plasma was also sampled. The concentration of methadone in breast milk was compared with that in maternal plasma in samples collected 3 to 10 days after birth. The daily methadone dose in these 10 subjects ranged from 10 to 80 mg. Maternal urine samples were collected prior to delivery, and newborn samples were collected in the first, second, and third days after birth. The numbers of subjects in each of these overlapping subsamples ranged from 10 to 12. Newborns were also observed for signs of a withdrawal syndrome.

RESULTS

The concentration of methadone in the amniotic fluid of 10 women receiving a single daily oral dose of 30 to 100 mg of methadone during pregnancy ranged from 0.07 to 0.39 micrograms per milliliter and from 0.14 to 0.48 micrograms per milliliter for plasma. Methadone in cord plasma averaged 0.57 of the value in maternal plasma, while the methadone in amniotic fluid averaged 0.73 of that in plasma. For breast milk, the ratio of methadone concentration to the plasma concentration was 0.83. The concentration of methadone in the newborn urine was about 37 percent of the maternal concentration on the first day after birth. By the third day, the average value had decreased to 16 percent of the maternal concentration. Efforts to classify the infants according to the severity of withdrawal symptoms and to relate these symptoms to urinary methadone concentrations were hampered by the presence of other drugs, particularly heroin.

CONCLUSIONS

A simple relationship between urinary methadone levels in the newborn infant and the intensity of the withdrawal syndrome was not found. The effects of multiple drug abuse and other factors are under continuing investigation. The pattern of drug addiction currently evolving is the licit and illicit use of methadone often associated with multiple-drug abuse. The effect on the maternal-fetal unit is poorly understood but may be responsible for the high degree of withdrawal signs currently reported.

Blinick, G.; Inturrisi, C.E.; Jerez, E.; and Wallach, R.C. Amniotic fluid methadone in women maintained on methadone. The Mount Sinai Journal of Medicine, 41(2):254-259, 1974.

DRUG	Methadone
SAMPLE SIZE	18
SAMPLE TYPE	Pregnant users
AGE	Young adults; mature adults (range: 19-40)
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	14

PURPOSE

Evaluations of the effects of opiates, including methadone, in the newborn infant have been based solely on clinical observation. A direct biochemical measurement of the concentration of methadone in human fetal fluids has not yet been reported. Due to the increasing numbers of pregnant women taking methadone, such a study would be desirable.

This paper reports on the analysis of amniotic fluid in 18 pregnant women taking methadone.

METHODOLOGY

Seventeen of the women were in the Methadone Maintenance Treatment Program for heroin dependence at the Bernstein Clinics of Beth Israel Medical Center in New York City. The other woman was using methadone and heroin on the street.

The amniotic fluid was obtained by amniocentesis or the vaginal collection of clear amniotic fluid at the time of rupture of the membranes. The amniotic fluid was obtained in the second trimester in two patients whose pregnancies were being terminated by saline amniocentesis. In the other 16 patients, the amniotic fluid was obtained to determine such parameters of fetal maturity

as the lecithin-sphingomyelin ratio, creatinine concentration, and the surfactant foam test. A sample of 10 ml of amniotic fluid was frozen at 15°F for the analysis of methadone using solvent extraction and gas-liquid chromatography. In 10 cases, collection of maternal blood permitted comparison of the methadone in the amniotic fluid with that in the maternal plasma.

RESULTS

The methadone concentration in the amniotic fluid varied from 0.10 micrograms to 0.45 micrograms. In maternal plasma, the concentration varied from 0.14 to 0.48 micrograms. The ratio of methadone in the amniotic fluid to maternal plasma averaged 0.73, with a range of 0.39 to 1.56. No constant relationship was found between the dose of methadone and the absolute levels of methadone in the maternal plasma. Preliminary data indicate a correlation between the levels of methadone in serum plasma and concentrations not only in amniotic fluid but also in cord blood, fetal urine, milk, and fetal tissues.

CONCLUSIONS

These data document the transfer of methadone to the amniotic fluid of the human fetus. Results indicate that the transfer of methadone probably occurs during most or all of the stages of pregnancy. Although the effects of prolonged intrauterine exposure to methadone are unknown, the newborns of methadone mothers have so far proved to be normal in their intellectual and physical growth. In addition, methadone maintenance, even with multiple-drug abuse, stabilizes a woman's life, removes many stresses, and permits more adequate nutrition than does heroin use. Further studies to clarify the role of methadone and of multiple-drug abuse in the withdrawal syndrome in the newborn are underway. Multiple-drug abuse may have a more important role in this syndrome than has been previously believed.

Blinick, G.; Jerez, E.; and Wallach, R.C. Methadone maintenance, pregnancy, and progeny. The Journal of the American Medical Association, 225(5):477-479, 1973.

DRUG	Methadone; heroin
SAMPLE SIZE	105
SAMPLE TYPE	Pregnant addicts
AGE	Young adults; mature adults
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Program/clinical statistics; hospital records
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	9

PURPOSE

Few opportunities have existed to study pregnancy in heroin addicts under continuous medical surveillance. This paper reports on reproductive function in 105 women in the Methadone Maintenance Treatment Program of the Beth Israel Medical Center in New York City.

METHODOLOGY

The subjects represented 105 consecutive pregnancies observed at the methadone treatment program and included 98 deliveries, terminations, or both at Beth Israel Hospital and 7 deliveries at other hospitals. Just over half the women were between ages 19 and 24, and an additional 31 were between 25 and 29 years of age.

The conduct of labor and delivery for these women varies little from the hospital's usual practice. Pain medication, if necessary, consists of intravenous administration of meperidine hydrochloride with promazine hydrochloride. Recently, the use of conduction anesthesia and local anesthesia has greatly reduced the use of meperidine and promazine. Patients who arrive too early in the day to have taken the daily methadone dose or who are in the hospital overnight are given methadone prior to the use of any pain medication. No further methadone is given during labor, and the daily oral dose is resumed on the following day.

RESULTS

Of the 105 pregnancies, 19 were currently pregnant at the time this paper was written, 15 were voluntarily terminated, and 61 resulted in live births. There were also two immature and three premature stillborn deliveries and two neonatal deaths of viable infants. In addition, there were four spontaneous abortions, one ectopic pregnancy, and one hydatidiform mole. The two neonatal deaths, one a twin, were due to hyaline membrane disease. None of the mothers died.

Of the intrauterine pregnancies, 36 began while the patient was taking heroin; 26 women conceived while they were receiving an 80 mg to 100 mg daily dose of methadone. Complications of pregnancy in these 62 women included 4 cases of premature rupture of the membranes, 4 of antepartum hemorrhage, 1 of postpartum hemorrhage, 4 of acute toxemia, 1 of chronic hypertension, 1 of diabetic acidosis, 1 of syphilis, and 1 of anemia. The women were usually maintained on full methadone doses because of their tendency to use heroin if the methadone dose was lowered.

Pregnant patients on methadone were observed to be more anxious and apprehensive than other pregnant women and required greater reassurance by the counselor, nurse, social service worker, and physician. The mothers on methadone maintenance seemed highly motivated to provide their offspring with maternal warmth and love and often expressed a great desire to breastfeed their children. The presence of methadone in these mothers' milk raises questions as to the advisability of breastfeeding, however.

About 10 percent of the infants had depressed Apgar scores at birth, and about one-third were premature by weight. None of the infants had shown congenital malformations at the time of this report. The mean birth weight was about 2,700 gm. Withdrawal signs were absent in 42 percent of the newborns, while another 32 percent had mild twitching and irritability, which subsided without therapy. A total of 26 percent showed enough irritability or noninfectious diarrhea to require administration of phenobarbital or tincture of opium, but infants with convulsions, coma, or other serious symptoms were not seen. The average hospital stay for the infants was 15 days, and findings from physiological examinations were all within normal limits. The first 14 children were observed for up to 4 years and were all developing physically within normal limits. Psychometric tests showed that 12 were normal, 1 was high normal, and 1 was low normal.

CONCLUSIONS

Reproductive function in heroin addicts seems to be returned to normal by effective treatment with methadone. Other reports of sudden deaths (crib deaths) in children of heroin addicts were not confirmed in this series. However, the frequency of low birth weight babies suggests intrauterine growth retardation or premature labor. The rarity of meconium appearance in this series (only one case) contrasts with the frequent finding of meconium in heroin-addicted mothers. A clear definition of newborn withdrawal from methadone has yet to be formulated, although symptoms that draw attention include irritability, hyperreflexia, hyperactivity, tremors, abnormal cry, abrasions at skin pressure points, diarrhea, diaphoresis, fever, vomiting, sneezing, yawning, and tachypnea. Study of the placental transfer of methadone and the problem of multiple drug usage is in process. Continuing studies are also being conducted to further validate the impressions that women on methadone maintenance appear capable of regular menstrual patterns, conception, pregnancy, and delivery of healthy babies.

Blinick, G.; Wallach, R.C.; Jerez, E.; and Ackerman, B.D. Drug addiction in pregnancy and the neonate. American Journal of Obstetrics and Gynecology, 125(2):135-142, 1976.

DRUG	Heroin; methadone
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant addicts and their offspring
AGE	Not applicable
SEX	Female; infants: both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Description; literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	35

PURPOSE

This paper discusses the alternatives of methadone detoxification and methadone maintenance in the clinical management of pregnancy in opiate addicts.

SUMMARY

Methadone detoxification. Methadone detoxification is best carried out in a hospital, with the dosage gradually reduced to zero over 5 to 10 days to alleviate withdrawal symptoms. Although it is hoped that once detoxified the pregnant addict will remain so, this is not generally the case. In fact, nearly all addicts return to their habits after detoxification. It is not unusual for a woman to undergo detoxification more than once during her pregnancy.

Methadone detoxification treatment during pregnancy carries risks of prematurity, breech delivery, withdrawal symptoms in the newborn, and meconium staining of the amniotic fluid.

Once in labor, the pregnant addict can be treated as any other patient. Anesthesia can be provided by epidural or pudendal block or, if necessary, meperidine. During the post partum period, maternal discomfort can be minimized with chloral hydrate, methadone, or hypnotic agents,

if this is warranted. The new mother, of course, should be encouraged to seek an alternative to her drug abuse, but the hardcore addict will often leave the hospital precipitously, and without her infant.

Methadone maintenance. The methadone maintenance treatment program is aimed at the voluntary rehabilitation of hardcore drug addicts. Patients are given increasing doses of methadone to induce a state of tolerance. The complications of pregnancy in this program are similar to those of the average obstetric population. The dangers to the infant are prematurity, increased percentage of breech deliveries, and withdrawal symptoms. Low birth weight at term is still frequent for those on methadone maintenance.

The problem of simultaneous abuse of a number of drugs such as heroin, cocaine, alcohol, tranquilizers, and amphetamines requires more attention. The ways in which such drugs affect the fetoplacental unit is poorly understood. Expansion and decentralization of the methadone maintenance program into many outpatient clinics has resulted in less effective supportive and rehabilitative services and an increase in use of alcohol, barbiturates, occasional heroin, and other drugs. Polydrug abusers should be hospitalized for treatment, preferably in a separate ward. Withdrawal from the various drugs should be gradual, while methadone maintenance should be continued. Complete and sustained detoxification of rehabilitated methadone-maintained patients is uncommon.

Infants born to drug-using mothers usually have lower birth weights than other infants. It is generally accepted that intrauterine growth retardation is the cause of the reduced birth weight in this population, although some researchers have suggested that a tendency toward premature birth may also exist. While narcotic drugs probably directly affect fetal growth, it may also be that infection, malnutrition, other socioeconomic factors, and the use of other drugs play a role. Although growth retardation occurs in fetuses exposed to methadone throughout pregnancy, these infants have a normal distribution of Apgar scores and rarely need resuscitation.

Withdrawal syndromes have been variously reported in 55 percent, 85 percent, and 67 percent of various groups of infants born to heroin-addicted mothers. For infants born to mothers receiving methadone, rates of 94 percent and 58 percent have been reported. With heroin, withdrawal signs usually occur by 24 hours, while the onset of withdrawal rarely occurs on the first day and most often occurs on the third or fourth day with methadone. Infants experiencing withdrawal usually feed poorly; have a reduced sucking reflex; and have increased muscle tone, tremors, marked irritability, and a high-pitched cry. Increased weight loss is common in these infants. Diazepam appears to be the drug of choice for treating withdrawal. About half of the infants in recent experience have received diazepam, while half have not needed treatment. The dose of diazepam has depended on the infant's size and the severity of the syndrome. In newborns with marked weight loss, a high-calorie formula is substituted for conventional formula. Infants are hospitalized for at least 14 days after birth. Data are insufficient to predict the ultimate outcomes for infants born to opiate addicts. No deleterious effects have been observed in the breastfed infants of mothers on methadone.

CONCLUSIONS

Drug addiction during pregnancy has been managed in two ways: the detoxification program and the methadone maintenance treatment program. The latter program is considered to be the most satisfactory approach in the treatment of heroin addiction.

The problem of multiple drug abuse and the long-term effects of intrauterine drug exposure, the withdrawal syndrome, and treatment all require more attention.

Chavez, C.J.; Ostrea, E.M.; Stryker, J.C.; and Smialek, Z. Sudden infant death syndrome among infants of drug-dependent mothers. The Journal of Pediatrics, 95(3):407-409, 1979.

DRUG	Heroin; methadone
SAMPLE SIZE	1,076
SAMPLE TYPE	Infants born to addicted and nonaddicted mothers
AGE	Neonates; infants
SEX	Both
ETHNICITY	Black (989 infants); other
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Comparative study; correlational study
DATA COLLECTION INSTRUMENT	Hospital records; program/clinical statistics
DATE(S) CONDUCTED	1974-1977
NO. OF REFERENCES	6

PURPOSE

Few reports describe an association between sudden infant death and maternal prenatal addiction. However, it is essential to recognize this association because of the increase in drug abuse among women of childbearing age and because methadone, which is used to treat opiate addiction, is also a narcotic.

This study compared the incidence of sudden infant death in infants born to drug-dependent mothers with the rate in a control group of infants born to nonaddicted mothers with socioeconomic characteristics similar to the drug-dependent women.

METHODOLOGY

The study population consisted of 688 infants born at Hutzel Hospital in Detroit between September 1974 and September 1977 and a control group of 388 randomly selected infants born to nonaddicted mothers. All infants weighed at least 1.9 kg at birth and had a gestational age of 34 weeks or more. The sex, race, Apgar scores, gestational age, and birth weight distribution of the infants in both groups were noted. The severity of narcotic withdrawal symptoms in the infants of drug-dependent mothers was also assessed.

The women mainly used heroin and methadone; however, the use of diazepam, barbiturates, cocaine, amphetamines, and alcohol was also common. Autopsies of all infants who died were performed by the Wayne County Medical Examiner. Diagnosis of sudden infant death syndrome was made only after other causes of death were excluded by investigation of the circumstances of the death, autopsy, and toxicology studies.

RESULTS

The sex, race, gestational age distribution, and 5-minute Apgar scores were not significantly different in the two groups, although more of the drug users' babies had 1-minute Apgar scores of less than 6 and more low birth weights. A total of 85 percent of the drug users' babies had moderate-to-mild narcotic withdrawal symptoms, and 15 percent had moderate-to-severe symptoms.

A total of 17 (2.5 percent) of the 688 drug users' babies and 2 (0.5 percent) of the control infants died from sudden infant death syndrome. All the infants died during sleep. The control group infants died in the spring and had a mean age of 13.8 weeks. Deaths of the drug users' children occurred throughout the year, and the mean age at death was 9.2 weeks. Significantly more deaths were observed in the infants showing moderate-to-severe narcotic withdrawal symptoms than in infants exhibiting minor-to-mild signs (6.7 percent versus 1.9 percent, respectively). All but one of the infants who died were full term.

The incidence of sudden infant death among low birth weight infants was not significantly different from that for normal birth weight babies. Medical complications encountered in eight infants who died and who had been followed at the Detroit clinic were nonspecific and included persistent neonatal narcotic withdrawal symptoms, skin rashes, mild upper respiratory tract infections, vomiting and diarrhea, and localized skin infections.

CONCLUSIONS

The frequency of suddent infant death syndrome differed significantly in the two groups. Similar findings have been reported by other investigators. However, in contrast with findings regarding the general population, male infants were not overrepresented among the infants who died. The finding that infant death was more frequent in infants who had moderate-to-severe withdrawal symptoms, coupled with a previous report linking withdrawal severity to the dosage of maternal methadone given during pregnancy, indicates that the fetus's exposure to increased amounts of drugs, including methadone, may have been harmful to the subsequent outcome. However, the mothers' frequent use of many other drugs prevents any conclusion regarding the association between specific drugs and infant death. Overall, sudden infant death syndrome is a major medical complication of prenatal addiction, and those involved in the treatment of drug addicts and their infants should be aware of this problem.

Cicero, T.J. Sex differences in the effects of alcohol and other psychoactive drugs on endocrine function: Clinical and experimental evidence. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 545-593.

DRUG	Alcohol; psychoactive drugs
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Humans; animals
AGE	Not applicable
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	1975-1980
NO. OF REFERENCES	289

PURPOSE

Little information exists regarding the effects of psychoactive drugs on neuroendocrine function in humans or animals of either sex. This subject has been inadequately studied in males and essentially ignored in females. Studies of drug-endocrine relationships in women have been avoided because of the hourly, daily, weekly, and monthly cyclic variations in many hormones and because many women take oral contraceptives, which markedly alter hormonal status. Other problems in studying drug-endocrine relationships are the influence of other factors such as nutritional status and the difficulty of controlling for these factors.

This paper reviews the available human and animal data on sex differences in the effects of alcohol and other psychoactive drugs on endocrine function. The focus is on the studies of the last 5 years, since earlier reports have significant methodological problems. Drugs examined include ethanol; the narcotics; marijuana; and central nervous system (CNS) stimulants, including amphetamines and LSD. Neuroendocrine axes considered include the hypothalamic-pituitary-gonadal (H-P-G) axis, the hypothalamic-pituitary-adrenal (H-P-A) axis, the hypothalamic-pituitary-luteinizing hormone (H-P-LH) axis, and the hypothalamic-pituitary-thyroidal (H-P-T) axis.

RESULTS

The effects of ethanol on the H-P-G axis include loss of libido, testicular atrophy, gynecomastia, and other signs and symptoms of hypogonadism. Ethanol also depresses serum testosterone levels in the male of every species and is a potent inhibitor of testicular steroidogenesis. Its production of multiple disturbances on this axis combines to produce marked impairments in reproductive endocrinology and function in the male, but little is known about its effects on reproductive endocrine systems in females.

With regard to the H-P-A axis, ethanol acutely increases serum cortisol levels in humans and corticosterone levels in animals. No prominent sex differences have been found in humans. Only slight sex differences have been found in rodent studies concerning the H-P-T axis and ethanol. Prolactin levels have been shown in some studies to increase modestly due to ethanol. Ethanol appears to block the stimulation of growth hormone release and oxytocin release. Acute ethanol administration also produces diuresis in both sexes by inhibiting the secretion of vasopressin.

Narcotics suppress testosterone levels in the male and disrupt the menstrual cycle in females. Although narcotics acutely raise corticosteroids in rats, mice, cats, and dogs, they probably do not alter cortisol secretion in humans, as tolerance develops. Narcotics appear to show no sex differences in their effects on the H-P-T axis. They raise serum prolactin and growth hormone but block the milk ejection response in females, presumably by inhibiting oxytocin release. Conflicting results have been obtained regarding vasopressin.

Marijuana and its active extracts produce atrophic changes in the secondary sex organs and testes, and they impair spermatogenesis after their chronic administration to the male of all animal species. Marijuana may also have direct ovarian effects in females. The locus of action appears to be the hypothalamus. Marijuana elevates corticosterone levels in animals but probably does not produce adrenal activation in humans or show sex differences in this area. Data are either lacking or too controversial to permit any conclusions regarding marijuana's effects on prolactin, oxytocin, or growth hormone. Marijuana has been found to produce diuresis in the male rat, indicating inhibition of vasopressin release, but studies do not exist on the female.

Few data exist on the effects on the neuroendocrine system of amphetamines, LSD, and other stimulants. Limited animal studies have shown increases in growth hormone as a result of amphetamines and decreased growth hormones following chronic LSD treatment.

CONCLUSIONS

Few definitive conclusions can be reached about the effects of psychoactive drugs on neuroendocrine systems. Failure to incorporate drug variables such as dose-response considerations into study designs, the difficulty or impossibility of controlling for many other variables, and other study design problems limit the validity of many studies. This review should provide a basis for future studies to overcome some of the methodological problems and fill gaps in existing knowledge. The development of sensitive and specific radioimmunoassays for hormones have, however, permitted rapid advances in the field of endocrinology and the recent resurgence of interest in the effects of psychoactive drugs on endrocrine function. The relatively few human studies, with males or females, have, however, limited the broad applicability of this research. In those studies that have been carried out with human subjects focusing on psychoactive drugs, male subjects have greatly outnumbered females, and we consequently know very little to this point about sex differences in neuroendocrine responses to psychoactive drugs.

Clark, D.; Keith, L.; Pildes, R.; and Vargas, G. Drug-dependent obstetric patients. A study of 104 admissions to the Cook County Hospital. Journal of Obstetric, Gynecologic and Neonatal Nursing, 3(5):17-20, 1974.

DRUG	Multidrug
SAMPLE SIZE	104
SAMPLE TYPE	Pregnant addicts
AGE	Adolescents; young adults; mature adults (range: 16-41; average: 26.8)
SEX	Female
ETHNICITY	Black (82 percent); white; Hispanic
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	January 1, 1969, to March 31, 1972
NO. OF REFERENCES	16

PURPOSE

No accurate nationwide statistics exist on drug-dependent pregnant patients or the types of drugs to which they are habituated. From an obstetric point of view, most drug-dependent patients who come to delivery do not present diagnostic or therapeutic challenges. However, the medical complications of heroin addiction during pregnancy (e.g., hepatitis, malnutrition, infections, anemia, and syphilis) may cause problems. The present study describes the characteristics and birth experiences of a group of pregnant drug-dependent obstetrical patients and the implications for treatment.

METHODOLOGY

The study sample consisted of 104 pregnant drug-dependent patients admitted to Cook County Hospital in Chicago from January 1, 1969, to March 31, 1972. The hospital did not have a program for drug-dependent parturients, and information about the patients was taken from hospital records.

RESULTS

Ages of patients ranged from 16 to 41 years (average: 26.8 years). The sample was 82 percent black and 18 percent white; most of the white patients were of Spanish extraction. Length of drug dependence varied from 2 months to 20 years; 26 patients had used drugs less than 1 year. Heroin, methadone, and barbiturates were some of the drugs used.

The average number of pregnancies per patient was 3.9 within a range of 0 to 13. Among the drug-dependent parturients the rate of prematurity by weight was 52 percent and by date was 29 percent, as compared to 14 percent in the general obstetrical population of the hospital. The low birth weight observed in many of these infants may have been the result of the malnourishment typical of heroin addicts. About 46 percent of the patients had had no prenatal care, compared with 15 percent of the general obstetrical patients.

Medical complications ranged from simple to life threatening and were usually related to drug abuse. Obstetrical complications varied but were never life threatening. Major obstetrical complications, such as placenta praevia, abruptio placentae, and severe toxemia, were not observed. However, over half of the patients entered with prematurely ruptured membranes.

Half of the patients required medication during labor, although some entered almost ready to deliver. Once delivery was accomplished, 61 percent required narcotic maintenance (most receiving methadone). The percentage of patients requiring drug maintenance might have been higher if some patients had not left the hospital immediately.

CONCLUSIONS

Treatment of drug-dependent patients depends on whether the patient requests withdrawal. Treatment in the antepartum period has the advantage of improving prenatal care. Without treatment, the addict is likely to be actively addicted during labor. The intrapartum period is inopportune for withdrawal, as patients are undergoing the additional stress of labor at that time. Patients who have had a fix shortly before admission may require less medication but should be given appropriate medication if required. Intrapartum medication should not be withheld, especially when the patient appears to be withdrawing. Abrupt withdrawal is not appropriate either before or during labor, as withdrawal is best accomplished with maintenance drugs such as methadone. Honesty in dealing with addicted patients is vital to the success of the therapeutic relationship.

Connaughton, J.F.; Finnegan, L.P.; Schut, J.; and Emich, J.P. Current concepts in the management of the pregnant opiate addict. Addictive Diseases: an International Journal, 2(1): 21-35, 1975.

DRUG	Heroin; methadone
SAMPLE SIZE	206
SAMPLE TYPE	Pregnant addicts
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Secondary analysis; description
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	1969 to 1973
NO. OF REFERENCES	11

PURPOSE

Since 1969, the increasing concern with the problem of opiate-dependent pregnant women who deliver drug-dependent infants has prompted the opening of a special prenatal clinic at the Philadelphia General Hospital and the establishment of numerous programs in other parts of the United States. According to the literature, the most significant obstetrical complication in pregnant addicts is pre-eclampsia. Neonatal complications are low birth weight with its sequelae and the neonatal withdrawal syndrome. Studies show that most programs have been able to reduce maternal complications, although infant birth weights remain low even with methadone treatment. The present report evaluates the effectiveness of the comprehensive approach to the care of pregnant addicts and their infants applied at the Philadelphia General Hospital.

METHODOLOGY

The hospital's sample consisted of 206 opiate-dependent pregnant patients who delivered their babies at Philadelphia General Hospital between 1969 and 1973. The patients were divided into three groups: patients who received no counseling and delivered while using heroin (Group A); patients who were admitted to the Family Center Program for drug-dependent mothers but received minimal prenatal care and counseling (Group B); and patients who were admitted to the

Family Center Program and received intensive counseling, prenatal care, and methadone maintenance or detoxification (Group C). Two comparison groups (D and E) were non-drug-dependent pregnant patients at the same hospital: Group D patients had no prenatal care, and Group E had more than four prenatal visits.

Data collected on Family Center Program patients included demographic, social, medical, laboratory, and neonatal parameters, but only significant medical and neonatal data are used in this report. A Neonatal Abstinence Score Sheet was employed to record the symptomatology of infants born to known addicts or infants who exhibited possible withdrawal symptoms. Before this scoring system was introduced in July 1972, the decision to treat the infant with drugs was made by the nursery physician in consultation with the nurse.

RESULTS

Obstetrical complications were present in 35.7 percent of Group A cases, 17.2 percent of Group B cases, 23.9 percent of Group C cases, 34 percent of Group D cases, and 20 percent of Group E cases. Incidence of low birth weight was 48.2 percent for Group A, 43.1 percent for Group B, 22.8 percent for Group C, 16 percent for Group D, and 18 percent for Group E. Obstetrical complications in patients on methadone are thus comparable to those of nonaddicts with prenatal care.

The pattern of incidence of low birth weight infants seems to implicate drug use rather than lack of prenatal care as a cause for fetal complications. The irregularity with which a street addict receives her supply causes withdrawal symptoms, uterine irritability, and increased incidence of premature labor with low birth weights. The overall incidence of medical complications was higher in addict groups, as might be expected from the lifestyle and frequent prostitution of the drug-dependent female. Although there was no significant difference between treated and untreated groups, patients with prenatal care at least had their medical complications identified and treated.

Statistics on neonatal outcome show that there was a gradual increase in average birth weights in the progression from the untreated heroin group to the group on methadone with counseling and prenatal services. Although little difference in the incidence of withdrawal was evident in the three groups, marked differences appear when the symptoms are classified according to severity. Group A infants were those experiencing heroin withdrawal, whereas Groups B and C infants went through methadone withdrawal. Severe withdrawal was most pronounced in Group A infants, while Groups B and C infants generally had mild to moderate withdrawal symptoms. A number of infants born to mothers on very low methadone dosages had no symptoms.

Other neonatal problems, such as asphyxia neonatorum, transient tachypnea, aspiration pneumonia, intrauterine growth retardation, and jaundice, were more common in Groups A (52 percent) and B (53 percent) than in Group C (33 percent). Fifteen of the 206 infants born to drug-dependent mothers died. Infant death rates were 5 percent in Group A, 14 percent in Group B, and 4 percent in Group C. All of the infants who died in Group A were extremely small and two were immature. In Group B, all the infants died from the sequelae of their premature birth.

CONCLUSIONS

The comprehensive approach to the care of pregnant addicts and their infants at Philadelphia General Hospital has significantly reduced maternal and infant morbidity heretofore associated with pregnancies complicated by opiate addiction. More significantly, the incidence of obstetrical complications has been reduced by 12 percent, with a decrease in incidence of low birth weight to 22 percent and a reduction of infant morbidity to 33 percent.

Application of this comprehensive type of approach to the pregnant addict can be a significant factor in the successful management of these patients.

Davis, M.M., and Shanks, B. Neurological aspects of perinatal narcotic addiction and methadone treatment. Addictive Diseases: an International Journal, 2(2):213-226, 1975.

DRUG	Heroin; methadone
SAMPLE SIZE	130
SAMPLE TYPE	Infants of addicted mothers
AGE	Infants
SEX	Not specified
ETHNICITY	92 percent black
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Brazelton's Neonatal Behavioral Neurological Assessment; neurological exams; Bayley Scales of Infant Development
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	50

PURPOSE

Clinical studies have established that maternal use of psychoactive drugs complicates pregnancies and affects the neonatal development of infants. However, the nature of changes in the fetal brain caused by maternal narcotics must be determined specifically. The present study therefore examines the evolution and prognostic significance of neurological and behavioral characteristics of drug-affected infants. Possibilities of applying electrophysiological measurements as sensitive indicators of cerebral dysfunction are to be investigated in a related study.

METHODOLOGY

The sample consisted of 130 infants born to narcotic-addicted mothers, both untreated and treated with methadone in various dosages. A total of 92 percent of the women were black and qualified for Medicaid. Neurological examinations used techniques and scoring criteria established by Prechtl and Beintema (1964, revised 1968) and the P.R.B. Collaborative Study Protocol (Paine and Donovan 1962). Infants were examined between 3 and 16 times during hospitalization. Brazelton's Neonatal Behavioral Neurological Assessment Scale (Brazelton 1973) was also used at least three times during hospitalization. Finally, the Bayley Scales of Infant Development (Bayley 1969) were administered to a subsample of 21 subjects ranging from 2 to 25 months old and all exposed to methadone in utero.

RESULTS

In keeping with earlier findings, the babies exhibited low birth weights but good Apgar scores. The spectrum and severity of withdrawal symptoms tended to be correlated with the level of maternal narcotic intake. Neurological findings include hyperexcitability, impaired nutritive sucking, vomiting, severe sleep deficits, hyperthermia, and tachypnea. Autonomic dysfunction varies from vasomotor lability and diaphoresis to diarrhea. Hyperactivity is one of the most persistent findings, sometimes continuing through early school age.

Early infantile automatisms and postural reflexes were intact but usually exaggerated; infants were also often accelerated in their maturational sequencing. The much-discussed myoclonic jerks and seizures appeared to be more marked in methadone than in heroin withdrawal and were related to dose. As in earlier studies, the Brazelton test underlined the impaired ability of postnarcotic babies to organize their responses to the environment, with lessened capacity to react to noxious stimuli and to habituate disturbing events.

Children tested during their first 5 months with the Bayley mental scale displayed a wide range in functional levels on the mental scale. Children evaluated during the last quarter of their first year fell within the normal range. After 15 months, a lag in mental development tended to appear, particularly with regard to receptive understanding or expressive use of language. Motor performance was satisfactory throughout the years tested.

CONCLUSIONS

Nearly every postnarcotic newborn presented between 4 and 7 days after birth a constellation of subtle but significant behavior changes that could be designated as "minor" withdrawal. Late, major withdrawal may occur because these early, mild symptoms have been overlooked. The mother-child relationship will benefit if mothers who are sent home with their infants are trained to deal with infants' withdrawal behavior using pacifiers, swaddling, coddling, and soothing. The clinical findings in neonatal withdrawal are reminiscent of hyperserotoninemia syndromes in the newborn, which raises questions as to the role of serotonin and other neurotransmitters in withdrawal phenomena. The trend toward acceleration of motor behavior appears to be limited to the first 8 months. Anomalies in the motor, sensory, and cognitive behaviors observed during the early weeks and months of life are temporary and drug induced. Whether the child's subsequent development is affected in any other way can only be established through long-term study of various symptoms, as well as of auditory and visual responses.

Davis, R.C.; Chapel, J.N.; Mejia-Zelaya, A.; and Madden, J. Clinical observations on methadone-maintained pregnancies. Addictive Diseases: an International Journal, 2(1):101-112, 1975.

DRUG	Heroin; methadone
SAMPLE SIZE	218
SAMPLE TYPE	Pregnant addicts in treatment
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Illinois
METHODOLOGY	Clinical observation
DATA COLLECTION INSTRUMENT	Observations; interviews
DATE(S) CONDUCTED	January 1969 to March 1974
NO. OF REFERENCES	24

PURPOSE

Prior to the widespread use of methadone maintenance as a treatment adjunct, few alternatives were available for the treatment of pregnant heroin addicts. Methadone maintenance has decreased the incidence of premature and low birth weight infants and of medical and obstetrical complications and has improved treatment retention rates. At the same time, a growing body of literature indicates a positive correlation between maternal methadone dose and the incidence and severity of the neonatal narcotic withdrawal syndrome. To help clarify the specific dangers and advantages of methadone maintenance to the unborn fetus, the effects of a variety of methadone treatment modes are assessed.

METHODOLOGY

The study sample consisted of 218 pregnant women followed by the Illinois Drug Abuse Program (IDAP) from January 1969 to March 1974. All patients had available the full range of treatment modalities offered by the IDAP. Methadone was used in the lowest doses necessary to suppress withdrawal symptoms in the woman or the fetus.

Four treatment groups were differentiated. The General Methadone Maintenance group of 41 subjects (group I) involved simple methadone maintenance in clinics, usually to women in the late second or third trimester of pregnancy. The IDAP Psychosocial Support group of 48 subjects (group II) was provided normal addiction treatment; weekly counseling; prenatal classes; and medical, legal, and welfare assistance. The Interagency Psychosocial Support group with 96 subjects (group III) received interagency care from the IDAP and University of Chicago Hospitals. The Heroin Deliveries group (group IV), having 33 subjects, was not treated for heroin addiction prior to delivery.

RESULTS

Group I had the highest rate of fetal wastage and perinatal mortality, and group IV had the highest incidence of low birth weight infants. The groups receiving psychosocial assistance (groups II and III) had the highest treatment retention rates.

No pronounced relationship was evident between trimester of entry into treatment and average birth weight or incidence of low birth weight infants. However, fetal loss and perinatal mortality were more frequent among women who did not conceive on methadone. Furthermore, the proportion of infants who required treatment for withdrawal was approximately 9 to 10 percent higher among women not in treatment at conception than among women who conceived on methadone, but the average length of treatment was reduced for infants whose mothers entered treatment in their third trimester. In the third group, the incidence of infants requiring withdrawal treatment increased in proportion to the maternal methadone dose. Differences were pronounced between low and moderate dose groups and between low and high dose groups. The incidence of fetal wastage and perinatal loss in a group of 24 women who had also been abusing central nervous system depressants was 41.7 percent as compared to 12.3 percent in methadone-treated pregnancies.

CONCLUSIONS

Stresses causing expectant addicts to continue to abuse drugs, avoid prenatal care, and drop out of treatment can be managed through a psychological support program including counseling, prenatal services, assistance in dealing with hospital staff, and material assistance. Methadone treatment alone does not appear sufficient to alter lifestyles that adversely affect pregnancies.

Findings support the hypothesis of other investigators that the incidence and severity of treatable neonatal narcotic withdrawal syndrome is positively correlated with the maternal methadone dose. The high rate of infant mortality among women who enter treatment in their third trimester and/or complicate their pregnancy through use of other substances casts doubts on conclusions of researchers who attribute greater toxicity to methadone than to illicit heroin. The use of methadone in the treatment of the pregnant heroin addict is an important adjunct in avoiding the high rate of loss from treatment by rapid detoxification and from continued heroin abuse.

Desmond, M.M., and Wilson, G.S. Neonatal abstinence syndrome: Recognition and diagnosis. Addictive Diseases: an International Journal, 2(1):113-121, 1975.

DRUG	Heroin; methadone; barbiturates
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Infants of addicted mothers
AGE	Not applicable
SEX	Not applicable
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review; clinical observation
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	11

PURPOSE

The paper discusses the detection and diagnosis of the abstinence syndrome in the neonate and outlines physical findings and clinical behaviors typical of the syndrome. The material is based on the literature and on the authors' experience with infants of mothers addicted to heroin, methadone, and barbiturates.

SUMMARY

The abstinence syndrome in infants is a generalized disorder characterized by central nervous system (CNS) excitation together with respiratory and gastrointestinal dysfunction. The condition arises in the transitional period following delivery and is associated with continuing maternal drug use during pregnancy. Genesis of the condition is the result of biochemical adaptation of the fetus to an abnormal agent in its tissues, followed by removal of the drug source at delivery and continuing metabolism of the drug by the infant until tissue levels become critically low. Recovery is gradual and requires that the infant's metabolism be reprogramed.

Diagnosis can be based on the history of drug usage by the mother during pregnancy, signs of abstinence syndrome in the infant after birth, and detection of the drug or its metabolites in

tissue fluids of the mother or the infant, or in the amniotic fluid. Initial signs of abstinence syndrome include fetal distress and passage of meconium prior to birth, low 1-minute Apgar scores, and growth retardation (in 30 to 40 percent of the infants born to addicts).

Onset of withdrawal may occur from birth to 2 weeks after birth, depending on the drug and dosage used by the mother, the timing of the last dose before birth, and the delivery medication. In the typical patient, neurological signs appear early and are predominant. First signs are an anxious expression, restlessness, overactivity, tremors, and constant crying. Gastrointestinal signs become more pronounced after the first day. Signs that persist into infancy include hyperphagia and increased oral drive, sweating, hyperacusis, irregular sleep patterns, and poor tolerance to holding or change in position.

Overt symptoms are more pronounced among full-term but undergrown infants of methadone and heroin addicts than among immature infants. A large percentage of immature infants have mild withdrawal signs, requiring no therapy. Their neural hyperexcitability is episodic. Sustained tremors are not seen in immature infants until they reach gestational ages when tone is present in upper and lower extremities. The differential diagnosis of the neonatal abstinence syndrome includes any entity that manifests itself by restlessness and central nervous system hyperexcitability. Unresolved are such questions as why the abstinence syndrome does not occur in 10 to 25 percent of the possible cases, why convulsions sometimes complicate the syndrome, why symptoms sometimes suddenly increase in severity after improvement has taken place, and how enduring are the effects on the developing brain.

CONCLUSIONS

The neonatal abstinence syndrome is a generalized disorder in infants of addicted mothers. The condition is characterized by CNS excitation, autonomic imbalance, and respiratory and gastrointestinal dysfunction. Signs are nonspecific and vary in severity. CNS excitation is predominant, but gastrointestinal manifestations may occur alone. Physical signs may be altered by immaturity or coexisting diseases. Signs that persist into infancy are hyperphagia, hyperacusis, sweating, diarrhea, and irregular sleep patterns.

Erkkola, R.; Kanto, J.; and Sellman, R. Diazepam in early human pregnancy. Acta Obstetricia et Gynecologica Scandinavica, 53(2):135-138, 1974.

DRUG	Diazepam
SAMPLE SIZE	19
SAMPLE TYPE	Pregnant women; fetuses
AGE	Young adults; mature adults; fetuses
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Turku, Finland
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	14

PURPOSE

Although drug use should be avoided during the first trimester of pregnancy, women may take the commonly used drug diazepam (Valium) without being aware that they are pregnant. Diazepam is also given for the psychiatric complications of pregnancy and to treat a threatened abortion. Although it is considered to be free from teratogenic effects, studies of diazepam in cell cultures have shown some damaging effects. Previous studies have also shown that diazepam and its main metabolite, N-demethyldiazepam, easily cross the placenta when given to the mother during labor or in pregnancy. Higher concentrations of diazepam in the fetus than in the mother have been found in studies involving single doses. However, diazepam is known to accumulate and reach a steady state in the tissues in about 4 days.

This study examined the transfer of diazepam and N-demethyldiazepam across the placenta in early human pregnancy in a group of 12 women after a single dose and in a group of 7 women after the continued use of diazepam for up to a month.

METHODOLOGY

A total of 12 patients with a mean age of 32.5 years who were admitted to a hospital in Finland for legal abortions by hysterotomy were given 10 mg diazepam and 0.5 mg atropine intramuscularly as preoperative medication. Other drugs were subsequently given, and the fetuses, which ranged from 12 to 15 weeks of gestation, were removed 40 to 120 minutes after premedication. A blood sample was drawn from both the woman and the umbilical cord.

In addition, seven women ranging in age from 25 to 46 years received 5 mg of diazepam three times daily by mouth for psychiatric reasons or voluntarily before the hysterotomy. The pregnancies ranged from 12 to 14 weeks in duration and the diazepam treatment lasted from 9 to 30 days.

Blood samples were collected from the woman and the umbilical cord. In addition, tissue samples were taken from the placenta, fetal brain, and fetal liver. A sample of amniotic fluid was taken in one case. A gas chromatographic method was used to determine the concentrations of diazepam and N-demethyldiazepam.

RESULTS

After a single dose, the difference between the fetal and maternal concentrations of the drug was not significant. The fetal-maternal ratio of the diazepam concentration was 1.2 after a single dose, while it was 0.4 after continued use. The difference after continued use was significant at the 0.0001 level. In addition, N-demethyldiazepam was similarly transferred across the placenta. The difference between its concentrations in fetal and maternal plasma was significant at the 0.01 level, and the differences in this metabolite's concentrations in fetal plasma and liver were significant at the 0.05 level.

CONCLUSIONS

Diazepam easily crosses the placenta at the end of the first trimester of pregnancy. The main reason for the difference in the concentrations is probably the incomplete distribution of diazepam after a single dose at the time the samples are taken. The transfer of N-demethyldiazepam across the placenta occurs just as easily. The higher concentration in the liver than in other tissues could constitute indirect evidence of metabolism in the fetal liver. The concentrations of diazepam and N-demethyldiazepam in fetal tissues are at a level comparable to the concentration of diazepam that has a damaging effect on cells in cellular cultures. Thus, drugs should not be prescribed for pregnant patients if the need for treatment is not urgent. Minor tranquilizers are seldom absolutely indicated during pregnancy.

Finnegan, L., ed. Drug Dependence in Pregnancy: Clinical Management of Mother and Child, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

DRUG	Multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant users and their infants
AGE	Not specified
SEX	Users: female; infants; both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	184

PURPOSE

A large number of women of childbearing age use heroin or are being treated in methadone maintenance programs. When these women become pregnant, they and their offspring become part of a high-risk population requiring special medical attention. However, the special medical problems of pregnant addicts and their children are not being adequately detected or addressed in many areas because of lack of experience or familiarity with these problems.

This manual provides guidelines for the clinical management of the pregnant drug abuser and her child. Research findings from a wide variety of sources are used as the basis for the guidelines. The manual is intended as a resource book for hospital systems and drug treatment programs.

SUMMARY

Little awareness exists of the magnitude of psychotropic drug use, and a general complacency exists regarding licit psychotropic medications. However, large numbers of psychotropic drug users are women of childbearing age, and the extent of drug use during pregnancy is often underestimated.

The prevalence of psychotropic drug use among women has always been about twice that of men. Abuse of multiple drugs is more prevalent among younger people, and thus among women in the childbearing years. Although females respond to psychotropic drugs, including depressants, stimulants, hallucinogens, and opioids, in a manner similar to males, there are important differences, which are only beginning to be understood. Evidence also indicates that the elimination of certain drugs is altered during pregnancy. The fetus receives the drugs consumed by the mother through the maternal fluids in the early weeks of pregnancy and through the placenta during the rest of pregnancy. Effects on the newborn may include teratogenicity, growth retardation, and specific pharmacological effects.

Pregnant women who abuse drugs must be designated high risk and given specialized care that includes addictive and obstetrical management and psychosocial counseling. The prenatal period offers a unique opportunity for physicians to have an impact on both the treatment and prevention of addiction. The pregnant addict is open to change and influence. Medical treatment during the prenatal period should complement and facilitate the long-term treatment of the woman's addiction. Treatment should be provided by trained staff oriented to maintaining a long-term relationship with the woman and to helping her change her lifestyle. Adequate physical, interpersonal, and social support should be provided for these women, with transportation provided if possible. Family members should be welcomed into the program.

A realistic approach should be taken to chemotherapeutic support, since detoxification is not usually a realistic goal. If detoxification is attempted, it should be extremely slow and should preferably occur between the 14th and 28th weeks of gestation. Therapeutic communities or methadone maintenance are other treatment approaches. Whatever the program approach, it should have an educational and vocational orientation to provide the woman with opportunities for an alternate lifestyle and the development of new skills.

The medical management of labor and delivery should follow accepted standards for women who are not drug dependent. However, labor and delivery represent a period of high stress for the pregnant addict. The experiences of this period may have major effects on the woman and on the future care her child receives. The physician and maternity ward staff need to focus on the establishment of trust between patient and staff, development of parent-child bonding, and demonstration and instruction in parenting skills. Staff should also emphasize psychotherapeutic support from the mother's addiction treatment program and development of a good working relationship between the parents and the medical personnel who will be providing ongoing pediatric care.

The passively drug-dependent newborn should be admitted to a special care nursery. The mother should have her urine tested on admission, and the infant's urine should be tested for drugs on the first day of life. Symptoms of abstinence should be promptly recognized, along with other potentially coexisting conditions, including hypoglycemia, hypocalcemia, intracranial hemorrhage, and infection. Monitoring efforts should focus on the respiratory rate, heart rate, temperature, intake and output, daily weight, and progression of abstinence symptoms. Supportive treatment should include swaddling, hydration, demand feeding, minimization of trauma to the skin, and suction when necessary. Pharmacological treatment of abstinence may be needed. Staff should also assess the mother's ability to care for the infant after hospital discharge, using recommended parameters.

CONCLUSIONS

Adequate treatment of the pregnant drug-dependent woman and her child should extend far beyond the post partum period. The treatment team can play a critical role in insuring adequate treatment by providing medical services; continuity of stable, dependable care; the sanctioning of paraprofessional and allied health counselors; and a sound basic knowledge of the developmental needs of the child and the family. Staff should provide strong support to any woman willing to undertake the major change from unhealthy living patterns to ones more conducive to meeting her child's needs. The followup period should be at least 5 to 6 years.

Finnegan, L. Clinical effects of pharmacologic agents on pregnancy, the fetus, and the neonate. Annals of the New York Academy of Sciences, 281:74-89, 1976.

DRUG	Multidrug
SAMPLE SIZE	303 newborns of users; 1,586 controls
SAMPLE TYPE	Pregnant users and nonusers and their infants
AGE	Not specified
SEX	Female; infants: both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Literature review; comparative study
DATA COLLECTION INSTRUMENT	Hospital records; observations
DATE(S) CONDUCTED	1970-1975
NO. OF REFERENCES	26

PURPOSE

Drugs taken during pregnancy through prescription, self-medication, or use of illicit substances may have an adverse effect on the developing fetus and neonate. However, the potential seriousness of drug use by obstetrical patients is not fully appreciated, and the average pregnant woman receives several drugs during pregnancy. This paper reviews the special medical problems faced by the pregnant woman and the fetus when various pharmacologic agents are taken during pregnancy. Data are also presented on outcomes for 303 newborns of drug-dependent women and 1,586 controls at Philadelphia General Hospital from 1970 to 1975.

SUMMARY

Potential effects on the fetus from drugs taken by the mother are affected by several characteristics of the placenta and the drugs passing through it, including lipid solubility, the degree of drug ionization, molecular weight of the drug, placental blood flow, placental metabolism of drugs, protein binding of drugs, and aging of the placenta. Drugs' distribution in the fetus is affected by the selective uptake of drugs by specific fetal tissues, specific binding of cellular constituents, the distribution of the fetal circulation, and other factors. Drug hydroxylation reactions and drug conjugation reactions can occur in human fetal tissues. Furthermore, the

possible incidence of congenital malformations is dependent on the interaction of four teratogenic principles: the nature of the responsible agent and its accessibility to the fetus, the time of its action, the level and duration of its dosage, and genetic constitution.

Pregnant women's physiological changes modify their handling of drugs, although little is known about these effects. Numerous drugs are known to affect the fetus, including antidiabetic agents, antithyroid drugs, antibiotics, hormones, diuretics, common analgesics, vitamins in large quantities, sedatives, hypotensive agents, anticonvulsive agents, cancer chemotherapeutic agents, nicotine, alcohol, and drugs of abuse.

Drug-dependent women have lifestyles that predispose them to many maternal complications, including toxemia, abruptio placentae, retained placenta, post partum hemorrhage, and, in the infant, low birth weight, breech presentation, and an increase in neonatal morbidity and mortality. About 10 to 15 percent of drug-dependent women have toxemia in pregnancy, and almost half of heroin-dependent women who have no prenatal care give birth prematurely.

Low birth weight is common among infants of drug-dependent mothers, and maternal narcotic withdrawal has been associated with stillbirth. Naeye's study revealed that nearly 60 percent of heroin-addicted mothers or their newborns showed evidence of acute infection. Serious illnesses such as syphilis may also occur in some pregnant drug-dependent women because of their lack of self-care and their use of prostitution to support their habits. Malnutrition may also occur due to disturbance of the central mechanism that controls appetite and hunger.

The rate of neonatal deaths among 303 infants born to heroin-dependent women receiving no prenatal care, methadone-dependent women receiving little prenatal care, and methadone-dependent women receiving much prenatal care was 5.3 percent, more than 3 times that of the 1,586 controls at Philadelphia General Hospital. A large number of infants in the drug group had low birth weights, which are predictive of subsequent neonatal complications and lifelong mental handicaps. The mortality rate among these infants was 13.6 percent.

Neonatal morbidity was seen in almost three-quarters of the infants of the drug-dependent mothers, requiring average hospital stays of 17 to 26 days. Over 90 percent of the infants in each group experienced the neonatal withdrawal syndrome. The highest rate of severe withdrawal was seen in the heroin group. Sucking rates and pressure were significantly lower for infants born to drug-dependent mothers than for normal controls. When the drug-dependent infants were compared with high-risk infants whose mothers had been treated for toxemia, they were found to have a more prolonged depression of sucking rates. Sucking behavior was more vigorous for infants treated with paregoric than with those treated with sedatives such as phenobarbital.

CONCLUSIONS

Clinicians caring for obstetrical patients face the difficult task of treating specific illnesses in pregnant women while remaining aware of the effects and interactions of the drugs on the entire maternal-feto-placental unit. Benefits of the drugs to be given must be carefully evaluated before the fetus is subjected to the many risks encountered with drugs used for the usual disorders of pregnancy. Unless otherwise absolutely necessary, clinicians should not prescribe any drugs. Pregnant women using illicit drugs pose especially severe problems, although further studies are needed to define clearly the problems faced by these women and their infants and to identify appropriate approaches to their treatment. The present findings suggest that uncontrolled methadone use in pregnant women may be more harmful than illicit heroin and that current assumptions regarding the safety and efficacy of current treatment methods for maternal drug dependence and neonatal withdrawal may be questionable.

Finnegan, L.P. Narcotics dependence in pregnancy. Journal of Psychedelic Drugs, 7(3):299-311, 1975.

DRUG	Heroin; methadone; multidrug
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	46

PURPOSE

Increasing numbers of pregnant narcotics addicts have come to medical facilities for delivery in the last decade. In addition, it is likely that a large number exist who gave birth at home without a physician in attendance since most addicts do not seek medical assistance until the onset of labor. Thus, addiction in pregnancy has become an important health problem due to the increased incidence of obstetrical and medical complications in these women and the extremely high rates of prematurity and other problems in their babies. However, inadequate research designs have resulted in a broad range of contradictory recommendations regarding the management of the pregnant woman on drugs and her infant.

This report describes the effects of prenatal ingestion of the various drugs of abuse on the maternal-fetal unit. It also describes the various methods of management of the pregnant woman through obstetrical care and psychosocial counseling and makes recommendations for future management of populations of pregnant women who are drug dependent.

SUMMARY

The effects of drug abuse on the pregnant woman. The pregnant addict usually suffers from chronic anxiety and depression. She is unable to lead a normal life because she alternates between being "high" and being "sick" and devotes much of her time to obtaining drugs. She usually arrives at the hospital during the first stage of labor. Physicians and nurses can identify pregnant addicts from such signs as absence of prenatal care, tattoos or self-scarring of the forearm to disguise needle marks, cigarette burns incurred due to diminished pain perception, jaundiced skin due to serum hepatitis, and pinpoint pupils. Withdrawal symptoms may occur.

Complications seen in the maternal-fetal unit. Addicts are predisposed to a host of maternal complications, including toxemia, venous thrombosis, thrombophlebitis, abruptio placentae, retained placenta, and postpartum hemorrhage. Complications in the infant may include low birth weight, breech presentation, and high neonatal morbidity and mortality. Studies indicate rates of low birth weights ranging from 19 percent to 57 percent. High incidences of meconium in amniotic fluid have been reported in heroin addict pregnancies. Changes in various physiological processes have been found, including adrenocortical function, estriol excretion, lecithin/sphingomyelin ratios, and heat stable alkaline phosphatase. Drug-dependent pregnant women often have serious illnesses, such as syphilis and gonorrhea, due to their reliance on prostitution to support their habits. In addition, they often develop anemia due to iron and folic acid deficiency.

Management of pregnancy when complicated by drug abuse. Care for the pregnant drug abuser should focus on obstetrical, psychosocial, addictive, and long-term planning. The addiction should be dealt with first, through methadone maintenance, since withdrawal generally has many risks. Additional psychological support is also needed.

A three-phase program of psychosocial counseling used at the Family Center Program in Philadelphia, Pennsylvania, includes the introduction of the patient to the program, the patient's intensified internal struggle to leave the addict subculture, and initiation of the process of developing more independence and coping with daily life. The Philadelphia program is voluntary, as are many others. In contrast, a team from Odyssey House, a drug-free residential therapeutic center, recommends that laws be drafted to provide for the compulsory treatment of pregnant drug addicts and guardianship of their children.

Promoting mother-infant attachment. Maternal attachment to the baby is a cumulative process taking place throughout pregnancy. However, financial and other stresses may provide negative reinforcements to the addicted woman during pregnancy. After the infant's birth, the most vital nursing reponsibility is to foster a healthy mother-infant attachment. The Philadelphia General Hospital Family Center encourages mothers to enter the nursery to see and touch their newborns to stimulate maternal attachment. Successful nursing care also includes consideration of and communication with the mother and encouragement of both parents. Intensive psychosocial services are also provided after delivery to prepare for discharge from the hospital. Risk parameters that may be used in deciding whether the mother will be able to care for her infant include the mother's age, length of drug use, presence in a drug program, reason for entering the drug program, drug use while on methadone, and ability demonstrated in raising other children. At Philadelphia General Hospital, over 80 percent of the mothers who have been in the treatment program during pregnancy have been able to take their babies home.

CONCLUSIONS

Initial data on programs providing comprehensive care for addicts have shown significant reductions in morbidity and mortality to both mothers and infants. It is recommended that pregnant drug abusers be designated as high risk and receive specialized care. Such care should include treatment for the physical addiction, physical examinations, psychosocial counseling, encouragement of mother-infant attachment, outreach care, assessment of the ability to care for the infant, and mechanisms for care after discharge from the hospital. Further research should focus on the effects of heroin and methadone use on the pregnant addict's lifestyle, newer treatment modalities, mothering practices of women who have abused drugs during pregnancy, nutritional status of pregnant addicts and nonaddicts, and followup assessment of mothers and infants.

Finnegan, L.P.; Schut, J.; Flor, J.; and Connaughton, J.F. Methadone maintenance and detoxification programs for the opiate-dependent woman during pregnancy: A comparison. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis: Mosby, 1977. Pp. 40-63.

DRUG	Opiates
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant addicts
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	51

PURPOSE

The recognition and management of pregnancy complicated by opiate dependence presents a new area of specialization for medical professionals. However, experts in this area disagree over the specific mode of management to employ during pregnancy, as well as over the management of the newborn infant.

This paper describes three basic approaches to the management of the pregnant opiate-dependent woman: (1) methadone maintenance, (2) detoxification, and (3) drug-free therapeutic communities. It includes discussions of the medical regimen; the social, psychological, and counseling programs available; and the effectiveness of each program.

SUMMARY

Choosing the appropriate approach. Factors that should be considered in determining the most appropriate treatment for the pregnant, opiate-dependent woman include the woman's age, Federal regulations, number of attempts to succeed in other programs, available openings for each treatment modality in the woman's community, family support, social stability, duration of addiction, and, most importantly, the woman's choice. For example, acute detoxification would be

unrealistic for a woman with a long drug history, whereas a drug-free existence could be considered for the woman who has just started using small amounts of illicit drugs. It should also be remembered that addiction is not an isolated problem but symbolizes the degree to which the addict's total life pattern has become self-destructive and unrewarding. Thus, the addict's childhood family patterns, current mental state, attitude toward pregnancy, and related areas should be considered.

Methadone maintenance. The use of methadone can only be an adjunct in what should be a comprehensive approach in the treatment of addiction. Fortunately for the pregnant drug-addicted woman, the majority of programs in recent years have used methadone only in this fashion, which probably accounts for their successes.

The medical regimen for pregnant addicts should be identical to that for any high-risk woman. A complete history and examination including extensive laboratory tests should be done during a 3- to 4-day hospital stay, since most of these women have not had any medical care for many years. If methadone maintenance is planned, stabilization of the daily methadone dosage should be recommended. Also necessary are social, psychological, and counseling regimens that emphasize the special needs and problems of the female addict. A team approach using social workers, public health nurses, and community workers is used at the Family Center Program in Philadelphia. In addition, a Detroit program aims to help addicts to resolve their conflicts, adjust to pregnancy, follow program guidelines, relieve environmental stress, enhance self-esteem, prepare for the future, detoxify from methadone, and be vocationally rehabilitated.

Reports from several programs show that maintenance of a drug-addicted woman using methadone under close supervision with prenatal care can produce an uneventful pregnancy and birth of a healthy infant whose withdrawal symptoms in the neonatal period are easily controlled. Methadone administration during pregnancy should aim to reduce maternal and fetal complications of illicit heroin use rather than to prevent withdrawal in the newborn infant.

Detoxification. Literature on detoxification reveals that an older age and shorter course of addiction are factors that favor successful and lasting detoxification. However, the literature lacks data on pregnant women. This lack of data plus the fetal complications seen when pregnant women are permitted to withdraw indicates that detoxification should be avoided in pregnancy unless accomplished in a tightly controlled situation. Detoxification of the pregnant addict is possible, but it is difficult and fraught with such possible hazards as fetal distress and abortion. If detoxification is necessary, it should occur between the 14th and 28th week of gestation. The medical regimen should be identical to that provided for any high-risk patient, and social, psychological, and counseling aspects of patient management must be strictly followed if the woman is to have any chance for rehabilitation. Partial detoxification or encouragement of methadone maintenance for detoxified women who return to drugs are among other recent approaches.

Drug-free therapeutic communities. Few of the many therapeutic communities in the United States deal with the pregnant woman who is using drugs. Housing for mothers and infants has also been lacking in therapeutic communities until recently. Thus, little information exists regarding these programs' effectiveness for pregnant women. Therapeutic communities view pregnant addicts, whose lives are generally chaotic, as having many problems associated with defining and enforcing responsibilities. The communities respond to this by imposing structure on the individual.

The Horizon House community, located in Philadelphia, involves close scrutiny and supervision for the first 24 hours, with initial concentration on behavioral and attitudinal issues only. Clients are required to perform according to the program's demands and expectations and are exposed to group and individual therapy, socialization activities, house cleaning, and a well-structured daily schedule. All clients are held responsible for themselves and for each other. Action is emphasized ahead of talk. Clients earn additional privileges and responsibilities after satisfactorily meeting behavior and attitudinal demands.

Medical management of pregnant women in therapeutic communities should be identical to that for any high-risk patient, with access to prenatal and childbirth care.

CONCLUSIONS

An overwhelming situation faces both the clinician and the pregnant addict. Awareness of the medical and obstetrical complications in the mother and the adverse effects in the newborn can permit reduction of some of the effects of the prenatal stresses. Although much is being done for these women, further research and development of appropriate treatments are needed.

Forfar, J.O., and Nelson, M.M. Epidemiology of drugs taken by pregnant women: Drugs that may affect the fetus adversely. Clinical Pharmacology and Therapeutics, 14(4, Pt. 2):632-642, 1973.

DRUG	Multidrug
SAMPLE SIZE	911
SAMPLE TYPE	Pregnant users
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Edinburgh, Scotland
METHODOLOGY	Retrospective survey; multivariate analysis
DATA COLLECTION INSTRUMENT	Interviews; doctors' records; hospital records; pharmacists' records
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	37

PURPOSE

Before 1961, most reports on drug effects on the fetus were concerned with the perinatal period, particularly with the effect of narcotics and analgesics on the fetus at the time of delivery. Thalidomide changed that, focusing attention on the possibility that other drugs had not yet been recognized as teratogenic. A first requirement for studying this problem is knowledge of the drugs actually taken during pregnancy, yet little information is available about drug use among pregnant women. To fill the gap, this article reports the findings of a Scottish study on drug consumption in pregnancy and on the relationship of such consumption to congenital abnormalities.

METHODOLOGY

The study sample consisted of 911 randomly selected mothers, two-thirds from a large city and one-third from a small town. None of the infants had significant congenital malformations. The double-check retrospective technique used involved obtaining information from all mothers studied through structured interviews with subjects; personal and written consultation with general practitioners; and examination of hospital records, physicians' records, and records of prescriptions supplied to patients. All substances used by patients, including drugs, vitamins, hormones, alcohol, and cigarettes were considered.

RESULTS

Drugs excluding iron were prescribed for 82 percent of the women during pregnancy, and the average number of drugs prescribed per woman was four. Sixty-five percent of the women took drugs as self-medication, with an average of 1.5 drugs per woman. The proportion of mothers taking different categories of drugs ranged from 1.2 percent to 82 percent. The mean duration of drug therapy ranged from 10 to 125 days.

Iron and vitamins are the most extensively used drugs in pregnancy. Of the drugs prescribed for medical purposes, analgesics rate twice as high as any other drug category: this means that an average of two in every three mothers take aspirin in full dosage for 6 weeks during pregnancy. Barbiturates are the second most widely used drug substance after aspirin. Antacids, diuretics, antiemetics, and drugs acting on the respiratory system come next, followed by the combined groups of antibiotics and sulfonamides, tranquilizers and hypnotics combined, antihistamines, and appetite suppressants. The cumulative total equates to every mother consuming one drug in normal daily dosage throughout 60 percent of her pregnancy.

Some drugs, such as certain vitamins, iron, analgesics, and barbiturates, are taken by many mothers over a large part of pregnancy, while others, such as dexamphetamine, are taken by only a few mothers over a large part of the pregnancy. Drugs such as sulfonamides and antihistamines are taken for comparatively short periods of time. Still other drugs, such as antiemetics and diuretics, are used in certain periods of pregnancy. These usages reflect clinical situations (e.g., control of morning sickness and treatment of headaches). In clinical terms, most of the drugs used are given empirically as symptomatic treatment rather than as specific therapy. The basis on which many of the drugs are used is questionable.

In estimating the adverse effects of particular drugs on the fetus, four things must be kept in mind: (1) little information is available about the effect of most drugs on the human fetus, (2) an association between the consumption of a drug during pregnancy and an adverse effect on the fetus does not necessarily imply causation, (3) the degree of risk has to be taken into account, and (4) clinical indications for the usage of a drug have to be considered.

Possibly harmful drugs in pregnancy are categorized as those with a teratogenic effect (influencing the embryo in the first 3 months of pregnancy) and those that affect the function of the fetus later in pregnancy. With the exception of powerful folic acid antagonists, such as aminopterin and methotrexate and the well-known case of thalidomide, most drugs present only a slight risk in the increase of teratogenicity. The risk of masculinization from synthetic progestogens and the risk of malformation from barbiturates, aspirin, phenytoin, dexamphetamine, iron, antacids, and nicotinamide have been reported for women who take these drugs early in pregnancy. A very delayed effect of diethylstilbestrol has been the occurrence of vaginal carcinoma in female offspring 20 years after their mothers had received the drug during pregnancy.

The drugs that influence the functioning of the fetus in the later part of pregnancy are numerous. Anesthetics, narcotics, and barbiturates in large quantities may depress the fetus so that respiration is not established. Heroin, morphine, or alcohol addiction of the mother may cause withdrawal symptoms after delivery of the infant. Diazepam has been linked with hypothermia in the infant; succinylcholine, with temporary ileus; reserpine, with nasal congestion and lethargy; the tetracyclines, with staining of the teeth; streptomycin, with hearing impairment; and thiazide diuretics, with platelet formation and thrombocytopenia. Anticoagulants such as warfarin may lead to fetal hemorrhage; diphenylhydantoin, to deficiency in coagulation factors; antithyroid drugs, to congenital goiter and hypothyroidism with mental defect; chlorpropamide, with respiratory distress syndrome; and cigarette smoking, with intrauterine growth retardation. The likelihood of occurrence of these and other complications from drug administration varies widely.

CONCLUSIONS

Drugs are used by an exceptionally high percentage of women during pregnancy, with analgesics and barbiturates the most common. Some drugs tend to be administered early, some late, and some throughout pregnancy, depending on the particular symptoms to be treated. Drugs may carry a risk of teratogenicity if administered early in pregnancy or may adversely affect fetal functioning or functioning of the newborn infant if administered late in pregnancy. The degree of risk and clinical indications for use should be considered in prescribing drugs to pregnant women.

Fried, P.A.; Watkinson, B.; Grant, A.; and Knights, R.M. Changing patterns of soft drug use prior to and during pregnancy: A prospective study. Drug and Alcohol Dependence, 6:323-343, 1980.

DRUG	Alcohol; tobacco; marijuana
SAMPLE SIZE	217
SAMPLE TYPE	Pregnant women
AGE	Young adults; mature adults (average: 29)
SEX	Female
ETHNICITY	White
GEOGRAPHICAL AREA	Ottawa, Ontario, Canada
METHODOLOGY	Longitudinal survey
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1978
NO. OF REFERENCES	36

PURPOSE

Several studies have shown that alcohol consumption and smoking during pregnancy are associated with various kinds of harm to the fetus. Although constituents of marijuana administered during pregnancy have been shown to result in reproductive risk and alterations in postnatal development and behavior in animals, studies with human subjects are virtually nonexistent.

Since 1978, a collaborative prospective research project has been underway involving the Department of Psychology of Carleton University and the Obstetric and Gynecology Department of the Ottawa Civic Hospital and the Ottawa General Hospital in Ontario, Canada. This project's main purpose is to use a prospective, multi-interview approach to investigate the effects of the use of social levels of alcohol, cigarettes, and marijuana during pregnancy on the behavior and development of the offspring. This report describes the procedures used to obtain a sample of pregnant women and establishes the extent and changing patterns of alcohol, nicotine, and marijuana use in the year before pregnancy and during each trimester of pregnancy. Some demographic characteristics of the users are also presented.

METHODOLOGY

Obstetric patients were informed of the study by the doctor, the receptionist, or through waiting room notices. Women wishing to take part phoned or mailed a stamped postcard to the researchers. A total of 217 women volunteered to participate. A series of interviews was conducted to obtain demographic data and information on drug use habits. Alcohol use was converted to average ounces of absolute alcohol consumed per day. Nicotine use was established by multiplying the daily number of cigarettes by the nicotine content of the brand smoked. Marijuana use was assessed by asking how many joints were smoked on average per week. If hashish use was reported, the number of joints was multiplied by five since hashish is estimated to contain five times as much tetrahydrocannabinol as marijuana. Information on the use of other drugs, both prescribed and nonprescribed, and on nutrition was also obtained.

Alcohol consumption was classified in four ways: (1) abstained, (2) light (a per-day average of less than 0.14 oz. of absolute alcohol), (3) moderate (an average of between 0.14 and 0.85 oz. per day), and (4) heavy (more than 0.85 oz. of absolute alcohol per day on the average). The nicotine use categories were nonsmokers, light smokers, and heavy smokers. Marijuana users included nonusers; light users, who smoked no more than one joint a week or were exposed to exhaled marijuana smoke; moderate users, who averaged between two and five joints per week; and heavy users, who smoked more than five joints per week.

RESULTS

Subjects' average age was 29 years. The average family income was $29,400, almost the same as the Ottawa average. A total of 93 percent had at least a high school diploma and 61 percent had continued their education beyond high school. Of the 196 women interviewed more than once, 37 percent changed their self-report of alcohol consumption during the study period, 8 percent changed nicotine categories, and 7 percent changed marijuana categories. Most of the inconsistencies concerned a reduced estimation of intake for a particular time period, especially the year before pregnancy.

Before pregnancy, 18 percent of the women were heavy social drinkers. During the first trimester of pregnancy this proportion was reduced by two-thirds and, in contrast to the other levels of social drinking, continued to decline during the last two trimesters. Age, income, education, and smoking were all positively associated with heavy social drinking.

Heavy cigarette smoking was reported by 13 percent of the women before and 8 percent during each of the trimesters. Education and income were negatively associated with heavy smoking.

A total of 3 percent of the women reported smoking more than five joints of marijuana per week before pregnancy, and most continued to smoke marijuana heavily during pregnancy. In contrast, over half of the 15 percent of the women who were light marijuana users before pregnancy become nonusers during pregnancy. The heavy marijuana users had a lower family income and less formal education than the overall sample. Marijuana use in general was associated with cigarette smoking and was not reported by women over 32 years of age.

Except for heavy social drinking, soft drug habits at all levels of usage remained essentially unchanged after the first trimester of pregnancy. The likelihood of any one specific soft drug being reduced once pregnancy was established did not vary as a function of the concomitant use of other soft drugs.

CONCLUSIONS

Although soft-drug use decreases with recognition of pregnancy among a predominantly middle class, well-educated urban sample of volunteer subjects, a significant minority of women continue to use one or a combination of the substances at levels that have been shown to affect the unborn. Heavy smoking, possibly heavy marijuana use, and binge drinking of wine and liquor among heavy social drinkers appear to be the prepregnancy soft-drug habits that are the least likely to change during pregnancy. Despite the known drawbacks of self-report studies, this study tried to obtain as valid a report as possible by using volunteer subjects, emphasizing confidentiality, having repeated interviews, and other measures. However, the data provide only a general estimate of soft-drug use.

Gaulden, E.C.; Littlefield, D.C.; Putoff, O.E.; and Seivert, A.L. Menstrual abnormalities associated with heroin addiction. American Journal of Obstetrics and Gynecology, 90(2): 155-160, 1964.

DRUG	Heroin; morphine; barbiturates; amphetamines
SAMPLE SIZE	74
SAMPLE TYPE	Addicts in treatment
AGE	Young adults; mature adults (range: 18-47; mean: 27.6)
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	California
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Questionnaire
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	51

PURPOSE

Research suggests that drugs, like electric current, affect pituitary-gonadal activity by exerting a primary influence on the hypothalamus or some other region of the central nervous system. The influences of numerous pharmacological agents on the release of pituitary ovulating hormone have been reported. In general, sympathomimetics appear to facilitate the release of gonadotropin, whereas the parasympathomimetics inhibit this process. There is direct evidence that morphine and tranquilizers interfere with ovulation in primates, including the human species. A number of studies suggest that morphine affects the hypothalamus.

Heroin is quantitatively similar to morphine in its pharmacology. However, the two drugs are structurally and chemically different. Heroin is more soluble than morphine both in water and in lipoid solvents, with the consequence that heroin is taken more rapidly from the peripheral deposits and crosses the blood-brain barrier. Its higher fat solubility may also account for the greater central nervous system potency and lesser somatic potency of heroin. Because of these findings regarding the action of heroin, the present study explores the effects of heroin on the menstrual cycles of female addicts, most of them former heroin users.

METHODOLOGY

The study sample consisted of 74 female residents of the California Rehabilitation Center. The mean age was 27.6 years, with a range between 18 and 47 years. The level of heroin consumption could not be quantified. Of the 74 addicts, 37 used other drugs secondarily during the period of their heroin addiction.

Women were interviewed using a structured questionnaire that elicited information on menstrual history as related to age of initial drug use, periods and frequency of drug use, and types of drugs used. A menstrual cycle length of 20 to 35 days was arbitrarily defined as normal.

RESULTS

Findings suggest that heroin in sufficiently large doses suppresses ovulation in women. The menstrual cycles of 63.9 percent (46) of the study subjects became abnormal while taking heroin; 45 became amenorrheic or experienced cycles of 35 days long or longer. After admission to treatment, the menses of 43 of the women with abnormal cycles returned to normal. Other factors, such as malnutrition and environmental stress, may play a role in modifying the menstrual cycle, but their effects cannot be adequately assessed.

Secondary drugs taken in addition to heroin may alter the effect of heroin addiction on the menstrual cycle. Barbiturates taken with heroin may enhance the interfering effect of heroin on the menstrual cycle, while amphetamines or marijuana may reduce this effect, resulting in a greater likelihood of normal menses. Amphetamines and marijuana may counteract the effects of heroin on the hypothalamus.

The high proportion of abnormal menses present as a result of heroin consumption indicates that this drug affects women in the same manner that morphine and other substances influence animals. It is probable that heroin acts as a carrier, exerting direct action on the central nervous system. Heroin is probably transported to the brain from the site of administration by the bloodstream. In the central nervous system, heroin and its products of hydrolysis depress impulses from the so-called "sexual centers" in the hypothalamus or block the transmission of impulses in the area between the basal tuberal region of the adenohypophysis and the median eminence of the hypothalamus. As a result of this action the neurohumoral substances that would normally arise from nerve endings in the median eminence of the hypothalamus are not discharged into the capillaries of the hypophyseal-portal circulation to be then carried into the sinusoids of the anterior pituitary gland. The presence of heroin and its metabolic products destroys or somehow blocks these neurohumoral substances, so that the anterior lobe of the adenohypophysis is not stimulated to secrete gonadotropic hormone, and a normal menstrual cycle with ovulation does not take place.

The specific cellular effects of morphine and heroin are not well understood, and as yet no clear-cut evidence links physical dependence to enzyme activity. However, the presence in the sample of seven women whose menstrual periods did not return to normal suggests development of a metabolic dependence of the neurons on morphine and related compounds, explaining in part the tendencies toward readdiction. The fact that the heroin addicts suffered prolonged amenorrhea may be an indication of a higher incidence of sterility among this group.

CONCLUSIONS

Heroin interferes with the normal menstrual cycle in women. If the mechanism is similar to that postulated in animals, heroin and its metabolic products block transmission of nervous impulses from the median eminence of the hypothalamus to the basal tuberal region of the hypophysis. This prevents a neurohumoral substance from reaching the adenohypophysis via the hypopnyseal-portal circulation. There is consequently no secretion of gonadotropic hormone and a normal menstrual cycle does not occur. This blocking action may be counteracted by adrenergic drugs such as the amphetamines and marijuana. Additional studies must determine how heroin interferes with the function of the neurons of the hypothalamus and whether this is a transient or permanent change.

Green, M.; Silverman, I.; Suffet, F.; Teleporos, E.; and Turkel, W.V. Outcomes of pregnancy for addicts receiving comprehensive care. American Journal of Drug and Alcohol Abuse, 6(4):413-429, 1979.

DRUG	Heroin; methadone
SAMPLE SIZE	105
SAMPLE TYPE	Pregnant addicts in treatment and their newborn offspring
AGE	Young adults; neonates
SEX	Female; infants: both
ETHNICITY	Black; white; Hispanic
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; correlational study
DATA COLLECTION INSTRUMENT	Hospital records; program/clinical statistics; Neonatal Narcotic Withdrawal Index
DATE(S) CONDUCTED	1975-1977
NO. OF REFERENCES	26

PURPOSE

Although many opiate-addicted women need maternal and child health services and face particular risks, only a handful of specialized programs provide comprehensive care with long-term continuity for these women. Pregnant addicts rarely sought prenatal care in the early years of the heroin problem, but this has increased in recent years.

This paper is based on the first 3 years of operation of the Pregnant Addicts and Addicted Mothers (PAAM) Program at New York Medical College in New York City. The study reports pregnancy outcomes for 105 addicted women enrolled in the program.

METHODOLOGY

The subjects included 105 addicts, each with 1 newborn offspring, who were given care and who gave birth between the program's start on February 1, 1975, and July 31, 1977. The subjects constituted all of the program's participants during that period except for two repeat deliveries and one delivery of twins. Participants were mostly indigent and were 49 percent black, 38 percent Hispanic, and 13 percent white. Most were in their twenties and were multiparas. Patients were seen at least every 2 weeks during the first 34 weeks of pregnancy and once weekly

thereafter. Both medical care and supportive services from social workers and counselors were provided. Methadone was prescribed for all the patients except the few who had detoxified just prior to admission.

Three classes of variables were examined: prenatal care, obstetrical outcomes, and neonatal outcomes. For obstetrical and neonatal outcomes, comparisons were made when possible to findings reported elsewhere on heroin-addicted, methadone-maintained, and drug-free populations. Zero-order correlations were developed for the prenatal care variables versus the neonatal outcomes. Stepwise regression analysis was used to examine the effect of prenatal care variables on neonatal outcomes.

RESULTS

Only 9 percent of the mothers made a first prenatal visit as early as 13 weeks of pregnancy or less, while 45 percent first sought care at 27 weeks or later. About half the women had eight or fewer prenatal visits; the rest had nine or more visits. The majority of the women received 20 mg or less of methadone daily.

High blood pressure was diagnosed in 13 percent of the women; abnormal fetal heart rates, in 12 percent of the cases; and meconium passage, in 10 percent of the cases. Complications of labor were observed in 30 percent of the cases and included four cases with hepatitis.

Prematurity occurred in 17 percent of cases, low birth weight in one-third of the babies, and withdrawal syndrome in 73 percent of the infants who were evaluated using the Neonatal Narcotic Withdrawal Index. There were 2 cases of congenital abnormality and 15 cases of meconium staining on the newborn's skin. Two premature infants died of hyaline membrane disease and one infant died of alpha streptococcal septicemia associated with kernicterus.

The mother's number of prenatal medical visits correlated significantly with the neonate's gestational age at birth and birth weight. The mother's methadone dose at delivery also correlated significantly with the neonate's withdrawal status. The duration of gestation at the first prenatal visit and the number of prenatal visits together accounted for 18.5 percent of the variance in birth weight and 26.9 percent of the variance in gestational age at birth, while the maternal methadone dose had virtually no effect on these outcome measures.

CONCLUSIONS

Comprehensive prenatal care has a beneficial effect on the outcome of addicted pregnancies. Most pregnancies and deliveries in the PAAM program could be defined as normal in that they were free from serious complications. Some neonatal outcomes were also improved over those reported for neonates of heroin-addicted mothers who received little prenatal care. The better neonatal outcomes were associated with the mother's joining the program relatively early in pregnancy and coming relatively often for prenatal care. With good prenatal care given early enough and often enough, the risks associated with pregnancy in opiate addicts can be demonstrably reduced.

Hargreaves, W.A.; Ling, W.; Brown, T.C.; Weinberg, J.A.; Landsberg, R.; and Harrison, W.L. Women on LAAM maintenance: Initial experiences. Journal of Psychedelic Drugs, 11(3):223-229, 1979.

DRUG	Methadyl acetate (levo-alpha-acetylmethadol or LAAM)
SAMPLE SIZE	13
SAMPLE TYPE	Women without childbearing potential
AGE	Young adults; mature adults (range: 25-48)
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Case study
DATA COLLECTION INSTRUMENT	Program/clinical statistics; medical/laboratory reports and examinations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	4

PURPOSE

Methadyl acetate, or levo-alpha-acetylmethadol (LAAM), is a methadone derivative that is being tested for use in maintenance of heroin addicts. LAAM has a longer duration of action than methadone, allowing many maintenance patients to be given LAAM only three times per week.

Early human trials indicate that LAAM is an effective maintenance drug that is as safe as methadone. However, women were excluded from these trials because adequate animal studies of LAAM's effect on the fetus had not been completed. The present study aimed to gain early experience with women on LAAM maintenance before the completion of animal studies regarding pregnancy. To accomplish this goal, women with no childbearing potential were recruited for the study.

METHODOLOGY

The 13 women taking part in the study were recruited at SAODAP-NIDA Phase II study sites. They participated voluntarily and signed statements of informed consent. All the women were diagnosed by a physician as incapable of bearing children and were free of severe medical or

psychological problems. They had all completed at least 1 month of methadone maintenance. Baseline and periodic medical and laboratory examinations were performed.

Subjects were transferred to maintenance on an initial LAAM dose that was equal to the previous daily dose of methadone. Doses were subsequently adjusted according to the physician's judgment. All LAAM was to be given on Monday, Wednesday, and Friday, and total LAAM dosage was not to exceed 300 mg per week. The study period lasted 40 weeks.

The individual case histories were reported for each woman, starting with those with more favorable outcomes.

RESULTS

One case involved a woman with chaotic behavior and a turbulent lifestyle who spent 7 years in the drug treatment program. Clinical staff agreed that the only period of relative stability in this 7 years was the time spent on LAAM. Another woman experienced initial dizziness and disorientation but soon felt that LAAM was preferable to methadone. A third case showed substantial social and psychological improvement while on LAAM, and one woman was terminated but expressed a wish to remain on LAAM. Another woman experienced withdrawal feelings but felt more stabilized on LAAM, and another also preferred LAAM in that it did not need to be taken daily. A seventh woman stayed on LAAM for the entire study period but never adjusted to it; she suffered severe headaches, nausea, extreme fatigue, and constipation during the entire study.

One woman consistently complained that LAAM was not effective over the weekend period and was returned to methadone maintenance after 27 weeks in the study. Another had alcohol problems that hampered her participation in the study, and one woman expressed numerous physical symptoms soon after being placed on LAAM and was returned to methadone. The other three cases were given LAAM for short periods only because of overdosing, underdosing, or anxiety problems.

CONCLUSIONS

The experience with this initial series of 13 women was generally similar to the initial experience in transfering men from methadone to LAAM. The six terminations involved reasons similar to the experience with males, except that overdosing complaints in men have not seemed so severe or have not required emergency treatment.

Controlled trials with many more women are needed before it can be concluded that LAAM's advantages and disadvantages are similar in women and men. The FDA's approval for inclusion of women with childbearing potential in a third phase of LAAM trials should permit collection of better information. In these trials, clinic staff or family members should observe patients closely in case the atypical overdosing pattern experienced by two of the women in this preliminary series is repeated.

Jhaveri, R.C.; Glass, L.; Evans, H.E.; Dube, S.K.; Rosenfeld, W.; Khan, F.; Salazar, J.D.; and Chandavasu, O. Effects of methadone on thyroid function in mother, fetus, and newborn. Pediatrics, 65(3):557-561, 1980.

DRUG	Methadone
SAMPLE SIZE	14 experimental pairs; 12 control pairs
SAMPLE TYPE	Pregnant addicts and nonaddicts and their offspring
AGE	Pregnant addicts: 17 to 31 (median: 25); pregnant nonaddicts: 19 to 31 (median: 27)
SEX	Female (mothers)
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Not specified
METHODOLOGY	Descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Human Thyroid Stimulating Hormone, Tetra-Tab, and Tri-Tab radioimmunoassay techniques
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	23

PURPOSE

Narcotics have been shown to affect thyroid metabolism in fetal, neonatal, and adult experimental animals. In addition, heroin and methadone influence thyroid function in nonpregnant adults, during both periods of drug use and periods of abstinence. The effects of these agents on thyroid functions of human fetuses and neonates exposed during pregnancy have not been studied, although certain signs of neonatal narcotic withdrawal syndrome are similar to symptoms of hyperthyroid states. The present study examines the effect of maternal use of methadone on maternal, fetal, and neonatal blood concentrations of thyrotropin (TSH), triiodothyronine (T_3), and thyroxine (T_4) in humans.

METHODOLOGY

The study sample consisted of 14 pregnant women who had been enrolled in methadone maintenance programs for at least 3 months, and their newborn infants. The mothers' age range was 17 to 31 years, with a median of 25 years. All received prenatal care, and their oral intake of methadone at delivery ranged from 20 to 80 mg, with a median of 40 mg. Infants' gestation ranged from 34 to 42 weeks, with a median of 40 weeks. Birth weights varied from 1.58 to 2.83 kg, with a median of 2.72 kg. Serum concentrations of TSH, T_3, and T_4 were measured on the

day of delivery in 14 cord blood samples, in 13 infants at 1 day of life, in 7 at both 2 and 3 days, and in 9 at 1 week. All 14 infants had at least mild signs of methadone withdrawal by age 48 hours, and specific drug therapy was required in 11 cases.

Twelve normal, nonaddicted women and their infants served as a control group. Maternal age ranged from 19 to 31 years, with a median of 27 years. Infants' birth weights were between 2.52 and 3.69 kg (median: 3.15 kg), and gestational ages were 36 to 42 weeks. Serum concentrations of TSH, T_3, and T_4 were measured in all 12 mothers and cord bloods; 7 infants at 1 day of life; and 6 at 2, 3, and 7 days of age.

TSH was measured by the Human Thyroid Stimulating Hormone radioimmunoassay technique. T_4 was measured by the Tetra-Tab technique, and T_3, by the Tri-Tab radioimmunoassay technique.

RESULTS

The control group of infants demonstrated the expected early postnatal surge of T_3 secretion, with serum concentrations leveling off by the second day of life. In contrast, this surge continued after the first day in the methadone group, paralleling the onset of withdrawal signs. TSH was not measured in the hours immediately after birth, and, therefore, the anticipated extremely high levels responsible for the increased T_3 concentration were not evaluated. T_4 levels, which normally increase in the days after birth, rose slightly in the control infants. However, a marked increase of T_4 accompanied withdrawal signs in the methadone group, parallel to that seen with T_3 levels. The control group of infants, with higher birth weights and gestational ages than the study infants, would be expected to have higher serum T_3 and T_4 concentrations than the latter group. The fact that the opposite occurred strengthens the contention that neonatal methadone withdrawal is associated with a biochemical hyperthyroid state.

CONCLUSIONS

There is no evidence that methadone in the dosage currently used for treatment of heroin addiction in pregnancy affects either maternal or fetal levels of TSH, T_3, or T_4. However, neonatal methadone withdrawal appears to be associated with a biochemical hyperthyroid state. Mechanisms responsible for the biochemical evidence of hyperthyroidism are unclear but may be related to altered autonomic function and/or increased metabolic activity that occurs during neonatal narcotic withdrawal. Although thyroid-binding globulin levels were not measured, it is unlikely that increased concentrations of this protein were responsible for the findings.

Of even greater importance than the short-term effects of narcotic exposure on thyroid function in the fetus and neonate are the long-term sequelae on anterior pituitary-mediated endocrine function. Long-term followup studies of these infants would be of interest.

Kandall, S.R.; Albin, S.; Gartner, L.M.; Lee, K.S.; Eidelman, A.; and Lowinson, J. The narcotic-dependent mother: Fetal and neonatal consequences. Early Human Development, 1(2):159-169, 1977.

DRUG	Heroin; methadone
SAMPLE SIZE	329
SAMPLE TYPE	Pregnant users and nonusers and their infants
AGE	Young adults; neonates
SEX	Female; infants: not specified
ETHNICITY	Black; white; Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Hospital records; program/clinical statistics
DATE(S) CONDUCTED	1971-1974
NO. OF REFERENCES	30

PURPOSE

Although the problem of narcotic abuse and addiction during pregnancy is receiving growing attention, few studies have tried to assess the comparative impact of different patterns of drug use on perinatal events.

This paper compares the fetal and neonatal outcomes for 230 infants born to drug-dependent women, 33 infants born to ex-addicts, and 66 infants selected as a control group. The infants were all born at the same New York City hospital.

METHODOLOGY

The data were collected at the Bronx Municipal Hospital Center, a teaching hospital of the Albert Einstein College of Medicine. Of the infants born there between 1971 and 1974, 230 were identified as having mothers with active legal or illicit drug histories. The mothers included 66 heroin users, 61 heroin and methadone users, 89 methadone users, and 14 users of a variety of drugs. Another 33 infants were born during this period to mothers with past histories of drug abuse but who were felt to be drug free during the current pregnancy. The control group of 66 newborns was generated by identifying the next baby born following the delivery of an infant

assigned to the heroin group. These infants were not exposed to maternal narcotics but were otherwise unselected and assumed to be representative of the hospital's total neonatal population. Blacks and Puerto Ricans were overrepresented in the heroin and heroin-methadone group, while whites were overrepresented in the methadone group.

Data were analyzed using the chi-square test. Subjects covered included prenatal care received, fetal growth and development, the neonatal period, withdrawal symptoms, perinatal mortality, and the disposition of surviving infants. All groups but the multidrug users were compared with one another.

RESULTS

The women using licit or illicit drugs received less prenatal care than the control group, while those in methadone maintenance programs were more likely to receive consistent prenatal attention than women using illicit drugs. Former drug users received less prenatal care than the control group.

Birth weights did not differ significantly among the drug groups. The infants in the control group had higher mean birth weights than infants in either the combined drug groups, methadone group, or ex-addict group. The intrauterine growth retardation of infants of former heroin addicts who were free of narcotic use during pregnancy was of special note. The drug groups had shorter gestations than the control group, but maternal methadone treatment was associated with longer gestations than heroin and heroin-methadone usage. The incidence of recognizable abnormalities was not significant across groups. One infant in the heroin group and another in the methadone group had Down's syndrome, while one infant in each of the heroin, heroin-methadone, and ex-addict groups had isolated microcephaly. The mortality rates showed no statistically significant differences between groups.

Meconium staining of amniotic fluid was increased in the heroin and heroin-methadone groups. However, this problem was not associated with an increase in meconium aspiration or a reduction in Apgar scores.

Neonatal withdrawal from methadone appeared to be more severe than that from heroin, adjudged by the amount of medication required to control the symptoms and the duration of the treatment. In all the groups, central nervous system signs were the most common indications of withdrawal. The severity of withdrawal did not correlate with the maternal methadone dosage during late pregnancy. Neonatal seizures occurred in 1.5 percent of the heroin group and 10 percent of the methadone group. Convulsive activity occurred more frequently with diazepam than with camphorated tincture of opium, which was used to treat initial withdrawal symptoms.

The discharge of an infant to a parent rather than to an alternate caretaker was more likely if the mother was enrolled in a methadone treatment program. Ex-addicts were also more likely than active drug users to retain custody of their infants.

CONCLUSIONS

While enrollment of heroin addicts in methadone treatment programs is increasing, varied patterns of drug use among treatment patients still exist. Accurate identification of drugs throughout pregnancy and monitoring of serum drug levels in the future should help to clarify the effects attributed to a single addictive agent. While fetal growth retardation has long been associated with maternal heroin use, it is also associated with heroin-methadone use and former narcotic addiction despite abstinence during the current pregnancy.

The overrepresentation of whites in the methadone group suggests that blacks and Puerto Ricans were less likely than others in this population to seek enrollment in a methadone maintenance program. Treatment programs should encourage and assure prenatal clinic attendance for their patients, since 15 percent of the methadone maintenance group received no prenatal medical care. In the post partum period, parental rooming-in and/or early discharge of the infant with frequent clinic visits, home visits, or daily telephone contact should be considered to promote mother-infant attachment.

Methadone maintenance programs appear to offer significant therapeutic benefits to pregnant heroin addicts if achievement of the drug-free state is not considered feasible. However, close liaison with a perinatal center is essential to permit optimal care for the drug-dependent mother and her newborn infant.

Kantor, G.K. Addicted mother, addicted baby--a challenge to health care providers. The American Journal of Maternal Child Nursing, 3(5):281-289, 1978.

DRUG	Narcotics
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicted mothers and their infants
AGE	Not applicable
SEX	Female; infants: both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Theoretical/critical review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	34

PURPOSE

The need to explore the problems of the pregnant addict and the addicted mother is more urgent than ever since narcotic addiction, drug abuse, and methadone dependence among pregnant women have risen rapidly in the last 10 years.

Often an addict will be motivated to seek out a methadone maintenance program on discovering that she is pregnant. By obtaining prenatal care, the pregnant addict reduces the risk of maternal and related fetal medical complications. However, the infant of the methadone-maintained mother will still likely suffer the discomfort of withdrawal, and the infant-mother relationship will be negatively affected by the hyperirritability of the neonate. The present study provides insight into the characteristics of the addicted mother and her infant, as well as into possible interventions for both.

SUMMARY

The addicted mother. To addicted mothers, infants may represent a renewal or rebirth, symbolizing the hope that this new life will provide the impetus to the woman to make constructive changes in her own life. The baby is also an affirmation of the mother's femininity and fertility.

However, whether pregnancy really has a maturing, socializing influence on addicts is open to debate.

The addicted mother's capacity to provide a stimulating atmosphere of nurturance for her infant is severely limited. Addiction itself is a symptom of a larger personality maladjustment. Addiction fills needs for escape and gratification and becomes an all-consuming lifestyle. Addicts are described as desiring to be free of responsibility for their actions, as hedonistic and psychopathic, as unable to control impulses and postpone gratification, and as low in self-esteem, chronically anxious, frequently depressed, and unable to sustain close interpersonal relationships. Addicts frequently come from disrupted families with immature mothers and remote fathers, and females may have been sexually abused by a male relative.

The female addict is thus likely to have severe problems adjusting to the task of childrearing. The child of the addict is in particular danger of being abused. Instead of providing the love and comfort the insecure parent craves, the babies of addicts tend to be troubled by medical problems and demanding of the parent. Whether drug abuse and child abuse actually do go hand in hand is not certain, but reports from the New York City Medical Examiner's office state that 80 percent of fatal child abuse cases occur in families with at least one addicted parent. In the opinion of some experts, addicts do not alter their lifestyles to accommodate a child and are incapable of making responsible decisions concerning children. Special programs are therefore needed to transmit mothering attitudes to addicts who are becoming drug free.

Efforts toward helping the drug-addicted mother should begin early in pregnancy with enrollment of the addict in a program providing low-dose methadone maintenance and strong psychosocial support. Support should include individual and marital counseling, prenatal classes, collaboration with hospital staff and financial aid personnel, and transportation arrangements. Involving other members of the addict's family in her rehabilitation is especially desirable. Nurses in the prenatal clinic and nurses involved in labor and delivery should be aware of the addict's hostility and distrust of authority figures and should attempt to form positive relationships with addicts.

As part of admission, the patient must be asked about her drug habit and about her most recent doses. Nursing priorities in post partum care are to reassure the mother about the infant's condition, enhance mother-infant bonding, and assess the quality of mother-infant interaction. These functions are especially important as predictive parameters in determining the amount of followup care needed and in influencing custody decisions.

The addicted baby. The passively addicted neonate begins life as an unwilling victim of the mother's drug abuse. Recent studies using Brazelton's Neonatal Behavioral Assessment Scale reveal that addicted infants show significantly depressed visual orientation and response following, but pronounced responsiveness to, auditory stimuli. Addicted infants are less alert and more irritable, have greater muscle tone, and are much more labile than nonaddicted babies. They alternate between hyperactivity and lethargy and are difficult to console. They are also characterized by small size and central nervous system irritability, as well as tremors, sleep disturbances, and abnormalities in crying pitch and quality. Other clinical signs in infants are excessive sucking, vomiting, and diarrhea.

Symptoms of withdrawal may vary widely in severity, and symptoms may occur from the time of delivery to 6 weeks after delivery. Causes affecting the time of onset may be related to maternal use of multiple drugs with different excretion rates or to differences in fetal accumulation of the drug.

The number of careful longitudinal studies of these high-risk infants is limited. However, findings to date suggest that children of addicts are more likely than other children to develop various kinds of problem behavior. This is especially true of children who have had multiple caretakers because of parents' drug habits. Problems include eating and elimination disturbances, sleep disturbances, poorly organized behavior, developmental lags in speech, temper tantrums, lack of impulse control, and relationship problems. Cases of hyperactivity and sudden infant death syndrome have also been reported.

Intervention to assist the infant should start with encouragement of mother-infant bonding and limited separations, even if the infant is suffering from withdrawal. Nurses should assure the mother that withdrawal symptoms are temporary and should explain the infant's need for sucking. Instruction of the mother in the use of pacifiers and soothing behavior techniques, such as positioning, swaddling, rocking, and soft talking, is essential. Support, encouragement, and

teaching are necessary to increase the addicted mother's self-esteem. Frequent followup and home visits by an ex-addict counselor, social worker, or public health nurse are essential to the well-being of both mother and infant.

CONCLUSIONS

Female drug addicts who become pregnant require special counseling and support services to deal with the difficult tasks of childrearing. Frequently, their disrupted home lives and drug-using lifestyle have left them ill-prepared for mothering. Their infants frequently display withdrawal symptoms, which further impede mother-infant bonding and may contribute to the vicious cycle of addiction and child neglect. Nursing intervention to encourage the addict and to develop the addict's mothering skills and understanding of the infant's behavior is recommended.

Kreek, M.J. The role of qualitative analysis of drugs and their metabolites in maternal-neonatal studies. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977. Pp. 67-73.

DRUG	Diazepam; barbiturates; narcotics
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant women and their infants
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review; case study
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	31

PURPOSE

Goals to aim for regarding pregnant drug users include the cessation of illicit drug use, good prenatal care, a healthy mother and child, and a suitable environment for the care of the baby. Proper studies of pregnant drug users and their infants are urgently needed to clarify the relative roles played by narcotic drugs and by polydrug use and abuse, alcohol abuse, smoking, chronic diseases, and altered nutritional states. Numerous laboratory analytical techniques are available for the qualitative analysis of drugs and their metabolites in biologic fluids.

The research focus should be on the problems of drug use and abuse by society as a whole rather than solely on users of street drugs. This report reviews research on two commonly used drugs--diazepam and barbiturates--and narcotics, in terms of their effect on the feto-placental unit. A case study of a woman on methadone who also took barbiturates is reported as well.

SUMMARY

Morphine, dihydromorphine, and methadone cross rats' placentas and penetrate the fetal brain more readily than the maternal brain. However, penetration of the brain by narcotics diminishes with age after birth. Morphine and methadone cross the human placenta and are found in the

amniotic fluid, umbilical cord blood, and neonatal urine. The effects of the mother's altered hormonal state on the metabolism of narcotics in pregnancy are unknown, as are the roles of the human placenta, the fetal liver, and other drugs.

Diazepam transfers across the placenta both in early and late pregnancy and accumulates in fetal tissues in high concentrations. After chronic treatment of the pregnant mother in low to medium doses, concentrations of diazepam and its active metabolites in the infant's plasma are high enough for pharmacologic action for at least 8 to 10 days after birth. The acute administration of diazepam during labor and delivery during the 15 hours just before birth may also result in prolonged pharmacologically active concentrations and clinical action in the newborn, although acute doses under 30 mg have shown no significant adverse effect on the infant's clinical state.

Similarly, barbiturates have been shown to cause numerous perinatal symptoms in the infants born of mothers receiving chronic treatment. Symptoms included restlessness, irritability, sleeplessness, and occasionally convulsions. Symptoms appeared at birth in some cases and 4 to 7 days after birth in others.

None of these kinds of studies has been carried out in pregnant women maintained on methadone or in other treatment for heroin addiction. However, methadone is known to be widely distributed throughout the body after oral ingestion, so that less than 6 percent is in the total blood volume at the time of peak plasma levels. The creation of nonspecific reservoirs of methadone in the body contributes to its long duration of action. Peak plasma levels occur between 2 and 6 hours after the oral dose, with plasma concentrations usually less than one microgram per milliliter. Lower doses are present during the rest of a 24-hour interval between doses.

In one patient who had been maintained on 110 mg of methadone per day during much of her pregnancy, the dose was dropped precipitously from 110 mg to 9 mg in 37 days before delivery. Nevertheless, at delivery, the amniotic fluid concentration of methadone was similar to that for a patient receiving 100 mg per day. In addition, the newborn's urine had a methadone concentration similar to that of an adult patient receiving 30 to 50 mg of methadone per day. The pyrrolidine metabolite was found in both amniotic fluid and neonatal urine, indicating metabolism of methadone in the mother and/or the placenta and fetal liver. When the patient's methadone dose was raised to 50 mg per day in the post partum period, concentrations in the breast milk were extremely low. The signs and symptoms that developed in the baby during the post partum period may have come from the barbiturates the mother was taking in the immediate prepartum period rather than from the methadone alone.

CONCLUSIONS

The usual recommendation that methadone maintenance patients not breastfeed their babies is questionable, especially in view of nursing's potential importance to mothering. History taking, physical examinations, counseling discussions, and routine urine monitoring should be carried out in all pregnant mothers who are narcotic addicts and who are in treatment for addiction, as well as in their babies. Prescribing multiple drugs for pregnant women should also be avoided because of the lack of knowledge about drug interactions. Narcotics rather than sedatives or tranquilizers can be used to treat narcotic withdrawal symptoms if detoxification or dose reduction of methadone is attempted. Professionals should also remember that inadequate medical care or lack of pharmacologic management of addiction will result in the addict's return to the streets to seek her own solutions to the problem.

Kreek, M.J.; Schecter, A.; Gutjahr, C.L.; Bowen, D.; Field, F.; Queenan, J.; and Merkatz, I. Analyses of methadone and other drugs in maternal and neonatal body fluids: Use in evaluation of symptoms in a neonate of mother maintained on methadone. American Journal of Drug and Alcohol Abuse, 1(3):409-419, 1974.

DRUG	Methadone
SAMPLE SIZE	2
SAMPLE TYPE	Mother in treatment and her newborn
AGE	Mother: 28; neonate
SEX	Female
ETHNICITY	White
GEOGRAPHICAL AREA	Louisville, Kentucky
METHODOLOGY	Case study
DATA COLLECTION INSTRUMENT	Gas chromatography; mass spectroscopy
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	18

PURPOSE

The possible effects of methadone delivered transplacentally to neonates born of mothers on methadone maintenance treatment is a current topic of great concern. Several studies do not detect any severe symptoms in neonates attributable to methadone itself, but no analysis of neonatal urine post partum or urine analysis of the mother during and after pregnancies is included in these reports. The present study measures, using gas-liquid chromatography, methadone levels in amniotic fluid, cord blood, neonatal plasma, neonatal urine, and maternal plasma and milk post partum for one patient and her child.

METHODOLOGY

The subject was a 28-year-old former heroin addict undergoing methadone treatment throughout pregnancy with rapid dose reduction from 110 to 9 mg during the last 5 weeks prepartum. The mother was returned to methadone on the second post partum day (27.5 mg) and each day thereafter (50 mg). The infant was normal except for an apparently unrelated infection. At 4 hours old, the infant began to show signs of withdrawal and was placed on gradually decreasing phenobarbital doses for 25 days.

Various body fluids were analyzed: mixed cord blood, amniotic fluid, neonatal plasma (24 hours after delivery), neonatal urine (the first urine passed after delivery), maternal plasma (post partum days 1 through 8), and colostrum and milk (post partum days 4 through 8). Plasma, urine, amniotic fluid, and milk levels of methadone and its major pyrrolidine metabolites were determined by gas-liquid chromatography. Qualitative analysis of methadone and two of its metabolites in amniotic fluid were made using mass spectroscopy with electron impact and chemical ionization techniques. The amniotic fluid and urine of the neonate were also examined for other drugs by thin-layer chromatography.

RESULTS

Low levels of methadone were present in amniotic fluid and neonatal urine but not in cord blood. Pentobarbital was unexpectedly found in the amniotic fluid but not in the neonatal urine. The presence of possible sepsis and the unexpected finding of pentobarbital in the amniotic fluid make the symptoms attributed to withdrawal from methadone in this infant difficult to interpret.

Methadone was also present in the mother's milk. Using the peak levels of methadone in breast milk observed as the constant level in milk, one can surmise that a neonate might ingest up to 0.057 mg/day during the first 5 weeks of life. It is unlikely that any adverse clinical effect would result from ingestion of such quantities of methadone daily in breast milk, since the neonates have already been exposed in utero to the drug, as is documented by analysis of amniotic fluid and urine. The peak levels of methadone can easily be avoided by giving the mother her daily dose of methadone after she has fed the infant and giving the neonate a milk supplement for the next feeding only.

CONCLUSIONS

Significant but low levels of methadone can be expected in amniotic fluid and neonatal urine but not in cord blood or neonatal plasma in children of mothers maintained on low doses of methadone after rapid decreases in dose. Low levels of methadone are present in breast milk of mothers after resuming moderate-dose methadone maintenance. An aggressive search must be made for other drugs used by the mother and for other complicating factors, such as neonatal infections, to avoid incorrectly ascribing symptoms of newborns to withdrawal from methadone. Further studies must correlate methadone levels in maternal and neonatal fluids of patients on stable and decreasing maintenance doses to the clinical status of the newborn.

Martin, C.A., and Martin, W.R. Opiate dependence in women. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 465-485.

DRUG	Opiates
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicted females and their offspring
AGE	Not applicable
SEX	Female; neonates: both
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Cross-sectional
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	100

PURPOSE

Researchers have paid little attention to opiate addiction and dependence in women, partly because women constitute a minority of the addict population. However, the total number of female addicts in the United States is probably greater than 100,000. The lack of hard data has meant that many important aspects of narcotic addiction in women remain obscure, although many existing data on analgesics in humans and narcotics in animals suggest that narcotics have similar actions in females and males.

Among issues that need special consideration with respect to both female addiction and male-female differences are the discrepancies in the incidence of drug abuse between males and females and the persisting biological changes in users and in their offspring. This literature review focuses on epidemiological and demographic data; findings regarding personality and antisocial behavior; the effects of narcotics on pituitary function and hormones; the effects of narcotics on the reproductive system and pregnancy; teratogenicity, congenital defects, and protracted changes; and the diagnosis and treatment of the narcotic-dependent female and neonate.

SUMMARY

Epidemiology and demography. Narcotic addiction is less prevalent in women than in men, although the reverse was true prior to the passage of the Harrison Narcotics Act in 1914. It is still generally held that the relatively low abuse rate of narcotics among women is culturally determined, although a biological base cannot be excluded.

Personality and antisocial behavior. The personality characteristics of many female addicts are similar to those of male addicts in most respects. Females exhibit sociopathic behavior and may well have antisocial personalities. The prevalence of antisocial behavior among females and female addicts appears to be less than among males. As a group, female addicts appear to be somewhat more neurotic and somewhat less psychopathic than male addicts.

One useful framework for comparing male and female narcotic addicts is the "Diagnostic Criteria for Antisocial Personality Disorders" derived by Woodruff et al. (1974). According to studies employing five of these criteria, male addicts were arrested more often than females both before and after addiction, were employed more often than female addicts, and had been married less often. In addition, female addicts often resorted to prostitution for support and exhibited more homosexuality and frigidity than the general female population.

Effects of narcotics on pituitary function. Most of the reports of effects of narcotics on endocrine function in females have been about animals. Pang et al. (1974) found that low doses of morphine increased plasma levels of luteinizing hormone (LH) in female rats, while higher doses decreased plasma levels. Tolerance developed to morphine's depressant effect on serum LH levels in male rats when the drug was administered chronically by pellet implantation technique (Cicero et al. 1977). Other studies of female rats have found that single doses of morphine inhibited ovulation. Similar studies have indicated that single doses of morphine may depress adrenal function in men and women.

Effects of narcotics on the reproductive system, pregnancy, and the neonate. Single doses of narcotics have a profound effect on endocrine function, although the long-term effect of these changes is unknown. The effects of the chronic use of narcotics, either on the street or in maintenance therapy, are not well understood. Some data indicate that with chronic administration of narcotics, partial tolerance develops to their effects on endocrine function. Although many female addicts believe that heroin causes infertility and cessation of menstruation when taken in large doses for prolonged periods, females on narcotics can become pregnant. Male addicts can also be potent. The existing data indicate that chronic narcotic use itself probably does not markedly affect pregnancy in terms of complications. The effects of narcotics, if they exist, are probably small compared with the impact of self-neglect and poor medical care received by pregnant addicts, who seek care relatively infrequently.

Narcotics readily cross the placenta, and the chronic use of narcotics by the mother thus makes the fetus drug dependent. Physical findings, a psychiatric history, and laboratory tests are helpful in diagnosing maternal narcotic dependence. Signs of narcotic withdrawal in newborns include irritability, hypertonicity, hyperactivity, tremor, the excessive need to suck, excessive crying, and many others. The majority of newborns show withdrawal signs within the first 24 hours of life. Reports comparing withdrawal syndromes in infants born to heroin addicts with those of methadone addicts have produced conflicting conclusions regarding the severity of withdrawal symptoms. Subacute withdrawal symptoms, which include restlessness, irritability, and other characteristics, have also been reported during the first 3 to 6 months after birth.

Diagnosis and treatment of addict and neonate. A number of signs, such as needle tracks, phlebitis, ulcers, and constricted pupils, may lead the clinician to suspect narcotic dependence in the addict. Further, many addicts may have pathological liver function tests, hepatitis, or exhibit sociopathic behavior. Signs of acute abstinence in adults include yawning, lacrimation, rhinorrhea, sweating, restlessness, twitching of muscles, and others. The earliest symptoms of abstinence are feelings of weakness and restlessness.

Treatment of the dependent addict post partum and the neonate should include relief of maternal signs of abstinence and the institution of maintenance therapy. Controversy exists over whether mothers being maintained on methadone should be encouraged to breastfeed, since the drug has been found in breast milk. While the long-term effects of maternal chronic narcotic use on the development of the infant and child have not been adequately studied, studies in mice and rats suggest that chronic narcotic dependence can affect infant maturation.

CONCLUSIONS

Research to determine the relative importance of social and biological factors in drug abuse might give insight into the etiology of drug abuse. Efforts should be made to diagnose maternal narcotic dependence, using both clinical judgment and laboratory data. Further study is also needed on the long-term effects of maternal chronic narcotic use on the development of the infant and child.

Newman, R.G.; Bashkow, S.; and Calko, D. Results of 313 consecutive live births of infants delivered to patients in the New York City methadone maintenance treatment program. American Journal of Obstetrics and Gynecology, 121(2):233-237, 1975.

DRUG	Methadone; heroin
SAMPLE SIZE	313
SAMPLE TYPE	Former heroin addicts in treatment and their infants
AGE	Young adults; mature adults (range: 18-42; average: 25)
SEX	Female
ETHNICITY	White; black; Puerto Rican
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Hospital records/clinical statistics
DATE(S) CONDUCTED	November 1970 to June 1973
NO. OF REFERENCES	15

PURPOSE

The effects of drug addiction on pregnant women and their offspring have recently received considerable attention in the professional and public media. Special interest has been focused on babies born to former heroin addicts under treatment in methadone maintenance programs, perhaps in part reflecting the underlying controversy surrounding the chemotherapeutic approach to narcotic addiction. To ascertain the effects on neonates of methadone maintenance during pregnancy, data on a group of babies born to methadone-maintained mothers in a New York treatment program are reported.

METHODOLOGY

The sample consisted of 313 babies born live to women enrolled in the New York City Methadone Maintenance Treatment Program from its inception in November 1970 to the end of June 1973. The clinic provided a broad range of medical and social supportive services. Pregnant patients were generally stabilized at 40 to 50 mg of methadone a day. Detoxification or lowered doses before delivery were not required.

The ages of these women ranged from 18 to 42 years (average: 25 years). A total of 26 percent of the mothers were white, 24 percent were Puerto Rican, and 50 percent were black. For 38 percent of the mothers this was the first birth; for 28 percent, the second; and for 34 percent, the third delivery or more. A total of 56 percent of the women entered treatment prior to or during the first trimester of pregnancy, 23 percent during the second trimester, and 21 percent during the last trimester. Over 80 percent of the patients in the study obtained prenatal care, whereas it has been reported that only 30 percent of heroin addicts receive such care.

RESULTS

A total of 93 percent of the babies were delivered after a reported gestation of 8 or 9 months. Length of gestation was not associated with either maternal dosage of methadone or with trimester of pregnancy at admission. The average birth weight of the 313 babies was 2,738 g; 110 babies, or 35 percent, weighed less than 2,500 g. White babies had the highest mean weight; black babies, the lowest; and Puerto Rican babies were intermediate. Of 291 babies with Apgar scores recorded, 62 percent had scores of 8 to 10 at 1 minute, and 90 percent, at 5 minutes.

Of the sample neonates, 80 percent were reported to have experienced some degree of withdrawal symptoms. There was no consistent association of withdrawal symptoms with trimester of admission to the program. The incidence of symptoms varied from 71 percent among babies born to mothers maintained at less than 40 mg of methadone daily during the last trimester of pregnancy to 85 percent for mothers receiving 110 mg or more daily. A similar trend was observed in the relationship of maternal dosage in the last 2 weeks of pregnancy to the incidence of withdrawal symptoms. However, neither trend over the whole range was statistically significant. Limitations on the reliability of the reported incidence of methadone withdrawal are the result of the lack of well-defined withdrawal criteria and of the simultaneous use of several drugs by addicted mothers. A total of 7 infants of the sample died, a rate of 21 per 1,000, the same as the New York City infant mortality rate, adjusted for ethnicity.

The retention rate of mothers in the program 1 to 19 months after delivery was 86 percent.

CONCLUSIONS

No consistent association was found between methadone dosage in the last trimester of pregnancy and birth weight or length of gestation. The incidence of prematurity was considerably lower than has been reported among heroin and morphine addicts. The incidence of reported neonatal withdrawal symptoms was 80 percent, similar to that of several large series of babies of heroin and morphine addicts. The proportion of patients who received prenatal care was similar to that among the general population and markedly higher than has been reported among heroin addicts. The infant mortality rate did not differ from the overall experience for New York City.

Ostrea, E.M., Jr., and Chavez, C.J. Perinatal problems (excluding neonatal withdrawal) in maternal drug addiction: A study of 830 cases. The Journal of Pediatrics, 94(2):292-295, 1979.

DRUG	Multidrug
SAMPLE SIZE	830 experimental pairs; 400 control pairs
SAMPLE TYPE	Addicted mothers and their infants
AGE	Not specified
SEX	Female (mothers)
ETHNICITY	Black; white
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Descriptive study
DATA COLLECTION INSTRUMENT	Hospital records; laboratory reports/examinations
DATE(S) CONDUCTED	1973 to 1976
NO. OF REFERENCES	6

PURPOSE

The fetus of a drug-dependent woman is at risk of a number of problems during the perinatal period other than the neonatal withdrawal syndrome. This study examines these additional problems.

METHODOLOGY

The study sample consisted of 830 drug-dependent mothers (90 percent black) and their infants, who were born at Hutzel Hospital in Detroit from 1973 to 1976. Of these women, 69 percent were clinic patients who used methadone and heroin during pregnancy, and 31 percent were nonclinic patients who were on heroin. In both groups the use of other drugs was common. The obstetrical history of the mother and the postnatal course of the infant were reviewed. For comparison, a group of 400 non-drug-dependent mothers and their infants was used; 86 percent of this group were black.

RESULTS

The most frequent complications in pregnant addicts were meconium-stained amniotic fluid, anemia, and premature rupture of the membranes. Infection rates were not higher in drug addicts than controls, but the prevalence of gonorrhea and syphilis in addicts (57 percent) surpassed that in controls (39 percent). Cesarean sections because of fetal distress were also more common in addicts than in controls. The rate of toxemia was slightly lower in pregnant drug addicts than in controls.

Infant problems after birth for the drug-addicted group included low birth weight, prematurity, small size for gestational age, and low Apgar scores, as well as jaundice, aspiration pneumonia, transient tachypnea, hyaline membrane disease, and congenital malformations. A total of 22 infants of drug-dependent mothers died (2.7 percent) as compared to 1 percent in the control group. Causes of death in the drug-dependent group were immaturity with primary pulmonary atelectasis (three), prematurity with severe hyaline membrane disease (nine), severe meconium aspiration (five), and congenital malformations (five). No deaths occurred secondary to narcotic withdrawal.

Antenatally, asphyxia is probably the greatest risk to the infant and is most likely induced by maternal withdrawal from drugs. The increased incidence of aspiration pneumonia and hyaline membrane disease is most likely related to the predisposition of infants of drug-dependent mothers. In general, the factors that cause a fetus to be small for gestational age are probably more important determinants of the risk of the infant to develop hyaline membrane disease than is the direct action of narcotics. Also, the high incidence of prematurity may be responsible for the high incidence of jaundice. However, the nature of the relationship between narcotics and drug-induced malformation has not yet been clearly defined.

CONCLUSIONS

Besides neonatal withdrawal syndrome, the fetus or infant of a drug-dependent woman is predisposed to a number of problems during the perinatal period. Intrauterine asphyxia, prematurity, aspiration pneumonia, and hyaline membrane disease are by far the most important problems because they account for the increased mortality in this group of infants.

Perlin, M.J., and Simon, K.J. The epidemiology of drug use during pregnancy. The International Journal of the Addictions, 14(3):355-364, 1979.

DRUG	General
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Pregnant women
AGE	Not applicable
SEX	Female
ETHNICITY	Not applicable
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not applicable
NO. OF REFERENCES	17

PURPOSE

American society has developed a philosophy of living that includes the avoidance of daily stresses and has popularized the expectation that every complaint can be remedied with a pill. This attitude extends to the use of drugs during pregnancy and for labor and delivery. Influencing the popular notion that the use of drugs to treat minor disturbances is necessary has been the general overprescribing of drugs by physicians. Moreover, in a study of high school students' attitudes toward labor and delivery, findings suggest that students' expressed desire for a "medicated delivery" may be related to the conditioned fear of pain and may represent socially acceptable behavior.

This article suggests that drug-taking behaviors related to pregnancy are socially conditioned patterns and are subject to reeducation. It reviews the literature on the prevalence of drug use during pregnancy and on the fetal risk associated with maternal drug consumption. Also presented are recommendations by the Consumer's Union on the use of medicines during pregnancy.

SUMMARY

Several studies indicate that prescribed and self-administered drug use is relatively common among pregnant women. For example, a study of 240 women observed until delivery revealed that drug exposures were not only common but frequently multiple. This use appears to be the result of social conditioning based on misinformation.

While the exact influence of specific drugs on developing humans remains unclear, drugs that cross the placental barrier have been implicated in a wide range of fetal abnormalities and neonatal iatrogenic diseases. Compounds with molecular weights below 600 readily permeate the placenta, and most therapeutically active agents have molecular weights between 250 and 400. Investigators accept as a working hypothesis that all drugs are potentially embryotoxic under suitable conditions of dosage, developmental stage, and species selection.

Detecting risk factors of teratogenic effects of a specific drug is difficult because mothers frequently cannot remember which drugs they used and because the period of greatest danger to the fetus falls before the woman even knows that she is pregnant.

Given the dangers of fetal abnormalities from maternal use of medicines, the Consumer's Union recommends that no drugs be taken during pregnancy unless there is a specific medical need. When the need exists, the drug should be taken in the amounts and at the time specified. Patients should always inform doctors prescribing drugs of potential pregnancies. During pregnancy, over-the-counter remedies, including aspirin, should be used with moderation. The term "drugs" should be interpreted broadly to include everything from hormone ointments to rectal suppositories and medicated nose drops. Use of all self-prescribed medications should be discontinued within a few days after an expected menstrual period fails to occur. Mothers who breastfeed their infants should continue to be prudent in their drug use patterns until weaning time. Physicians should exercise restraint in prescribing medications and should weigh the medical benefits of any drug against the potential hazards.

CONCLUSIONS

Evidence indicates that licit drug use is common among pregnant women. All drugs are potentially toxic to the fetus under suitable conditions, and a number of therapeutic drugs have been implicated in fetal abnormalities. Thus, great caution in the use of drugs by pregnant women is recommended. Scrutiny of socially conditioned drug use practices is also advised.

Santen, R.J.; Sofsky, J.; Bilic, N.; and Lippert, R. Mechanism of action of narcotics in the production of menstrual dysfunction in women. Fertility and Sterility, 26(6):538-548, 1975.

DRUG	Methadone; heroin
SAMPLE SIZE	7
SAMPLE TYPE	Patients in methadone maintenance clinics
AGE	Young adults (range: 21-26)
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Pennsylvania
METHODOLOGY	Longitudinal survey; descriptive study
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations; interviews
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	24

PURPOSE

The central nervous system, the pituitary, and the ovaries all play a role in the regulation of ovulation, as well as in the cyclic release of luteinizing hormone (LH), follicle-stimulating hormone (FSH), and ovarian steroids. In many rodent species, morphine can interrupt the cyclical activity of these systems. Similarly, chronic addiction to heroin or methadone is associated with amenorrhea and other menstrual disorders in women. While rodent studies indicate that morphine blocks ovulation through its action on the central nervous system, no human studies on this topic exist.

This study examined 7 women from a group of 76 heroin addicts attending methadone maintenance clinics in order to establish the site of action of narcotic analgesics on the female reproductive system.

METHODOLOGY

Detailed menstrual histories were obtained on the 76 women, who had received methadone for at least 2 months and who agreed to take part in the study. The seven patients selected for the detailed prospective study had histories of amenorrhea or irregular menses. The women ranged

in age from 21 to 26 years and had been taking methadone for 8 to 30 months. Daily urine specimens were monitored for the presence of methadone, as well as many other commonly abused drugs. Blood samples were collected to study separate aspects of gonadotropin secretion: cyclic gonadotropin release, episodic (1 to 2 hours) LH secretory pulses, estrogen negative and positive feedback, ovarian and uterine function, and plasma LH and FSH levels.

RESULTS

Only 30 percent of the 76 women experienced regular menstrual periods while taking heroin or methadone, whereas 95 percent had noted regular menses prior to drug addiction. Four of the seven women whose endocrinologic systems were studied in detail showed abnormalities of the control of gonadotropin secretion. Three of these four failed to exhibit cyclic gonadotropin release, as indicated by an absence of increased levels of follicular phase 1 FSH, midcycle gonadotropin peaks, or luteal phase progesterone increments. In the fourth patient, a prolonged follicular phase (30 days) of the menstrual cycle was detected. One of these four patients also had low basal gonadotropin levels and failed to exhibit luteinizing hormone increments greater than control levels in response to ethinyl estradiol.

The remaining three women showed normal patterns of gonadotropin secretion during the observation period. In these women, menstrual bleeding took place in response to withdrawal from luteal phase (10 to 20 mg per ml) progesterone levels and to exogenous ethinyl estradiol, suggesting normal uterine responsiveness to progesterone and estrogen. Although not documented, it is likely that oligo-ovulation was the cause of the irregular menses in these three patients.

Two of the four women with amenorrhea who were followed continuously over a 6- to 12-month period experienced a return of menses.

CONCLUSIONS

The amenorrhea commonly associated with regular use of heroin or methadone appears to be related to changes in the hypothalamic mechanisms controlling gonadotropic secretion. A woman may develop tolerance to these effects of methadone after using it regularly for a longer time period than occurred for most of the women studied.

Shaffer, H. Methadone and pregnancy: Perspectives and prescriptions. Journal of Psychedelic Drugs, 11(3):191-202, 1979.

DRUG	Methadone
SAMPLE SIZE	Not applicable
SAMPLE TYPE	Addicts
AGE	Not specified
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Not applicable
METHODOLOGY	Literature review
DATA COLLECTION INSTRUMENT	Not applicable
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	89

PURPOSE

Opiate addiction can result in a wide variety of physical complications. The reproductive system typically does not manifest any major physical signs of drug abuse, but even commonly prescribed medications may affect conception and pregnancy. The present article reviews the issues surrounding the relationship between methadone use and sexuality, as well as pregnancy.

SUMMARY

Methadone and sexuality. Recent findings indicate that there is a significant improvement in sexual function for males who switch from street heroin to methadone maintenance. Others show that 75 percent of male methadone patients exhibit impaired sexual performance. These conflicting reports indicate that the available information regarding male sexual function is still equivocal.

The effects of methadone on female sexual functioning are similar to those of other opiates: methadone is considered to cause a decline in the sexual capacity of females and concurrently disturb the menstrual cycle, decreasing the probability of conception. While all narcotics depress certain hormonal levels governing the menstrual cycle, amenorrhea and reduced sex drive are

less pronounced in methadone users than in heroin users. As a result, the probability of pregnancy tends to increase with the conversion from heroin to methadone.

Methadone's effects on the fetus and newborn. There is a paucity of research dealing with the effects of methadone on the fetus. Existing literature does, however, support several generalizations. First, narcotics pass through the placenta and can therefore be responsible for an addicted fetus. Second, the rate of congenital abnormalities is the same for infants born to demographically matched methadone-maintained mothers and nonaddicted mothers. Third, infants tend to have lower birth weights when born to heroin-addicted mothers than to methadone-addicted mothers; babies in both these groups have birth weights lower than babies born to nonaddicted mothers. Finally, newborns display narcotic withdrawal symptoms.

The typical narcotic withdrawal syndrome in the dependent infant consists of tremors, irritability, restlessness, watery stools, and a shrill cry. Other symptoms may include vomiting, poor food intake, fever, twitching, yawning, sneezing, nasal congestion, lacrimation, hyperhidrosis, convulsions, apnea, and cyanosis. Withdrawal may occur at birth or as late as 14 days post partum. Withdrawal symptoms for methadone appear to be at least as, if not more, prevalent than for heroin and last longer.

Treating the addicted infant. Therapeutic interventions for infant withdrawal syndrome vary greatly among practitioners. Treatment procedures range from no medicinal intervention to a variety of medications including paregoric, methadone, barbiturates, chlorpromazine, and diazepam. Different presenting situations require differential treatment responses, and practitioners should familiarize themselves thoroughly with the available treatment options.

Breastfeeding can be a source of drug ingestion for the infant, since methadone is present in the milk of the methadone-dependent mother. However, the concentration of the substance in breast milk varies over time. Therefore, a methadone-maintained mother who is breastfeeding her child should be aware of the relationship between the schedule of infant feeding and her ingestion of methadone.

The majority of the empirical studies on methadone effects are retrospective. As a result, there is no way of measuring the effects of other variables on results. Unless more multivariate research is contemplated and conducted, functional causal relationships will remain embedded in a plethora of positive correlations and descriptive compilations. Investigators must resolve ethical questions surrounding differential treatment and implement long-term and followup research designs.

Case management issues. Practitioners should note information affecting patient needs. For example, methadone adversely affects the accuracy of urine pregnancy tests so two tests should be performed. Also, methadone patients should be helped in working through the decision about whether or not to keep their babies. Furthermore, when a physician or clinic provides prenatal care, release of information forms should be signed to facilitate communication and optimal prenatal care. The methadone clinic and the hospital should coordinate their efforts to deliver the baby. Practitioners should be aware that methadone patients may need a higher than normal dose of anesthetic during delivery. Finally, there is considerable controversy about whether methadone helps stabilize the lifestyle of the female addict and makes her a better mother.

CONCLUSIONS

Methadone affects both the sexual performance and reproductive capacity of males and females, although less so than heroin, but specific levels of effect are difficult to determine. Methadone produces secondary effects on the infants of methadone-maintained women, for the drug crosses the placenta during pregnancy. Among the more serious of these effects are low birth weights and withdrawal symptoms, treatment of which depends upon the particular situation. Despite infant withdrawal effects, methadone should be used for pregnant addicts if it facilitates an effective treatment plan that will improve the likelihood of a successful pregnancy and a healthy child.

Stimmel, B., and Adamsons, K. Narcotic dependency in pregnancy: Methadone maintenance compared to use of street drugs. The Journal of the American Medical Association, 235(11): 1121-1124, 1976.

DRUG	Heroin; methadone
SAMPLE SIZE	115 women; 118 infants
SAMPLE TYPE	Pregnant users and their infants
AGE	Young adults; mature adults; neonates
SEX	Female; infants: both
ETHNICITY	Black; white; Hispanic
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Comparative study
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	1968-1974
NO. OF REFERENCES	18

PURPOSE

Attention has focused increasingly on the effects of narcotics on pregnant women and their babies. Methadone has received particular emphasis, with some viewing it as relatively innocuous and others associating it with serious hazards including severe withdrawal symptoms and even crib deaths. However, most of the published studies involve poorly defined populations and lack adequate control groups.

This study aimed to clarify the relationship between methadone maintenance therapy and pregnancy outcome by comparing the course of pregnancy in patients enrolled in a comprehensive methadone maintenance treatment program with that in women taking narcotics under essentially uncontrolled conditions, as well as that in women not exposed to narcotic agents during the prenatal period.

METHODOLOGY

The subjects included 3 groups totaling 115 women. Group 1 consisted of all 28 women who gave birth while enrolled in the methadone maintenance program at the Mount Sinai Hospital in New

York from March 1968 to May 1974. These 28 women had 31 pregnancies and were followed closely with respect to methadone dose, use of other drugs, and medical complications. Group 2 consisted of 57 women known to be users of various narcotic agents of their own choice (heroin or methadone) whose infants were born between July 1971 and April 1974. These women were further subgrouped into 30 persons who used mainly heroin (group 2A) and 27 women who used only methadone (group 2B), obtained either on the street or in other methadone programs. Group 3 contained 30 women whose infants were born from January through October 1972 and who had no recorded history of drug abuse but resided in the same area as those women in groups 1 and 2. Analysis of urine for mood-altering drugs was not performed.

The records of the 118 infants born to these women were reviewed to determine the incidence of fetal distress, Apgar scores at 1 and 5 minutes, birth weight, neonatal complications, and the presence of withdrawal symptoms. Infants in group 1 have been followed for periods of 1 to 55 months. It was not possible to obtain consistent followup information in the other two groups.

RESULTS

Women in group 1 had the lowest incidence of coexisting medical problems, 16 percent compared with 37 percent in group 2 and 47 percent in group 3. Anemia was the most common problem encountered in each of the groups. The incidence of fetal distress was 16 percent in group 1, 42 percent in group 2, and 23 percent in group 3. Group 2 had a significantly higher incidence of fetal distress than the other two groups, which did not differ significantly from one another. The incidence of low birth weight (less than 2,500 gm) was essentially the same in groups 1 and 2 but much greater than the 3 percent incidence in group 3.

Excluding withdrawal symptoms, no major neonatal complications were found among the infants in group 1, except that three newborns exhibited transient respiratory distress. In contrast, respiratory distress was noted in nine infants in group 2, and there were four infants with congenital defects. This group also experienced one stillbirth and one neonatal death. Symptoms characteristic of narcotic withdrawal occurred in just over half of the infants in both group 1 and group 2. Irritability was the main symptom observed. Where the methadone dose was known, the mean maternal dose was greater in those group 1 women whose children did not display withdrawal symptoms.

CONCLUSIONS

Use of closely supervised methadone therapy for pregnant addicts is compatible with an uneventful pregnancy and the birth of a healthy infant whose withdrawal symptoms in the neonatal period are readily controllable. Several investigators have confirmed the findings regarding healthy outcomes for infants, while those studies indicating unfavorable outcomes have involved methodological problems that make it impossible to implicate methadone as a contributing factor. The infants in group 1 are still being carefully monitored and now range in age from 6 months to 5 years.

Strauss, M.E.; Andresko, M.; Stryker, J.C.; and Wardell, J.N. Relationship of neonatal withdrawal to maternal methadone dose. The American Journal of Drug and Alcohol Abuse, 3(2):339-345, 1976.

DRUG	Methadone
SAMPLE SIZE	70
SAMPLE TYPE	Newborn offspring of women on methadone maintenance
AGE	Neonates
SEX	Both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Correlational study; longitudinal study
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	7

PURPOSE

Methadone maintenance is increasingly being used by pregnant heroin addicts. However, controversy exists regarding the effects of prenatal methadone exposure on the fetus and the newborn. This study examined the withdrawal symptomatology of 70 infants born to methadone-treated opiate addicts enrolled in the Hutzel Hospital Methadone-Prenatal Care Program at Wayne State University in Detroit, Michigan.

METHODOLOGY

The program provides comprehensive medical, social service, and psychiatric support to pregnant addicts maintained on relatively low doses (60 mg or less per day) of methadone. During the 6 weeks prior to delivery, efforts are made to reduce the daily methadone dose to 20 mg or less per day.

The records of 34 male and 36 female newborns were studied. The physicians and nurses who made the entries in the records were aware that the mothers were drug dependent but were not aware of the methadone doses. The infants did not differ in birth weight, gestation age, Apgar scores, or morbidity from sociomedically comparable nonaddicts' newborns, and their mothers'

pregnancies were no more complicated or disordered than those of nonaddicts. Of the 70 cases, 33 received 20 mg or less of methadone per day and 37 received more than 20 mg per day.

RESULTS

The average number of withdrawal symptoms observed was 4.4 out of a possible maximum of 17. Almost all infants (93 percent) were hyperirritable, and 76 percent were significantly tremulous. However, only 34 percent exhibited hypertonicity, only 21 percent had shrill cries, and only 1 infant experienced dehydration or convulsion.

The average number of withdrawal symptoms was significantly greater in the higher dose group than in the lower dose group. The incidence of 13 of the 17 withdrawal symptoms was also higher in the higher dose group, with significant differences for both tremulousness and hypertonicity. The duration of irritability was also significantly longer in the higher dose group. Twice as many high-dose infants as low-dose infants had vomiting problems for more than 1 day. The distributions of the durations of the remaining symptoms did not differ significantly. However, the use of drugs to control symptoms was significantly greater in the higher dose infants.

Although the two groups of infants were similar in birth weight, gestation age, length, and Apgar scores, the high-dose addicts' infants lost a significantly higher proportion of birth weight than did lower dose offspring and were hospitalized for a period one-third longer. Lower dose infants also regained their birth weights more often by the time of hospital discharge. Moreover, the lower dose women had lower rates of illicit drug use as detected by urine samples than did the higher dose group. Although the two groups had the same duration of prior heroin addiction, the higher dose women tended to have more expensive habits.

CONCLUSIONS

Infants born to women treated with 60 mg or less of methadone during pregnancy will usually exhibit some withdrawal symptoms, usually only hyperirritability and tremulousness. The maternal dosage level is associated with withdrawal symptoms, the use of drugs to treat withdrawal, neonatal weight loss, and duration of hospitalization. The reduction of methadone dose levels during the last 6 weeks of pregnancy to 20 mg per day or less appears to reduce the severity of neonatal withdrawal. Further studies should be done on the dose-symptomatology relationships and on the potential mediators of these relationships.

Strauss, M.E.; Andresko, M.; Stryker, J.C.; Wardell, J.N.; and Dunkel, L.D. Methadone maintenance during pregnancy: Pregnancy, birth, and neonate characteristics. American Journal of Obstetrics and Gynecology, 120(7):895-900, 1974.

DRUG	Heroin; methadone
SAMPLE SIZE	144
SAMPLE TYPE	Pregnant addicts and nonaddicts and their infants
AGE	Adolescents; young adults; mature adults (range: 16-32)
SEX	Female; infants: both
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Detroit, Michigan
METHODOLOGY	Comparative study; descriptive study
DATA COLLECTION INSTRUMENT	Clinical records
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	7

PURPOSE

Studies have shown that pregnant addicts receiving methadone therapy and comprehensive prenatal care experience fewer obstetric complications than do untreated heroin addicts. The reduction in risk appears similar in high-dose methadone and low-dose methadone regimens.

This study aimed to determine whether the obstetric risk in a group of women who were on low-dose methadone maintenance and received comprehensive prenatal care was comparable with the risk observed in nonaddicted women of similar medical and socioeconomic circumstances. In addition, the study examined the incidence of low birth weight (under 2,500 gm) in such populations and the incidence of symptoms of narcotics withdrawal in the infants of the mothers maintained on methadone.

METHODOLOGY

The 144 subjects included 72 heroin addicts who were consecutively admitted and treated in a methadone maintenance and prenatal care program at Hutzel Hospital in Detroit and two comparison groups of 36 nonaddicted women each who had delivered at about the same time of year. The first comparison group had socioeconomic backgrounds similar to the addicted women, while

the second group came from the high-risk pregnancy prenatal clinic. Half of each group had produced single, live-born boys delivered vaginally; the other half, single, live-born girls. The records of these women were examined regarding obstetric risks and infant characteristics. Patients had been maintained on the lowest dose possible, with a range of 2 to 60 mg during the last 6 weeks before term. The women had been addicted for an average of 30 months.

RESULTS

Rates of pregnancy-related illness, pregnancy complications, and characteristics of labor and delivery did not differ between the groups. The variation in rates of illnesses diagnosed during pregnancy fell within chance limits for all syndromes, even though high-risk mothers had a higher mean number of pregnancy-related illnesses. The average number of major obstetrical complications was similar for all groups: 0.3 for addicts, 0.2 for clinic controls, and 0.3 for high-risk patients.

The mean lengths of labor were similar for all groups. Few substantial differences were observed in the distributions of labor and delivery complications. The incidence of meconium in amniotic fluid and/or staining was higher among addicts, although not significantly so. However, meconium, in the absence of staining, was present only in addicted infants. The three groups of infants were remarkably similar at birth in terms of birth weight, gestation age, Apgar scores, and weight loss. Disease tended to be more frequently diagnosed among both the addicted newborns and high-risk mothers' offspring than among clinic controls, but the differences were not statistically significant.

Irritability, the most common withdrawal symptom, was recorded in over 90 percent of the charts of the addicted newborn infants. Jitteriness or tremulousness was noted in 75 percent and hypertonicity in about 40 percent. A total of 30 percent of the infants of the addicted group required drugs such as diazepam or chlorpromazine to treat these withdrawal symptoms.

CONCLUSIONS

Pregnant methadone addicts and their babies were generally comparable to nonaddicts and their progeny. Providing comprehensive prenatal care to women being treated with methadone appears to reduce obstetric risk to the level observed in nonaddicted clinic samples of similar demographic characteristics and obstetric history. Other investigators' findings of higher rates of low birth weights may have resulted from their inclusion of women who had received no prenatal care and from their use of an entire hospital or clinic population as a comparison group. What is required for more precise specification of the degree and kind of obstetric, perinatal, and neonatal risk associated with addiction are parametric studies that compare large samples of treated and untreated addicts, both with and without prenatal care, with appropriately matched nonaddicted women.

Wallach, R.C.; Jerez, E.; and Blinick, G. Comparison of pregnancies and birth during methadone detoxification and maintenance. Pediatric Annals, 4(7):46-61, 1975.

DRUG	Methadone; heroin
SAMPLE SIZE	205
SAMPLE TYPE	Pregnant addicts in a detoxification program and a methadone maintenance program
AGE	Young adults; mature adults
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; comparative study
DATA COLLECTION INSTRUMENT	Hospital records; observations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	35

PURPOSE

The adverse physiological, psychological, and social effects of narcotics addiction have been addressed in numerous studies. Studies of the effect of heroin addiction on pregnancy began with observations of withdrawal symptoms in the newborn. Other studies have dealt with the relation of narcotics use to ovulation, menstruation, and fertility.

This paper reports on pregnancies and births among women in the methadone detoxification program and the methadone maintenance program at Beth Israel Hospital in New York City. Descriptions of each program and outcomes for about 100 patients in each program are described.

METHODOLOGY

The detoxification program is aimed mainly at narcotic withdrawal and offers an extended stay to introduce rehabilitative service. On admission, the addict is given a dose of methadone according to the size of the habit. The dosage is reduced over 10 days and then eliminated. Patients are asked to stay an additional 2 to 4 weeks for psychiatric and rehabilitative services. Since the program consistently fails to meet its goals, frequent readmissions are the rule.

Pregnant addicts in labor are treated generally like other patients. The mother stays in the hospital for 3 days and the infant for 10 days. Results are reported for 100 consecutively delivered pregnancies of addicted mothers in this program. The Methadone Maintenance Treatment Program is aimed at voluntary rehabilitation of the hardcore heroin addict. Patients are given gradually increasing doses of methadone until a daily dose of 80 to 140 mg is reached. This dosage eliminates both the craving for heroin and the euphoric effects of heroin; thus, patients can return to work and family. The conduct of labor and delivery in women receiving methadone maintenance varied little from the hospital's usual practice. Results are reported here for 105 consecutive pregnancies of women in the program.

RESULTS

Among the women in the detoxification program, the main clinical effect noted was the increased frequency of low birth weight infants and breech deliveries. There were 9 breech presentations, and 34 of the infants weighed under 2,500 gm. The incidence of breech delivery was probably secondary to low birth weight. Six infants had Apgar scores of 1 to 4. In addition, a very high incidence (33 cases) of meconium in the amniotic fluid was noted. This was thought to reflect antepartum stress and was seldom associated with neonatal distress. The patients' transiency in the program resulted in few prenatal visits and almost no followup 1 year after delivery.

About one-third of the infants born to mothers in the methadone maintenance program were premature by weight, and about 10 percent had depressed Apgar scores at birth. Over half of the infants had some withdrawal signs, and 26 percent received phenobarbital or tincture of opium. The average hospital stay for the infants was 15 days. The physical development of the first 14 infants, observed for up to 4 years, has been within normal limits. Psychometric tests have shown 12 to be normal, 1 to be high normal, and 1 to be low normal.

CONCLUSIONS

The two programs had similar outcomes in terms of low birth weights, low incidence of major obstetric complications, and fetal exposure to narcotic drugs. Areas in which knowledge is lacking include the incidence and effects of multiple drug abuse among women in the methadone program, the relative long-term effects of methadone and heroin on the infants, and the potential for narcotics addiction in children exposed in utero to narcotics.

Patients in the methadone maintenance program were more cooperative and motivated for infant care than were the detoxification patients, as well as more available for followup. However, the dispersal of the maintenance program into regional centers may reduce the opportunities for observation and for potentially better control of the patients.

Clinicians will continue to be faced with a drug-using population, as they cannot control the availability of drugs in society. The expansion of methadone maintenance programs is also reducing the obstetric experience with strict heroin users and those in the detoxification programs before the long-term effects on the fetus have been determined. The little evidence available on the many issues related to heroin and methadone use by pregnant women has thus produced more questions than answers.

Wallach, R.C.; Jerez, E.; and Blinick, G. Pregnancy and menstrual function in narcotics addicts treated with methadone. American Journal of Obstetrics and Gynecology, 105(8): 1226-1229, 1969.

DRUG	Methadone
SAMPLE SIZE	83
SAMPLE TYPE	Women of reproductive age in a methadone treatment program
AGE	"Of reproductive age"
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Descriptive study; longitudinal survey
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations; observations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	20

PURPOSE

Retrospective studies have indicated that chronic opiate addiction in women is associated with amenorrhea, anovulation, and infertility. Although some reports of pregnancy among addicts have suggested that reproductive function is not always totally suppressed, these women generally sought medical care late in pregnancy, making their earlier medical histories difficult to evaluate.

A unique chance to observe reproductive functioning in women maintained on known large doses of a narcotic drug under close medical supervision was provided by the Methadone Maintenance Treatment Program at the Bernstein Institute of the Beth Israel Medical Center in New York City. Addicts in the program are given gradually increasing doses of methadone to induce a state of tolerance. The total daily dose is eventually held constant at 80 mg to 100 mg. This paper reports results for 83 addicted women in the program, former heroin users at the time of the study.

METHODOLOGY

The 83 women were among the active patients from the 121 women who had been admitted to the Methadone Maintenance Treatment Program during the 2 years preceding the study. The patients were hardcore "mainliners" with histories of many arrests, multiple drug exposures, and repeated experiences of detoxification. All 83 women were of reproductive age. Prior to entry into the program, two-thirds of the patients reported that they were menstruating infrequently or not at all, while 19 percent stated that their menses were normal. This paper reports the menstrual functioning and pregnancy outcomes while in the methadone maintenance program of the 83 women who were premenopausal and had not had hysterectomies.

RESULTS

All but 1 of these 83 women resumed regular menstruation. Menstruation usually resumed within 1 to 2 months of the institution of methadone maintenance.

A total of 13 women ranging in age from 24 to 36 years became pregnant. All but one had had one or more pregnancies before entering the program, with a range of 2 to 9 years since the last pregnancy. Methadone maintenance treatment was begun during pregnancy in five women due to the urgent need for therapy. Each patient received from 60 to 120 mg of methadone daily before, during, and following the pregnancy. Initial attempts to reduce the dose because of fear of possible teratogenic effects provided unsatisfactory.

All 13 patients had uneventful pregnancies, with no toxemia or undue weight gain. One patient with a positive serology was treated with penicillin. Two women were still pregnant at the time of this study. The eight live births included seven vaginal births and one repeat cesarean delivery. One stillborn vaginal delivery followed an intrapartum death due to strangulation by the umbilical cord. Two spontaneous abortions and one ectopic pregnancy occurred. The seven living infants had Apgar scores of 8 to 10 at birth. No significant withdrawal symptoms were observed; two infants received therapy. No infants had congenital abnormalities and all went home after 10 days of observation. The children are now at home with their families and seem normal in every way.

CONCLUSIONS

Methadone appears to have had little effect on the pregnancies of the 13 subjects. Ovulation, conception, and pregnancies occurred without serious problems to mother or child. The series is too small to evaluate the abortion rate. The average maternal age, which was higher than for nonaddicted obstetric patients at the same hospital, was consistent with the higher ages seen in women in the detoxification program.

The uniform return to a regular menstrual pattern may reflect the women's return to an orderly existence, or it may be a pharmacological effect of the methadone. The patients in the program were also quite different from unselected street addicts, as those with multiple drug abuse, alcoholism, and schizophrenia were excluded. Nevertheless, the results indicate that regular menstruation, ovulation, conception, and apparently normal pregnancy occur in women treated with large doses of methadone.

Wilson, G.S.; Desmond, M.M.; and Verniaud, W.M. Early development of infants of heroin-addicted mothers. American Journal of Diseases of Children, 126(4):457-462, 1973.

DRUG	Heroin
SAMPLE SIZE	30
SAMPLE TYPE	Infants of addicted mothers
AGE	Mothers: mean, 25; neonates
SEX	Both
ETHNICITY	White; black; Hispanic
GEOGRAPHICAL AREA	Houston, Texas
METHODOLOGY	Longitudinal survey
DATA COLLECTION INSTRUMENT	Hospital records
DATE(S) CONDUCTED	January 1963 to December 1970
NO. OF REFERENCES	15

PURPOSE

Although the effects of maternal heroin use on infants have been extensively reported, the focus has been on problems of neonatal withdrawal phenomena, with little information concerning subsequent development. Delineation of the behavioral and developmental potential of infants born to addicts is of concern because of the rising incidence of drug abuse in women of childbearing age and the frequent need for adoptive placement of their progeny. For that reason, the present study examines the neonatal course, as well as the early growth and development of 30 infants born to addicted mothers.

METHODOLOGY

The study sample included 30 infants delivered to heroin-addicted mothers from January 1963 through December 1970. The mean maternal age was 25. A total of 22 of the infants were white and 8 were black; 11 of the white patients were of Latin American origin.

Patients were classified on the basis of the pattern of maternal drug use and the severity of withdrawal symptoms manifested by the infants. A total of 16 infants were born to addicts who continued to use heroin throughout pregnancy (group A), 12 infants were born to mothers who

voluntarily substituted other drugs such as sedatives or tranquilizers for heroin (group B), and 2 infants were born to mothers who underwent enforced abstinence 1 month before and 1 month after conception (group C). According to hospital records, 22 of the infants developed withdrawal symptoms in the nursery and 2 after being released from the hospital at 36 to 48 hours of age. The severity of the withdrawal reaction was graded retrospectively on the basis of the infant's need for medication. After discharge from the nursery, infants were evaluated through the Maternity and Infant Care High Risk Clinic on a well-baby schedule. Of the 30 infants, 4 were being cared for by their addict mothers, 16 were in court-appointed foster homes, and 10 were being raised by family or friends.

RESULTS

A total of 10 infants weighed 2,500 gm or less at birth; 3 of these were of less than 37 weeks' gestation. Birth weights of eight were below the 10th percentile by Lubchenco et al.'s criteria. Moreover, infants with appropriate birth weight and length had head circumferences below the 10th percentile.

Of infants who had withdrawal symptoms in the nursery, 82 percent demonstrated exacerbation or recurrence of symptoms upon transfer from the hospital to the home environment. The phenomenon persisted for 3 to 6 months. Symptoms included irritability, exaggerated rooting and oral activity, wide-amplitude tremors, spontaneous startles, vasomotor instability, hyperacusis, and poor socialization. By 4 to 6 months, infants became more responsive, although hypertonicity persisted in some infants even after 7 months. Of the 16 infants who stayed in the hospital less than 1 year, 3 were normal, 5 had impaired somatic growth, 5 still had withdrawal symptoms, and 3 had abnormal neurological findings.

Of the 14 patients observed for a year or longer, 2 group A infants were considered normal, while 5 manifested behavioral dysfunction. One group B infant was normal, one was underweight, two demonstrated neurological abnormality, and two had behavioral dysfunction. The single group C patient appeared normal.

Children's motor development scattered about the normative curve. Adaptive behavior tended to fall slightly below the mean during the first 4 to 5 months, coinciding with the period of acute and subacute withdrawal but thereafter scattered according to the expectancy for age. Language performance clustered about the normative curve with a few exceptions in the 9- to 21-month range. Personal-social development also followed the normative curve. Six children 1 year old or older demonstrated disturbances of activity level or attention span or both, with associated sleep disturbances, temper tantrums, and low frustration tolerance. The age of onset of hyperactivity could not be clearly defined. Other observed effects in single or a few cases included abnormal or equivocal neurological findings; hypotonic behavior with motor delay; hypertonicity of the lower extremities and asymmetrical hand use with fine motor delay; and clumsy, asymmetrical hand use, toe stance, and slight delay of gross motor development.

The high incidence of hyperkinesis, impaired attention span, and other behavioral problems in infants who had previously undergone severe withdrawal symptoms in the newborn period and the frequent association with impaired somatic growth suggest that these findings may have a relationship to intrauterine drug exposure. Opiates may exert a direct action on the maternal hypothalamic-hypophyseal axis, resulting in retarded growth of offspring.

Effects during infants' withdrawal and subsequent development suggest that subcortical brain function may be influenced by maternal heroin use. The hyperexcitable state in the newborn is correlated to neurological and behavioral dysfunction at 1½ to 4 years of age. According to study findings, behavioral disturbances and impaired somatic growth appear to be more frequent in infants exposed to continuous maternal heroin use during pregnancy than in those exposed to intermittent maternal heroin use plus use of other psychoactive drugs.

CONCLUSIONS

Withdrawal symptoms occurred in 80 percent of the 30 infants observed, while subacute withdrawal symptoms beginning upon nursery discharge and terminating at 5 to 6 months occurred in 60 percent. Some form of abnormality was found in 64 percent of the 14 infants observed 1 year or longer. These abnormalities included behavioral disturbances such as hyperactivity and

growth impairment. After subsidence of acute and subacute withdrawal symptoms, the infants demonstrated age-appropriate performance on Gesell schedules except where hyperactivity and short attention span interfered. A longitudinal study of a larger group is necessary to confirm developmental and behavioral abnormalities in children of drug-addicted mothers.

Zuspan, F.P. Urinary amine alterations in drug-addiction pregnancy. American Journal of Obstetrics and Gynecology, 126(7):955-964, 1976.

DRUG	Heroin; methadone
SAMPLE SIZE	122
SAMPLE TYPE	Pregnant addicts
AGE	Adolescents; young adults; mature adults (mean: 25.13; range: 16-44)
SEX	Female
ETHNICITY	Black; white; Hispanic
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Longitudinal study
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations
DATE(S) CONDUCTED	Not specified
NO. OF REFERENCES	12

PURPOSE

Narcotics addiction in pregnancy is of special concern since it affects the fetus as well as the mother. Effects on the autonomic nervous system, for example, are associated with withdrawal symptoms in the mother and the newborn infant, and within this system, it is appropriate to document the effect of drug addiction on the biochemical activity of the adrenal gland as measured by urinary epinephrine. Effects on the activity of the sympathetic nervous system are measured by urinary norepinephrine. Therefore, this study examined urinary amines in 122 pregnant women who were heroin addicts or were being maintained on methadone. The paper is the first such report in the literature on this topic.

METHODOLOGY

The subjects were referred from the Illinois Drug Abuse Program Special Treatment Unit to the Special Obstretrics Clinic at Chicago Lying-In Hospital. The study sample's typical patient was black, 25 years old, had had a total of 2.98 pregnancies, and had 1.97 living children. A total of 1,887 24-hour urine specimens were collected prenatally, during labor, and during the post partum period. Urine samples were discarded unless their creatinine values indicated that they were a complete 24-hour collection. All determinations on amines were done in duplicate, and

values that did not agree within 10 percent were discarded. A chemical fluorometric procedure was used to determine the amine levels.

RESULTS

From the 30th antepartum week to term, as well as during labor, delivery, and the post partum period, amine excretion was similar for the 21 heroin addicts and the 101 women in the methadone group. These groups were therefore combined for mean values.

The labor, delivery, and post partum values of epinephrine were significantly different from the antepartum values, and all were inordinately higher than those of normal pregnancy. The mean excretion of epinephine druing pregnancy was 28 micrograms during 24 hours. The excretion level rose to 60 micrograms on the first day post partum. These values indicated increased adrenal gland activity and were more than six times greater than seen in normal pregnancy.

The norepinephrine values were not significantly different antepartum, during labor and delivery, and post partum, whereas norepinephrine temporarily increases in the first day post partum in normal pregnancy. The pregnant drug addicts thus did not have the increased sympathetic nervous system activity thought to be associated with late labor and the delivery process. The antepartum norepinephrine values were 50 percent higher than seen in normal pregnancy.

CONCLUSIONS

Drug addicts who are well controlled on methadone have markedly increased adrenal gland activity during pregnancy as shown by their increased levels of epinephrine. The sympathetic nervous system activity as shown by urinary norepinephrine is only slightly increased. The drug addict's sympathetic nervous system also does not have the ability to respond with increased levels of norepinephrine seen late in labor and during the first 24 hours post partum in normal pregnancy. Methadone appears to increase the activity of the adrenal medulla and promote rapid turnover and excretion of neurohormones as evidenced by the high levels observed in the urine. The rise in epinephrine in the urine is due to an altered effect on the enzyme of biosynthesis, PNMT (phenylethanolamine-N-methyl transferase).

Zuspan, F.P.; Gumpel, J.A.; Mejia-Zelaya, A.; Madden, J.; Davis, R.; Filer, M.; and Tiamson, A. Fetal stress from methadone withdrawal. American Journal of Obstetrics and Gynecology, 122(1):43-46, 1975.

DRUG	Methadone
SAMPLE SIZE	1
SAMPLE TYPE	Pregnant addict
AGE	Not specified
SEX	Female
ETHNICITY	Not specified
GEOGRAPHICAL AREA	Chicago, Illinois
METHODOLOGY	Case study; longitudinal survey
DATA COLLECTION INSTRUMENT	Laboratory reports/examinations
DATE(S) CONDUCTED	August 9 to November 15, 1973
NO. OF REFERENCES	4

PURPOSE

An in-depth study on drug addiction in pregnancy has been sponsored since 1972 by the Department of Obstetrics and Gynecology at the Chicago Lying-In Hospital, the Departments of Pediatrics and Psychiatry at the University of Chicago, and the Illinois Drug Abuse Program's special treatment unit for pregnancy. Under the program, it was established that attempts to detoxify methadone-maintained patients during pregnancy could result in fetal death. As a result, an edict of the Food and Drug Administration in 1973 requiring withdrawal of methadone from pregnant patients within 21 days after acceptance into the program was rescinded. The present study reports the results of an attempt to detoxify a pregnant patient selectively and gradually under controlled conditions by monitoring amniotic fluid.

METHODOLOGY

The study sample consisted of one patient in the special drug abuse clinic of the Department of Obstetrics and Gynecology at the Chicago Lying-In Hospital. Upon the patient's request for detoxification, permission was obtained to perform amniocentesis as a means of monitoring the amine (epinephrine and norepinephrine) response of the fetus to detoxification. The first amniocentesis was performed on August 9, 1973, and the last on November 15, 1973. A baseline level

was established; amniocentesis determination was then done at 1 week and thereafter at 2-week intervals, with a 4-week interval before the last tap. The patient was receiving 20 mg doses of methadone prior to initial amniocentesis. The dose was decreased to 15 mg 3 days before the second amniocentesis, 13 mg 1 day before the third amniocentesis, and finally to 10 mg on September 4, 1973, 9 days before the fourth amniocentesis.

Twenty-four-hour urine samples were collected from the patient upon arrival at the prenatal clinic, and epinephrine and norepinephrine determinations were undertaken to detect the presence of drugs other than methadone. The epinephrine and norepinephrine levels in the amniotic fluid obtained through amniocentesis were measured by absorption onto an alumina column and by the trihydroxyindole fluorometric automated method of Zuspan and Cooley.

RESULTS

After the third amniocentesis, the epinephrine value was 10 times higher than before, and the norepinephrine value was 8 to 9 times higher than the initial values. A further increase in values was noted after the fourth amniocentesis. Subsequently, the methadone dose was increased to 15 mg to reduce fetal stress. Several weeks after the increase in methadone dosage, epinephrine had stabilized at a high level and norepinephrine at a lower level. The norepinephrine levels in maternal urine remained the same throughout the study, while the epinephrine values were higher than expected. After delivery, the infant showed only mild symptoms of withdrawal, was not medicated, and was discharged with the mother on the sixth post partum day.

Amniotic fluid primarily reflects fetal homeostasis. The fetal adrenal gland, periartic tissue, and the sympathetic nervous system have the capacity to contribute epinephrine and norepinephrine to amniotic fluid. Thus, alterations from normal amniotic fluid epinephrine and norepinephrine levels indicate changes in fetal homeostasis. Serving as indicators, the amniotic fluid amines demonstrate that both the fetal adrenal gland and the sympathetic nervous system are hyperactive from intrauterine withdrawal of the fetus from the drug and that this excess activity can be decreased by increasing the methadone dosage.

Maternal urinary amine values are not correlated with changes in amniotic fluid values, indicating a compartmentalized system for the fetal unit. The maternal amine values also suggest that one of the physiologic actions of methadone in the pregnant patient is to stimulate the adrenal gland (epinephrine) and to blunt the response of the sympathetic nervous system (norepinephrine).

CONCLUSIONS

Detoxification of pregnant, drug-addicted patients, especially in the last trimester, is potentially hazardous to the fetus and should be avoided. If, however, detoxification is desirable, the detoxification program should be scientifically controlled, using neurobiologic response as an indicator of stress. A successful method for fetal neuroendocrine evaluation consists of serial amniocentesis and determination of amniotic fluid epinephrine and norepinephrine.

Bibliography

The citations presented here constitute a broad sampling of the scientific literature of relevance to women's drug use published through late 1981. While not a comprehensive listing, this bibliography should provide interested researchers a basis upon which to begin a literature search in this area.

PSYCHOSOCIAL RESEARCH

*Andersen, M. Personalized nursing: An intervention model for drug dependent women in an emergency room. Journal of Addictions and Health, 1(4):217-226, 1980.

Andersen, M.D. Medical Needs of Addicted Women and Men and the Implications for Treatment, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977. Shorter version in: Schecter, A.J., ed. Drug Dependence and Alcoholism, New York: Plenum Press, 1981.

Anderson, E. A comparison of male and female adolescents: Attachment to parents and differential involvement with marijuana. International Review of Modern Sociology, 7(2):213-223, 1977.

Arafat, I., and Yorburg, B. Drug use and the sexual behavior of college women. Journal of Sex Research, 9(1):21-29, 1972.

Ashbrook, D.L., and Solley, L.C. Women and Heroin Abuse: A Survey of Sexism in Drug Abuse Administration. Palo Alto, Calif.: R&E Research Associates, 1979.

Attardo, N. Psychodynamic factors in the mother-child relationship in adolescent drug addiction: A comparison of mothers of schizophrenics and mothers of normal adolescent sons. Psychotherapy and Psychosomatics, 13:249-255, 1965.

Badiet, P. Women and legal drugs: A review. In: MacLennan, A., ed. Women: Their Use of Alcohol and Other Legal Drugs--A Provincial Consultation--1976. Toronto: Addiction Research Foundation, 1976. Pp. 57-81.

*Bahna, G., and Gordon, N.B. Rehabilitation experiences of women ex-addicts in methadone treatment. The International Journal of the Addictions, 13(4):639-655, 1978.

Baldinger, R.; Goldsmith, B.M.; Capel, W.C.; and Stewart, G.T. Pot smokers, junkies, and squares: A comparative study of female values. The International Journal of the Addictions, 7(1):153-166, 1972.

Ball, J.C. Sex differences in criminality among drug abuse patients in the United States. In: Gibbons, R.J.; Israel, Y.; Kalant, H.; Popham, R.E.; Schmidt, W.; and Smart, R.G.; eds. Research Advances in Alcohol and Drug Problems. Toronto: Wiley, 1976.

*Ball, J.C.; Levine, B.K.; Demaree, R.B.; and Neman, J.E. Pretreatment criminality of male and female drug abuse patients in the United States. Addictive Diseases: an International Journal, 1(4):481-489, 1975.

*indicates that this work is abstracted in this volume.

Barber, J.M., and Means, R.K. Amphetamine use among college women. Journal of School Health, 51(4):205-208, 1971.

Battegay, V.R., and Ladewig, D. /Group therapy and group work with addicted women./ (Ger) British Journal of Addiction, 65:89-98, 1970.

*Bell, D.S. Dependence on psychotropic drugs and analgesics in men and women. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 423-463.

Bell, D.S., and Trethowan, W.H. Amphetamine addiction and disturbed sexuality. Archives of General Psychiatry, 4:100-104, 1961.

Berzins, J.I.; Ross, W.F.; English, G.E.; and Haley, J.V. Subgroups among opiate addicts: A typological investigation. Journal of Abnormal Psychology, 83:65-73, 1974.

*Beschner, G.M.; Reed, B.G.; and Mondanaro, J.; eds. Treatment Services for Drug Dependent Women (Vol. 1), National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981. Pp. 1-24.

*Beschner, G., and Thompson, P. Women and Drug Abuse Treatment: Needs and Services, National Institute on Drug Abuse. (ADM) 81-1057. Services Research Monograph Series. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1981.

*Beschner, G.M., and Treasure, K.G. Female adolescent drug use. In: Beschner, G.M., and Friedman, A.S., eds. Youth Drug Abuse: Problems, Issues, and Treatment. Lexington, Mass.: Lexington Books, 1979. Pp. 169-212.

*Binion, V.J. A descriptive comparison of the families of origin of women heroin users and non-users. In: Addicted Women: Family Dynamics, Self Perceptions, and Support Systems, National Institute on Drug Abuse. DHEW Pub. No. (ADM) 80-762. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

Binion, V.J. A Description of Selected Variables of Women Admitted to Demonstration Treatment Programs of the National Women's Drug Research Project From September, 1975 Through February, 1976. Ann Arbor, Mich.: Women's Drug Research Coordinating Project, Institute for Social Research, 1977. Pp. 5,7-12.

Boothroyd, W.E. The female drug addict: A profile. Addictions, 10:36-40, 1963.

Borgman, R.D. Medication abuse by middle-aged women. Social Casework, 54(9):526-531, 1973.

Bowker, L.H. Drug Use Among American Women, Old and Young: Sexual Oppression and Other Themes. San Francisco: R&E Research Associates, 1977.

Brahen, L.S. Housewife drug abuse. Journal of Drug Education, 3(1):13-24, 1973.

Braxton, E.R., and Yonker, R.J. Does being urban, poor, black, or female affect youth's knowledge and/or attitudes relating to drugs? Journal of School Health, 43(3):185-188, 1973.

*Brazelton, T.B. Effect of prenatal drugs on the behavior of the neonate. American Journal of Psychiatry, 126(9):1261-1266, 1970.

Brigham, J.B. Sexuality and female addiction. Urban and Social Change Review, April 1976.

Brook, J.S.; Gordon, A.S.; and Brook D.W. Perceived paternal relationships, adolescent personality, and female marijuana use. Journal of Psychology, 105:277-285, 1980.

Brummit, H. Observations on drug addicts in a house of detention for women. Corrective Psychiatry and Journal of Social Therapy, 9:62-70, 1963.

*Burt, M.R.; Glynn, T.J.; and Sowder, B.J. Psychosocial Characteristics of Drug-Abusing Women, National Institute on Drug Abuse. DHEW Pub. No. (ADM)80-917. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

Carr, J. Drug patterns among drug addicted mothers. Pediatrics Annual, 66:409-417, 1975.

*Celentano, D.D.; McQueen, D.V.; and Chee, E. Substance abuse by women: A review of the epidemiologic literature. Journal of Chronic Diseases, 33(6):383-394, 1980.

*Chambers, C.D., and Griffey, M.S. Use of legal substances within the general population: The sex and age variables. Addictive Diseases: an International Journal, 2(1):7-19, 1975.

*Chambers, C.D.; Hinesley, R.K.; and Moldestad, M. The female opiate addict. In: Ball, J.C., and Chambers, C.D., eds. The Epidemiology of Opiate Addiction in the United States. Springfield, Ill.: Thomas, 1970. Pp. 222-239.

Chambers, C.D.; Hinesley, R.K.; and Moldestad, M. Narcotic addiction in females: A race comparison. The International Journal of the Addictions, 5:257-278, 1970.

*Chambers, C.D., and Hunt, L.G. Drug use patterns in pregnant women. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: Mosby, 1977. Pp. 73-81.

*Chein, I.; Gerard, D.L.; Lee, R.S.; and Rosenfeld, E.; eds. The female addict. In: The Road to H: Narcotics, Delinquency and Social Policy. New York: Basic Books, 1964. Pp. 299-319.

Chisholm, C. Alcohol and drug addiction in relation to women and children. The British Journal of Inebriety, 26:207-217, 1929.

Christenson, S.J., and Swanson, A.Q. Women and drug use: An annotated bibliography. Journal of Psychedelic Drugs, 6(4):371-414, 1974.

Clark, J.S.; Capel, W.C.; Goldsmith, B.M.; and Stewart, G.T. Marriage and methadone: Spouse behavior patterns in heroin addicts maintained on methadone. Journal of Marriage and the Family, 34:496-502, 1972.

Clark, J.S.; Capel, W.C ; Goldsmith, B.M.; and Stewart, G.T. Wives, families and junk: A comparative study of wives of heroin addicts maintained on methadone. Journal of Drug Issues, 2(1):57-65, 1972.

*Climent, C.E.; Raynes, A.; Rollins, A.; and Plutchik, R. Epidemiological studies of female prisoners. II: Biological, psychological, and social correlates of drug addiction. The International Journal of the Addictions, 9(2):345-350, 1974.

Coleman, B.I. Helping women addicts in New York City. International Journal of Offender Therapy and Comparative Criminology, 18:82-85, 1974.

*Colten, M.E. A descriptive and comparative analysis of self-perceptions and attitudes of heroin-addicted women. In: Addicted Women: Family Dynamics, Self Perceptions, and Support Systems, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979. Pp. 7-36.

*Colten, M.E. A comparison of heroin-addicted and nonaddicted mothers: Their attitudes, beliefs, and parenting experiences. In: Heroin-Addicted Parents and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print., Off., 1980. Pp. 1-18.

Connaughton, J.F.; Finnegan, L.P.; Schut, J.; and Emich, J.P. Family center program: A successful approach for the rehabilitation of pregnant drug-dependent women. In: Committee on Problems of Drug Dependence. Report of the 36th Annual Scientific Meeting at Mexico City. Washington, D.C.: National Academy of Sciences, 1974.

*Cooperstock, R. Special problems of psychotropic drug use among women. Canada's Mental Health, 28(2):3-5, 1980.

Cooperstock, R. A review of women's psychotropic drug use. Canadian Journal of Psychiatry, 24(1):29-34, 1979.

*Cooperstock, R. Sex differences in psychotropic drug use. Social Science & Medicine, 12B: 179-186, 1978.

Cooperstock, R. Current trends in prescribed psychotropic drug use. In: Gibbons, R.J.; Israel, Y.; Kalant, H.; Popham, R.E.; Schmidt, W.; and Smart, R.G.; eds. Research Advances in Alcohol and Drug Problems. Vol. III. Toronto: Wiley, 1976.

*Cooperstock, R. Psychotropic drug use among women. Canadian Medical Association Journal, 115(8):760-763, 1976.

Cooperstock, R. Women and psychotropic drugs. In: MacLennan, A., ed. Women: Their Use of Alcohol and Other Legal Drugs--A Provinicial Consultation--1976. Toronto: Addiction Research Foundation, 1976.

Cooperstock, R. Sex differences in use of mood-modifying drugs: An explanatory model. Journal of Health and Social Behavior, 12(3):238-245, 1971.

*Cooperstock, R., and Lennard, H.L. Some social meanings of tranquilizer use. Sociology of Health and Illness, 1(3):331-347, 1979.

*Coppolillo, H.P. Drug impediments to mothering behavior. Addictive Diseases: an International Journal, 2(1):201-208, 1975.

Corley, C. Parental Attitudes and Practices of Addicted Women: A Descriptive Comparison. Ann Arbor, Mich.: Women's Drug Research Project, University of Michigan, 1978.

Coser, R.L. Why bother? Is research on issues of women's health worthwhile? In: Olesen, V., ed. Women and Their Health: Research Implications for a New Era. DHEW Pub. No. HRA 77-3138. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1975.

Cotroneo, M., and Krasner, B.R. Addiction, alienation, and parenting. Nursing Clinics of North America, 11(3):517-525, 1976.

Coughlan, A.J., and Gold, R. Self-destructive behavior in female adolescent addicts. American Journal of Orthopsychiatry, 44(2):252-253, 1974.

*Cuskey, W.; Berger, L.; and Densen-Gerber, J. Issues in the treatment of female addiction: A review and critique of the literature. Contemporary Drug Problems, 6(3):307-371, 1977.

Cuskey, W.; Moffett, A.; and Clifford, H. Comparison of female opiate addicts admitted to Lexington Hospital in 1961 and 1967. HSMHA Health Reports, 86(4):332-340, 1971.

Cuskey, W.R.; Densen-Gerber, J.; and Wathey, R.B. A follow-up study of women terminated from a therapeutic community program for female addicts. Journal of Addictions and Health, 1(4): 282-290, 1980.

Cuskey, W.R.; Premkumar, T.; and Edington, B. Female drug abuse--the third dimension. Public Health Reviews, 2(4):341-352, 1973.

*Cuskey, W.R.; Premkumar, T.; and Sigel, L. Survey of opiate addiction among females in the United States between 1850 and 1970. In: MSS Information Corporation. Psychotherapy & Drug Addiction, I: Diagnosis & Treatment. New York: MSS Information Corp. 1974. Pp. 55-88.

Cuskey, W.R.; Richardson, A.H.; and Berger, L.H. Specialized Therapeutic Community Program for Female Addicts, National Institute on Drug Abuse. DHEW Pub. No. (ADM)79-880. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

*Cuskey, W.R.; Wathey, R.B.; Richardson, A.H.; and Densen-Gerber, J. Evaluation of a therapeutic community program for female addicts. Journal of Addictions and Health, 1(3):186-203, 1980.

D.A.C. Bulletin. Women and Addiction: A Special Report. Washington, D.C.: Dept. of Drug and Alcohol Concerns, Board of Church and Society, 1974.

*Dammann, G., and Ousley, N. Female polydrug abusers. In: Wesson, D.R.; Carlin, A.S.; Adams, K.M.; and Beschner, G.M.; eds. Polydrug Abuse: The Results of a National Collaborative Study. New York: Academic Press, 1978. Pp. 59-95.

Danto, B.L. Prostitution and drug use as a means of coping with underlying psychodynamic conflict. In: Lettieri, D.J., ed. Drugs and Suicide: When Other Coping Strategies Fail. Beverly Hills, Calif.: Sage Publications, 1978.

*Davidson, V., and Bemko, J. International review of women and drug abuse (1966-1975). Journal of the American Medical Women's Association, 33(12):507-518, 1978.

*Davis, R.C. Psychosocial care of the pregnant narcotic addict. The Journal of Reproductive Medicine, 20(6):316-322, 1978.

DeLeon, G. Phoenix House: Psychopathological signs among male and female drug-free residents. Addictive Diseases: an International Journal, 1(2):135-152, 1974.

Densen-Gerber, J. Addiction and female sexuality. Journal of Addictions and Health, 2(2):94-115, 1981.

Densen-Gerber, J.; Wathey, R.; and Speller, M.L. Women and addiction: The sociologic autopsy. Legal Medicine Annual, 1976:261-269, 1977.

*Densen-Gerber, J.; Wiener, M.; and Hochstedler, R. Sexual behavior, abortion, and birth control in heroin addicts: Legal and psychiatric considerations. Contemporary Drug Problems, 1(4):783-793, 1972.

Deren, S., and Koslowsky, M. Personality sex differences of narcotic addicts and treatment implications. The International Journal of the Addictions, 12:541-551, 1977.

d'Orban, P.T. Court sentences in female narcotic addicts. British Journal of the Addictions, 69(2):167-171, 1974.

d'Orban, P.T. A follow-up of female narcotic addicts: Variables related to the outcome. The British Journal of Psychiatry, 125:28-33, 1974.

*d'Orban, P.T. Female narcotic addicts: A follow-up study of criminal and addiction careers. British Medical Journal, 4:345-347, 1973.

d'Orban, P.T. Heroin dependence and delinquency in women--a study of heroin addicts in Holloway Prison. British Journal of the Addictions, 65:67-78, 1970.

*Doyle, K.M.; Quinones, M.A.; Tracy, G.; Young, D.; and Hughes, J. Restructuring rehabilitation for women: Programs for the female drug addict. American Journal of Psychiatry, 134(12): 1395-1399, 1977.

Driscoll, G.Z., and Barr, H.L. Comparative study of drug-dependent and alcoholic women. In: Selected Papers from the 23rd Annual Meeting of Alcohol and Drug Problems Association of North America. Washington, D.C.: ADPA, 1972. Pp. 9-20.

DuPont, R.L. Drugs, alcoholism and women: Discrimination in women's drug problems. Vital Speeches of the Day, 42:140-143, 1975.

Duthie, R.B. Factor analytic study of the personality of female methadone outpatients. The International Journal of the Addictions, 15(3):1091-1096, 1980.

Edwards, E.D., and Jackson, J. Rehabilitative services provided women versus men in a substance abuse treatment program. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975. Pp. 505-508.

Elaine B., Clare M., June S., and Janet A. Helping the nurse who misuses drugs. American Journal of Nursing, 74(9):1665-1671, 1974.

*Eldred, C.A.; Grier, V.V.; and Berliner, N. Comprehensive treatment for heroin-addicted mothers. Social Casework, 55(8):470-477, 1974.

*Eldred, C.A., and Washington, M.N. Interpersonal relationships in heroin use by men and women and their role in treatment outcome. The International Journal of the Addictions, 11(1):117-130, 1976.

*Eldred, C.A., and Washington, M.N. Female heroin addicts in a city treatment program: The forgotten minority. Psychiatry, 38(1):75-85, 1975.

*Ellinwood, E.H.; Smith, W.G.; and Vaillant, G.E. Narcotic addiction in males and females: A comparison. The International Journal of the Addictions, 1:33-45, 1966.

*Escamilla-Mondanaro, J. Women: Pregnancy, children and addiction. Journal of Psychedelic Drugs, 9(1):59-68, 1977.

Eveson, M. The female addict. The Canadian Journal of Corrections, 9:227-233, 1967.

Eveson, M. Research with female drug addicts at the Prison for Women. The Canadian Journal of Corrections, 6:21-27, 1964.

Faires, T.M. A group experience to foster mothering skills in drug using mothers. Drug Forum, 5(3):229-235, 1976.

*Fanshel, D. Parental failure and consequences for children: The drug-abusing mother whose children are in foster care. American Journal of Public Health, 65(6):604-612, 1975.

*Farkas, M.I. The addicted couple. Drug Forum, 5(1):81-87, 1975-1976.

Ferrence, R.G., and Whitehead, P.C. Sex differences in psychoactive drug use: Recent epidemiology. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 125-201.

Fidell, L.S. Gender and drug use and abuse. In: Al-Issa, I., ed. Gender and Psychopathology. New York: Academic Press, in press.

*Fidell, L.S. Sex differences in psychotropic drug use. Professional Psychology, 12(1):156-162, 1981.

*Fidell, L.S. Sex role stereotypes and the American physician. Psychology of Women Quarterly, 4(3):313-330, 1980.

*File, K.N. Sex roles and street roles. The International Journal of the Addictions, 11(2):263-268, 1976.

File, K.N.; McCahill, T.W.; and Savitz, L.D. Narcotic involvement and female criminality. Addictive Diseases: an International Journal, 1:177-188, 1974.

*Finnegan, L.P. Women in treatment. In: DuPont, R.L.; Goldstein, A.; and O'Donnell, J.; eds. Handbook on Drug Abuse, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979. Pp. 121-131.

Finnegan, L.P.; Bookhart, P.R.; Moten, L.; Cohen, C.; and Goodman, N. Comprehensive services to drug-dependent women and their children. In: Schecter, A.; Alksne, H.; and Kaufman, E.; eds. Critical Concerns in the Field of Drug Abuse. New York: Marcel Dekker, 1978.

Flint, M.S. Narcotics addiction in women offenders. Canadian Journal of Corrections, 6:246-265, 1964.

Freedman, T.G., and Finnegan, L.P. Triads and the drug-dependent mother. Social Work, 21(5):402-404, 1976.

Gasta, C.; Steer, R.A.; Kotzker, E.; and Schut, J. Relationship between similarity of needs and marital adjustment in dyadic and monodic heroin addicted couples. International Journal of Family Counseling, 6(1):74-80, 1978.

*Gerstein, D.R.; Judd, L.L.; and Rovner, S.A. Career dynamics of female heroin addicts. American Journal of Drug and Alcohol Abuse, 6(1):1-23, 1979.

*Gioia, C., and Byrne, R. Distinctive problems of the female drug addict: Experiences at IDAP. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975. Pp. 531-538.

Glaser, F.B. Narcotic addiction in the pain-prone female patient. II. Some factors in the doctor-patient relationship. The International Journal of the Addictions, 3(1):149-161, 1968.

Glaser, F.B. Narcotic addiction in the pain-prone female patient. I. A comparison with addict controls. The International Journal of the Addictions, 1(1):47, 1966.

*Gossop, M. Drug dependence, crime and personality among female addicts. Drug and Alcohol Dependence, 3(5):359-364, 1978.

Gossop, M.R.; Stern, R.; and Connell, P.H. Drug dependence and sexual dysfuction: A comparison of intravenous users of narcotics and oral users of amphetamines. British Journal of Psychiatry, 124:431-434, 1974.

Green, D.E., and MacDonald, M. Women and Psychoactive Drug Use: An Interim Annotated Bibliography. Toronto: Addiction Research Foundation, 1976.

Greene, B.T., and Ryser, P.E. Impact of sex on length of time spent in treatment and treatment success. American Journal of Drug and Alcohol Abuse, 5(1):97-105, 1978.

Halpern, P.E. Prescription drug abuse. Journal of Addictions and Health, 1(1):57-60, 1980.

Hargraves, R., and Nellis, M. Women and drug concerns: Bibliography. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975.

*Harris, S. Mothers in methadone programs need day care. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975.

Henry, B.C. Helping women addicts at "The Coke Hole," England. International Journal of Offender Therapy and Comparative Criminology, 18:68-76, 1974.

Hobel, C.J. The identification of the patient at risk. In: Bolognese, R.J., and Schwarz, R.H., eds. Perinatal Medicine: Management of the High Risk Fetus and Neonate. Baltimore, Md.: Williams & Wilkins, 1977. Pp. 1-25.

Holzner, A.S., and Ding, L.K. White dragon pearls in Hong Kong: A study of young women drug addicts. The International Journal of the Addictions, 8:253-263, 1973.

Huba, G.J.; Segal, B.; and Singer, J.L. Consistency of daydreaming styles across samples of college male and female drug and alcohol users. Journal of Abnormal Psychology, 86(1): 99-102, 1977.

*Huba, G.J.; Segal, B.; and Singer, J.L. Organization of needs in male and female drug and alcohol users. Journal of Consulting and Clinical Psychology, 45(1):34-44, 1977.

Hunt, E.M. Aftercare for the woman drug addict. In: Proceedings of the 68th Annual Congress of the American Prison Association, 1938. Pp. 358-365.

*James, J. Prostitution and addiction: An interdisciplinary approach. Addictive Diseases: an International Journal, 2(4):601-618, 1976.

*James, J.; Gosho, C.; and Wohl, R.W. The relationship between female criminality and drug use. The International Journal of the Addictions, 14(2):215-229, 1979.

Jennrich, R.I., and Sampson, P.F. Rotation for simple loadings. Psychometrika, 31:313-323, 1966.

Johnston, W.C. A descriptive study of 100 convicted female narcotics residents. Corrective Psychiatry and Journal of Social Therapy, 14:230-236, 1968.

Kaiser, H.F. The varimax criterion for analytic rotation in factor analysis. Psychometrika, 23:187-200, 1958.

*Kandel, D.B.; Davies, M.; and Raveis, V.H. "Women and Drug Use: Social Strains, Coping and Psychological Functioning: A Pilot Study." Final report of NIDA grant No. 1-RO1-DA 01931. New York: Columbia University and New York State Psychiatric Institute, 1981.

Kaubin, B.J. Sexism shades the lives and treatment of female addicts. Contemporary Drug Problems, 3:471-484, 1974.

Keil, T.J. Social correlates of female abstinence from marijuana: Results of a household survey. The International Journal of the Addictions, 15(7):957-967, 1980.

Kerr, B. Strong at the Broken Places: Women Who Have Survived Drugs. Chicago: Follett Publishing, 1974.

Khantzian, E.J. Drug-alcohol problems in women: A clinical perspective. Psychiatric Opinion, 15(10):18-20, 1978.

Kilmann, P.R. Personality characteristics of female narcotic addicts. Psychological Reports, 35:485-486, 1974.

Kilmann, P.R. Self-actualization of female narcotic drug addicts. Journal of Clinical Psychology, 30(3):308-310, 1974.

Kirk, R.E. Experimental Design Procedures for the Behavioral Sciences. Belmont, Calif.: Brooks/Cole Publishers, 1968.

Klinge, V.; Vaziri, H.; and Lennox, K. Comparison of psychiatric inpatient male and female adolescent drug abusers. The International Journal of the Addictions, 11(2):309-323, 1976.

Kolb, L. Drug addiction among women. In: Proceedings of the 68th Annual Congress of the American Prison Association, 1938. Pp. 348-357.

Kunnes, R. Poly-drug abuse: Drug companies and doctors. American Journal of Orthopsychiatry, 43:530-532, 1973.

Ladewig, D., and Battegay, R. Abuse of anorexics with special reference to newer substances. The International Journal of the Addictions, 6(1):167-172, 1971.

*Lawson, M.S., and Wilson, G.S. Parenting among women addicted to narcotics. Child Welfare, 59(2):67-79, 1980.

*Lawson, M.S., and Wilson, G.S. Addiction and pregnancy: Two lives in crisis. Social Work in Health Care, 4(4):445-457, 1979.

Levi, M., and Seborg, M. The study of I.Q. scores on verbal vs. academic achievement among women drug addicts from different racial and ethnic groups. The International Journal of the Addictions, 7(3):581-584, 1972.

*Levine, D.G.; Preston, P.A.; and Lipscomb, S.G. A historical approach to understanding drug abuse among nurses. American Journal of Psychiatry, 131(9):1036-1037, 1974.

Levine, D.G.; Preston, P.A.: Lipscomb, S.C.; and Ross, W.F. A special program for nurse addicts. American Journal of Nursing, 74(9):1672-1673, 1974.

Levy, S.J., and Doyle, K.M. Attitudes toward women in a drug treatment program. Journal of Drug Issues, 4(4):428-434, 1974.

*Levy, S.J., and Broudy, M. Sex role differences in the therapeutic community: Moving from sexism to androgyny. Journal of Psychedelic Drugs, 7(3):291-297, 1975.

Levy, S.J., and Doyle, K.M. Attitudes toward women in a methadone maintenance program. In: Women in Treatment: Issues and Approaches Resource Manual, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1976.

*Lex, B.W. "Significance of Addicts' Mates in Rehabilitation." Final report of NIDA grant No. 1-R01-DA 02325-01. Boston, Mass.: McLean Hospital, Harvard University, 1981.

Lief, N. Some measures of parenting behavior for addicted and nonaddicted mothers. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Linn, L.S. Physician characteristics and attitudes toward legitimate use of psychotherapeutic drugs. Journal of Health and Social Behavior, 12:132-140, 1971.

*Linn, L.S., and Davis, M.S. The use of psychotherapeutic drugs by middle-aged women. Journal of Health and Social Behavior, 12(4):331-340, 1971.

Lipp, M.R.; Benson, S.G.; and Allen, P.S. Marijuana use by nurses and nursing students. American Journal of Nursing, 71(12):2339-2341, 1971.

Lipsitt, P.D., and Lelos, D. Relationship of sex-role identify to level of ego development in habitual drug users. In: Proceedings of the 80th Annual Convention of the American Psychological Association. Arlington, Va.: American Psychological Association, 1972. Pp. 255-256.

Litt, I.F. Substance abuse among adolescent females. Journal of Addictions and Health, 2(2): 61-67, 1981.

Lohr, L. Why are more women misusing drugs? American Pharmacy, 18(11):44-45, 1978.

Longdon, W.H. Methedrine use in young women--some findings. Canada's Mental Health, 21:8-9, 1973.

MacDonald, A.; Walls, R.; and LeBlanc, R. College female drug abusers. Adolescence, 8:189-196, 1973.

MacLennan, A., ed. Women: Their Use of Alcohol and Other Legal Drugs; a Provincial Consultation--1976. Toronto: Addiction Research Foundation, 1976.

*Maglin, A. Sex role differences in heroin addiction. Social Casework, 55(3):160-167, 1974.

*Mandel, L.; Schulman, J.; and Monteiro, R. A feminist approach for the treatment of drug-abusing women in a coed therapeutic community. The International Journal of the Addictions, 14(5):589-597, 1979.

Martin, F. Effects of grade level and sex upon self-reported delinquency and drug use. Peabody Journal of Education, 53(2):115-120, 1976.

Martin, R.L.; Cloninger, C.R.; and Guze, S.B. The evaluation of diagnostic concordance in follow-up studies: II. A blind, prospective follow-up of female criminals. Journal of Psychiatric Research, 15(2):107-125, 1979.

Martin, R.L.; Cloninger, C.R.; and Guze, S.B. Female criminality and the prediction of recidivism: A prospective six-year follow-up. Archives of General Psychiatry, 35(2):207-214, 1978.

McCarthy, M. The female drug addict and her feminine mystique. Psychiatric Opinion, 9:30-35, 1972.

McRee, C.; Corder, B.F.; and Haizlip, T. Psychiatrists' responses to sexual bias in pharmaceutical advertising. American Journal of Psychiatry, 131(11):1273-1275, 1974.

Mier Y Teran, C.; Schnass, L.; Vargas, G.; and Belsasso, G. Drug abuse among the inmates of a women's prison in Mexico City. Addictive Diseases: an International Journal, 1(2):153-175, 1974.

Miller, B. Student drug use: Attitudinal, parental relations, and sex differences: A pilot study. The International Journal of the Addictions, 11(6):1079-1084, 1976.

Miller, J.S.; Sensenig, J.; Stocker, R.B.; and Campbell, R. Value patterns of drug addicts as a function of race and sex. The International Journal of the Addictions, 8(4):589-598, 1973.

Mitchell, K.R.; Kirkby, R.J.; and Mitchell, D.M. Note on sex differences in student drug usage. Psychological Reports, 27:116, 1970.

Moinat, S., and Snortum, J.R. Self-management of personal habits by female drug addicts: A feasibility study. Criminal Justice and Behavior, 3(1):29-40, 1976.

*Moise, R.; Kovach, J.; Reed, B.G.; and Bellows, N. A comparison of black and white women entering drug abuse treatment programs. The International Journal of the Addictions, 17(1):35-49, 1982.

*Moise, R.; Reed, B.G.; and Conell, C. Women in drug abuse treatment programs: Factors that influence retention at very early and later stages in two treatment modalities. The International Journal of the Addictions, 16(6):1295-1300, 1981.

Moise, R.; Reed, B.G.; and Ryan, V.S. Issues in the treatment of heroin addicted women: A comparison of men and women entering two types of drug abuse programs. The International Journal of the Addictions, 17(1):109-139, 1982.

Mosher, E.H. Portrayal of women in drug advertising: A medical betrayal. Journal of Drug Issues, 6(1):72-78, 1977.

*Murphy, L., and Rollins, J.H. Attitudes toward women in co-ed and all female drug treatment programs. Journal of Drug Education, 10(4):319-323, 1980.

Murray, H.A. Explorations in Personality. New York: Wiley, 1938.

National Institute on Drug Abuse. Addicted Women: Family Dynamics, Self Perceptions and Support Systems. NIDA Services Research Monograph Series. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

National Institute on Drug Abuse. Women and prescription drugs. NIDA Capsules, April 1978.

Neal, G.L., and Pearson, R.G. Comparative effects of age, sex, and drugs upon two tasks of auditory vigilance. Perceptual and Motor Skills, 23:967-974, 1966.

Nellis, M., ed. Drugs, Alcohol and Women: A National Forum Source Book. Washington, D.C.: National Research and Communications Associates, 1976.

Noble, P., and Barnes, G.G. Drug taking in adolescent girls: Factors associated with the progression to narcotic use. British Medical Journal, 2:620-623, 1971.

Noble, P.; Hart, T.; and Nation, R. Correlates and outcomes of illicit drug use by adolescent girls. British Journal of Psychiatry, 120:497-504, 1972.

*Obeso, P., and Bordatto, O. Cultural implications in treating the Puerto Rican female. American Journal of Drug and Alcohol Abuse, 6(3):337-344, 1979.

O'Donnell, J. The drug culture and women. Caveat, 2(3):6-7, 1974.

O'Donnell, J.A.; Besteman, K.J.; and Jones, J.P. Marital history of narcotics addicts. The International Journal of the Addictions, 2:21-38, 1967.

Oehlberg, S.M.; Regan, D.O.; Rudrauff, M.E.; and Finnegan, L.P. A preliminary evaluation of parenting, depression, and violence profiles in methadone maintained women. In: Petersen, R.C., ed. Problems of Drug Dependence 1980. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1980.

Oglesby, H. Demographic characteristics and social work input in the social rehabilitative process of the pregnant opiate dependent mother in a comprehensive care program. In: National Academy of Sciences. Report of the 36th Annual Scientific Meeting of the Committee on Problems of Drug Dependence. Washington, D.C.: the Academy, 1974.

Olson, M.S., and Thomas, P.J. Preenlistment Drug Experiences of Navy Women and Men: A Comparison. San Diego, Calif.: Navy Personnel Research and Development Center, 1978.

Olson, R.W. MMPI sex differences in narcotic addicts. The Journal of General Psychology, 71:257-266, 1964.

Ostrea, E.M.; Chavez, C.J.; and Stryker, J.C. The Care of the Drug Dependent Women and Her Infant. Lansing, Mich.: Michigan Dept. of Public Health, 1978.

Oswalt, R., and Sexton, D. Marijuana and LSD usage among female college students. Journal of the American College Health Association, 20(4):265-268, 1972.

Paton, S.M., and Kandel, D.B. Psychological factors and adolescent illicit drug use: Ethnicity and sex differences. Adolescence, 13:187-200, 1978.

Peirce, S.M. When the addict is a nurse. AORN Journal, 24(4):655-664, 1976.

Petersen, D.M. Acute drug reactions (overdoses) among females: A race comparison. Addictive Diseases: an International Journal, 1(2):223-233, 1974.

Poland, B.J.; Wogan, L.; and Calvin, J. Teenagers, illicit drugs and pregnancy. Canadian Medical Association Journal, 107:955-958, 1972.

Polit, D.F.; Nuttall, R.L.; and Hunter, J.B. Women and drugs: A look at some of the issues. The Urban Social Change Review, 9:9-16, 1976.

Poplar, J. Characteristics of nurse addicts. American Journal of Nursing, 69(1):117-119, 1969.

*Prather, J., and Fidell, L. Sex differences in the content and style of medical advertisements. Social Science & Medicine, 9(1):23-26, 1975.

*Prather, J.E., and Fidell, L.S. Drug use and abuse among women: An overview. The International Journal of the Addictions, 13(6):863-885, 1978.

Ramsey, M. Feminism and female drug abuse: Eight techniques to enrich the therapeutic experience. Focus on Women--Journal of Addictions and Health, 1(4):277-281, 1980.

Raynes, A.E.; Climent, C.; Patch, V.D.; and Ervin, F. Factors related to imprisonment in female heroin addicts. The International Journal of the Addictions, 9(1):145-150, 1974.

*Reed, B.G.; Kovach, J.; Bellows, N.; and Moise, R. The many faces of addicted women: Implications for treatment and future research. In: Schecter, A.J., ed. Drug Dependence and Alcoholism. Vol. 1. Biomedical Issues. New York: Plenum Press, 1981. Pp. 833-847.

*Reed, B.G., and Leibson, E. Women clients in special women's demonstration programs compared with women entering co-sex programs. The International Journal of the Addictions, 16(8):1425-1466, 1981.

Reed, B.G., and Moise, R. Treatment implications of WDR research: Psychosocial characteristics of addicted women and other studies. In: Addicted Women: Self Perceptions, Social Supports and Family Dynamics, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1980.

Reed, B.G., and Rinaldo, S.G. Preliminary observations on the organizational context of treatment for female and male heroin abusers. Journal of Psychedelic Drugs, 10(3):269-276, 1978.

*Rementeria, J.L., and Marrero, G. Drug-addicted family (mother, father, and infant): Some sociomedical factors. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: C.V. Mosby, 1977. Pp. 245-259.

Rittenhouse, J.D. The female addict: A needs perspective. Proceedings of the 31st International Congress on Alcoholism and Drug Dependence. Lausanne, Switzerland: International Congress on Alcohol and Addictions, 1975. P. 82.

*Robins, L.N., and Smith, E.M. Longitudinal studies of alcohol and drug problems: Sex differences. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 202-232.

Rohrs, C.C.; Densen-Gerber, J.; and Murphy, J.P. Addicted mothers--aims of the program, clinical experiences, results of treatment. Proceedings of the 30th International Congress on Alcoholism and Drug Dependence, Lausanne, Switzerland: International Congress on Alcohol and Addictions, 1972. P. 165.

*Rosenbaum, M. Sex roles among deviants: The woman addict. The International Journal of the Addictions, 16(5):859-877, 1981.

*Rosenbaum, M. When drugs come into the picture, love flies out the window: Women addicts' love relationships. The International Journal of the Addictions, 16(7):1197-1206, 1981.

*Rosenbaum, M. Women addicts' experience of the heroin world: Risk, chaos, and inundation. Urban Life, 10(1):65-91, 1981.

Rosenbaum, M. Women on Heroin. New Brunswick, N.J.: Rutgers University Press, 1981.

*Rosenbaum, M. Becoming addicted: The woman addict. Contemporary Drug Problems, 8(2):141-166, 1979.

*Rosenbaum, M. Difficulties in taking care of business: Women addicts as mothers. American Journal of Drug and Alcohol Abuse, 6(4):431-446, 1979.

Rosenbaum, M. The World and Career of Women Heroin Addicts. San Fernando, Calif.: Scientific Analysis Corp., 1973.

*Rosenbaum, M., and Murphy, S. Getting the treatment: Recycling women addicts. Journal of Psychoactive Drugs, 13(1):1-13, 1981.

Rosenberg, J.; Kasl, S.; and Berberian, R. Sex differences in adolescent drug use: Recent trends. Addictive Diseases: an International Journal, 1(1):73-96, 1974.

*Rosenthal, B.J.; Savoy, M.J.; Greene, B.T.; and Spillane, W.H. Drug treatment outcomes: Is sex a factor? The International Journal of the Addictions, 14(1):45-62, 1979.

Ross, W.F., and Berzins, J.I. Personality characteristics of female narcotic addicts on the MMPI. Psychological Reports, 35(2):779-784, 1974.

Ross, W.F.; McReynolds, W.T.; and Berzins, J.I. Effectiveness of marathon group psychotherapy with hospitalized female narcotics addicts. Psychological Reports, 34:611-616, 1974.

Rouse, B.A., and Ewing, J.A. Marihuana and other drug use by women college students: Associated risk taking and coping activities. American Journal of Psychiatry, 130(4):486-490, 1973.

Ryan, V.S. Differences between males and females in drug treatment programs. In: Schecter, A.J., ed. Drug Dependence and Alcoholism. New York: Plenum Press, 1981.

Santo, Y. Patterns of substance abuse: Differences between men and women. Alcohol Health and Research World, 3(2):37-39, 1978.

*Saxon, S.; Kuncel, E.; and Kaufman, E. Self-destructive behavior patterns in male and female drug abusers. American Journal of Drug and Alcohol Abuse, 7(1):19-29, 1980.

Schaefer, E.S., and Bell, R.Q. Development of a parental attitude research instrument. Child Development, 29:339-361, 1958.

*Schuckit, M., and Morrissey, E. Drug abuse among alcoholic women. American Journal of Psychiatry, 136(4B):607-611, 1979.

*Schultz, A.M. Radical feminism: A treatment modality for addicted women. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975. Pp. 484-503. Also in: Rawlings, E.I., and Carter, D.K. Psychotherapy for Women. Springfield, Ill.: Thomas, 1977.

Schuman, S.H., and Polkowski, J. Drug and risk perceptions of ninth-grade students: Sex differences and similarities. Community Mental Health Journal, 11(2):184-194, 1975.

Segal, B.; Rhenberg, G.; and Sterling, S. Self-concept and drug and alcohol use in female college students. Journal of Alcohol and Drug Education, 20(3):17-22, 1975.

Seidenberg, R. Images of health, illness and women in drug advertising. Journal of Drug Issues, 4:264, 1974.

Seitz, L. Status of women alcohol/drug abusers in Tennessee. Journal of Tennessee Medicine, 72(5):373-374, 1979.

Seltzer, C.; Friedman, C.D.; and Siegelaub, A.B. Smoking and drug consumption in white, black and oriental women. American Journal of Public Health, 64(5):466-473, 1974.

Shainess, N. Women, drugs and well-being. ADIT: Approaches to Drug Abuse and Youth, 2(5):1-2,9-12, 1973.

Shepherd, T.L.; Wotring, C.E.; and Schmeling, D. The incidence of mood altering drug use and abuse among middle-aged women in Florida. Journal of Drug Education, 8(1):9-17, 1978.

Sherwin, R.; Blackwell, K.; and Kienzle, H. Sexual status and drug use. Journal of Drug Issues, 3:348, 1973.

Silver, F.C.; Panepinto, W.C.; Arnon, D.; and Swaine, W.T. A family approach in treating the pregnant addict. In: Senay, E.; Short, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1975. P. 401.

*Singer, A. Mothering practices and heroin addiction. American Journal of Nursing, 74(1):77-82, 1974.

Sister Joan Elizabeth. Helping women addicts as Spelthorne St. Mary's, England. International Journal of Offender Therapy and Comparative Criminology, 18:77-81, 1974.

Soler, E.G., and Dammann, G. Women in crisis: Drug use and abuse. Journal of Addictions and Health, 1(4):227-241, 1980.

*Staats, G.R. Sexual differentiation among marijuana users: Reality or inaccuracy. The International Journal of the Addictions, 14(8):1163-1170, 1979.

Steer, R.A.; Gasta, C.; Kotzker, E.; and Schut, J. Need similarity in husbands and wives who are receiving methadone maintenance therapy. Journal of Clinical Psychology, 34(2): 558-561, 1978.

Steer, R.A., and Kotzker, E. Affective changes in male and female methadone patients. Drug and Alcohol Dependence, 5:115-122, 1980.

*Steer, R.A., and Schut, J. Moods of pregnant and nonpregnant heroin addicts. The International Journal of the Addictions, 15(8):1279-1283, 1980.

Steffenhagen, R.; McAree, C.; and Nixon, H. Drug use among college females: Sociodemographic and social psychological correlates. The International Journal of the Addictions, 7(2):285-303, 1972.

Stone, C.I., and Shute, R.E. Persuader sex differences and peer pressure effects on attitudes toward drug abuse. American Journal of Drug and Alcohol Abuse, 4(1):55-64, 1977.

Strimbu, J.L.; Schoenfeldt, L.F.; and Sims, O.S. Sex differences in college student drug use. Journal of College Student Personnel, 14:507-510, 1973.

*Suffet, F., and Brotman, R. Female drug use: Some observations. The International Journal of the Addictions, 11(1):19-33, 1976.

Sutker, P., and Allain, A. MMPI indices of personality change following short- and long-term hospitalization of heroin addicts. Psychological Reports, 34:495-500, 1974.

Sutker, P.B. Adolescent drug and alcohol behaviors. In: Field, T.; Huston, A.; Quay, H.; Troll, L.; and Finley, G.; eds. Review of Human Development. New York: Wiley, 1982.

Sutker, P.B.; Allain, A.N.; Smith, C.J.; and Cohen, G.H. Addict descriptions of therapeutic community, multimodality, and methadone maintenance treatment clients and staff. Journal of Consulting and Clinical Psychology, 46:508-517, 1978.

Sutker, P.B., and Archer, R.P. Drug abuse and dependence disorders: Psychopathology and deviance. In: Adams, H.E., and Sutker, P.B., eds. Comprehensive Handbook of Psychopathology. New York: Plenum Press, in press.

*Sutker, P.B.; Archer, R.P.; and Allain, A.N. Psychopathology of drug abusers: Sex and ethnic considerations. The International Journal of the Addictions, 15(4):605-613, 1980.

*Sutker, P.B.; Archer, R.P.; and Allain, A.N. Drug abuse patterns, personality characteristics, and relationships with sex, race, and sensation seeking. Journal of Consulting and Clinical Psychology, 46(6):1374-1378, 1978.

Sutker, P.B., and Moan, C.E. Personality characteristics of socially deviant women: Incarcerated heroin addicts, street addicts, and non-addicted prisoners. In: Singh, J.M.; Miller, L.; and Lal, H.; eds. Drug Addiction: Clinical and Socio-Legal Aspects. Mount Kisco, N.Y.: Futura Publishing, 1972. Pp. 107-114.

*Sutker, P.B.; Patsiokas, A.T.; and Allain, A.N. Chronic illicit drug abusers: Gender comparisons. Psychological Reports, 49:383-390, 1981.

Taylor, S.D.; Wilbur, M.; and Osnos, R. The wives of drug addicts. American Journal of Psychiatry, 123(5):585-591, 1966.

*Tucker, M.B. A descriptive and comparative analysis of the social support structure of heroin addicted women. In: Addicted Women: Family Dynamics, Self Perceptions, and Support Systems, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979. Pp. 37-76.

Tucker, M.B.; Colten, M.E.; and Douvan, E. "Report on the Development of Psychosocial Measures Appropriate for Use With Low Income/Low Education Women." Women's Drug Research Project Report to the National Institute on Drug Abuse, 1976.

*Tyler, J., and Thompson, M. Patterns of drug abuse among women. The International Journal of the Addictions, 15(3):309-321, 1980.

Wackwitz, J.H.; Pelfrey, M.C.; and Stenmark, D.E. The relationship of social and personality characteristics to hallucinogen use among college females. Addictive Diseases: an International Journal, 1(2):189-202, 1974.

Waldorf, D. Women versus men. In: Waldorf, D. Careers in Dope. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

Waldron, I. Increased prescribing of Valium, Librium, and other drugs: An example of the influence of economic and social factors on the practice of medicine. International Journal of Health Services, 7(1):37-61, 1977.

*Weschler, H., and McFadden, M. Sex differences in adolescent alcohol and drug use: A disappearing phenomenon. Journal of Studies on Alcohol, 37(9):1291-1301, 1976.

*Weissman, J.C., and File, K.M. Criminal behavior patterns of female addicts: A comparison of findings in two cities. The International Journal of the Addictions, 11(6):1063-1077, 1976.

*Wellisch, D.K., and Steinberg, M.R. Parenting attitudes of addict mothers. The International Journal of the Addictions, 15(6):809-819, 1980.

Westermeyer, J. Sex ratio among opium addicts in Asia: Influences of drug availability and sampling method. Drug and Alcohol Dependence, 6(3):131-136, 1980.

Westermeyer, J., and Peng, G. A comparative study of male and female opium addicts among the Hmong (Meo). British Journal of Addiction, 73(2):181-187, 1978.

*Whitehead, C.C. Psychohistorical perspectives on drug abuse, alienation, feminism and warfare in relation to the methadone maintenance treatment. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fifth National Conference on Methadone Treatment. New York: NAPAN, 1973.

Williams, J.E., and Bates, W.M. Some characteristics of female narcotic addicts. The International Journal of the Addictions, 5(2):245-256, 1970.

*Wilson, G.S.; Desmond, M.M.; and Wait, R.B. Follow-up of methadone-treated and untreated narcotic-dependent women and their infants: Health, developmental, and social implications. The Journal of Pediatrics, 98(5):716-722, 1981.

Winick, C. Drug dependence among nurses. In: Winick, C., ed. Sociological Aspects of Drug Dependence. Cleveland: CRC Press, 1974.

Wolk, R.L., and Diskind, M.H. Personality dynamics of mothers and wives of drug addicts. Journal of Crime and Delinquency, 7:148-152, 1961.

*Wotring, C.D., and Schmeling, D. Mood altering drug abuse: The perceptions of middle-aged women concerning the use and abuse of prescription drugs. Journal of Drug Education, 7(2):123-131, 1977.

Zahn, M.A., and Ball, J.C. Patterns and causes of drug addiction among Puerto Rican females. Addictive Diseases: an International Journal, 1(2):203-213, 1974.

PHYSIOLOGICAL RESEARCH

Aase, J.M.; Laestadius, N.; and Smith, D.W. Children of mothers who took LSD in pregnancy. Lancet, 2:100-101, 1970.

Amarose, A.P. Chromosome aberrations in the mother and the newborn from drug-addiction pregnancies. Journal of Reproductive Medicine, 20(6):323-328, 1978.

Amarose, A.P., and Norusis, M.J. Cytogenetics of methadone-managed and heroin-addicted pregnant women and their newborn infants. American Journal of Obstetrics and Gynecology, 124(6):635-640, 1976.

Ananth, J. Side effects in the neonate from psychotropic agents excreted through breastfeeding. American Journal of Psychiatry, 135(7):801-805, 1978.

*Andersen, M.D. Health needs of drug dependent clients: Focus on women. Women and Health, 5(1):23-34, 1980.

Andersen, M.D. Medical Needs of Addicted Women and Men and the Implications for Treatment, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Annunziato, D. Neonatal addiction to methadone. Pediatrics, 47(4):787, 1971.

Apgar, V. Drugs in pregnancy. Journal of the American Medical Association, 190(9):840-841, 1964.

Apple, D.J., and Bennett, T.O. Multiple-systemic and ocular malformations associated with maternal LSD usage. Archives of Ophthalmology, 92(4):301-303, 1974.

Bai, J.; Greenwald, E.; Caterini, H.; and Kaminetzky, H.A. Drug-related menstrual aberrations. Obstetrics and Gynecology, 44(5):713-719, 1974.

Barton, W.I. A statistical study of infants born with withdrawal symptoms in the District of Columbia. Medical Annals of the District of Columbia, 42(6):287-290, 1973.

Bayley, N. Bayley Scales of Infant Development. New York: Psychological Corp., 1969.

Behrendt, H., and Green, M. Nature of the sweating deficit of prematurely born neonates: Observations on babies with the heroin withdrawal syndrome. The New England Journal of Medicine, 286(26):1376-1379, 1972.

Belafsky, H.A.; Breslow, S.; Hirsch, L.M.; Shangold, J.E.; and Stahl, M.B. Meprobamate during pregnancy. Obstetrics and Gynecology, 34(3):378-386, 1969.

Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Blatman, S. Narcotic poisoning of children (1) through accidental ingestion of methadone and (2) in utero. Pediatrics for the Clinician, 54(3):329-332, 1974.

Blatman, S. Methadone effects on pregnancy and the newborn. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fifth National Conference on Methadone Treatment. New York: NAPAN, 1973. Pp. 842-845.

Blatman, S. Methadone and children. Pediatrics, 48(2):173-175, 1971.

Bleyer, W.A.; Au, W.Y.W.; Lange, W.A., Sr.; and Raisz, L.G. Studies on the detection of adverse drug reactions in the newborn. I. Fetal exposure to maternal medication. Journal of the American Medical Association, 219(12):2046-2048, 1970.

Bleyer, W.A., and Breckenridge, R.T. Studies on the detection of adverse drug reactions in the newborn. II. The effects of prenatal aspirin on newborn hemostasis. Journal of the American Medical Association, 219(12):2049-2053, 1970.

Bleyer, W.A., and Marshall, R.E. Barbiturate withdrawal syndrome in a passively addicted infant. Journal of the American Medical Association, 221(2):185-186, 1972.

Blinick, G. Fertility of narcotics addicts and effects of addiction on the offspring. Social Biology, 18:S34-S39, 1971.

Blinick, G. Menstrual function and pregnancy in narcotics addicts treated with methadone. Nature, 219:180, 1968.

*Blinick, G.; Inturrisi, C.E.; Jerez, E.; and Wallach, R. Methadone assays in pregnant women and progeny. American Journal of Obstetrics and Gynecology, 121(5):617-621, 1975.

*Blinick, G.; Inturrisi, C.E.; Jerez, E.; and Wallach, R. Amniotic fluid methadone in women maintained on methadone. Mount Sinai Journal of Medicine, 41(2):254-259, 1974.

*Blinick, G.; Jerez, E.; and Wallach, R.C. Methadone maintenance, pregnancy, and progeny. The Journal of the American Medical Association, 225(5):477-479, 1973.

Blinick, G.; Tavolga, W.M.; and Antopol, W. Variations in birth cries of newborn infants from narcotic-addicted and normal mothers. American Journal of Obstetrics and Gynecology, 110(7):948-958, 1971.

Blinick, G., and Wallach, R.C. Fertility of narcotic addicts. Proceedings of the 30th International Congress on Alcoholism and Drug Dependence. Lausanne, Switzerland: International Congress on Alcohol and Addictions, 1972. P. 167.

Blinick, G.; Wallach, R.; and Jerez, E. Pregnancy in narcotics addicts treated by medical withdrawal: The methadone detoxification program. American Journal of Obstetrics and Gynecology, 105:997-1003, 1969.

*Blinick, G.; Wallach, R.C.; Jerez, E.; and Ackerman, B.D. Drug addiction in pregnancy and the neonate. American Journal of Obstetrics and Gynecology, 125(2):135-142, 1976.

Blumenthal, I., and Lindsay, S. Neonatal barbiturate withdrawal. Postgraduate Medical Journal, 53:157-158, 1977.

Blumenthal, S.; Bergner, L.; and Nelson, F. Low birth weights of infants associated with maternal heroin use. Health Services Report, 88:416, 1973.

Brackbill, Y.; Kane, J.; Manniello, R.L.; and Abramson, D. Obstetric meperidine usage and assessment of neonatal status. Anesthesiology, 40(2):116-120, 1974.

Brackbill, Y.; Kane, J.; Manniello, R.L.; and Abramson, D. Obstetric premedication and infant outcome. American Journal of Obstetrics and Gynecology, 118:377, 1974.

Brazelton, B. Neonatal Behavioral Assessment Scale. In: Clinics in Developmental Medicine, No. 50. London: Spastics International Medical Publications, 1973.

Buck, D. Drugs used in pregnancy. Canadian Medical Association Journal, 112:1285, 1975.

Carakushansky, G.; Neu, R.L.; and Gardner, L.I. Lysergide and cannabis as possible teratogens in man. Lancet, 1:150-151, 1969.

Cary, W. "Cold turkey" in the newborn. Medical Journal of Australia, 1:361-363, 1972.

Challis, R.E., and Scopes, J.W. Late withdrawal symptoms in babies born to methadone addicts. Lancet, 8050:1230, 1977.

Chambers, E.D., and Hunt, L.G. Drug use patterns in pregnant women. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and the Neonate. St. Louis, Mo.: C.V. Mosby, 1977.

Chavez, C.J. Evaluation of a neonatal recovery room. Michigan Medicine, Vol. 74, 1975.

Chavez, C.J., and Ostrea, E.M., Jr. Outcome of infants of drug dependent mothers based on the type of caregiver. Pediatric Research, 11:385, 1977.

Chavez, C.J.; Ostrea, E.M., Jr.; Stryker, J.C.; and Strauss, M.E. Ocular abnormalities in infants as sequelae of prenatal drug addiction. Pediatric Research, 13:367, 1970.

*Chavez, C.J.; Ostrea, E.M.; Stryker, J.C.; and Smialek, Z. Sudden infant death syndrome among infants of drug-dependent mothers. The Journal of Pediatrics, 95(3):407-409, 1979.

*Cicero, T.J. Sex differences in the effects of alcohol and other psychoactive drugs on endocrine function: Clinical and experimental evidence. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 545-593.

Cicero, T.J.; Bell, R.D.; Meyer, E.R.; and Schweitzer, J. Narcotics and their hypothalamic-pituitory-gonadal hormone, testosterone and androgen-dependent systems. Journal of Pharmacology and Experimental Therapeutics, 201:76-83, 1977.

Claman, A.D., and Strang, R.I. Obstetric and gynecologic aspects of heroin addiction. American Journal of Obstetrics and Gynecology, 83(2):252-257, 1962.

*Clark, D.; Keith, L.; Pildes, R.; and Vargas, G. Drug dependent obstetric patients: A study of 104 admissions to the Cook County Hospital. Journal of Obstetric, Gynecologic and Neonatal Nursing, 3(5):17-20, 1974.

Cobrinik, R.W.; Hood, T.; and Chusid, E. The effect of maternal narcotic addiction on the newborn infant. Review of the literature and report of 22 cases. Pediatrics, 24:288, 1959.

Cohen, M.M.; Hirschhorn, K.; and Frosch, W.A. In vivo and in vitro chromosomal damage induced by LSD-25. New England Journal of Medicine, 277(20):1043-1049, 1967.

Cohen, S.N., and Neumann, L.L. Methadone maintenance during pregnancy. American Journal of Diseases of Children, 126:445-446, 1973.

Cohlan, S.Q. Fetal and neonatal hazards from drugs administered during pregnancy. New York State Journal of Medicine, 64:493-499, 1964.

*Connaughton, J.F.; Finnegan, L.P.; Schut, J.; and Emich, J.P. Current concepts in the management of the pregnant opiate addict. Addictive Diseases: an International Journal, 2(1): 21-35, 1975.

Connaughton, J.F.; Reeser, D.S.; and Finnegan, L.P. Pregnancy complicated by drug addiction. In: Bolognese, R., and Schwarz, R., eds. Perinatal Medicine: Management of the High Risk Fetus and Neonate. Baltimore, Md.: Williams & Wilkins, 1977. Pp. 265-276.

Connaughton, J.F.; Reeser, D.; Schut, J.; and Finnegan, L.P. Perinatal addiction: Outcome and management. American Journal of Obstetrics and Gynecology, 129(6):679-686, 1977.

Cooper, S.J. Psychotropic drugs in pregnancy: Morphological and psychological adverse effects on offspring. Journal of Biosocial Science, 10(3):321-334, 1978.

Davis, M. The quality of prenatal treatment of narcotic addicted women as a factor in neonatal outcome. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Davis, M.M.; Brown, B.S.; and Glendinning, S.T. Neonatal effects of heroin addiction and methadone-treated pregnancies. Preliminary report on 70 live births. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fifth National Conference on Methadone Treatment. New York: NAPAN, 1973. P. 1153.

*Davis, M.M., and Shanks, B. Neurological aspects of perinatal narcotic addiction and methadone treatment. Addictive Diseases: an International Journal, 2(2):213-226, 1975.

Davis, R.C., and Chappel, J.N. Pregnancy in the context of narcotic addiction and methadone maintenance. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the National Conference on Methadone Treatment. New York: NAPAN, 1973. P. 1146.

Davis, R.C.; Chappel, J.N.; Cohn, S.; and Mejia-Zelaya, A. An interagency approach in managing pregnant narcotic addicts. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1974. Pp. 418-426.

*Davis, R.C.; Chappel, J.N.; Mejia-Zelaya, A.; and Madden, J. Clinical observations on methadone-maintained pregnancies. Addictive Diseases: an International Journal, 2(1):101-112, 1975.

Densen-Gerber, J.; Wiener, M.; and Hochstedler, R. Sexual behavior, abortion, and birth control in heroin addicts: Legal and pscyhiatric considerations. Contemporary Drug Problems, 1(4):783-793, 1972.

Desmond, M.M.; Schwanecke, R.P.; Wilson, G.S.; Yasunga, S.; and Burgdorff, I. Maternal barbiturate utilization and neonatal withdrawal symptomatology. Journal of Pediatrics, 80(2):190-197, 1972.

*Desmond, M.M., and Wilson, G.S. Neonatal abstinence syndrome: Recognition and diagnosis. Addictive Diseases: an International Journal, 2(1):113-121, 1975.

Dumars, K.W., Jr. Parental drug usage: Effects upon chromosomes of progeny. Pediatrics, 47(6):1037-1041, 1971.

Eldred, C.A. Comprehensive treatment for heroin addicted mothers. Social Casework, 55:470-477, 1974.

Eller, J.L., and Morton, J.M. Bizarre deformities in offspring of users of lysergic acid diethylamide. New England Journal of Medicine, 283:395-397, 1970.

Epstein, S.S.; Lederberg, J.; Legator, M.; Carroll, E.E.; and Blaine, J.D. Drugs of Abuse: Their Genetic and Other Nonpsychiatric Hazards. Cambridge, Mass.: MIT Press, 1971.

Eriksson, M.; Catz, C.S.; and Yaffe, S.J. Drugs and pregnancy. Clinical Obstetrics and Gynecology, 16:199-224, 1973.

Eriksson, M.: Larsson, G.; Winbladh, B.; and Zetterstrom, R. The influence of amphetamine addiction on pregnancy and the newborn infant. Acta Paediatrica Scandinavica, 67(1):95-99, 1978.

Eriksson, M.; Larsson, G.; and Zetterstrom, R. Abuse of alcohol, drugs and tobacco during pregnancy--consequences for the child. Paediatrician, 8(4):228-242, 1979.

*Erkkola, R.; Kanto, J.; and Sellman, R. Diazepam in early human pregnancy. Acta Obstetricia et Gynecologica Scandinavica, 53(2):135-138, 1974.

Escamilla-Mondanaro, J. Mothers on methadone--echoes of failure. Addictions, 23(2):40-49, 1976.

Evans, A.N.; Brooke, O.G.; and West, R.J. The ingestion by pregnant women of substances toxic to the foetus. Practitioner, 224(1341):315-319, 1980.

Falek, A., and Einstein, S. Genetics and drug abuse: A primer for workers in the field. Drug Forum, 2(4):377-394, 1973.

Faria, L.J. Developmental observations on offspring of parents ingesting illicit LSD. American Journal of Occupational Therapy, 17(4):198-202, 1973.

Finnegan, L.P. Drugs and other substance abuse in pregnancy. In: Stern, L., ed. Drug Use in Pregnancy. Australia: ADIS Press, 1981.

Finnegan, L.P. The effects of narcotics and alcohol on pregnancy in the newborn. Annals of the New York Academy of Sciences, 286:136-157, 1981.

Finnegan, L.P. Maternal and neonatal effects of drug dependence in pregnancy. In: Lowinson, J.H., and Ruiz, P., eds. Substance Abuse: Clinical Problems and Perspectives. Baltimore, Md.: Williams & Wilkins, 1981. Pp. 545-581.

Finnegan, L.P. In utero opiate dependence and sudden infant death syndrome. Clinics in Perinatology, 6(1):163-180, 1979.

*Finnegan, L.P., ed. Drug Dependency in Pregnancy: Clinical Management of Mother and Child, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979.

Finnegan, L.P. Management of pregnant drug-dependent women. Annals of the New York Academy of Sciences, 283:135-146, 1978.

Finnegan, L. Management of the drug dependent pregnancy and effects on neonatal outcome. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

*Finnegan, L.P. Clinical effects of pharmacologic agents on pregnancy, the fetus, and the neonate. Annals of the New York Academy of Sciences, 281:74-89, 1976.

*Finnegan, L.P. Narcotic dependence in pregnancy. Journal of Psychedelic Drugs, 7(3):299-311, 1975.

Finnegan, L.P.; Chappel, J.N.; Kreek, M.J.; Stimmel, B.; and Stryker, J. Narcotic addiction in pregnancy. In: Niebyl, J., and Zuspan, F., eds. Current Drug Use in Pregnancy. Philadelphia, Pa.: Lea & Febiger, 1980.

Finnegan, L.P.; Connaughton, J.F.; and Emich, J.P. Abstinence score in the treatment of the infant of the drug-dependent mother. Pediatric Research, 7(4):319/91, 1973.

Finnegan, L.P.; Connaughton, J.F.; Emich, J.P.; and Wieland, W.F. Comprehensive care of the pregnant addict and its effect on maternal and infant outcome. Contemporary Drug Problems, 1(4):795-809, 1972.

Finnegan, L.P.; Connaughton, J.F.; Kron, R.E.; and Emich, J.P. Neonatal abstinence syndrome: Assessment and management. In: Harbison, R.D., ed. Perinatal Addiction. New York: Spectrum Publications, 1975. Pp. 141-158.

Finnegan, L.P.; Connaughton, J.F.; and Schut, J. Infants of drug-dependent women: Practical approaches for management. In: Proceedings of the 37th Annual Scientific Meeting of the Committee on Problems of Drug Dependence of the National Research Council. Washington, D.C.: National Research Council, 1975. P. 489.

Finnegan, L.P.; Kron, R.E.; Connaughton, J.R.; and Emich, J.P., Jr. A scoring system for evaluation and treatment of the neonatal abstinence syndrome: A new clinical and research tool. In: Morselli, P.L., et al., eds. Basic and Therapeutic Aspects of Perinatal Pharmacology. New York: Raven Press, 1975. Pp. 139-153.

Finnegan, L.P.; Kron, R.E.; Connaughton, J.R.; and Emich, J.P. Assessment and treatment of abstinence in the infant of the drug-dependent mother. International Journal of Clinical Pharmacology and Biopharmacy, 12(0.5):19-32, 1975.

Finnegan, L.P., and MacNew, B.A. Care of the addicted infant. American Journal of Nursing, 74:685, 1974.

Finnegan, L.P., and Reeser, D.S. Low dose methadone maintenance for pregnant drug dependent women: Effects on the newborn. Pediatric Research, 11:533, 1977.

Finnegan, L.P.; Reeser, D.S.; and Connaughton, J.F. The effects of maternal drug dependence on neonatal mortality. Drug and Alcohol Dependence, 2:131-140, 1977.

Finnegan, L.P.; Reeser, D.S.; Connaughton, J.F.; and Schut, J. Does methadone during pregnancy affect neonatal outcome? In: Schecter, A.; Alksne, H.; and Kaufman, E.; eds. Critical Concerns in the Field of Drug Abuse. New York: Marcel Dekker, 1976. Pp. 691-696.

Finnegan, L.P.; Regan, D.O.; and Wapner, R.J. Management problems in the care of pregnant women dependent upon pentazocine. In: Proceedings of the 41st Annual Scientific Meeting of the Committee on Problems of Drug Dependence. Philadelphia, Pa.: the Committee, 1979.

*Finnegan, L.P.; Schut, J.; Flor, J.; and Connaughton, J.F. Methadone maintenance and detoxification programs for the opiate-dependent woman during pregnancy: A comparison. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis: C.V. Mosby, 1977. Pp. 40-63.

Finnegan, L.P., and Stern, J. Sociological aspects of pregnant drug-dependent women. In: National Academy of Sciences. Problems of Drug Dependence, 1975. Proceedings of the 37th Annual Scientific Meeting, Committee on Problems of Drug Dependence. Washington, D.C.: the Academy, 1975. Pp. 872-891.

*Forfar, J.O., and Nelson, M.M. Epidemiology of drugs taken by pregnant women: Drugs that may affect the fetus adversely. Clinical Pharmacology and Therapeutics, 14(4,Pt.2):632-642, 1973.

Fraser, A.C. Drug addiction in pregnancy. Lancet, 2(7991):896-899, 1976.

Freedman, T., and Stern, J. The family system of the drug-dependent mother and her newborn. Addictions, 4(6):7-11, 1976.

Freeman, D.J. Drugs during pregnancy and after birth. On Continuing Practice, 1(1):15-19, 1973.

Freese, U.E. A placental evaluation of drug addiction in pregnancy. Journal of Reproductive Medicine, 20(6):307-315, 1978.

Fricker, H.S., and Segal, S. Narcotic addiction, pregnancy, and the newborn. American Journal of Diseases of Children, 132:360-366, 1978.

Fried, P.A. Marihuana use by pregnant women: Neurobehavioral effects in neonates. Drug and Alcohol Dependence, 6:415-424, 1980.

*Fried, P.A.; Watkinson, B.; Grant, A.; and Knights, R.M. Changing patterns of soft drug use prior to and during pregnancy: A prospective study. Drug and Alcohol Dependence, 6:323-343, 1980.

Friel, L.F., and Saltonstall, M.B. Legal protection of the drug-addicted infant. Child Welfare, 53(8):493-497, 1974.

*Gaulden, E.C.; Littlefield, D.C.; Putoff, O.E.; and Seivert, A.L. Menstrual abnormalities associated with heroin addiction. American Journal of Obstetrics and Gynecology, 90(2): 155-160, 1964.

Gawecki, F.M., and Pomante, R.G. Drug use in pregnancy. Nebraska Medical Journal, 60:349-352, 1975.

Ghodse, A.H.; Reed, J.L.; and Mack, J.W. The effect of maternal narcotic addiction on the newborn infant. Psychological Medicine, 7(4):667-675, 1977.

Glaser, F.B. Narcotic addiction in the pain-prone female patient. I. A comparison with addict controls. The International Journal of the Addictions, 1:47-59, 1966.

Glass, L.; Evans, H.E.; Rajegowda, B.K.; and Kahn, E.J. Effects of heroin on perinatal respiration. Addictive Diseases: an International Journal, 2(2):357-368, 1975.

Glass, L.; Rajegowda, B.K.; and Evans, H.E. Absence of respiratory distress syndrome in premature infants of heroin addicted mothers. Lancet, 2:685, 1971.

Glass, L.; Rajegowda, B.K.; Kahn, E.J.; and Floyd, M.V. Effect of heroin withdrawal on respiratory rate and acid-base status in the newborn. New England Journal of Medicine, 286: 746, 1972.

Glass, L.; Rajegowda, B.K.; Mukherjee, T.K.; Roth, M.M.; and Evans, H.E. Effect of heroin on cortisol production in pregnant addicts and their fetuses. Pediatric Research, 7(4): 320/92, 1973.

Goetz, R.L., and Bain, R.V. Neonatal withdrawal symptoms associated with maternal use of pentazocine. The Journal of Pediatrics, 84(6):887-888, 1974.

Goldstein, A., and Kaizer, S. Psychotropic effects of caffeine in man. III. A questionnaire survey of coffee drinking and its effects in a group of housewives. Clinical Pharmacology and Therapeutics, 10(4):477-488, 1969.

Goodfriend, M.J.; Shey, I.A.; and Klein, M.D. The effects of maternal narcotic addiction on the newborn. American Journal of Obstetrics and Gynecology, 71(1):29-36, 1956.

Green, M. Neonatal narcotic withdrawal index: A quantitative method for evaluation of narcotic abstinence in the newborn. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

*Green, M.; Silverman, I.; Suffet, F.; Teleporos, E.; and Turkel, W.V. Outcomes of pregnancy for addicts receiving comprehensive care. American Journal of Drug and Alcohol Abuse, 6(4): 413-429, 1979.

Green, M.; Zelson, C.; and Behrendt, H. Sweating function in the heroin withdrawal syndrome of neonates. The International Journal of the Addictions, 9:495-502, 1974.

Gumpel, J., and Mejia, A. Prenatal management, labor and delivery care and postpartum follow-up of the drug addict. Journal of Reproductive Medicine, 20(6):333-336, 1978.

Hall, R.J. Teratogenic and Chromosomal Damaging Effects of Illicit Drugs. An Annotated Bibliography. Toronto: Addiction Research Foundation, 1973.

Harbison, R.D., and Braude, M. Overview of the perinatal narcotic addiction conference and future research goals in developmental pharmacology of abused drugs. Addictive Diseases: an International Journal, 2(1):1-5, 1975.

*Hargreaves, W.A.; Ling, W.; Brown, T.C.; Weinberg, J.A.; Landsberg, R.; and Harrison, W.L. Women on LAAM maintenance: Initial experiences. Journal of Psychedelic Drugs, 11(3):223-230, 1979.

Harper, R.G.; Feingold, E.; Solish, G.I.; and Sokal, M. Heat-stable alkaline phosphatase in methadone maintained pregnancies. Addictive Diseases: an International Journal, 2(1):89-99, 1975.

Harper, R.G.; Sia, C.G.; and Blenman, S. Observations on the sudden death of infants born to addicted mothers. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fifth National Conference on Methadone Treatment. New York: NAPAN, 1973. Pp. 1122-1127.

Harper, R.G.; Solish, G.I.; Purow, H.H.; Sang, E.; and Panepinto, W.C. The effect of a methadone treatment program upon pregnant heroin addicts and their newborn infants. Pediatrics, 54:300-305, 1974.

Hill, R.M. Drugs ingested by pregnant women. Clinical Pharmacology and Therapeutics, 14(4,Pt.2):654-659, 1973.

Hill, R.M., and Desmond, M.H. Management of narcotic withdrawal syndrome. Pediatric Clinics of North America, 10:67, 1963.

Hoey, J. LSD and chromosome damage. Journal of the American Medical Association, 212:1707, 1970.

Horowitz, C.A.; Maslansky, R.; Waldinger, R.; Cabrera, H.; and Ward, P.C.J. The effect of methadone on pregnancy tests: An analysis of 506 specimens with four currently available immunoassays. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fourth National Conference on Methadone Treatment. New York: NAPAN, 1972. Pp. 111-116.

Hughes, E.F.X., and Pippenger, C.E. Maternal and neonatal plasma methadone and clinical symptoms. Bulletin of the New York Academy of Medicine, 51(10):1167-1168, 1975.

Jacobson, C.B., and Berlin, C.M. Possible reproductive detriment in LSD users. Journal of the American Medical Association, 222(11):1367-1373, 1972.

*Jhaveri, R.C.; Glass, L.; Evans, H.E.; Dube, S.K.; Rosenfeld, W.; Khan, F.; Salazar, J.D.; and Chandavasu, O. Effects of methadone on thyroid function in mother, fetus, and newborn. Pediatrics, 65(3):557-561, 1980.

Journal of the American Medical Association. Link between LSD and birth defects reported. Journal of the American Medical Association, 212(9):1447-1448, 1970.

Kahn, E.J.; Neumann, L.L.; and Polk, G.A. The course of the heroin withdrawal syndrome in newborn infants treated with phenobarbital or chlorpromazine. The Journal of Pediatrics, 75(3):495-500, 1969.

Kandall, S.R. Managing neonatal withdrawal. Drug Therapy, 1:47, 1976.

Kandall, S.R.; Albin, S.; Dreyer, E.; Comstock, M.; and Lowinson, J. Differential effects of heroin and methadone on birth weights. In: Harbison, R.D., ed. Perinatal Addiction. New York: Spectrum Publications, 1975. Pp. 347-352.

*Kandall, S.R.; Albin, S.; Gartner, L.M.; Lee, K.S.; Eidelman, R.; and Lowinson, J. The narcotic-dependent mother: Fetal and neonatal consequences. Early Human Development, 1(2):159-169, 1977.

Kandall, S.R., and Gartner, L.M. Late presentation of drug withdrawal symptoms in newborns. American Journal of Diseases of Children, 127:58, 1974.

Kandall, S.R., and Gartner, L.M. Delayed presentation of neonatal methadone withdrawal. Pediatric Research, 7(4):320/92, 1973.

Kandall, S.R.; Lowinson, J.; Berle, B.; Albin, S.; Fidelman, A.I.; and Gartner, L.M. A four-year experience with passive neonatal narcotic addiction. In: Schecter, A.; Alksne, H.; and Kaufman, E.; eds. Drug Abuse: Modern Trends, Issues, and Perspectives. New York: Marcel Dekker, 1978.

Kandall, S.R.; Shahrivar, F.; Berle, B.B.; and Lowinson, J. Birth weights and maternal narcotic use. In: Senay, E.; Shorty, V.; and Alksne, H.; eds. Developments in the Field of Drug Abuse. Cambridge, Mass.: Schenkman Publishing, 1974.

*Kantor, G.K. Addicted mother, addicted baby--a challenge to health care providers. American Journal of Maternal Child Health Nursing, 3:281-289, 1978.

Kirk, R.E. Experimental Design Procedures for the Behavioral Sciences. Belmont, Calif.: Brooks/Cole Publishers, 1968.

Klein, D.B.; Krauss, A.N.; and Auld, P.A.M. Tachypnea and alkalosis in infants of narcotic-addicted mothers. New York State Journal of Medicine, 72(3):367-368, 1972.

Klingberg, M.A.; Abramovic, A.; and Chemke, J. Drugs and Fetal Development. New York: Plenum Press, 1972.

Krause, S.O.; Murray, P.M.; Holmes, J.B.; and Burch, R.E. Heroin addiction among pregnant women and their newborn babies. American Journal of Obstetrics and Gynecology, 75(4):754-758, 1958.

*Kreek, M.J. The role of qualitative analysis of drugs & their metabolites in maternal-neonatal studies. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977. Pp. 67-73.

*Kreek, M.J.; Schecter, A.; Gutjahr, C.L.; Bowen, D.; Field, F.; Queenan, J.; and Merkatz, I. Analyses of methadone and other drugs in maternal and neonatal body fluids: Use in evaluation of symptoms in a neonate of mother maintained on methadone. American Journal of Drug and Alcohol Abuse, 1(3):409-419, 1974.

Kron, R.E.; Kaplan, S.L.; Finnegan, L.P.; Litt, M.; and Phoenix, M.D. The assessment of behavioral change in infants undergoing narcotic withdrawal: Comparative data from clinical and objective methods. Addictive Diseases: an International Journal, 2(2):257-275, 1975.

Kron, R.E.; Kaplan, S.L.; Phoenix, M.D.; and Finnegan, L.P. Behavior of infants born to drug-dependent mothers: Effects of prenatal and postnatal drugs. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: C.V. Mosby, 1977.

Kron, R.E.; Litt, M.; and Finnegan, L.P. Effect of maternal narcotic addiction on sucking behavior of neonates. In: National Academy of Sciences. Report of the 36th Annual Scientific Meeting, Committee on Problems of Drug Dependence. Washington, D.C.: the Academy, 1974.

Kron, R.E.; Litt, M.; and Finnegan, L.P. Narcotic addiction in the newborn: Differences in behavior generated by methadone and heroin. International Journal of Clinical Pharmacology, Therapy and Toxicology, 1974.

Kron, R.E.; Litt, M.; Phoenix, M.D.; and Finnegan, L.P. Neonatal narcotic abstinence: Effects of pharmacotherapeutic agents and maternal drug usage on nutritive sucking behavior. Journal of Pediatrics, 88:637-641, 1976.

Larsson, G.; Eriksson, M.; and Zetterstrom, R. Amphetamine addiction and pregnancy, psychosocial and medical aspects. Acta Psychiatrica Scandinavica, 60(4):334-346, 1979.

Lenz, W. Malformations caused by drugs in pregnancy. American Journal of Diseases of Children, 112:99-106, 1966.

Lenz, W. Drugs and congenital abnormalities. Lancet, 2:1332-1334, 1962.

Lipsitz, P.J. A proposed narcotic withdrawal score for use with newborn infants: A pragmatic evaluation of its efficacy. Clinical Pediatrics, 14:592, 1975.

Lipsitz, P.J., and Blatman, S. The early neonatal period of 100 live-borns of mothers on methadone. Pediatric Research, 7(4):404/176, 1973.

Little, W.A. Drugs in pregnancy. American Journal of Nursing, 66(6):1303-1307, 1966.

Lodge, A.; Marcus, M.M.; and Ramer, C.M. Behavioral and electrophysiological characteristics of the addicted neonate (Neonatal addiction: A two year study. Part two.) Addictive Diseases: an International Journal, 2(2):235-255, 1975.

Long, S.Y. Does LDS induce chromosomal damage and malformations? A review of the literature. Teratology, 6(1):75-90, 1972.

Lubchenco, L.O.; Hansman, C.; and Boyd, E. Intrauterine growth in length and head circumference as estimated from live births at gestational ages from 26 to 42 weeks. Pediatrics, 37:403-408, 1966.

Lund, C.J., and Harris, J.W. The use of heroin (diacetylmorphine) in labor; report of 454 deliveries. American Journal of Obstetrics and Gynecology, 45(6):980-991, 1943.

Madden, J.D. Problems pertaining to the care of newborn infants of drug-addicted women. Journal of Reproductive Medicine, 20(6):303-306, 1978.

Madden, J.D.; Chappel, J.N.; Zuspan, F.; Gumpel, J.; Mejia, A.; and Davis, R. Observation and treatment of neonatal narcotic withdrawal. American Journal of Obstetrics and Gynecology, 127(2):199-201, 1977.

*Martin, C.A., and Martin, W.R. Opiate dependence in women. In: Kalant, O.J., ed. Alcohol and Drug Problems in Women. Vol. 5. Research Advances in Alcohol and Drug Problems. New York: Plenum Press, 1980. Pp. 465-485.

Martin, J.C. Drugs of abuse during pregnancy: Effects upon offspring structure and function. Signs: Journal of Women in Culture and Society, 2(2):357-368, 1976.

Maslansky, R.A.; Sukov, R.; and Beaumont, G. Pregnancies in methadone maintained mothers. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Third National Conference on Methadone Treatment. New York: NAPAN, 1970. Pp. 56-61.

Matsuyama, S.S.; Yen, F.-S.; Jarvik, L.F.; Sparkes, R.S.; Fu, T.-K.; Fisher, H.; Reccius, N.; and Frank, I.M. Marijuana exposure in vivo and human lymphocyte chromosomes. Mutation Research, 48:255-266, 1979.

McGlothlin, W.H.; Sparkes, R.S.; and Arnold, D.O. Effect of LSD on human pregnancy. Journal of the American Medical Association, 212(9):1483-1487, 1970.

Merkin, B.L. Maternal and fetal distribution of drugs in pregnancy. Clinical Pharmacology and Therapeutics, 14(4,Pt.2):643-647, 1973.

Metcalfe, J.; Dunham, M.J.; Olsen, G.D.; and Krall, M.A. Respiratory and hemodynamic effects of methadone in pregnant women. Respiration Physiology, 42(3):383-393, 1980.

Mirkin, B.L. Effects of drugs on the fetus and neonate. Postgraduate Medicine, 47(1):91-95, 1970.

Moorhead, P.S.; Jarvik, L.F.; and Cohen, M.M. Cytogenetic methods for mutagenicity testing. In: Epstein, S.S., ed. Drugs of Abuse. Their Genetic and Other Chronic Nonpsychiatric Hazards. Cambridge, Mass.: MIT Press, 1971. Pp. 140-170.

Naeye, R.L., and Blanc, W. Fetal growth in offspring of heroin addicts. A quantitative study. American Journal of Pathology, 70(2):85a, 1973.

Naeye, R.L.; Blanc, W.; and LeBlanc, W. Postmortem findings in offspring of heroin addicts. Laboratory Investigation, 28(3):392-393, 1973.

Naeye, R.L.; Blanc, W.A.; and LeBlanc, W. Heroin and the fetus. Pediatric Research Abstracts, 7(4):321/93, 1973.

Naeye, R.L.; Blanc, W.; LeBlanc, W.; and Khatamee, M.A. Fetal complications of maternal heroin addiction: Abnormal growth, infections, and episodes of stress. Journal of Pediatrics, 83:1055, 1973.

Nathenson, G. Neonatal addiction in 1973. Journal of the National Medical Association, 66:19-22, 1974.

Nathenson, G.; Cohen, M.I.; Litt, I.F.; and McNamara, H. The effect of maternal heroin addiction on neonatal jaundice. Journal of Pediatrics, 81:899-903, 1972.

Nathenson, G.; Golden, G.S.; and Litt, I.F. Diazepam in the management of the neonatal narcotic withdrawal syndrome. Pediatrics, 48:523, 1971.

Nelson, M.M., and Forfar, J.O. Association between drugs administered during pregnancy and congenital abnormalities of the fetus. British Medical Journal, 1:523-527, 1971.

Neuberg, R. Drug addiction in pregnancy. Review of the problem. Proceedings of the Royal Society of Medicine, 65:867, 1972.

Neuberg, R. Drug dependence and pregnancy. A review of the problems and their management. Journal of Obstetrics and Gynaecology of the British Commonwealth, 77:1117-1122, 1970.

Neumann, L.L. Drug abuse in pregnancy: Its effects on the fetus and newborn infant. In: Harms, E., ed. Drugs and Youth: The Challenge of Today. New York: Pergamon Press, 1973. Pp. 1-32.

Neumann, L.L., and Cohen, S.N. The neonatal narcotic withdrawal syndrome: A therapeutic challenge. Clinics in Perinatology, 2:99, 1975.

Newman, R.G. Pregnancies of methadone patients. Findings in New York City methadone maintenance treatment program. New York State Journal of Medicine, 74(1):52-54, 1974.

*Newman, R.G.; Bashkow, S.; and Calko, D. Results of 313 consecutive live births of infants delivered to patients in the New York City methadone maintenance treatment program. American Journal of Obstetrics and Gynecology, 121(2):233-237, 1975.

Nichols, W.W. Genetic hazards of drugs of abuse. In: Zarafonetis, C.J.D., ed. Drug Abuse: Proceedings of the International Conference on Drug Abuse. Philadelphia: Lea & Febiger, 1972. Pp. 93-99.

Northrop, G.; Ditzler, J.; Ryan, W.G.; and Wilbanks, G.D. Estriol excretion profiles in narcotic-addicted pregnant women. American Journal of Obstetrics and Gynecology, 112(5): 704-712, 1972.

Oettinger, K.B. Public health aspects of maternal and neonatal narcotic addiction. British Medical Quarterly, 17:38-40, 1966.

Oleske, J.M. Experiences with 118 infants born to narcotic-using mothers: Does a lowered serum-ionized calcium level contribute to the symptoms of withdrawal? Clinical Pediatrics, 16(5): 418-423, 1977.

*Ostrea, E.M., Jr., and Chavez, C.J. Perinatal problems (excluding neonatal withdrawal) in maternal drug addiction: A study of 830 cases. Journal of Pediatrics, 94:292-295, 1979.

Ostrea, E.M., Jr.; Chavez, C.J.; and Strauss, M.E. Study of factors that influence the severity of neonatal narcotic withdrawal. Journal of Pediatrics, 88:642-645, 1976.

Ostrea, E.M., Jr.; Chavez, C.J.; Strauss, M.E.; and Stryker, J.C. Conservative treatment of neonatal narcotic withdrawal. Pediatric Research, 9:369, 1975.

Ostrea, E.M., Jr.; Chavez, C.J.; and Stryker, J.C. The Care of the Drug Dependent Woman and Her Infant. Lansing, Mich.: Dept. of Public Health, 1979.

Paine, R., and Donovan, D. Prognostic implications of neurologic abnormalities in the neonatal period. Neurology, 12:910, 1962.

Pang, C.N.; Zimmermann, E.; and Sawyer, C. Effects of morphine on the proestrous surge of luteinizing hormone in the rat. Anatomical Record, 178:434, 1974.

Pelosi, M.A.; Frattarola, M.; Apuzzio, J.; Langer, A.; Hung, C.T.; Oleske, J.M.; Bai, J.; and Harrigan, J.T. Pregnancy complicated by heroin addiction. Obstetrics and Gynecology, 45:512, 1975.

*Perlin, M.J., and Simon, K.J. The epidemiology of drug use during pregnancy. The International Journal of the Addictions, 14(3):355-364, 1979.

Perlin, M.J., and Simon, K.J. The etiology, prevalence and effects of drug use during pregnancy. Contemporary Drug Problems, 7(3):313-325, 1978.

Perlmutter, J.F. Drug addiction in pregnant women. American Journal of Obstetrics and Gynecology, 99:569-572, 1967.

Pierson, P.S.; Howard, P.; and Kleber, H.D. Sudden deaths in infants born to methadone-maintained addicts. Journal of the American Medical Association, 220(13):1733-1734, 1972.

Possega, R.; Bacigalupo, L.; Bellati, R.; Napoli, G.; and Arpe, M. /Neonatal withdrawal syndrome 2 cases of newborn infants of drug-addicted mothers./ (Ital.) Minerva Pediatrica, 32(22):1307-1311, 1980.

Prechtl, M., and Beintema, D. The neurological examination of the full-term normal infant. In: Little Club Clinics in Developmental Medicine, No. 12. London: Heineman, 1964.

Priestly, R.L. Drug addiction in pregnancy. Drug addiction and the newborn. Proceedings of the Royal Society of Medicine, 65:870, 1972.

Rajegowda, B.K.; Glass, L.; Evans, H.E.; Swartz, D.P.; and LeBlanc, W. Brief clinical and laboratory observations--methadone withdrawal in newborn infants. Journal of Pediatrics, 81(3):532-534, 1972.

Rajegowda, B.K.; Kandall, S.R.; and Falciglia, H. Sudden unexpected death in infants of narcotic-dependent mothers. Early Human Development, 2(3):219-225, 1978.

Ramer, B.S.; Webb, G.A.; Ramer, C.M.; and Mondanaro, J. Treatment experiences with the pregnant addict. In: National Association for the Prevention of Addiction to Narcotics. Proceedings of the Fifth Annual Conference on Methadone Treatment. New York: NAPAN, 1973. Pp. 1138-1145.

Ramer, C.M. The case history of an infant born to an amphetamine-addicted mother. Clinical Pediatrics, 13(7):596-597, 1974.

Ramer, C.M., and Lodge, A. Clinical and developmental characteristics of infants of mothers on methadone maintenance. (Neonatal addiction: A two year study. Part one.) Addictive Diseases: an International Journal, 2(2):227-234, 1975.

Reddy, A.M.; Harper, R.G.; and Stern, G. Observations on heroin and methadone withdrawal in the newborn. Pediatrics, 48:353-358, 1971.

Rementeria, J.L. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: C.V. Mosby, 1977.

Rementeria, J.L., and Bhatt, K. Withdrawal symptoms in neonates from intrauterine exposure to diazepam. The Journal of Pediatrics, 90(1):123-126, 1977.

Rementeria, J.L.; Janakammal, S.; and Hollander, M. Multiple births in drug-addicted women. American Journal of Obstetrics and Gynecology, 122:958, 1975.

Rementeria, J.L., and Lotongkhum, L. The fetus of the drug-addicted woman: Conception, fetal wastage, and complications. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: C.V. Mosby, 1977.

*Rementeria, J.L., and Marrero, G. Drug-addicted family (father, mother, and infant): Some sociomedical factors. In: Rementeria, J.L., ed. Drug Abuse in Pregnancy and Neonatal Effects. St. Louis, Mo.: Mosby, 1977. Pp. 245-259.

Rementeria, J.L., and Nunag, N.N. Narcotic withdrawal in pregnancy: Stillbirth incidence with a case report. American Journal of Obstetrics and Gynecology, 116(8):1152-1156, 1973.

Reveri, M.; Pyati, S.P.; and Rildes, R.S. Neonatal withdrawal symptoms associated with glutethimide (Doriden) addiction in the mother during pregnancy. Clinical Pediatrics, 16(5):424-425, 1977.

Rogers, S.C.; Wheatley, D.; Galbraith, A.W.; Smith, F.R.; and Elson, C. Psychotropic drugs and fertility. Journal of Psychosomatic Research, 14:383-386, 1970.

Rorke, L.B.; Reeser, D.S.; and Finnegan, L.P. Nervous system lesions in infants of addicted mothers. Pediatric Research, 11:533, 1977.

Rosen, T.S., and Pippenger, C.E. Pharmacologic observations on the neonatal withdrawal syndrome. Pediatrics, 88:1044-1048, 1976.

Rosen, T.S., and Pippenger, C.E. Disposition of methadone and its relationship to severity of withdrawal in the newborn. Addictive Diseases: an International Journal, 2:169, 1975.

Rosenthal, T.; Patrick S.W.; and Krug, D.C. Congenital neonatal narcotics addiction: A natural history. American Journal of Public Health, 54(8):1252-1262, 1964.

Rothstein, P., and Gould, J.P. Born with a habit: Infants of drug-addicted mothers. Pediatric Clinics of North America, 21:307, 1974.

Ryan, V.S. "Hospital Treatment of the Pregnant Addict: A Survey of Perceptions of Treatment Staff." Women's Drug Research Report to the National Institute on Drug Abuse, 1977. Shorter version in: Schechter, A.J., ed. Drug Dependence and Alcoholism. New York: Plenum Press, 1981.

*Santen, R.J.; Sofsky, J.; Bilic, N.; and Lippert, R. Mechanism of action of narcotics in the production of menstrual dysfunction in women. Fertility and Sterility, 26(6):538-548, 1975.

Schenkel, B., and Vorherr, H. Non-prescription drugs during pregnancy: Potential teratogenic and toxic effects upon embryo and fetus. Journal of Reproductive Medicine, 12(1):27-45, 1974.

Schneck, H. Narcotic withdrawal symptoms in the newborn infant resulting from maternal addiction. Journal of Pediatrics, 52:584, 1958.

Schulman, C.A. Alterations of the sleep cycle in heroin-addicted and "suspect" newborns. Neuropaediatrie, 1:89-100, 1969.

Shader, R.I. Pregnancy and psychotropic drugs. In: Shader, R.I., and DiMascio, A. Psychotropic Drug Side Effects. Baltimore, Md.: Williams & Wilkins, 1970. Pp. 206-213.

*Shaffer, H. Methadone and pregnancy: Perspectives and prescriptions. Journal of Psychedelic Drugs, 11(3):191ff, 1979.

Shute, E., and Davis, M.E. The effect on the infant of morphine administered in labor. Surgery, Gynecology and Obstetrics, 57(6):727-736, 1933.

Silverman, H.M. Fetal and newborn adverse drug reactions. A survey of the recent literature. Drug Intelligence and Clinical Pharmacy, 8:690-693, 1974.

Singh, E.J.; Mejia, A.; and Zuspan, F.P. Studies of human amniotic fluid phospholipids in normal, diabetic, and drug abuse pregnancy. American Journal of Obstetrics and Gynecology, 119(5):623-629, 1974.

Smart, R.G., and Bateman, K. The chromosomal and teratogenic effects of lysergic acid diethylamide: A review of the current literature. Canadian Medical Association Journal, 99:805-810, 1968.

Soloway, I.H., and Walters, D.B. Neonatal drug dependence: Developmental and bio-cultural considerations. Addictive Diseases: an International Journal, 2(4):673-688, 1976.

STASH Capsules. Methadone and pregnancy. STASH Capsules, 5(6), 1973.

STASH Library. Methadone and pregnancy: An annotated guide to the literature. Journal of Psychedelic Drugs, 6(1):101-124, 1974.

Statzer, D.E., and Wardell, J.N. Heroin addiction during pregnancy. American Journal of Obstetrics and Gynecology, 113:273-278, 1972.

Stenchever, M.A., and Jarvis, J.A. Lysergic acid diethylamide (LSD)--effect on human chromosomes in vivo. American Journal of Obstetrics and Gynecology, 106(4), 1970.

Stern, R. The pregnant addict. American Journal of Obstetrics and Gynecology, 94(2):253-257, 1966.

*Stimmel, B., and Adamsons, K. Narcotic dependency in pregnancy: Methadone maintenance compared to use of street drugs. The Journal of the American Medical Association, 235(11): 1121-1124, 1976.

Stoffer, S.S. A gynecologic study of drug addicts. American Journal of Obstetrics and Gynecology, 101:779, 1968.

Stone, M.L.; Salerno, L.J.; Green, M.; and Zelson, C. Narcotic addiction in pregnancy. American Journal of Obstetrics and Gynecology, 109(5):716-723, 1971.

*Strauss, M.E.; Andresko, M.; Stryker, J.C.; and Wardell, J.N. Relationship of neonatal withdrawal to maternal methadone dose. The American Journal of Drug and Alcohol Abuse, 3(2):339-345, 1976.

*Strauss, M.E.; Andresko, M.; Stryker, J.C.; Wardell, J.N.; and Dunkel, L.D. Methadone maintenance during pregnancy: Pregnancy, birth and neonate characteristics. American Journal of Obstetrics and Gynecology, 120(7):895-900, 1974.

Strauss, M.E.; Lessen-Firestone, J.K.; Starr, R.H.; and Ostrea, E.M. Behavior of narcotics addicted newborns. Child Development, 46:887-893, 1975.

Strauss, M.E.; Starr, R.H.; Ostrea, E.M.; Chavez, C.J.; and Stryker, J.C. Behavioral concomitants of prenatal addiction to narcotics. Journal of Pediatrics, 89:842-846, 1976.

Stryker, J.C. A unique situation--two people must be considered: An overview of the Hutzel Hospital Program. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977. P. 24.

Suffet, F.; Bryce-Buchanan, C.; and Brotman, R. Pregnant addicts in a comprehensive care program: Results of a follow-up survey. American Journal of Orthopsychiatry, 51(2):297-306, 1981.

Sussman, S. Narcotic and methamphetamine use during pregnancy. Effect on newborn infants. American Journal of Diseases of Children, 106:125-130, 1963.

Sutherland, J.M., and Light, I.J. The effect of drugs upon the developing fetus. Pediatric Clinics of North America, 12(3):781-806, 1965.

Thomas, E. Maternity and narcotic addiction. Canada's Mental Health, 23(5):13-16, 1975.

Titus, R.J. Lysergic acid diethylamide: Its effects on human chromosomes and the human organism in utero. A review of current findings. The International Journal of the Addictions, 7(4):701-147, 1972.

Tucker, B. Pregnancy and drugs. Addictions, 22(2):2-19, 1975.

Tucker, M.B.; Colten, M.E.; and Douvan, E. "Report on the Development of Psychosocial Measures Appropriate for Use With Low Income/Low Education Women." Unpublished Women's Drug Research Project Report to the National Institute on Drug Abuse, 1976.

U.S. Congress. House of Representatives. Committee on Narcotics Abuse and Control. The Use of Drugs During Pregnancy. Hearing Before the Select Committee on Narcotics Abuse and Control. 96th Cong., 2nd sess. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1980.

Vargas, G.C.; Pildes, R.S.; Vidyasagar, D.; and Keith, L.G. Effect of maternal heroin addiction on 67 liveborn neonates; withdrawal symptoms, small body size, and small head circumference were frequent findings. Clinical Pediatrics, 14(8):751-757, 1975.

*Wallach, R.C.; Jerez, E.; and Blinick, G. Comparison of pregnancies and births during methadone detoxification and maintenance. Pediatric Annals, 4(7):46-61, 1975.

*Wallach, R.C.; Jerez, E.; and Blinick, G. Pregnancy and menstrual function in narcotics addicts treated with methadone. American Journal of Obstetrics and Gynecology, 105(8): 1226-1229, 1969.

Warren, R.J.; Rimoin, D.L.; and Sly, W.S. LSD exposure in utero. Pediatrics, 45:466-469, 1970.

Weir, J.G. Drug addiction in pregnancy. The pregnant narcotic addict; a psychiatrist's impression. Proceedings of the Royal Society of Medicine, 65:869, 1972.

Whiting, M.; Whitman, S.; Bergner, L.; and Patrick, S. Addiction and low birth weight: A quasi-experimental study. American Journal of Public Health, 68(7):676-678, 1978.

Wilson, G.S. Somatic growth effects of perinatal addiction. Addictive Diseases: an International Journal, 2(2):333-345, 1975.

*Wilson, G.S.; Desmond, M.M.; and Verniaud, W.M. Early development of infants of heroin-addicted mothers. American Journal of Diseases of Children, 126:457-462, 1973.

Woodruff, R.A.; Goodwin, D.W.; and Guze, S.B. Psychiatric Diagnosis. New York: Oxford University Press, 1974.

Wright, J., and Christopher, C.R. Cotton fever and pregnancy. A confusing clinical problem. Diagnostic Gynecology and Obstetrics, 2(4):283-285, 1980.

Yaffe, S. A clinical look at the problem of drugs in pregnancy and their effects on the fetus. Canadian Medical Association Journal, 112:728-733, 1975.

Zarin-Ackerman, J. Development assessment of all infants born to the family care program. In: Beschner, G., and Brotman, R., eds. Symposium on Comprehensive Health Care for Addicted Families and Their Children, National Institute on Drug Abuse. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Zelson, C. Maternal narcotic addiction and the neonate. Drug Therapy, 4(7):91-96, 1974.

Zelson, C. Infant of the addicted mother. New England Journal of Medicine, 288(26):1393-1395, 1973.

Zelson, C.; Bubio, E.; and Wasserman, E. Neonatal narcotic addiction: 10 year observation. Pediatrics, 48(2):178-189, 1971.

Zelson, C., and Green, M. Progeny and drug abuse. In: Pradhan, S.M., and Dutta, S.N., eds. Drug Abuse: Clinical and Basic Aspects. St. Louis, Mo.: C.V. Mosby, 1977.

Zelson, C., and Lee, S.J. Neonatal narcotic addiction--exposure to heroin and methadone. Pediatric Research Abstracts, 7:289/61, 1973.

Zelson, C.; Lee, S.J.; and Casalino, M. Neonatal narcotic addiction. Comparative effects of maternal intake of heroin and methadone. New England Journal of Medicine, 289(23):1216-1220, 1973.

*Zuspan, F.P. Urinary amine alterations in drug-addiction pregnancy. American Journal of Obstetrics and Gynecology, 126(7):955-964, 1976.

*Zuspan, F.P.; Gumpel, J.A.; Mejia-Zelaya, A.; Madden, J.; Davis, R.; Filer, M.; and Tiamson, A. Fetal stress from methadone withdrawal. American Journal of Obstetrics and Gynecology, 122(1):43-46, 1975.

INDEXES

Terms are indexed to the first page of each abstract.

DATA COLLECTION INSTRUMENT

The specific instrument or scale used in the research reported by the study.

DRUG

The general and specific names of all drugs mentioned in the abstracts, as used by the author of the document.

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