

An assessment of living situations, work, education and patient care preparedness among interns(house surgeons) of different medical colleges in Kerala.

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Abstract

Traditionally training of MBBS doctors is completed through one year of house surgery after the completion of five years of medical education. Level of training and patient care preparedness of the house surgeons before and after the training is of paramount importance in the health of the society as they form the primary working class doctors in the medical colleges where they are trained, and primary care physicians of the society once they are trained. A questionnaire (attached) of 27 questions was the primary tool of the study. Inclusion criteria were completion of house surgery in any medical institution in Kerala or outside Kerala and willingness to take part in the survey. Subjects were recruited via various social media as well as by personal mailings. The recruited subjects were requested to provide information regarding their living conditions, level of training and work environment. To confirm informed consent, the system allowed participants to complete the questionnaire only after they checked a box verifying that they have read a brief description of the study which appeared at the top of the questionnaire. A total of 360 doctors took part in the survey and the results showed that there is a steady decline in the quality of education and work atmosphere(according to the perception of the interns) over the last 15 years from 1999-2009.

Introduction

In India, the medical training is spread over four and a half years of class room and clinic based studies, and one year of internship or rotatory house surgery. The one year of internship was introduced in the curriculum in the 1960s as a response to rising awareness of the need for resources devoted to community health. The MCI regulation mandates two months in medicine, surgery, gynaecology and obstetrics, three months of community medicine (rural and urban) and half month each of paediatrics and other sub specialties. The interns participate in round the clock duties making this period crucial for the acquisition of skills and hands on experience, that are required for fulfilling their duties as a community doctor. The rotations are structured envisioning this purpose with postings to outpatient clinics, inpatient wards and emergency rooms. But the success of this introduction in improving the learning process and experience has been questioned (*Bansal RK. Need for strengthening of internship (rotary housemanship) training in India. Educ Health. 2004;17:332-338.*). Quality of medical education is closely intertwined with the health of a society and thus must be something that should be of constant monitoring and improvement. This becomes even more significant considering the fact that the number of medical seats in both Kerala and India has been on an exponential rise over past ten years. The number rose from 29000 to 34000 in just three years from 2006 to 2009. While this is supposedly a good news in a country with a doctor population ratio of 0.5 for 1000 population, the quality of the doctors who enter the practice and their level of training is largely an unanswered question.

There have been many articles in previous years indicating the lack of any standardization of intern year training. While as it remains a fact that no objective studies have been done to our knowledge on this topic, it seems undisputed that the level of training is subpar in many of the institutions. One fact that we could find from an exhaustive literature search is that the work hours of an average intern and its effect on his training is largely unaddressed although it is a common problem often faced by him. This is of paramount importance as long work hours has been shown to not only affect the training but increase the medical errors and jeopardizing patient care. A landmark study was conducted by Brigham's Women's Hospital in Boston showing the increase in medical errors among overworked intensive care doctors. Following this several work-hour and burn out studies were conducted among interns in the US culminating in ACGME reformation and capping of intern work hours. Through this survey, we have done an initial cross sectional study among the interns in Medical Colleges of Kerala, on the level of training given to them, their work hours and quality of life.

Methods

A questionnaire (attached) of 27 questions was the primary tool of the study. Inclusion criteria were completion of house surgeony in any medical institution in Kerala or outside Kerala and willingness to take part in the survey. Subjects were recruited via various social media as well as by personal mailings. To confirm informed consent, the system allowed participants to complete the questionnaire only after they checked a box verifying that they have read a brief description of the study which appeared at the top of the questionnaire. Google forms was used to create the survey and the analysis were done using Microsoft Excel.

Results

A total of 360 doctors participated in the survey. 283 (78.8%) were from Govt Medical Colleges and the rest from private medical colleges. 231 (64.6%) of the survey takers completed house surgeony within last five years and 47 (13.1%) 15 or more years before. The results are discussed under five headings.

Work Hours: Work hours in the departments medicine, surgery, OB-GYN and orthopaedics were asked for in the survey as average hours per week. Patient population in an average medical college is divided among units which have weekly once, twice or even thrice Out-patient clinics. The patients admitted in a unit's clinic day are taken care by the interns, post graduates and attendings of the respective unit. In addition, the casualty division of the respective department is attended to by the unit responsible for the day. In addition to this, one intern is responsible for the ward duties each day and this is usually twenty four hour on call duty. We asked the survey takers to sum up all the ICU, ward, clinic and casualty hours each week with the regular work hours for the calculation.

In all the four departments, regardless of private or government, more than 50% of the survey takers said they were worked more than 80 hours a week (see figure..)

On stratification of the study population by year of doing house surgeony, this does not seem to change much with about 89% of doctors who did house surgeony between 2009-2014 voting for being worked more than 80 hours a week while 85% of those who did house surgeony before 1999 voted to have worked the same hours.

On a question about the long work hours hampering the patient care, 77.5% of doctors of government medical colleges and 67.6% of those from private colleges agreed to the statement that their patient care was hampered at some point during their internship due to the long work hours. Year stratification on the same question shows that more among the recently graduated doctors (those who did internship recently) agreed to the statement than the old graduates with the percent steadily increasing over the years.

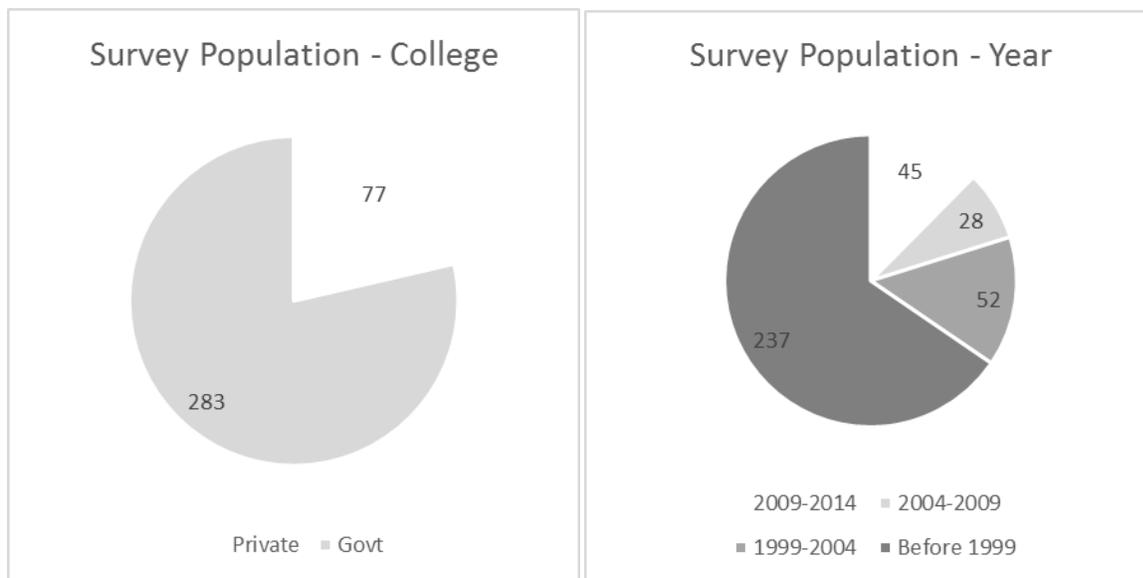
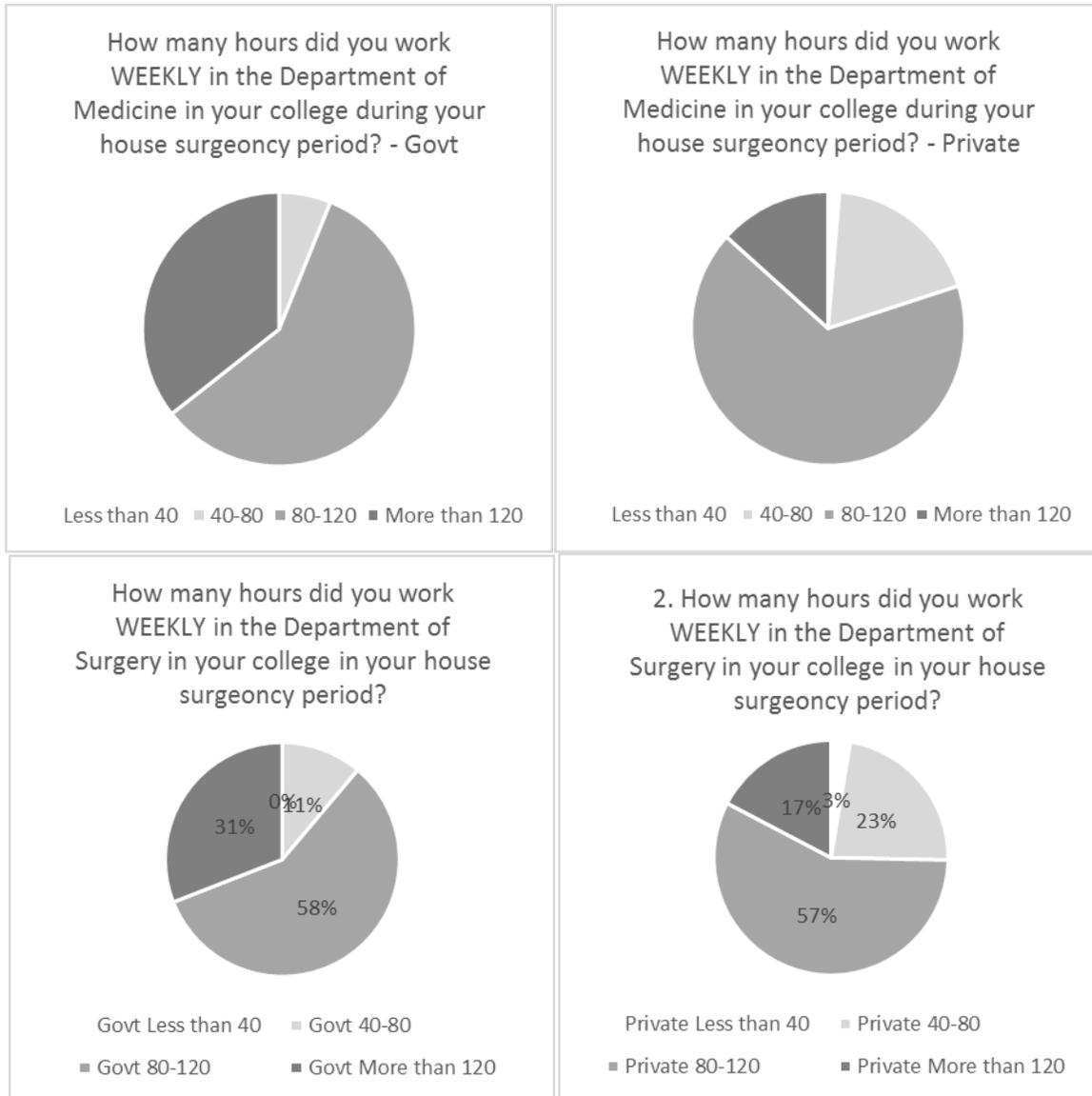
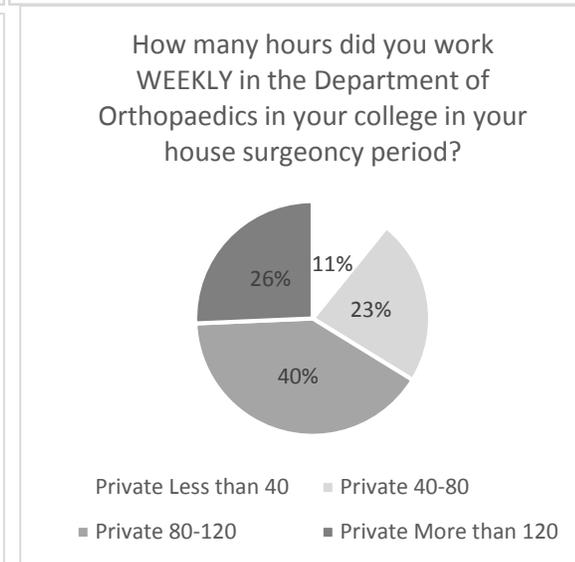
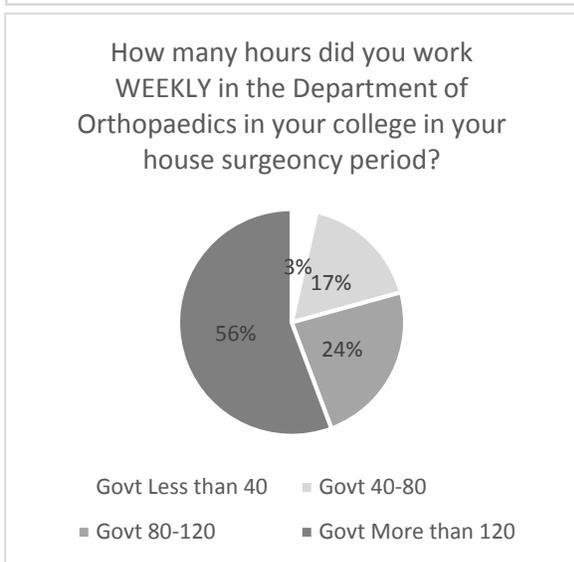
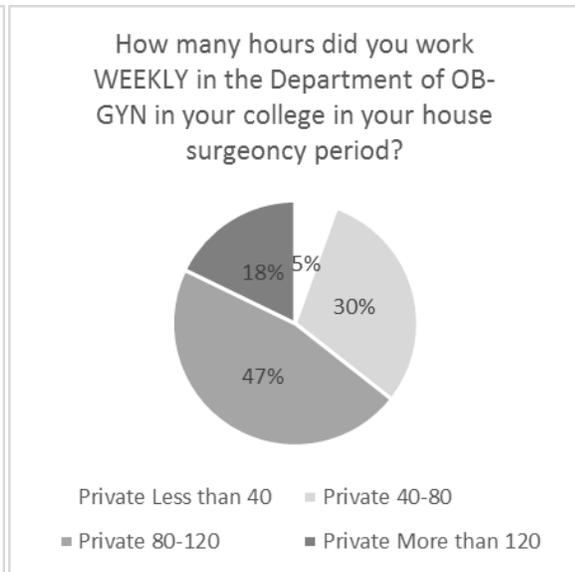
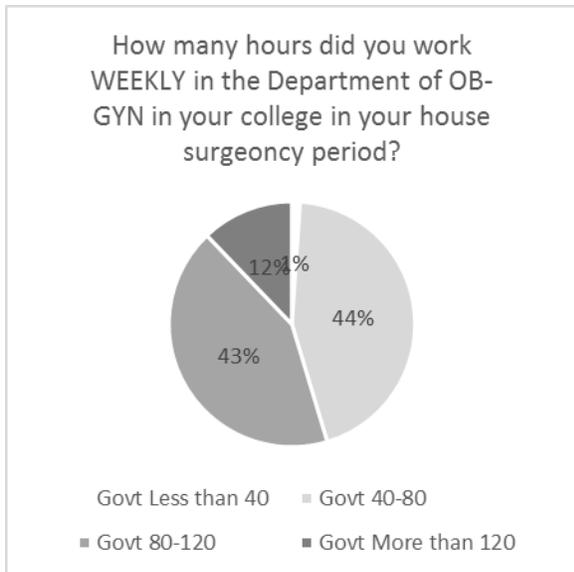


Figure 1.1,1.2: Of the 360 doctors participated in the survey, 283 (78.6%) were from Government Medical colleges and 77 (21.4%) from self financing medical colleges. 237(65.8%) did their house surgeony

between 2009-2014, 52(14.4%) between 2004-2009, 28(7.8%) between 1999-2004 and 45(12.5%) before 1999.



Figures 1.3,1.4,1.5,1.6: From top left clockwise, weekly work hours in Department of medicine in Govt medical colleges, weekly work hours in Department of medicine in Self Financing medical colleges, weekly work hours in Department of surgery in Self Financing Medical colleges and weekly work hours in Department of Surgery in Government Medical colleges.



Figures 1.7,1.8,1.9,1.10: From top left clockwise, weekly work hours in Department of OB-GYN in Govt medical colleges, weekly work hours in Department of OB-GYN in Self Financing medical colleges, weekly work hours in Department of Orthopaedics in Self Financing Medical colleges and weekly work hours in Department of Orthopaedics in Government Medical colleges.



Figure 1.11: Change in work hours in department of surgery from 1999 to 2014 in five year intervals.

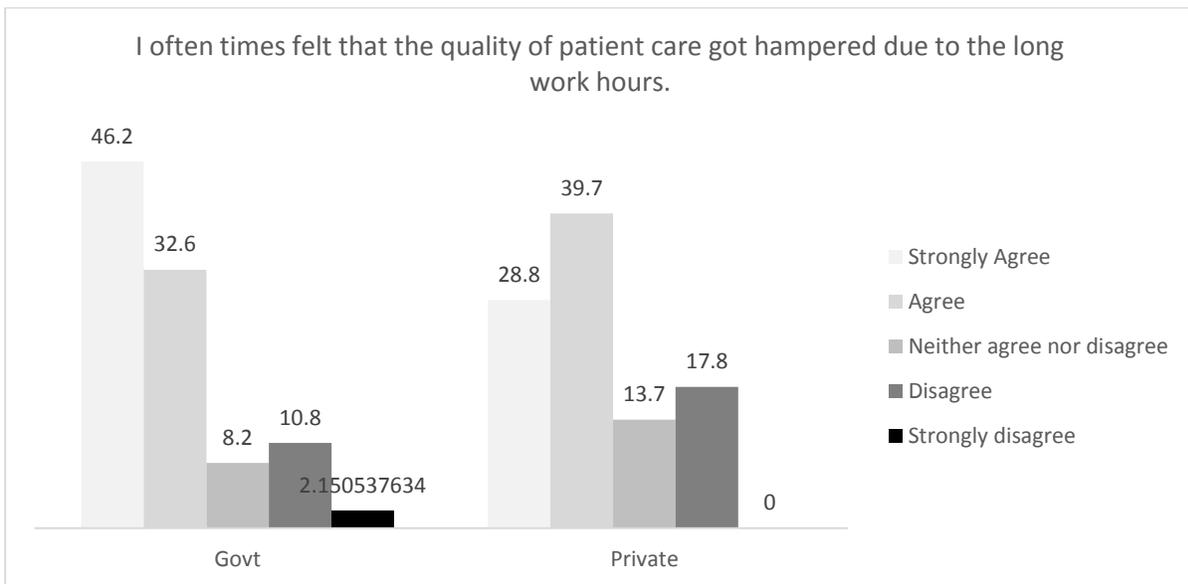


Figure 1.12: Patient care jeopardy due to long work hours, comparison of responses between Govt and Self Financing medical colleges.

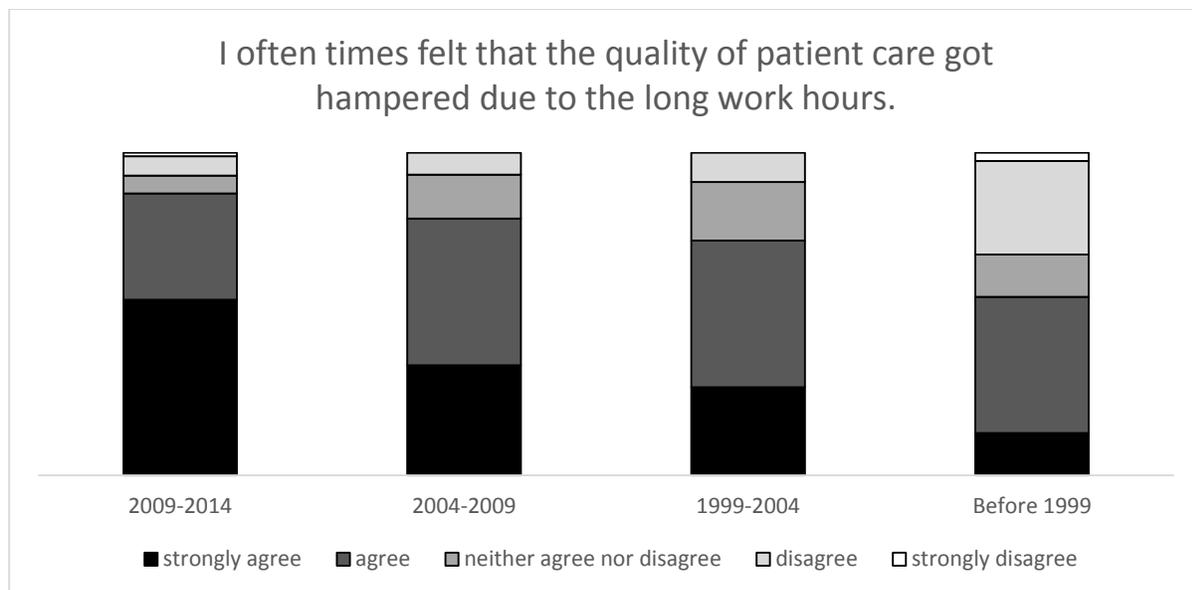


Figure 1.13: Patient care jeopardy due to long work hours over the years from 1999-2014 in five year intervals.

More than 50% of the doctors who took the survey regardless of college or year of doing house surgeoncy voted that they were worked more than 80 hours a week in all the core departments. In departments like orthopaedics and medicine, the percent is as high as 80 in which, a fare share voted they were worked more than 120 hours a week. Now one can see this trend holds true over the years on stratification of the population according to the year they did their house surgeoncy (Figures 1.1-1.11). This deserves to be mentioned as according to ACGME (American College of Graduate Medical Education) guidelines prepared after the reforms of 2004, the number of work-hours to 80 hours weekly, overnight call frequency to no more than one in three, 30-hour maximum straight shifts, and at least 10 hours off between shifts. Now one can argue that the number of patients to be catered in a country like India is different from USA and the authors totally agree with that, but if you look at the Figure 1.12, 78.8% of the survey takers of Govt Medical Colleges and 68.5% of the survey takers of Self Financing colleges agree that their patient care had been jeopardized one or more times due to the long work hours. One a stratification study of the responses to the same question (Figure 1.13), one can see that this problem has been only increasing over the years.

Training and Orientation:

In training and orientation section, chief issues addressed were the usefulness of the orientation program and number of house surgeons who got trained on BLS/ACLS(Basic Life Support/Advanced Cardiac Life Support) before the start of house surgeoncy. BLS as its expansion says is the protocol for supporting life of a collapsed patient until he or she is taken to expert medical care. Ideally every person should be trained and certified in this. ACLS is a set of protocol to stabilize a patient in cardiac shock that every medical personnel should be trained at.

The figures 2.1 and 2.2 shows that majority of doctors opined that the orientation program they were given were not useful. This is marginally higher among doctors of Govt Medical Colleges. The even more shocking response is the training in BLS/ACLS, 88% of doctors of Govt Colleges and 80% of doctors of SF colleges are not trained before starting their house surgeoncy. This is appalling numbers as the chief care givers of the tertiary care centers of our state are not trained in life saving procedures

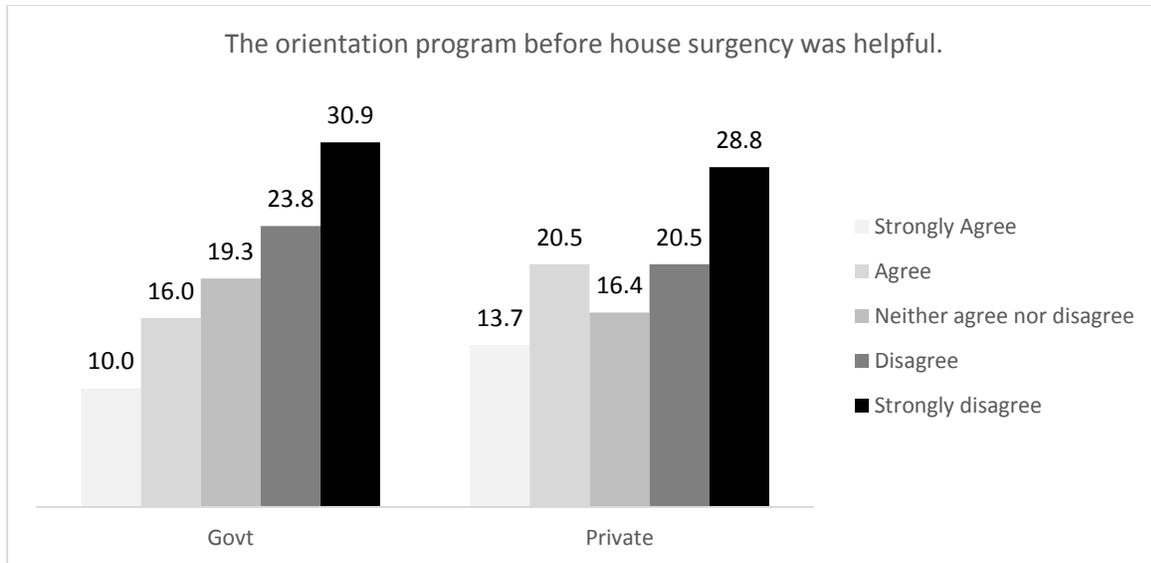


Figure 2.1: Usefulness of house surgery orientation program, comparison between Govt and Self Financing medical colleges.

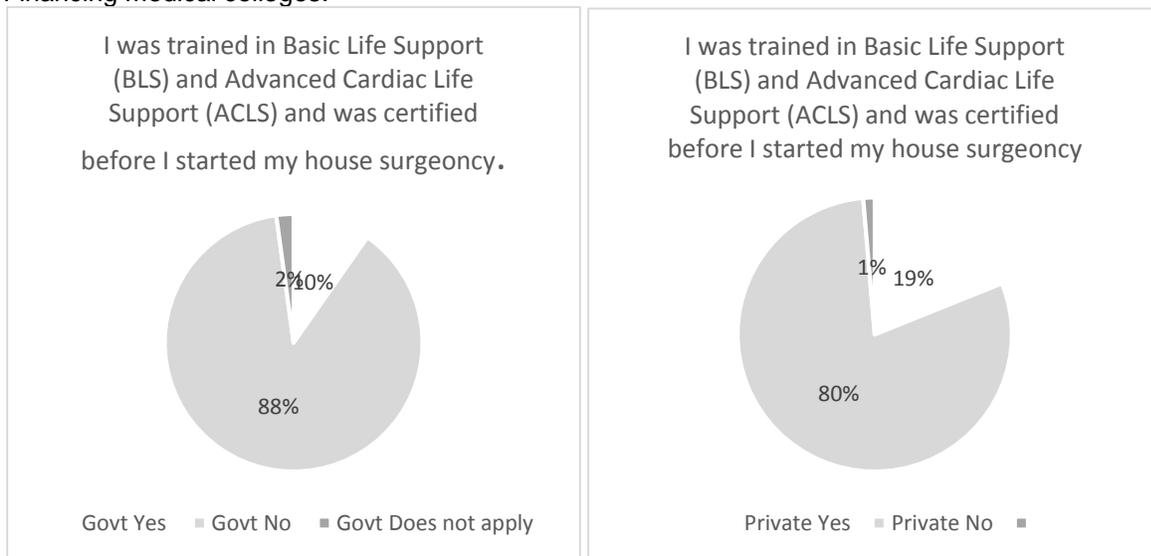


Figure 2.2: BLS/ACLS training before house surgery, comparison between Govt and Self Financing medical colleges.

Learning Experience:

Learning Experience at the medical colleges was a chief focus of the survey because as we mentioned before, quality of medical education is directly proportional to the future health of our society. A medical teaching unit is headed by a professor with one or more additional, associate or assistant professors with him. In addition, post graduates and lecturers play important roles in training the house surgeons. Didactic activities usually include discussions and presentations during teaching rounds and seminars. As an objective assessment to the number of didactic hours an average house surgeon gets, the number teaching staff who spent at least two hours a week teaching them in the core departments were asked. As the figure shows, 72% of the doctors had only one out of four teaching staff taking the pain to teach them atleast two hours a week. On a comparison, more than 50% of doctors who graduated before 1999 had more than one out of four doctors to teach them. A comparison between the government and private

owned medical colleges showed that government medical college interns fell behind in the number of didactic hours availed compared to the private.

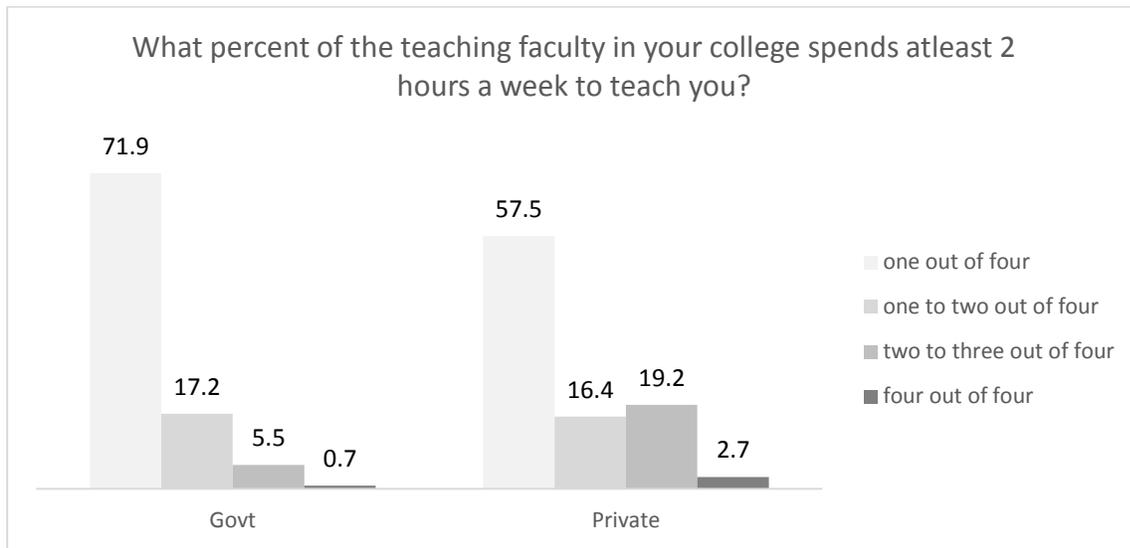


Figure 3.1: Percentage of faculty spending on house surgeon didactics, comparison between Govt and Self Financing medical colleges.

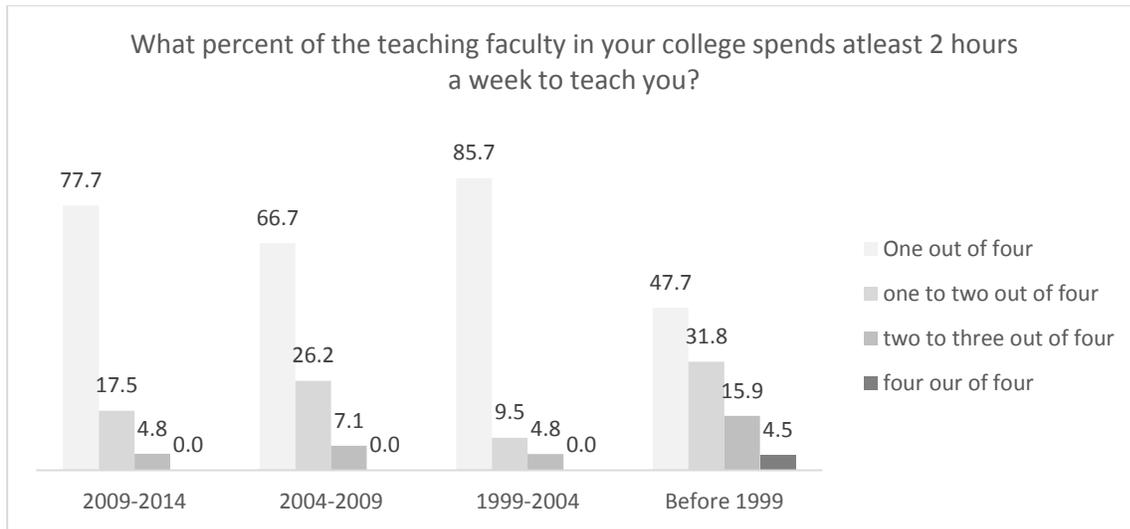


Figure 3.1: Percentage of faculty spending on house surgeon didactics, change over the years from 1999-2014 in five year intervals.

Professional judgement and autonomy in patient care is an important factor in medical education. The doctors graduating from a government institution have to work independently in the periphery where often times they have to make judgements on their own with no superiors to consult above them. How to proceed in the management of the patient, what investigations are to be done next, what drugs are to be given, when to discharge fall under this category. Ironically, more number of doctors from government medical colleges voted that their professional judgement is not considered in the patient management than private medical colleges as shown in the picture below.

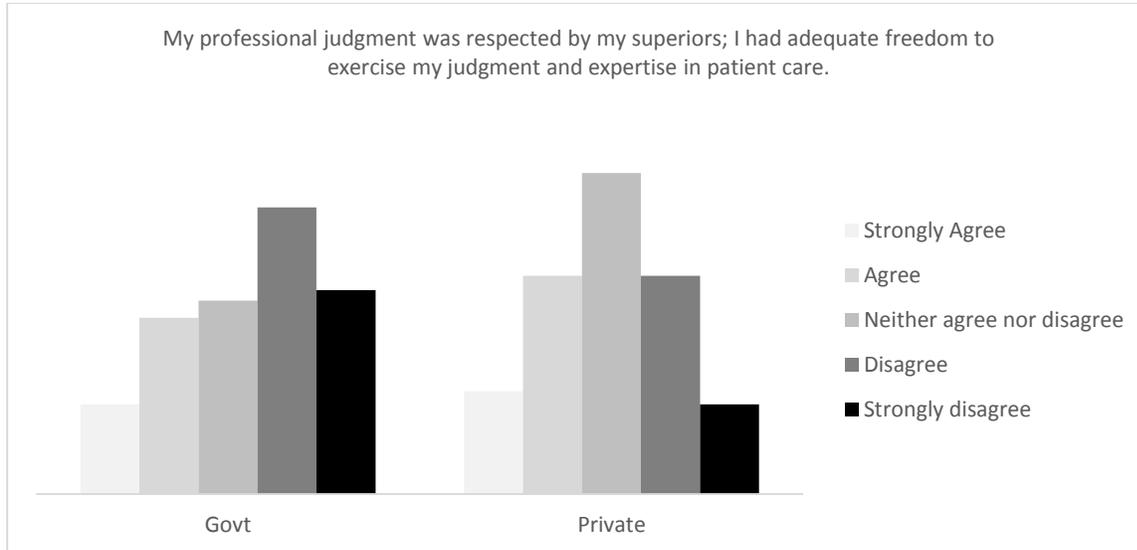


Figure 3.2: Respect for professional judgements made by house surgeons, comparison between Govt and Self Financing medical colleges.

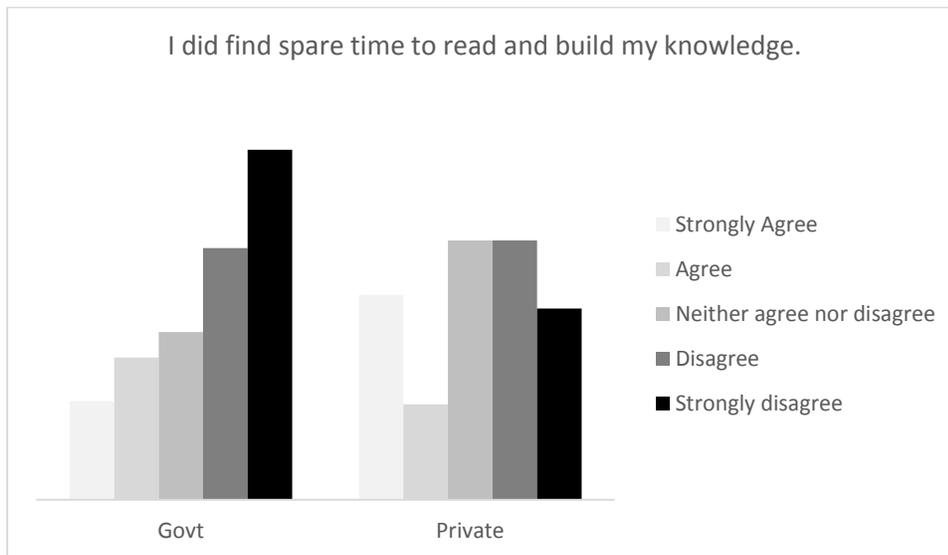
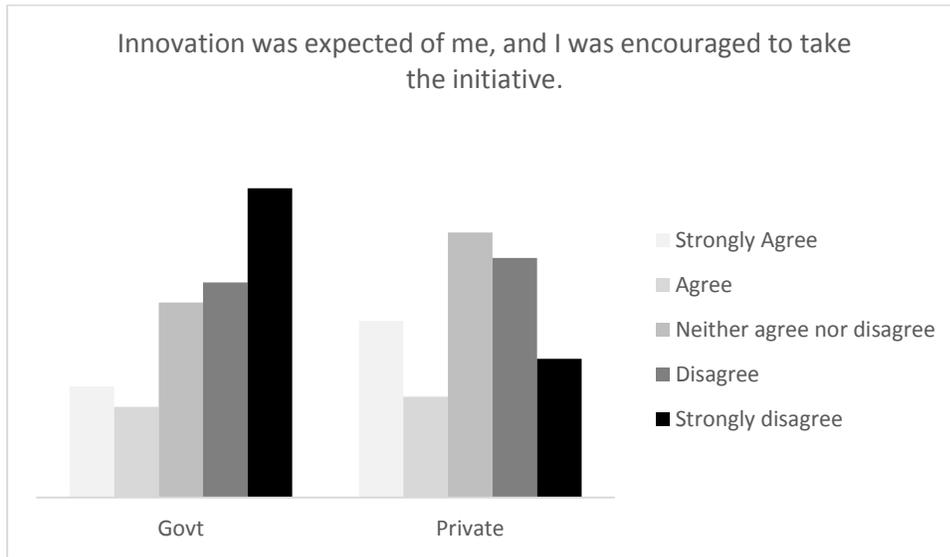


Figure 3.3: Spare time availability for building knowledge during house surgery, comparison between Govt and Self Financing medical colleges.



Figures 3.4: Support for innovation, comparison between Govt and Self Financing medical colleges.

Work Atmosphere and Collegiality:

Equally important to building knowledge and vocational skills is the building of team spirit as patient care is increasingly becoming a team work. How well an intern felt to be a part of his team, how well he understood his teams common goals , did he feel accepted by the team members and how approachable was the team members to him were the four chief questions we focused on.

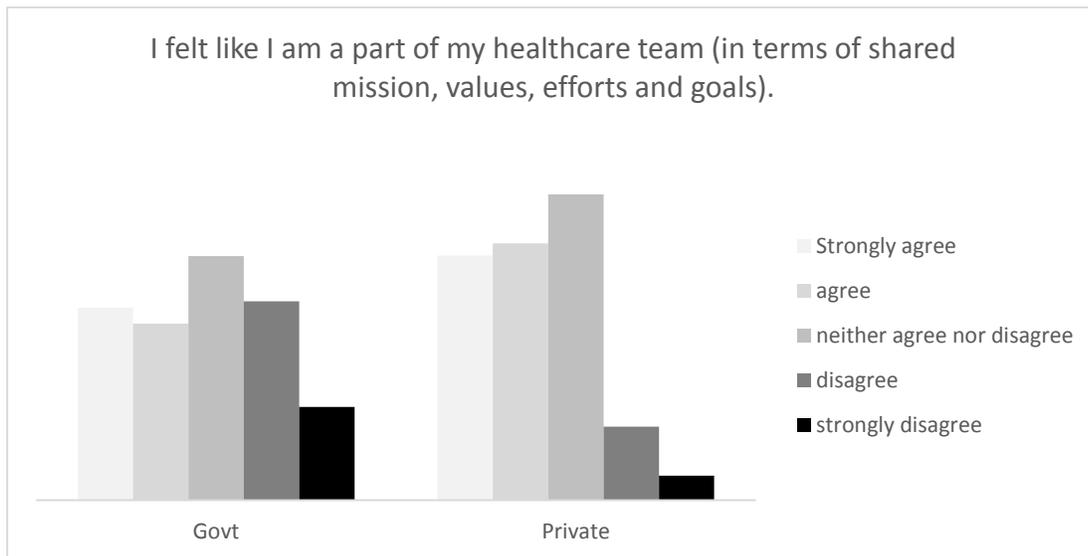


Figure 4.1: Team Spirit, comparison between Govt and Self Financing medical colleges.

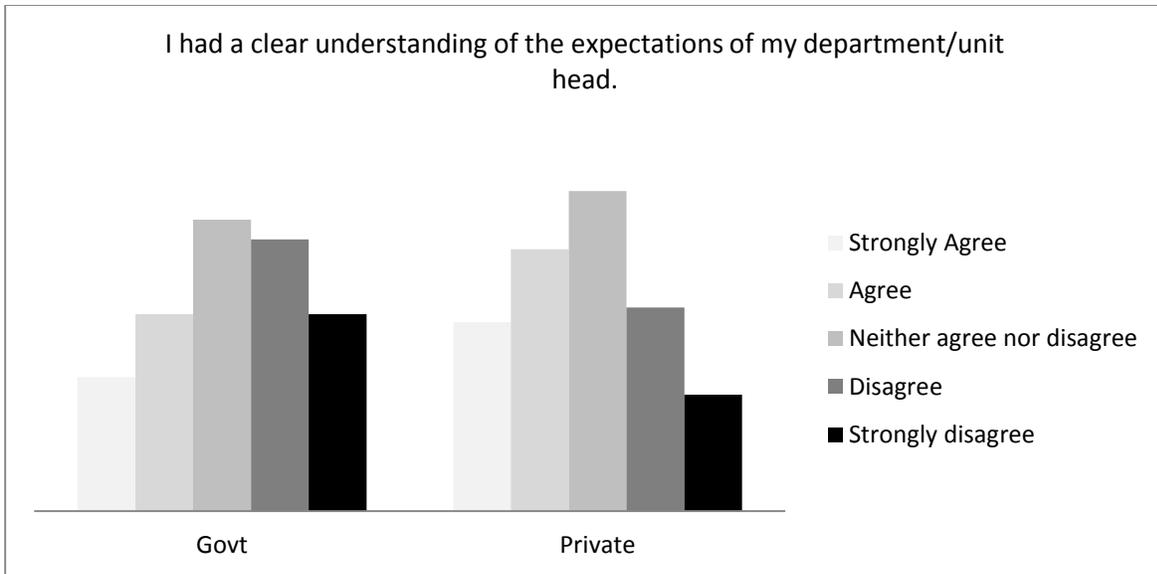


Figure 4.2: Clear understanding of the expectations, comparison between Govt and Self Financing medical colleges.

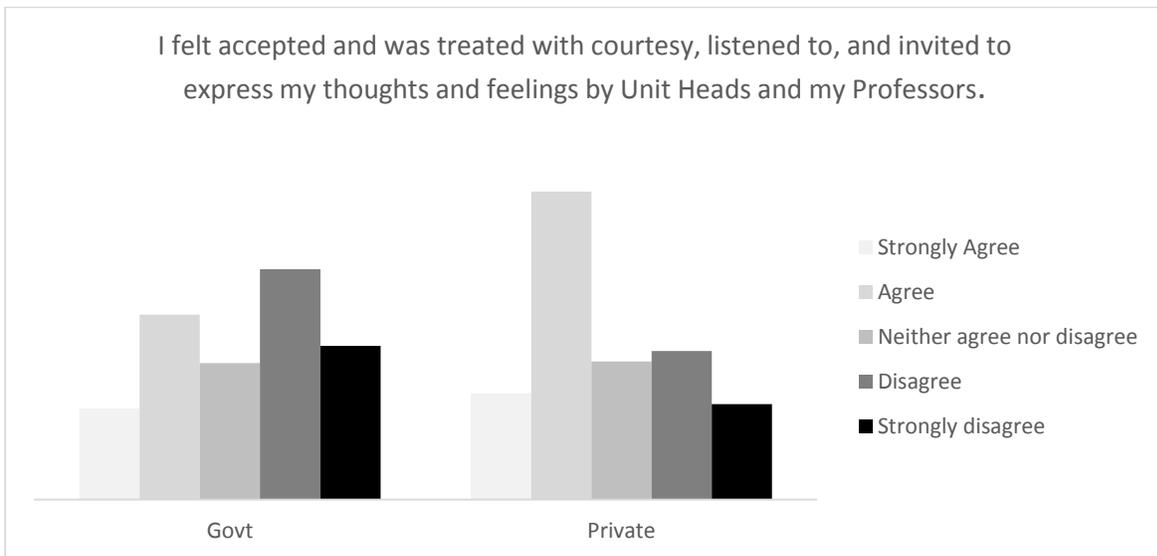


Figure 4.3: Communication with Unit heads and professors, comparison between Govt and Self Financing medical colleges.

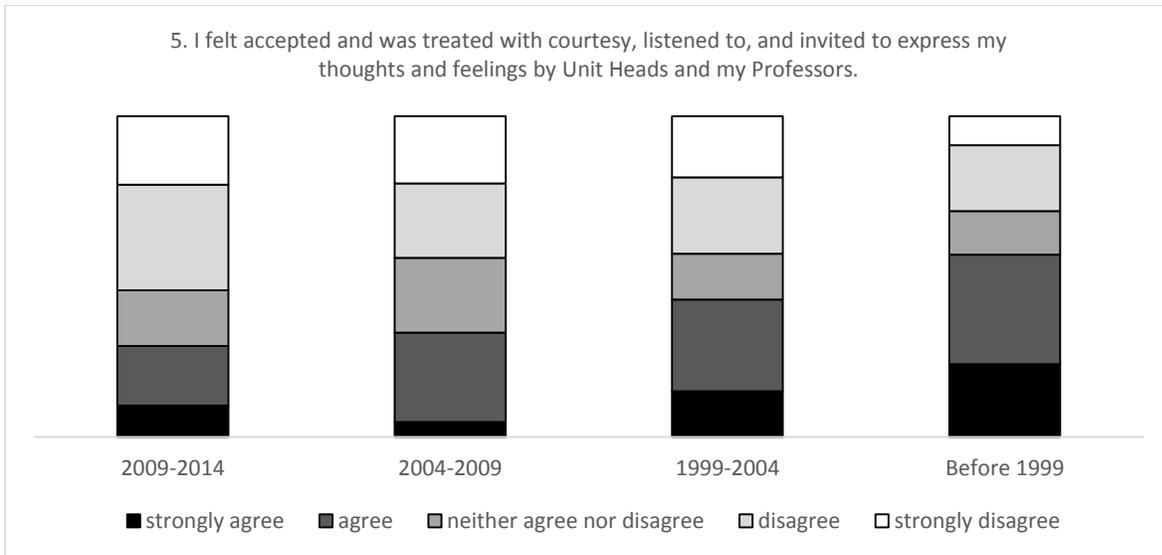


Figure 4.4: Communication with Unit heads and professors, over the years from 1999-2014 in five year intervals.

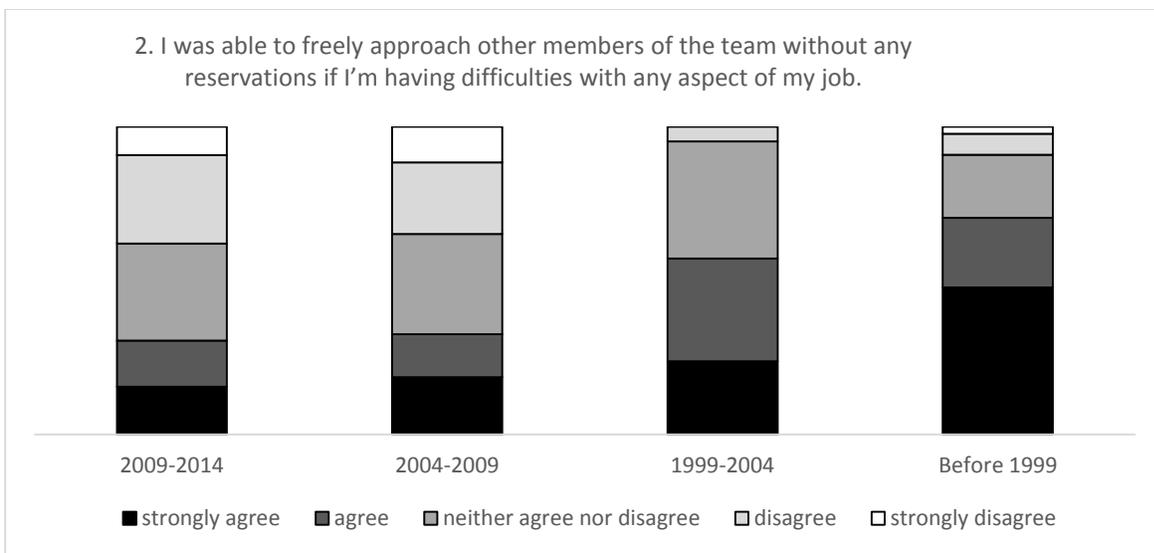


Figure 4.5: Approachability of higher members of the team, over the years from 1999-2014 in five year intervals.

Employee Appreciation:

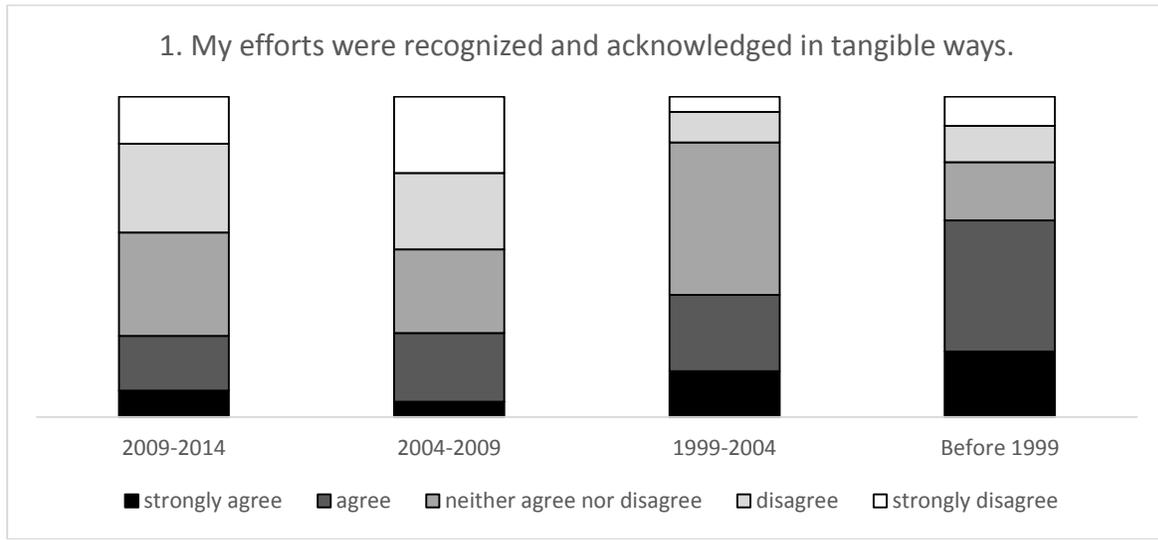


Figure 5.1: Employee appreciation over the years from 1999-2014 in five year intervals.



Figure 5.2: Employee work compensation the years from 1999-2014 in five year intervals.

Living and Work Facilities:

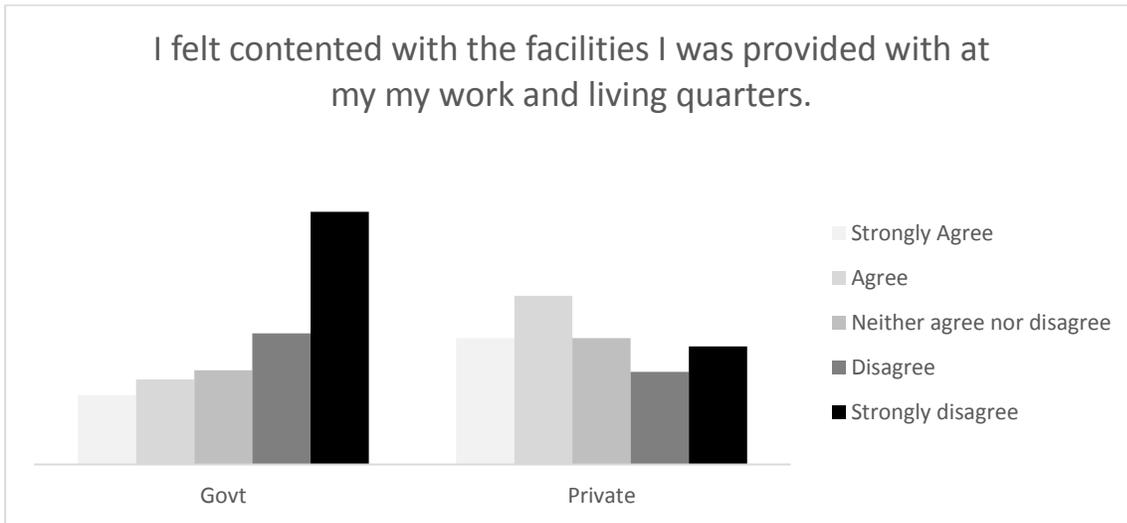
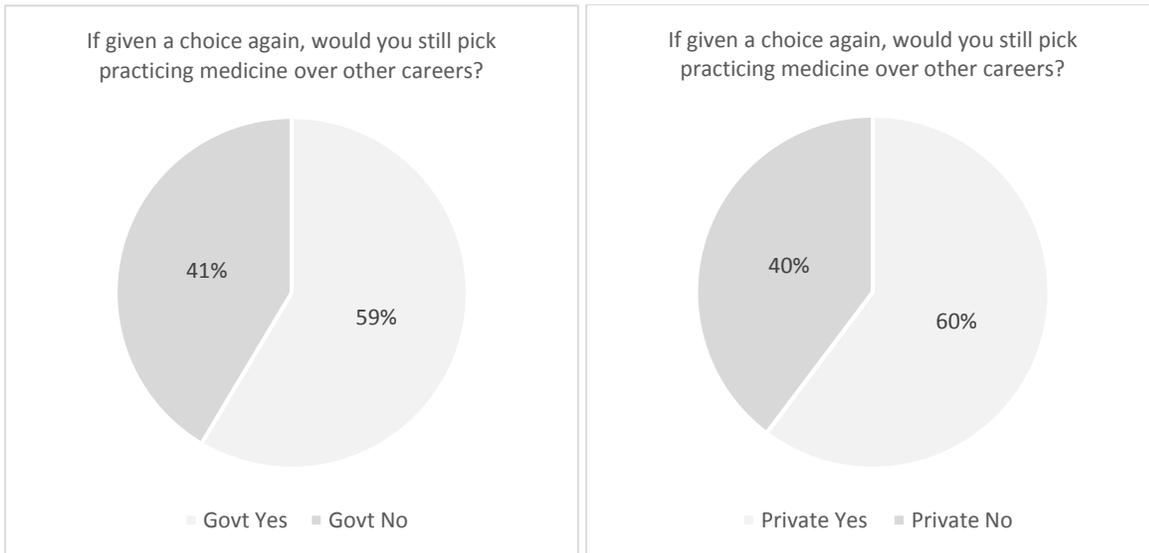


Figure 6.1: Satisfaction on facilities provided, comparison between Govt and Self Financing medical colleges.



If given a choice again, would you still pick practicing medicine over other careers?

