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Research article

STUDY OF PRIOR PREPAREDNESS AND AWARENESS REGARDING THE MBBS COURSE AMONGST FIRST YEAR STUDENTS ADMITTED AT RURAL MEDICAL COLLEGE, OF PIMS-DU, LONI

*Padmanabhan P[1], Kunkulol R[2], Jangle SN[3]

[1]Associate Professor, [3]Prof and Head, Department of Biochemistry, [2]Professor, Department of Pharmacology
Rural Medical College, Pravara Institute of Medical Sciences-Deemed University, Loni, Ahmednagar, Maharashtra, India

*Corresponding author email: preetipadmanabhan@gmail.com

ABSTRACT

Background: Adolescents in India choose career in medicine under the influence and pressure from parents, family members, peers and external sources. There are no measures taken to study whether these medical students understand the demands and priorities of a career in medicine once they decide to choose it. Hence the study was undertaken at PIMS-DU with Ist year MBBS students as participants. **Aims:** 1) Assess the factors influencing the choice of MBBS. 2) Analyze the prior knowledge and awareness of medical students regarding the course. 3) Their career trend in future. **Material and Methods:** All newly admitted students present at the orientation programme in September 2014 at PIMS –DU were included as participants. Their written responses to a 14 point questionnaire were entered into a Microsoft Excel Spreadsheet and descriptive analysis was done. **Results:** A majority of students had their parents and family members in medical profession indicating prior idea amongst the students regarding the course, even when the choice was made at an early stage of academics or without appearing for aptitude tests due to unawareness. Appearance for entrance exams to kept their options wide open but caused unnecessary stress, anxiety and economic burden to parents. However, these participants had limited knowledge about medical curriculum but had decisive ideas regarding future trend in career. **Conclusions:** Family being strong motivator for career choice for medical students; should encourage students to undertake aptitude tests, career guidance courses and investigate about future prospects to create a strong foundation as MBBS students.

Keywords: Career, Medical students, Awareness, Medical curriculum.

INTRODUCTION

The personnels opting for medical profession must have the right approach, aptitude, attitude, selfless service motto and ability to work relentlessly for the patients. Other attributes are ability to overcome sleep, preparedness for a kaleidoscope of emotions, service over economics and empathy [1].

To enable the medical students to make the right choice of professional career, aptitude tests are developed by trained expert psychologists to prevent frustrations in future in case of failures. Consequently, educational authorities have realized the need for institutions to have career guidance counselors who enable the students to select appropriate career in co-ordination with their intellectual abilities and virtues [2].

In some cases students are forced to choose a professional course such as MBBS at an early stage in student life and persist in their choices until their

early academic goals are completed [3,4].At this juncture of selection, their choice is influenced by parents, relatives, peers and other external sources as well as their own perceptions [5] .

After the decision of choosing MBBS as a course of study, there are some requirements which the medical student should possess, such as comprehension of English language, competence in communication, empathy, independent thinking and decision making, integrity, dedication to lifelong learning, as well as ability to cope with stress [6].

However, several studies indicated that stress due to the profession is dominating problem amongst the current medical practitioners suggesting the choice regarding the career is replaced by pessimism and cynicism [7, 8].

It has been noted that students in India opt for a career in medicine because of influence and pressure from parents, even they lack self motivation. It should be kept in mind that in our country the majority of children taking this decision are very young (17-18 years old) and have a protected life with plenty of parental guidance in nuclear family with not much career counseling. Nothing much has been done to know whether they really understand the high demands and rigours of a career in medicine once they decide to choose it [9].

At the Pravara Institute of Medical Sciences-Deemed University the MBBS course has tenure of 5½ years, which is inclusive of one year of internship. As soon as they get admission in the First year, subjects like Anatomy, Physiology, Biochemistry and Community Medicine are taught for two terms. In the Second year for 3 terms Pharmacology, Microbiology, Pathology, Forensic Medicine and Community Medicine are taught along with clinical posting. In Final MBBS Part I of 2 terms cover the subjects Community Medicine, Ophthalmology and Oto-rhino laryngology and Final MBBS Part II of 2 terms includes the subjects Medicine, Surgery including Orthopedics, Obstetrics and Gynaecology and Pediatrics. Internship lasts for a period of one year which is as per MCI guidelines.

The objectives of the present study were to:

1) Assess the factors influencing the choice of MBBS as a course of study.
2) Analyze the prior knowledge and awareness of newly admitted medical students regarding the MBBS course and
3) Their career trend in future.

MATERIAL AND METHODS

All newly admitted medical students (n= 91) of first year MBBS course admitted in an observational study in September 2014, at Pravara Institute of Medical Sciences- Deemed University were included as volunteers in the 2 month study. On the first day of orientation programme of the newly recruited students who were present and the questionnaire with 14 point questions were distributed amongst the students. The modified questionnaire [10] was anonymous and self administered. Further data confidentiality was ensured over and above the anonymity.

The primary outcome measures were the number of attempts taken by students for admission and the people who motivated them for a profession in medicine. The secondary outcome measures were number and type of career preparation activities pursued prior to admission and the extent of prior knowledge and awareness about the various aspects of medical curriculum.

Ethics: After approval from the Institutional Ethical Committee, Registration No: PIMS/RMC/2014/86.

Statistics: Responses were entered into a Microsoft Excel Spreadsheet and descriptive analysis was done.

RESULTS

Table 1: Distribution of characteristics and responses of newly admitted first year MBBS students according to gender.

Student Age	Boys (%)	Girls (%)
17 yrs	20 (45.45)	24 (51.06)
18 yrs	14 (31.82)	11 (23.40)
19 yrs	06 (13.64)	11 (23.40)
20 yrs	04 (9.09)	01 (2.12)
Total	44	47

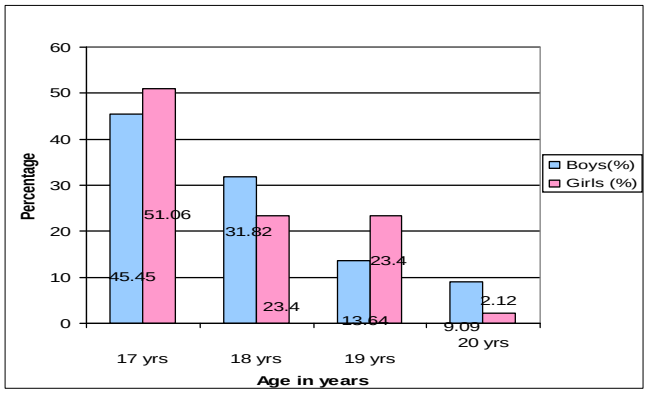

Fig: Age and Gender wise distribution of 1st year MBBS students

Table 1: Distribution of characteristics and responses of newly admitted first year MBBS students according to gender.

Parameter	Boys (%)	Girls (%)
Number of attempts in entrance exam for MBBS course		
First attempt	28 (63.64)	36 (76.60)
Second attempt	16 (36.36)	10(21.28)
> two attempts	00 (0.00)	01 (2.13)
Decision to choose MBBS course		
Before 10th Std	25 (56.82)	30 (63.83)
During Junior College	17 (38.64)	17 (36.17)
Not disclosed	02 (4.55)	00 (0.00)
Reason for selecting MBBS course		
Answered and explained	34 (77.27)	45 (95.74)
Unanswered	10 (22.72)	03 (4.25)
Consideration of other option if not admitted to MBBS		
BDS	14 (31.81)	07 (14.89)
BPT	12 (27.27)	20 (42.55)
B .Pharm	00 (00.00)	05 (10.64)
Biotech	03 (6.82)	01 (2.13)
B.Sc	03 (6.82)	00 (0.00)
BAMS	02 (4.55)	01 (2.13)
Engineering	01 (2.27)	03 (6.82)
Any other	01 (2.27)	02 (4.26)
Not disclosed	08(18.18)	08 (17.02)
Awareness that ragging is prohibited		
Yes	42 (95.45)	47 (100)
No	02 (4.55)	00 (0.00)

Parameter	Boys (%)	Girls (%)
Any other member of the family in medical profession		
Mother	11 (25.00)	20 (42.55)
Father	09 (20.45)	07 (14.89)
Maternal uncle	08 (18.18)	11 (23.40)
Paternal uncle	07 (15.90)	03 (6.38)
Grandparents	05 (11.36)	03 (6.38)
Sister	03 (6.82)	03 (6.38)
None	01 (2.27)	00 (0.00)
Profession of family		
Nursing	10 (22.73)	23 (48.94)
Hospital administration	12 (27.27)	08 (17.02)
Pharmaceutical	08 (18.18)	08 (17.02)
Business	08 (18.18)	03 (6.38)
Bank	04 (9.09)	02 (4.26)
Education	01 (2.27)	02 (4.26)
Not disclosed	01 (2.27)	01 (2.13)

Table 2: Guidance availed before admission to MBBS course.

	Boys (%)	Girls (%)
Decision to choose MBBS encouraged by		
Mother	06 (13.64)	10 (21.28)
Father	06 (13.64)	06 (12.77)
Maternal uncle	03 (6.18)	06 (12.77)
Paternal uncle	07 (15.91)	05 (10.64)
Teacher	07 (15.91)	09 (19.15)
Friend	08 (18.18)	07 (14.89)
Grandmother	00(0.00)	01 (2.13)
Inner voice	01 (2.27)	01 (2.13)
Not disclosed	06 (13.64)	02 (4.25)
Taken prior Aptitude test		
Yes	12 (27.27)	22 (46.80)
No	19 (43.18)	18 (38.30)
Was not aware	06 (13.64)	04 (8.51)
Not disclosed	07 (15.91)	03 (6.38)
Common entrance test for admission to MBBS other than test conducted by PIMS-DU		
One	05 (11.36)	01 (2.13)
Two	08(18.18)	06 (12.77)
Three	05 (11.36)	02 (4.26)
Four	05 (11.36)	09 (19.15)
Five	17 (38.64)	26 (55.32)
Not disclosed	04 (9.09)	03 (6.38)

Table 3: Medical students awareness about MBBS course

	Boys (%)	Girls (%)
Duration of study in years		
4	02 (4.55)	02 (4.25)
4 ½	38 (86.36)	41 (87.23)
5	02 (4.55)	0 (0.00)
5½	01 (2.27)	04 (8.51)
Not disclosed	01 (2.27)	0 (0.00)
Awareness of Internship duration		
1	42 (95.45)	42 (89.36)
1½	0 (0.00)	02 (4.25)
Not disclosed	02 (4.55)	03 (6.38)
Parameter	**Boys (%)**	**Girls (%)**
Names of subjects in I MBBS		
3	35 (79.55)	43 (91.49)
4	02 (4.55)	02 (4.26)
Not disclosed	07 (15.90)	02 (4.26)
Names of subjects in II MBBS		
2	03 (6.82)	07 (14.89)
3	10 (22.72)	13 (27.66)
4	18 (40.90)	12 (25.53)
5	01 (2.27)	02 (4.26)
Not disclosed	12 (27.27)	12 (27.66)
Names of subjects in III MBBS		
2	03 (6.82)	03 (6.38)
3	02 (4.55)	02 (4.26)
4	06 (13.66)	07 (14.89)
5	05 (11.36)	10 (21.28)
6	10 (22.72)	13 (27.65)
7	14 (31.82)	12 (25.53)
8	01 (2.27)	0 (0.00)
Number of attempts to clear University Exam		
1	09 (20.45)	04 (8.51)
2	01(2.27)	02 (4.26)
3	12 (27.27)	0 (0.00)
4	0 (0.00)	0 (0.00)
Not disclosed	22 (50.00)	41 (87.23)

Table 4: Decision about future after opting for MBBS

	Boys (%)	Girls (%)
After MBBS opting for		
Post-graduation	35 (86.36)	42 (89.36)
Private practice	01 (2.27)	04 (8.51)
Teaching	02 (4.55)	0 (0.00)
Any other	02 (4.55)	0 (0.00)
Not disclosed	01 (2.27)	01 (2.13)
Aware of USMLE Exam		
Yes	16 (36.36)	13 (27.66)
No	28 (61.36)	29 (63.83)
Not disclosed	01 (2.27)	04 (8.51)
Total	44	47

The number of students admitted to the first semester of Ist MBBS in 2014 was 125.On the day of the study 91 students were available who duly filled the questionnaire and all were included in the study. As depicted in Figure 1 of age and gender wise distribution of Ist year MBBS students, amongst the total number of newly admitted students 51.06% were girl students of 17 years age group and 23.4% were girls in the age group of 19 years which were higher in percentage when compared to boy students of the same age group. Whereas there was a majority of boy students as compared to girl students in the age group of 18 years (31.82%) and 20 years (9.09%).

Success in an entrance exam conducted by the Pravara Institute of Medical Sciences- Deemed University (PIMS-DU) is a pre-requisite to gain admission into PIMS-DU. A higher percentage of girl students made their first attempt (76.6%) as compared to boy students. Whereas higher percentage of boy students (36.36%) as compared to girl students were attempting the second time to secure admission. Girl students (2.13%) were more competent and ensured their chances of gaining admission by making more than two attempts. These data are represented in Table 1.

Table 1 also the time period during which the I st year MBBS students had made their decision to uptake MBBS course, As compared to boy students 63.83% of the girl students had made their firm decision in 10th standard. But 38.64%of the boy students as compared to girl students had made their choice during Junior College. All the girl students were prompt in disclosing but 4.55% of boy students preferred not to disclose about when they had made their decision. Ragging is strictly prohibited amongst students at Pravara Institute of Medical Sciences – Deemed University. Amongst the newly admitted first year MBBS students; all girl students were fully aware about this fact as compared to boy students.4.55% of the boy students were unaware that ragging is prohibited at PIMS –DU. Table 1 further depicts the consideration of other options if not admitted to MBBS. 31.81% of the boy students preferred BDS as next option .The same percentage (6.82%) of boy students would have opted for either of the streams that Biotechnology or B.Sc as next option. For girl students (42.55%) their next choice was BPT. None of the boy students were interested in opting for B.Pharm. Whereas none of the girl students showed interest in opting for B.Sc.6.82%of the girl students were interested in Engineering or 4.26% for any other course as next option.18.18% of the boy students and 17.02% of girl students preferred not to disclose about their consideration for of other option of study courses. As shown in Table1 a higher percentage of girl students (42.55%) had their mothers in medical profession and (23.4%) had their maternal uncles in medical profession. Fathers (20.45%), paternal uncles (15.9%), grandparents (11.36%), sisters (6.82%) of the boy students were involved in medical profession. However, 2.27% of boy students did not disclose about which member in the family were in medical profession; but all girl students were prompt in their response.

The data shown Table 1 ascertains that larger numbers of family members of girl students are in nursing field (48.94%) and education (4.26%). As compared to girl students the family members of boy students were in hospital administration (27.27%), pharmaceuticals (18.18%), business (18.18%) and banking (4.26%).However, 2.27% of boy students and 2.13 % of girl students did not divulge information about the profession of their family members. Since, 42.55% of the mothers and 23.4% of maternal uncles of girl students (as depicted in Table 1) were in medical profession they must have encouraged and influenced their daughters and nieces to choose MBBS course. Fathers (13.64%), paternal uncles (15.9%), friends (18.18%) were pivotal in encouraging the boy students but had lesser influence of the same family members on the girl students to choose MBBS course.

However, none of the girl students were encouraged by their grandmothers. Whereas, 13.64% of boy students and 4.25% of the girl students preferred not to disclose about their kins are influential in their decision to choose MBBS course. These data are represented in figures in Table 2.The inner voice was also an encouraging factor in 2.27% boys and 2.13% girl students. As represented in Table 2 , girl students (46.8%) as compared to boy students were career conscious and cautious enough to have undergone a prior an aptitude test.13.64% of the boy students were unaware as compared to girl students about the aptitude tests.Whereas,15.91% of the boy students and 6.38% of the girl students preferred not to disclose. According to Table 2, 38.64% of the boy students and 55.34% of the girl students had applied for more than 5 entrance tests other than tests conducted by Pravara Institute of Medical Sciences – Deemed University thus causing economic burden, stress and anxiety to them and their families.

With reference to Table 3, as compared to boy students 87.23% of girl students were aware regarding the duration of the MBBS course; as compared to girl students 95.45% of the boy students were aware of the internship duration.

Table 4 represents that 36.36%of the boy students were aware of USMLE exam and 63.83% of the girl students were totally unaware of the competitive USMLE exam. 2.27% of the boys and 8.51% of the girls preferred not to disclose. Table 1 depicts the reasoning amongst medical students regarding MBBS course selection. Most of the girl students (95.74%) have perfect understanding regarding their career choice and made conscientious decision to choose MBBS course. According to Table 3 most of the girl students (87.23%) were totally unaware regarding the number of attempts required to pass the University Exam. As depicted in Table 3 only 4.55 % of boy students and 4.26% of the girl students correctly reported the number of subjects that is Anatomy, Physiology, Biochemistry and Preventive & Social Medicine taught in I st year MBBS. It is evident from Table 3 that uncertainty and ignorance existed amongst the boys and girls regarding the number and names of subjects taught in II nd and III rd year MBBS. Table 4 represents that majority of boy students (86.36%) as well as girl students (89.36%) were interested in doing post-graduation and a negligible percentage opted for private practice amongst both boy students (2.27%) and girl students (8.51%).None of the girl students were interested in teaching profession as future career after completion of MBBS course.

DISCUSSION

Our study indicates that amongst the total students admitted for MBBS course at Pravara Institute of Medical Sciences –Deemed University (PIMS-DU) the number of girl students admitted had outnumbered the boy students. This trend of statistics even extends to the number of attempts at the entrance exam whether at PIMS-DU or at other university entrance exam. Thus it appears that the girl students are found to maintain their perseverance regarding their career choice even when selecting their course of study.

The medical profession faces a changing gender composition with larger number of girls opting for medicine as their career choice. Our study findings are in unison with this fact. A study in the United Kingdom showed an increase in feminization of the medical profession [11].

The choice of a particular career is largely influenced by certain factors; such as peer group influence and parental influence. Family influence is an important factor in career choice of the students [12]. Adolescents have young minds therefore develop many attitudes about occupation and career as a resultant effect of interactions with their families. Family background according to our study provides the basis from which their career plans and decision making evolves.

Our study indicates that parents and other members in the family have significant influence on career choice. Teachers and friends contribute equally to the decision of choosing MBBS as course of study. Parents, family members of medical students probably recognized their wards ability at an early age and guided them into academically suitable careers [13]. A study by Penick and Jepsen reported that parental influence surpasses that of peer influence [14].This fact bears resemblance to findings of our study. But this is a variable factor since it is pertaining to the student's rapport with their parents and peers. Our study also indicates that inner voice of students can also influence and can be a guiding factor regarding career choice. A study by Csinady et al found that altruistic motivations were the most

significant career choice reason among medical students [15].

It is also observed that nearly majority of the students had their parents and family members in medical profession; which means that the students had prior idea regarding the type of scenario awaiting them. It also ascertains the findings of a previous study that family is a very strong motivating force regarding career choice in India [9]. In our study, the medical students have made the decision of their career choice before 10th standard and in Junior College. In a similar study by Noble et al who dealt with factors influencing career choice of orthodontic residents in the United States, found that career decision was made at an early stage in life [16].However, this fact is debatable that students at the tender schooling age and junior college days are able to make such an important decision such as career choice in medicine. Aptitude career tests are specially designed and developed by trained, expert psychologists; who guide and enable the students to decide their career in future. The test analyses the inclinations and skill sets of students like logical thinking skills, analytical skills, leadership capabilities, power of comprehension, communi- cation skills etc along with capabilities that can be improvised. Hidden potential or talents can be assessed and explored [16].

Our study depicts a significant number of students did not appear for aptitude tests or were not aware of the same. There is also a notable observation that girls outnumbered the boy students in appearing at the aptitude tests, a clear indication of their conscientious decision taken especially by the girl students. The fact lies that by appearing for aptitude tests prior to entering any profession can be beneficial and directional to the students immensely. Aptitude tests can be used to narrow down the career options and also give a definite motivation which navigates and gives a head start to their careers [17]. Our study indicates that majority of medical students had appeared for five entrance exams other than that at our institution. Also to be noted is the fact the remaining students had appeared for more than one entrance exam. This may result in unnecessary economic burden, stress and anxiety to the students as well as their family members. But when considering the same scenario in a different perspective, it also means that the students were keeping their options and probability of securing admissions to various institutions wide open. According to findings of the present study the awareness amongst the students regarding the medical curriculum was limited. Most of the medical students did not have correct information hence knowledge regarding the duration of the study, internship duration, about the number of attempts required to clear the university exam nor the subjects taught at the level of first year, second year or final year MBBS. However, nearly all students which included all girl students were aware that ragging is prohibited in college and college premises. A majority of the medical students had a clear decisive idea regarding their future career choice after MBBS course and would opt for further studies or post-graduation. However, an insignificant number will opt for private practice and teaching. According to our study teaching profession was an unpopular choice amongst the girl students since none opted for it. The present study also indicates that majority of the medical students were unaware regarding the qualifying exams for education aboard after completion of MBBS course. But, it is satisfying to observe that students had a perfect understanding, reasoning and firm ideas as to why they had eventually chosen MBBS as course of study? Students should not be “encouraged” to make a career out of medicine unless they are explained in detail about the dedication and hardwork that awaits them in future. Perhaps students who make an informed choice and have a prior idea will excel, perform and score in the study course selected [18, 19]. Our study has limitations that the findings are confined to a single medical college and does not generalize to other medical colleges in India. Gender issues, as well as socio-economic and cultural issues may also influence the decision to opt for MBBS course, into which we did not study or delve; perhaps further studies may enlighten the possible associations and outcomes. However, the strength of the study is that it denotes the major motivational force of family and its members in the student’s life in choice of selecting medicine as study course. But these newly recruited medical students are not fully informed regarding the study course of MBBS which suggests scope for improvement in the form of new reforms and policies that would enable the students to be better informed.

CONCLUSION

The study is a subjective evaluation of the prior

knowledge, awareness and preparedness regarding MBBS course. The findings suggest that students themselves are responsible for the choice with strong motivation from family and members quite early in their lives. But they have not undergone aptitude tests to strengthen their candidature as a medical student. However, they have appeared in more than one entrance tests in order to ensure a seat in a medical college. Their knowledge about the medical curriculum and future prospects are poor which may lead to a burnout in future. Hence it is suggestive that since family is the strong motivating factor they should encourage the students to take aptitude tests, career guidance courses and give picture of future that would create a strong foundation for their future course as MBBS students.

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