Psychiatric Curriculum and its Impact on the Attitude of Indian Undergraduate Medical Students and Interns

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ABSTRACT

Context: Psychiatry is given very less importance in the Indian undergraduate medical curriculum and this affects the attitudes of students toward psychiatry and mentally ill patients. Aim: To study the attitude of undergraduate medical students and interns toward psychiatry and mentally ill patients. Materials and Methods: Undergraduate medical students and interns of a private medical college and research institute in South India consented to form our sample. We studied the General Health Questionnaire, overall level of satisfaction in ongoing Medical course using Visual Analog Scale, attitudes toward psychiatry scale and the attitudes toward mentally ill patient’s scale of the students, with their informed consent. SPSS version 18 was used for analysis of data. Results: Participation rate was 96%. Mean age of entire sample was 20.56 years. The total mean score on the General Health Questionnaire was 13.52 in first year but became worse toward internship (18.2). The level of satisfaction in the medical course dipped from 86% at baseline to 20% during internship. Equally high scores were noted in the attitude toward mentally ill scale. On the attitude toward psychiatry scale, there were more views on psychiatry as being an unscientific specialty, psychiatrists being considered poor role models, and psychiatric teaching was of low quality and psychiatry was the least preferred career choice. Conclusions: The undergraduate medical students have a very unfavorable attitude toward psychiatry and mentally ill patients.

Key words: Internship, mentally ill, psychiatry

INTRODUCTION

Globally, it is an ongoing concern that the subject of psychiatry, psychiatrists, mental health professionals, and the mentally ill patients are affected by the negative prejudices and the cultural stereotypes of the general public. There have been opinions that the separation of psychiatry from mainstream medicine has contributed to this unpopularity.1 Surprisingly, this problem is noted even among medical students who are part of the general public and despite receiving education on psychiatry, they may still harbor an unhealthy attitude about mentally ill patients and psychiatric practice.

Most of the literature shows negative attitude of the students toward psychiatry.2-5 Negative attitudes toward psychiatry among fresh medical students prior to medical training have been documented.6 In medical schools in North America, negative attitudes toward psychiatry were found to exist prior to formal medical training. In London, reports show that psychiatry was graded lowest among eight other specialties and was given the most pejorative rating. It was considered the most ineffective, unscientific, and conceptually the weakest specialty. On the contrary, senior medical staffs...
often have more realistic attitudes toward mental illness than their junior colleagues.\(^7\)

India, being a multicultural country, stigma and stereotypes are certainly widespread in the people toward psychiatry and the mentally ill patients. Generally, emphasis on training in psychiatry during undergraduate training has been dismally low, with recommendations by the Medical Council of India (MCI) of only 12 hours of lectures starting in the third year that is spread over 12 months, followed by a 2-week clerkship in the third year, and an optional 2 weeks rotation during the internship period.

In 1989, an Indian study reported that nearly 90% of the medical community acknowledged the scientific basis of psychiatry, indicating that at least psychiatry is increasingly being considered a valid medical discipline, which is reflected from the fact that mental illness is being accepted to be a disease like any other.\(^8\) Another study in 2001 found that only 5% of post graduation medical students disagreed with the opinion that psychiatry is a valid medical discipline.\(^9\) A more recent study\(^10\) showed that 80% of the 76 respondents consisting of interns, residents and medical officers, considered psychiatry to be a difficult discipline. None of these studies have comprehensively investigated the general attitude of all undergraduate medical students and looked at the impact of existing psychiatry curriculum in these students.

To address the health care needs of India’s ever growing population, the Ministry of Health and Family Welfare Services, India, has sought private partnership leading to an increase in the number of private medical colleges in the country. But whether merely increasing the number of doctors will improve the attitude of these medical professionals, especially toward mental illness, is a debatable issue. Hence, it is important to understand the existing status of these future doctors to understand what areas need to be addressed. In this background, we planned the first study to investigate the attitude of all undergraduate medical students and interns in a private medical college and research institute toward psychiatry and mentally ill patients.

**MATERIALS AND METHODS**

A cross-sectional survey was carried out among all undergraduate medical students in 2009 at the Mahatma Gandhi Medical College and Research Institute (MGMC and RI), Sri Balaji Vidyapeeth, a deemed university, Pondicherry, South India. The institution is a 750-bedded facility and serves as a tertiary care referral health care service to a heterogeneous catchment population of rural, semi-urban and urban patients. Medical students gain entrance through a common entrance examination and consist of Indian origin students from all parts of India, making it a culturally diverse, ethnically different study sample. The Institutional Ethical Committee had approved the study protocol before data collection.

The sample consisted of all undergraduate medical students and included the subjects covered in the 4.5 years, with various subjects from Anatomy, Physiology, Biochemistry in the first year to Medicine, Surgery, and Obstetrics and Gynecology in the final year, followed by 12 months of compulsory rotatory internship. Each year, this institution has an intake of 100 students and hence a target sample of 500 was expected initially.

**Measures**

**Demographic data**

These included age, gender, religion, marital status, and self-reported ethnicity.

**Visual analogue satisfaction scale**

A visual analogue (VA) rating of the overall general satisfaction level of choosing medicine as their undergraduate degree. The student would rate between 0% (absolutely no satisfaction) to 100% (complete satisfaction), before joining the institution and during his current position in the medical training.

**General health questionnaire (GHQ-12)**

Scoring – Likert Scale 0, 1, 2, 3 from left to right. Twelve items scored as 0–3 for each item; score range 0–36. Scores vary by study population. Scores about 11–12 are typical. Score >15 is an evidence of distress. Score >20 suggests severe problems and psychological distress.

**Attitude to psychiatry scale (ATP-29; Balon et al.’s questionnaire)**

This scale measures attitudes using a 5-point Likert type self-rated scale (1 = agree strongly, 5 = disagree strongly) with questions about attitude to psychiatric patients, illness and treatment, psychiatrists, psychiatric institutions, teaching, knowledge, and career choice. The scale had been used locally and internationally and had demonstrated good validity and reliability. It generates a global score between 29 and 145, with higher scores indicating a relatively more favorable attitude to psychiatry. There were six domains under this scale, namely, (1) overall merits of psychiatry; (2) efficacy; (3) role of definition and functioning of psychiatrist; (4) possible abuse and social criticism; (5) career and personal rewards; and (6) specific medical school factors.
**Attitude toward mentally ill (ATMI-34)**

This is a 34-item, Likert type, self-rated scale that examines attitudes toward mentally ill patients. The questionnaire was constructed and validated by Burra. We used the modified version of the scale, the opinions about Mental Illness in the Chinese Community (OMICC) (Ng and Chan, 2000). The scale has six domains, namely, Separatism (S), Stereotyping (St), Restrictiveness (R), Benevolence (B), Pessimistic Prediction (P) and Stigmatization (Stig). The scores for the five choices under each of the 34 items were from 1 (for a) to 5 (for e). The average scores for each item range from 1.0 to 5.0. High scores on benevolence and lower scores on the other five legends indicate a better and healthy attitude, whereas the reverse indicates an unhealthy attitude. The English version of the questionnaire that has six legends, a total of 34 items and 5 choices under each item was used.

**Informed consent form**

This information was prepared according to universal ethical guidelines by ensuring strict confidentiality and freedom of participation, and maintaining anonymity.

**Procedure**

The above set of measures was distributed to each batch of students separately at various times, in a group setting in a common place such as the lecture halls. Those who consented to participate formed our final sample. It was explicitly explained to the students that their responses would have no influence on their semester exams. It was strictly ensured that the students did not discuss their statements among themselves while in a group. It was also explained to the students that some items may not be appropriate for answering at their level and those were ignored.

**Statistical analysis**

Descriptive statistics, means, standard deviations were analyzed using the Statistical Package for Social Sciences (SPSS; Windows Trial Version 18).

**RESULTS**

**Sociodemographic details**

A response of 96% was obtained from the participants. 480 students formed the study sample as the remaining 20 interns were not available for various reasons on the day of the study. The sex ratio was different in each batch of students: first year (Male:Female=62:38); second year (Male:Female=55:45); third year (Male:Female=43:57); fourth year (Male:Female=58:42) and interns (Male:Female=42:38). The total mean age of the entire sample in years was males 20.56 (±2.1) and females 20.61 (±2.23). The socioeconomic status was mostly upper middle class (424) and upper class (46).

**VAS scores of levels of overall satisfaction**

There was a significant reduction in the overall level of satisfaction about the chosen career of medical education and the institutional environment among the participants as they approached internship, when it was least of 20% compared to 86% at baseline [Figure 1].

**Primary measures scores**

**GHQ-12 scores**

The total mean GHQ score was 13.52 of the entire sample. The group scores were as follows: first year (9.7), second year (11.4), third year (12.2), fourth year (16.1) and interns (18.2).

**ATMI-34 scores**

Higher scores were observed on the positive domain of benevolence (24.8) but equally high scores were noted on other domains also, namely, Separatism (21.8), Stereotypy (21.8) and Pessimistic prediction (21.8).

![Figure 1: Visual analog scores of level of overall satisfaction in the current education and environment](image1)

![Figure 2: Attitude towards mentally ill patients scores](image2)
Restrictiveness (14.8), Stigma (14.2), Stereotypy (13.4) and Pessimistic prediction (13.2) [Figure 2].

**ATP scores**
The ATP scores are given in Tables 1–4.

**DISCUSSION**

We have included the largest sample of students to study the impact of psychiatric curriculum on medical students anywhere in the world and this increases the credibility of the findings. Unlike other studies reported already by other researchers, our study differed in including all the medical students and interns. Although psychiatry is introduced only in the later part of the third year in Indian medical curriculum, including fresh medical graduates and the second year students by itself can serve as a comparison group to those who have exposure to psychiatry.

**Sociodemographic data**
Overall, we had a very good participation rate for our survey. The sociodemographic variables of age, sex distribution, social, economic status of these students were heterogeneous and entirely dependent on the recruitment process that is adapted by the medical

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**Table 1: ATP-29 Scores on overall merits of psychiatry (1, 2, 3), efficacy (4, 5, 6), and possible abuse and social criticism (7, 9) domains**

| Items                                                                 | Students                      | Percentage of students |
|-----------------------------------------------------------------------|-------------------------------|------------------------|
|                                                                       | Strongly agree | Moderately agree | Moderately disagree | Strongly disagree |
| Psychiatric research has made good strides in advancing care of major mental disorders | First year         | 30.3             | 28.2              | 11.2              | 29.1              |
|                                                                       | Second year        | 39.1             | 24.2              | 19.6              | 12.3              |
|                                                                       | Third year         | 28.3             | 26.7              | 20.1              | 16.4              |
|                                                                       | Fourth year        | 26.3             | 24.1              | 10.3              | 20.2              |
|                                                                       | Internship         | 22.2             | 11.4              | 20.6              | 28.9              |
| Psychiatry is a rapidly expanding frontier of medicine                | First year         | 32.0             | 21.2              | 19.3              | 24.4              |
|                                                                       | Second year        | 29.2             | 20.4              | 17.8              | 20.6              |
|                                                                       | Third year         | 28.9             | 33.1              | 20.3              | 29.2              |
|                                                                       | Fourth year        | 10.2             | 11.7              | 33.2              | 45.4              |
|                                                                       | Internship         | 6.9              | 12.3              | 44.1              | 40.5              |
| Psychiatry is unscientific and imprecise                               | First year         | 28.3             | 26.1              | 20.9              | 13.3              |
|                                                                       | Second year        | 12.2             | 20.5              | 29.5              | 40.5              |
|                                                                       | Third year         | 15.3             | 40.1              | 15.5              | 21.5              |
|                                                                       | Fourth year        | 36.3             | 39.3              | 11.1              | 6.9               |
|                                                                       | Internship         | 32.4             | 44.2              | 12.2              | 15.1              |
| If someone in my family was very emotionally upset and the situation did not seem to be improving, I would recommend a psychiatric consultation | First year         | 10.2             | 23.3              | 40.6              | 25.5              |
|                                                                       | Second year        | 20.7             | 12.8              | 33.8              | 37.9              |
|                                                                       | Third year         | 22.5             | 12.9              | 34.1              | 12.9              |
|                                                                       | Fourth year        | 16.8             | 20.1              | 45.8              | 28.7              |
|                                                                       | Internship         | 12.9             | 14.9              | 35.8              | 33.9              |
| Psychiatric consultation for medical or surgical patients is often helpful | First year         | 8.1              | 10.3              | 33.3              | 46.3              |
|                                                                       | Second year        | 5.4              | 14.4              | 55.4              | 46.4              |
|                                                                       | Third year         | 3.3              | 7.8               | 34.3              | 43.1              |
|                                                                       | Fourth year        | 5.6              | 12.4              | 32.3              | 55.4              |
|                                                                       | Internship         | 2.1              | 4.3               | 44.4              | 46.7              |
| Psychiatric treatment is helpful to most people who require it         | First year         | 23.2             | 43.9              | 12.3              | 5.6               |
|                                                                       | Second year        | 20.8             | 55.6              | 12.7              | 3.9               |
|                                                                       | Third year         | 16.9             | 20.2              | 40.7              | 33.5              |
|                                                                       | Fourth year        | 15.4             | 33.1              | 23.4              | 29.6              |
|                                                                       | Internship         | 12.2             | 15.4              | 43.3              | 34.5              |
| Psychiatrists frequently abuse their legal power to hospitalize patients against their will | First year         | 3.1              | 14.3              | 44.3              | 49.6              |
|                                                                       | Second year        | 4.3              | 6.7               | 32.9              | 33.1              |
|                                                                       | Third year         | 2.1              | 4.3               | 46.4              | 34.4              |
|                                                                       | Fourth year        | 3.6              | 2.1               | 44.9              | 46.5              |
|                                                                       | Internship         | 4.9              | 3.2               | 56.7              | 37.9              |
| On average, psychiatrists make as much money as most other doctors     | First year         | 42.9             | 33.6              | 5.9               | 10.7              |
|                                                                       | Second year        | 34.9             | 37.8              | 12.6              | 5.9               |
|                                                                       | Third year         | 45.9             | 44.8              | 10.8              | 8.3               |
|                                                                       | Fourth year        | 20.7             | 34                | 36.6              | 34.7              |
|                                                                       | Internship         | 15.4             | 33.3              | 33.6              | 23.9              |
The VAS scores showed an overall declining trend in the level of satisfaction in the existing medical education as the students approach internship. This is a very unhealthy issue with widespread implications on the existing quality of education, medical curriculum, medical teaching, medicine as a career choice, and the environment in which such education is offered [Figure 1].

### GHQ scores

The GHQ scores indicated a relatively healthy physical and psychological well-being of the entire sample in the preceding 1 month. But if the individual group mean GHQ scores were analyzed, there was a declining trend observed, indicating the probable burnout due to increasing mental and physical strain during the final year and during the various rotations in internship. Students might have also had to adapt to various other factors such as heterosexual studying environment, interactions with multicultural peer groups, staying away from home, eating hostel food, adjusting to hostel accommodation and high degree of academic competition. One can appreciate the mixed effect of all these nonmedical factors on top of the tough medical curriculum that could have influenced changes in the

| Items                                                                 | Percentage of students | First year | Second year | Third year | Fourth year | Internship |
|----------------------------------------------------------------------|------------------------|-----------|-------------|-----------|-------------|------------|
|                                                                      | Strongly agree | Moderately agree | Moderately disagree | Strongly disagree |
| Psychiatry has a low prestige among the general public                |                        |           |             |            |             |            |
| First year                                                           | 45.7             | 46.8      | 10.4        | 3.4        |             |            |
| Second year                                                          | 80.4             | 4.3       | 3.2         | 2.3        |             |            |
| Third year                                                           | 73.4             | 3.4       | 1.5         | 2.5        |             |            |
| Fourth year                                                          | 63.6             | 13.2      | 3.2         | 1.2        |             |            |
| Internship                                                           | 85.4             | 3.5       | 5.4         | 4.9        |             |            |
| Psychiatry has a high status among other medical disciplines         |                        |           |             |            |             |            |
| First year                                                           | 12.6             | 23.2      | 45.5        | 12.3       |             |            |
| Second year                                                          | 23.2             | 22.3      | 49.6        | 11.2       |             |            |
| Third year                                                           | 6.5              | 33.2      | 52.4        | 7.2        |             |            |
| Fourth year                                                          | 10.2             | 14.6      | 43.7        | 4.6        |             |            |
| Internship                                                           | 7.1              | 22.1      | 56.6        | 3.2        |             |            |
| Many people who could not obtain a residency position in other specialties eventually enter psychiatry |                        |           |             |            |             |            |
| First year                                                           | 45.6             | 23.4      | 15.4        | 13.4       |             |            |
| Second year                                                          | 50.3             | 33.1      | 12.7        | 20.7       |             |            |
| Third year                                                           | 45.6             | 34.1      | 12.8        | 1.5        |             |            |
| Fourth year                                                          | 56.4             | 22.1      | 3.3         | 2.1        |             |            |
| Internship                                                           | 86.4             | 11.2      | 1.2         | 3.2        |             |            |
| Psychiatry is a discipline filled with international medical graduates whose skills are of low quality |                        |           |             |            |             |            |
| First year                                                           | NA               | NA        | NA          | NA         |             |            |
| Second year                                                          | NA               | NA        | NA          | NA         |             |            |
| Third year                                                           | NA               | NA        | NA          | NA         |             |            |
| Fourth year                                                          | NA               | NA        | NA          | NA         |             |            |
| Internship                                                           | NA               | NA        | NA          | NA         |             |            |
| My family discouraged me from entering psychiatry                     |                        |           |             |            |             |            |
| First year                                                           | -                | -         | -           | -          |             |            |
| Second year                                                          | -                | -         | -           | -          |             |            |
| Third year                                                           | -                | -         | -           | -          |             |            |
| Fourth year                                                          | 22.1             | 59.3      | 26.3        | 12.1       |             |            |
| Internship                                                           | 12.1             | 54.3      | 13.5        | 9.5        |             |            |
| Friends and fellow students discourage me from entering psychiatry    |                        |           |             |            |             |            |
| First year                                                           | -                | -         | -           | -          |             |            |
| Second year                                                          | -                | -         | -           | -          |             |            |
| Third year                                                           | -                | -         | -           | -          |             |            |
| Fourth year                                                          | 2.1              | 56.6      | -           | -          |             |            |
| Internship                                                           | 24.2             | 50.4      | 20.1        | 33.2       |             |            |
| If a student expresses interest in psychiatry, he or she risks being associated with a group of other would-be psychiatrists who are often seen by others as odd, peculiar, or neurotic |                        |           |             |            |             |            |
| First year                                                           | 24.1             | 43.2      | 15.7        | 13.2       |             |            |
| Second year                                                          | 44.1             | 12.5      | 22.2        | 12.1       |             |            |
| Third year                                                           | 10.4             | 24.5      | 12.3        | 50.3       |             |            |
| Fourth year                                                          | 22.3             | 13.3      | 12.2        | 44.5       |             |            |
| Internship                                                           | 11.2             | 12.2      | 23.2        | 40.3       |             |            |
| I feel uncomfortable with mentally ill patients                       |                        |           |             |            |             |            |
| First year                                                           | 93.5             | 2.1       | 1.9         | 2.3        |             |            |
| Second year                                                          | 91.3             | 2.4       | 2.5         | 1.2        |             |            |
| Third year                                                           | 89.4             | 8.4       | 4.6         | 2.5        |             |            |
| Fourth year                                                          | 70.6             | 13.3      | 2.1         | 4.3        |             |            |
| Internship                                                           | 63.5             | 10.3      | 10.1        | 7.2        |             |            |

Table 2: Scores on career and personal rewards (9–16) domain
mental and physical well-being of the students. In the above background, the findings of the attitudes of these students toward psychiatry and mentally ill patients need to be understood.

**ATMI scores**

High scores were observed in both the positive and negative domains of the scale as discussed below. However, higher scores on the negative domains of the scale indicated an overall unhealthy attitude of these medical students toward those with mental illness [Figure 2].

**Benevolence**

Higher benevolence scores indicated that most of the students would express kindness and altruism toward the person suffering from any form of mental illness.

| Items                                                                 | Students       | Percentage of students |   |   |   |   |
|----------------------------------------------------------------------|----------------|------------------------|---|---|---|---|
| Psychiatry is not a genuine and valid branch of medicine             | First year     | 12.3                   | 10.4 | 44.3 | 34.5 |   |
|                                                                      | Second year    | 22.2                   | 14.5 | 32.4 | 45.3 |   |
|                                                                      | Third year     | 8.9                    | 12.6 | 32.1 | 46.3 |   |
|                                                                      | Fourth year    | 20.2                   | 33.2 | 45.4 | 25.4 |   |
|                                                                      | Internship     | 34.1                   | 45.2 | 12.3 | 5.6  |   |
| Most psychiatrists are clear, logical thinkers                       | First year     | 23.2                   | 43.2 | 23.1 | 24.3 |   |
|                                                                      | Second year    | 20.2                   | 11.4 | 26.4 | 33.2 |   |
|                                                                      | Third year     | 22.1                   | 24.2 | 33.2 | 39.5 |   |
|                                                                      | Fourth year    | 24.5                   | 14.4 | 34.2 | 66.3 |   |
|                                                                      | Internship     | 14.3                   | 22.4 | 43.3 | 50.6 |   |
| With a few exceptions, clinical psychologists and social workers are just as qualified as psychiatrists to diagnose and treat emotionally disturbed persons | First year | -                      | -    | -    | -    |   |
|                                                                      | Second year    | -                      | -    | -    | -    |   |
|                                                                      | Third year     | -                      | -    | -    | -    |   |
|                                                                      | Fourth year    | 12.2                   | 33.2 | 27.6 | 34.6 |   |
|                                                                      | Internship     | 2.2                    | 3.7  | 45.5 | 43.6 |   |
| Among mental health professionals, psychiatrists have the most authority and influence | First year | -                      | -    | -    | -    |   |
|                                                                      | Second year    | -                      | -    | -    | -    |   |
|                                                                      | Third year     | 41.1                   | 43.4 | 22.1 | 23.3 |   |
|                                                                      | Fourth year    | 36.6                   | 44.3 | 34.5 | 23.3 |   |
|                                                                      | Internship     | 3.3                    | 5.6  | 46.4 | 45.7 |   |
| Psychiatrists are too frequently apologetic when teaching psychiatry | First year     | -                      | -    | -    | -    |   |
|                                                                      | Second year    | -                      | -    | -    | -    |   |
|                                                                      | Third year     | 45.4                   | 41.6 | 24.4 | 2.4  |   |
|                                                                      | Fourth year    | 33.1                   | 23.4 | 24.6 | 34.3 |   |
|                                                                      | Internship     | 2.3                    | 4.5  | 35.6 | 45.6 |   |
| Psychiatrists are too “biologically” minded and not attentive to the patient’s personal life and psychological problems | First year | -                      | -    | -    | -    |   |
|                                                                      | Second year    | -                      | -    | -    | -    |   |
|                                                                      | Third year     | 45.4                   | 41.6 | 24.4 | 2.4  |   |
|                                                                      | Fourth year    | 33.1                   | 23.4 | 24.6 | 34.3 |   |
|                                                                      | Internship     | 2.3                    | 4.5  | 35.6 | 45.6 |   |
| Psychiatry is too analytical, theoretical and psychodynamic and not attentive enough to patient’s physiology | First year | -                      | -    | -    | -    |   |
|                                                                      | Second year    | -                      | -    | -    | -    |   |
|                                                                      | Third year     | 45.4                   | 41.6 | 24.4 | 2.4  |   |
|                                                                      | Fourth year    | 12.3                   | 33.2 | 40.5 | 35.3 |   |
|                                                                      | Internship     | 12.3                   | 33.2 | 40.5 | 35.3 |   |

**Separatism**

Higher separatism scores meant a negative attitude when it came to accepting the autonomy and independence of the mentally ill and in considering them as part of the larger unaffected community.

**Stereotypes**

As in most societies, stereotypes about mental illness, such as influence of evil spirits, religious afflictions, and deviations from societal norms, were also rated high by these students.

**Stigma**

The phenomenon whereby an individual with an attribute, such as mental illness, which is deeply discredited by his/her society, gets rejected as a result of the same also was rated high.
Pessimistic prediction
High scores showed the lack of concept of partial recovery, rehabilitation of mentally ill patients.

Restrictiveness
Indicated that mentally ill people cannot enjoy personal or social life events such as marriage, working, having children, or family.

Overall, our sample of students did not demonstrate a healthy attitude toward the mentally ill patients on the above domains. Although these scores are basically opinions of different individuals, the domains actually are qualities expected from all of us in terms of healthy community and societal interactions. These scores reflect that in spite of medical students receiving some exposure toward psychiatry and mental illness during their medical education, they seem to have developed a negative outlook toward mentally ill patients.

ATP scores
Overall, the ATP scores were also not very healthy in this sample [Tables 1–4].

Overall merits of psychiatry
Before exposure to psychiatry, the equivocal responses observed show a total lack of knowledge on psychiatric research, mental disorders and of the scientific basis of psychiatry in medicine. But after exposure to psychiatry, students do not seem to believe much that psychiatry is an expanding field in itself, also unscientific and imprecise. There was equivocal response on the advancement of psychiatric research and treatments of most common mental disorders.

Efficacy
Sadly, both fresh and all students including interns do not seem to believe much in seeking psychiatric expert consultation in situations where it might be warranted, probably for reasons such as stigma, lack of hope in such expertise and treatment modalities and, to a large extent, the misconceptions on some treatment methods such as electroconvulsive therapy, adverse effects of medications, etc.

Possible abuse and social criticism
Students generally disagreed on views that psychiatrist misuse their powers to lock up their patients inside
hospitals. In India, the Mental Health Act is the legislative guideline for psychiatrists to exert their duties and it is not possible for them to act independently in overruling the rights of the patients while a decision on hospital admission is considered.

**Career and personal rewards**

Majority of the students irrespective of psychiatric exposure in their course showed an unfavorable response toward psychiatry as a career choice. They believed that psychiatrists are respected less in their society unlike their nonpsychiatric peers, and had prejudices of those choosing psychiatry as odd, eccentric people in their personality. Since the influence of family in postgraduate career decision after medical graduation is mostly less and students tend to choose those specialties that are perceived by friends, family and other peers as "good", there was lack of any clear response on encouragement for anyone to choose psychiatry in particular.

**Role definition and functioning of psychiatrist**

Students and interns showed unclear responses before and healthier opinions after exposure to psychiatry in their course, in terms of their beliefs about psychiatry, about the various mental health professionals and their roles and functions in patient care.

**Specific medical school factors**

There was a decline in the opinions of students as they progressed to internship in psychiatry about the teaching quality of the existing psychiatric curriculum, psychiatrists and residents in psychiatry not forming role models for inspiration for anyone who might be interested in choosing psychiatry as a career, and non-psychiatrists not showing the due respect toward their psychiatric colleagues. The students did not find their psychiatric teachers to be more clear and logical thinkers.

Although the study findings on attitudes of medical graduates are comparable to the general public, it is obvious that the existing psychiatric curriculum has very minimal impact in changing or inducing healthy views and opinions about psychiatry. The lectures and psychiatric rotation in medical curriculum appear to be a routine rather than an essential knowledge of all medical graduates.

Interestingly, a Malaysian study\(^{11}\) found that an 8-week clinical posting in psychiatry was associated with an increase in positive attitudes to mental illness and to psychiatry among female but not male students. In Spain, undergraduate psychiatry curriculum is a total of 100 hours (6 weeks in the fourth year: 35 hours of theory and 65 hours of practice rotation). This was associated with a more realistic opinion change on psychiatry in these students and an increase in the proportion of students willing to consider psychiatry as a future career.\(^{12}\) Research suggests that those with more knowledge about mental illness were less likely to endorse negative or stigmatizing attitudes.\(^{13}\)

There is evidence that recruitment into psychiatry is correlated with the quality of undergraduate medical school teaching programs and with a commitment of major resources for teaching students.\(^{14,15}\) The World Psychiatric Organisation (2001) published a core curriculum in psychiatry and also provided a justification for the need for all future doctors to know about psychiatric problems.\(^{16}\)

The main aim of this study was to highlight the growing need for more doctors and psychiatrists in India as the proportion of doctor–patient is too inadequate. Also, mental illnesses will be the number one health concern across the world, causing more disability to a person’s life by the year 2020. The Medical Council of India needs to take up this issue seriously and take measures to inform the policy makers in the Ministry of health, so that psychiatry is given its due importance in medical education and more psychiatrists are available to meet the mental health needs of our country.

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