Medical and nursing students’ attitudes toward mental illness: An Indian perspective

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Objective. Compare the attitudes toward mental illness between medical and nursing undergraduate students from a university in India. Methods. A cross-sectional descriptive study was carried out among medical (n=154) and nursing undergraduate students (n=168) using Attitude Scale for Mental Illness (ASMI) questionnaire with six sub scales namely; Separatism, Stereotyping, Restrictiveness, Benevolence, Pessimistic prediction and Stigmatization. This was a 5-point Likert scale with 34 items to rate participants responses from totally disagree (1) to totally agree (5). The lower scores indicate positive attitudes toward persons with mental illness. Results. Our findings revealed that 54.5% of medical students versus 64.8% of nursing students have positive attitudes toward mental illness. While medical students have better attitudes against separatism and stigmatization, nursing students have more positive attitudes in benevolence and against pessimism. Conclusion. An important proportion of medical and nursing students have negative attitudes toward mental illness. It is necessary to review and adapt the current curriculum to favor the positive attitude of future professionals toward people with these types of diseases.

Descriptors: mental disorders; attitude; students, medical; students, nursing; cross-sectional studies.

Actitudes de los estudiantes de medicina y enfermería hacia la enfermedad mental: Una perspectiva hindú

Objetivo. Comparar las actitudes hacia la enfermedad mental entre los estudiantes de medicina y enfermería de una universidad en India. Métodos. Se realizó un estudio descriptivo de tipo transversal con estudiantes de Medicina (n=154) y de Enfermería (n=168). Se utilizó la Attitude Scale for Mental Illness (ASMI) la cual tiene 34 ítems divididos en seis dominios: Separatismo, Estereotipos, Restricción, Benevolencia, Predicción pesimista y Estigmatización. Las opciones de respuesta son tipo Likert y van desde totalmente en
desacuerdo (1) a totalmente de acuerdo (5). A menor puntaje es mejor la actitud positiva hacia las personas con enfermedad mental. **Resultados.** Nuestros hallazgos revelaron que el 54.5% de los estudiantes de Medicina versus el 64.8% de los de Enfermería tienen actitudes positivas hacia la enfermedad mental. Mientras que los estudiantes de Medicina tienen mejores actitudes contra el separatismo y la estigmatización, los estudiantes de enfermería poseen actitudes más positivas en la benevolencia y en contra del pesimismo. **Conclusión.** Una proporción importante de alumnos de Medicina y Enfermería tienen actitudes negativas hacia la enfermedad mental. Es necesario revisar y adaptar el currículo actual para favorecer la actitud positiva de los futuros profesionales hacia las personas con este tipo de enfermedades. **Descriptores:** transtornos mentales; actitud; estudiantes de medicina; estudiantes de enfermería; estudios transversales.

**Introduction**
Mental illness is common around the world and constitutes 14% of the global burden of disease.\(^1\) Meta-analysis of epidemiological studies report that 58/1 000 Indians have a mental illness and at least 20% of the adult population is affected with one or the other psychiatric disorder that needs mental health professionals intervention.\(^2\) On the other hand people with Mental illness are one of the most vulnerable populations as they frequently encounter stigma and discriminatory attitudes not only by the general population\(^3\) but also by health care professionals. Further, stigmatizing attitudes hold by the public tend to restrict the civil rights of the persons with mental illness.\(^4\) Earlier studies indicate that health care providers’ negative attitude towards persons with mental illness may result in inequality in access, treatment, and outcomes.\(^5\) However, numerous studies from indicate that negative attitudes among medical\(^6\) and nursing\(^7\) undergraduate students. These negative attitudes toward mental illness and psychiatry may be attributable to various factors such as shortage of psychiatric professionals,\(^8\) education, treatable and dangerousness. It is also believed that attitudes and beliefs about mental illness are influenced by knowledge, familiarity, cultural stereotypes, and media stories about mental illness.\(^9\) Further, few studies indicate that attitude influences professional and personal behavior of the health care professionals. According to World Health Organization, positive attitude among health care professionals towards mental illness is prerequisite for the provision of quality care.\(^10\) On the other hand, persons with mental illness and their family
members expect health care professionals to treat them as unique individuals without any prejudice and discrimination.\textsuperscript{11} In this context, it is crucial to assess future health professionals’ attitudes toward mental illness. Further, undergraduate training process could be the right time to modify the negative attitudes toward mental illness, as being primary care providers they frequently face the patients with psychological problems. In India, most of the studies focused on medical and nursing students attitudes toward mental illness and psychiatry. Very few studies examined the impact of undergraduate curriculum in changing their attitudes toward mental illness. It would be interesting to examine attitudinal differences between health professionals’ attitudes toward mental illness. It is therefore, present study was developed with aim to assess and compare the attitudes toward mental illness between medical and nursing undergraduate students prior to exposure to psychiatry curriculum.

Methods
This was a cross sectional descriptive study carried out among undergraduate medical and nursing students at selected colleges in Bangalore, India.

Participants. Sample consisting of students from medical and nursing professions selected through convenient sampling method. Study criteria included (a) nursing and medical students studying 1st year and 2nd year of their course (b) students those did not have any exposure to psychiatry yet (c) who were willing to participate. Students those attended any mental health courses and those who were not willing to participate were excluded from the study. A total of 182 students from medicine and 170 students from nursing were enrolled in to the study. Few students from medicine were refused to participate (n=13), few questionnaire were in complete (n=7) and few were absent during data collection (n=8). Almost all the students from nursing were participated other than those were absent during data collection. Thus, the final sample comprised of 322 students 154 from medicine (84.6\% response rate) and 168 students from nursing (98.8\% response rate).

Measures. 1-\textbf{Demographic data survey instrument}. The demographic form consists of five items to seek the background of the participants in the study that includes “age, education, residence, and contact with mental illness”. 2-\textbf{Attitude Scale for Mental Illness (ASMI).}\textsuperscript{12} This was a valid and reliable (Cronbach’s Alpha 0.86), self-report measure used to measure health professionals attitudes toward mental illness. This modified version of the questionnaire measures opinions about mental illness in Chinese community (OMICC). This was a 5-point Likert scale rated participants responses from totally disagree (1) to totally agree (5). The lower scores indicate positive attitudes toward persons with mental illness. (i) \textbf{Separatism:} includes ten items, (1-9, 24) to measure respondents’ attitude of discrimination. Ex: “People with mental illness have unpredictable behavior”; (ii) \textbf{Stereotyping:} includes four items (10-13) intended to measure the degree of respondents’ maintenance of social distance toward persons with mental illness. Ex: “It is easy to identify those who have a mental illness”; (iii) \textbf{Restrictiveness:} composed of four items (14-17), that hold an uncertain view on the rights of people with mental illness. Ex: “It is not appropriate for a person with mental illness to get married”; (iv) \textbf{Benevolence (reverse coded):} includes eight items (18-23, 25, 26) related to kindness and sympathetic views of the respondents towards people with a mental illness. Ex: “People with mental illness can hold a job”; (v) \textbf{Pessimistic prediction:} composed of four items (27-30) intended to measure the level of prejudice toward mental illness. Ex: “It is harder for those who have a mental illness to receive the same pay for the same job”; and (vi) \textbf{Stigmatization:} includes four items (31-34) that measure the discriminatory behavior of the students toward mental illness.

Procedure. Data was collected batch wise in their classrooms after completion of the regular lectures. On introduction, the primary author explained briefly about aims and methods of the
present study to all the participants. Students those were willing to participate were asked to complete the questionnaires. They could complete both questionnaires in about 20 min. Data collection tools contained no identifying information and therefore kept the individual responses confidential.

Ethical considerations. Permission was obtained from the administrators of the colleges where the study was conducted. Participants were introduced to the aims and procedures of the study to decide if they would like to participate. After they agreed to participate verbally, the researchers gave them the confidential questionnaire. Participants were given freedom to withdraw from the study at any part of the procedure.

Statistical analysis. The response of the benevolence domain was reverse coded before the analysis. The data were analyzed using appropriate statistical software and results were presented in narratives and tables. The t-test was used to determine whether significant differences existed between medical and nursing students regarding their mean attitudes scores. Chi-Square test was used to find the significant association between socio-demographic variables. Statistical significance was assumed at \( p<0.05 \).

Results

The sample in the present study comprised of undergraduate students (\( n=322 \)) of whom 52.1% were nursing students (\( n=168 \)). The mean age of the nursing students (19.57) was lesser than mean age of the medical students (20.87). More number of nursing students was aged below 20 yrs (72%) compared to 33.1% of medical students (\( X^2 = 48.879, p<0.001 \)). A vast majority of the participants were women (83.9%) and were from nursing course (\( X^2 = 53.518, p<0.001 \)). Nearly one fourth of the students from both groups agreed that they know persons with mental illness. Majority of the medical students (85.7%) than nursing were from urban background (\( X^2 = 11.838, p<0.001 \)).

Table 1. Chi-square analysis of the study population

| Variables                      | Medicine (\( n=154 \)) | Nursing (\( n=168 \)) | Total (\( n=322 \)) | Test value | \( p \)-Value |
|-------------------------------|-------------------------|------------------------|---------------------|------------|----------------|
| **Age**                       |                         |                        |                     |            |                |
| Below 20                      | 20.87±1.23              | 19.57±1.62             | 20.23±1.57          | 37.59      | 0.001          |
| Above 20                      | 51 (33.1%)              | 121 (72.0%)            | 172 (53.4%)         | 48.879     | 0.001          |
| **Gender**                    |                         |                        |                     |            |                |
| Male                          | 49 (31.8%)              | 3 (1.8)                | 52 (16.1%)          | 53.518     | 0.001          |
| Female                        | 105 (68.2%)             | 165 (98.2%)            | 270 (83.9%)         |            |                |
| **Contact with mental illness** |                         |                        |                     |            |                |
| Yes                           | 34 (22.1%)              | 36 (21.4%)             | 70 (21.7%)          | 0.020      | 0.497          |
| No                            | 120 (77.9%)             | 132 (78.6%)            | 252 (78.3%)         |            |                |
| **Residence**                 |                         |                        |                     |            |                |
| Rural                         | 22 (14.2%)              | 51 (30.4%)             | 73 (22.7%)          | 11.838     | 0.001          |
| Urban                         | 132 (85.7%)             | 117 (69.6%)            | 249 (77.3%)         |            |                |

Table 2 demonstrates mean significant differences on subscales of ASMI questionnaire, between medical and nursing students (\( t=2.996, p<0.001 \)), as the mean score of separatism domain was higher among nursing students (27.54) compared to medical students (25.74). This finding indicates
that medical students hold more positive attitudes than nursing in separatism domain. Similarly, medical students hold less stigmatizing attitudes (8.37) than nursing (t=3.055, p<0.05). Interestingly, no significant differences were observed between medical and nursing students regarding stereotyping and restrictiveness domains. However, nursing students were more benevolent toward persons with mental illness than the medical students (t=3.528, p<0.001). With regard to pessimistic prediction, medical students hold more negative attitudes (13.49) than nursing and statistically significant difference was found (t=4.604, p<0.001).

Table 2. Comparison between medical and nursing students regarding domains of attitude scale for mental illness

| Subscales           | Medicine (n= 154) M ±SD | Nursing (n= 168) M ±SD | t value | p-value |
|---------------------|--------------------------|------------------------|---------|---------|
| Separatism          | 25.74±5.49               | 27.54± 5.28            | 2.996   | 0.003   |
| Stereotyping        | 11.61±3.01               | 11.54±3.02             | -0.204  | 0.839   |
| Restrictiveness     | 8.96±2.86                | 8.45±2.97              | -1.578  | 0.116   |
| Benevolence         | 17.00±4.91               | 15.00±5.22             | -3.528  | 0.001   |
| Pessimistic prediction | 13.49±3.32              | 11.83±3.12             | -4.604  | 0.001   |
| Stigmatization      | 8.37±2.81                | 9.27±2.48              | 3.055   | 0.002   |

Table 3 reveals the mean ASMI scores for the six subscales with different socio-demographic variables of the participants. Women tend to be less restrictive (8.55) and more benevolent (15.52) towards persons with mental illness than men. Age found to be significantly affecting students attitudes in restrictiveness, benevolence, and pessimistic prediction domains. Students those were below 20 years of age were found to be less restrictive (8.34), more benevolent (15.27) and lesser pessimistic predictions (12.25) toward mental illness. Students from rural background showed less pessimistic predictions compared to participants from urban (11.71). Similarly, students those who had contact with mental illness demonstrated less restrictive (8.49) and more benevolent (15.51) attitudes toward persons with mental illness. However, no significant association was illustrated between medical and nursing students regarding their overall attitudes toward mental illness. Nonetheless, the number of nursing students (64.8%) with positive attitudes toward mental illness was slightly higher than medical students are (54.5%) (Table 4).
**Table 3.** Mean scores of domains of Attitude scale for mental illness with socio demographic variables

|                      | Separatism | Stereotyping | Restrictiveness | Benevolence | Pessimistic prediction | Stigmatization |
|----------------------|------------|--------------|-----------------|-------------|------------------------|----------------|
| **Gender**           |            |              |                 |             |                        |                |
| Male (n=52)          | t =0.406   | t =1.769     | t =2.058*       | t =3.432†   | t = -0.856             | t = -0.381     |
| Female (n=270)       |            |              |                 |             |                        |                |
| **Age**              |            |              |                 |             |                        |                |
| <20 (n=172)          | t =1.663   | t = -0.437   | t = -2.308*     | t = -2.539* | t = -2.215*            | t = 1.050      |
| >20(n=150)           | t =1.573   | t = .165     | t = .727        | t = .481    | t = -2.431†            | t = 0.350      |
| **Residence**        |            |              |                 |             |                        |                |
| Rural (n=73)         | t =2.370*  | t = 0.188    | t = 2.370*      | t = 2.963†  | t =0.198               | t =0.608       |
| Urban (n=249)        | t =1.426   | t = .652     | t = -1.236      | t = -1.751  | t = 1.050              | t = 0.350      |
| **Contact with mental illness** |           |              |                 |             |                        |                |
| Yes (n=70)           | 26.57±5.15 | 12.02±3.11   | 8.49±2.92       | 15.51±4.95  | 12.70±3.35             | 9.01±2.92      |
| No (n=252)           | 26.71±5.54 | 11.44±2.98   | 9.42±2.85       | 17.55±5.62  | 12.61±3.31             | 8.79±2.62      |

*p<0.05, †p<0.01, ‡p<0.001
Table 4. Comparison of attitudes towards mental illness between Medical and Nursing students

| Attitude   | Medicine (n=154, 47.8%) | Nursing (n=168, 52.1%) | Total n=322 | \( \chi^2 \) value | p-value |
|------------|-------------------------|-------------------------|-------------|---------------------|---------|
| Positive   | 84 (54.5%)              | 105 (64.8%)             | 189 (59.8%) | 3.464               | 0.067   |
| Negative   | 70 (45.5%)              | 57 (35.2%)              | 127 (40.2%) |                     |         |

Discussion

To our best of knowledge, this was the first study that compared medical and nursing undergraduates' attitude towards mental illness using the standardized questionnaire in various dimensions. The present study was unique in nature, since the sample of the present study comprised of the undergraduates, those completed theoretical and clinical exposure to Psychiatry. The present study found mixed opinions about mental illness as medical students hold attitudes that are more positive in separatism and stigmatization domain while nursing students were more benevolent and less pessimistic attitudes toward persons with mental illness.

In the present study, 83.9% of the sample was women and was from nursing course (98.2%). This findings could be due to nursing profession is women dominated in general. The mean scores of separatism (25.74) and stigmatization (8.37) domains were lesser in medical students compared to nursing students. This indicates that medical students hold attitudes that are more positive in these domains. These findings were inconsistent with a study that assessed the impact of Psychiatric curriculum on the attitude of Indian undergraduate medical students. The higher mean scores compared to the findings of the present study were observed in all the domains such as Separatism (21.8), Restrictiveness (14.8), Stigma (14.2), Stereotypy (13.4), and Pessimistic prediction (13.2), indicating negative attitudes toward the mental illness and the persons with mental illness. Exhaustive research is available related to stigma and mental illness. Further, persons with mental illness encounter stigma not only restricted to society, but also by the mental healthcare professionals.

Though significant difference was not observed between medical and nursing students, they hold negative attitudes in the stereotype domain. Earlier research pointed out that health care professionals were not resistant to social prejudices. Further, it was evident that nursing students had stereotypes and prejudices related to persons with mental illness beginning of their nursing course. These findings could be due to lack of knowledge related to nature of mental illness. However, stereotype beliefs and social prejudices leads to stigma and discrimination of persons with mental illness. Negative stereotype attitudes among undergraduates toward mental illness are potential to influence therapeutic relationship between person with mental illness and health care providers. Hence it is an urgent concern to modify these negative stereotype attitudes among medical and nursing undergraduates since they are the primary health care providers.

Nursing students in the current study hold more benevolent attitudes toward persons with mental illness compared medical students. While these findings concur with earlier studies from Southern Nigeria that found stigmatizing attitudes among medical students and interns, inconsistent with previous research that observed benevolent attitudes that were positive, toward mental illness. On the other hand, these findings also support documented evidence that showed high benevolent attitudes among nursing students toward mental illness. Similarly, nursing students were more positive towards treatment and reintegration of people with mental illness in to the society than students from medicine were. These results could be due to negative stereotypes and social prejudice they hold, hence they were unaware about rehabilitation of people with mental illness. However, nursing students in the
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The present study has certain limitations such as small and convenient sample selected and cross sectional design made difficult to generalize the findings. Thus, future studies should focus on larger sample and comparative studies between the students after completion of psychiatry course, and qualitative approach such as focus group discussions to understand the multiple factors that influence the attitude of future health professionals toward mental illness. Despite of these limitations, the present study showed certain important findings to the educators and administrators in medical and nursing professions to target students with negative attitudes toward mental illness in specific domains.

Conclusion

Concisely, while nursing students were more benevolent and less pessimistic attitudes toward mental illness, medical students hold more attitudes that are positive in separatism and stigmatization domains. These findings have important implications in reviewing the current curriculum and adapting modern teaching methods that confront negative attitudes of future health professionals towards mental illness. Further, there is need for short educational interventions to inculcate positive attitudes among the students to face the challenges in order to provide quality of care and protect the human rights of these disadvantaged populations.

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