

# Perceived stigma among undergraduate medical students towards people with psychiatric illness: A cross sectional study

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## ABSTRACT

**Background:** Over 450 million individuals worldwide suffer from mental illnesses, according to epidemiological data, making this one of the biggest problems facing modern medicine. People often react in a fairly discriminatory way to those with mental illness, and stigmatizing views toward those with mental illness are ubiquitous. In India, people who suffer from mental illness live with their families, and the stigma associated with mental illness has a significant impact on how effectively these people are treated over time by their families and communities. **Objective:** This study aims to specifically investigate how undergraduate medical students who participated in a two-week psychiatric posting and teaching program and those who did not learn about mental illness from the course curriculum or clinical experience differed in their perceived stigma toward people with mental illness. **Materials and Methods:** This cross-sectional study used a self-reported Perceived devaluation-discrimination scale (PDDS) questionnaire distributed via Google form to undergraduate medical students who were exposed ( $n = 72$ ) to a two-week psychiatry posting and attended lectures and those who were not exposed ( $n = 176$ ) to psychiatry training. **Results:** The results show that medical students' perceptions of the stigma associated with mental illness remain unchanged following their exposure to psychiatry training. Nonetheless, it was discovered that students' perceptions of the stigma associated with mental health patients were influenced by their urban domicile. **Conclusions:** Our research indicates that there was perceived stigma among medical students about patients with mental illnesses, and that this tendency was more pronounced among students belonging from rural areas.

**Keywords:** Medical Students, perceived stigma, primary care physician, psychiatric illness, psychiatry training

## Introduction

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Over 450 million individuals worldwide suffer from mental illnesses, according to epidemiological data, making this one of the biggest problems facing modern medicine.<sup>[1,2]</sup> In addition to battling the illness itself, sufferers frequently battle stigma in their daily lives. This phenomenon has an adverse effect on the

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patient's day-to-day functioning as well as the diagnostic and treatment processes. Mental illnesses are the leading cause of disability in the world, affecting one in four persons globally throughout their lives in varying degrees of severity.<sup>[3]</sup> Globally, individuals with mental health issues and mental health services, and even the idea of mental health itself, are stigmatized in the public vision and receive bad press despite mounting evidence of the value of mental health for human, social, and financial wealth.<sup>[4]</sup> Currently, the goal of mental health treatment is to help patients become less institutionalized. Tolerance and the absence of discrimination are two of the most crucial requirements for this to happen.<sup>[5]</sup> Stigma is defined as a mark of shame, disgrace, or disapproval that results in an individual being rejected, discriminated against, and excluded from participating in several different areas of society.<sup>[6]</sup> The stigma associated with mental health includes prejudice and marginalization of psychiatric patients, impeding their ability to lead more fruitful and satisfying lives.<sup>[7]</sup> People who suffer from mental illness are largely ignored around the world.<sup>[8]</sup> People often react in a fairly discriminatory way to those with mental illness, and stigmatizing views toward those with mental illness are ubiquitous.<sup>[9,10]</sup> In recent years, the study of stigma in the context of mental illness has gained relevance. An effort to reduce stigma and discrimination against people with mental illnesses has been made in recent years.<sup>[11,12]</sup> However, despite all the publicity and education, mental illness stigma and discrimination are widely present and persistent in the community, much like they were before.<sup>[12]</sup> Numerous research findings have shown that the general public and healthcare professionals have stigmatizing attitudes toward people with mental illness.<sup>[13,14]</sup> In India, people who suffer from mental illness live with their families, and the stigma associated with mental illness has a significant impact on how effectively these people are treated over time by their families and communities. In addition to providing medical care, family doctors and primary care physicians are the first responders when it comes to mental health services. Being part of the medical community, primary care physicians offer secure and efficient service. Primary care providers' stigmatizing attitudes may be a factor in the poor health outcomes that seriously mentally ill patients experience.<sup>[15]</sup> Labeling people with mental disorders may inadvertently turn them into a social outgroup that is more vulnerable to disadvantage and discrimination than to inclusion and equity.<sup>[16]</sup> Every social group has a different perspective on mental illness, particularly the younger generation and college students. Since college students' views and values typically have the largest impact on society, colleges may be the best place to develop an extensive mental health program.<sup>[4]</sup> Thus, it is necessary to understand the perceptions of undergraduate medical students toward individuals with mental illness to address the stigma that is so commonly seen in research. The perception of stigma among undergraduate medical students toward mental health and psychiatric illnesses is crucial since these students will eventually be involved in the direct or indirect care of these patients during their careers.<sup>[17,18]</sup> Therefore, the purpose of the current study was to specifically investigate how undergraduate medical students who participated in a two-week psychiatric

posting and teaching program and those who did not learn about mental illness from the course curriculum or clinical experience differed in their perceived stigma toward people with mental illness. It was assumed that the perceived stigma in the two groups would differ from one another.

## Methods

This cross-sectional descriptive study was conducted from March to August 2022 at a government medical college in North India. Google Forms was used to prepare the questionnaire. Students received a brief description of the study. A consent form was also appended to the Google form. Following the lecture, medical students received links to the Google Form via email and WhatsApp. It was voluntary to participate. The data collection team of the investigators had taken precautions to ensure the privacy of the participants. After clicking the link, participants were taken to a page detailing the study's objectives and asked for consent. After providing their consent, the participants were taken to a page asking for their socio-demographic data. Following that, a series of questions about how participants perceived stigma against people with mental illnesses were posed to them. The first section of the questionnaire asked questions about sociodemographics and the second section addressed the perceived stigma towards patients with psychiatric illnesses.

## Participants

Easy sampling was used to choose the participants. The following study criteria were met: (a) M.B.B.S. medical students (first and second year) who had no prior exposure to psychiatry; (b) third-year students who had taught theory and undergone clinical rotation that included a two-week posting in psychiatry. (c) Students who expressed a willingness to take part. A sample of 248 out of 300 students (1<sup>st</sup> and 2<sup>nd</sup> year  $n = 176$ , the 3<sup>rd</sup> year  $n = 72$ ) participated in the study.

## Instruments

### Demographic data survey instrument

The study's participants' backgrounds are gathered through questions on their "age, education, place of residence, and contact with mental illness," among other things.

## Questionnaires

The Perceived devaluation-discrimination scale (PDDS). The original Perceived Stigma Questionnaire (PSQ), developed by Link in 1989, consists of 29 items and rates participants' perceptions of stigma on four scales.<sup>[19]</sup> The scales are devaluation-discrimination, secrecy, withdrawal, and education. Only the portion of the instrument that measures devaluation-discrimination was utilized in this study. The scale, which consists of twelve questions, gauges people's opinions on how society views mental illness. The devaluation-discrimination scale was created to evaluate how much respondents stigmatize those who have mental illnesses. To evaluate the attitudes of professionals who work with clients of mental health services, this study employs a modified version

of the devaluation-discrimination scale created by Angermeyer, Link, and Majcher–Angermeyer (1987).<sup>[20]</sup> Items were changed in the modified version to reflect the respondent's perspective of what they would do as opposed to what the majority of people would do. On a Likert scale with 1 being strongly disagree and 4 being strongly agree, participants are asked how much they agree or disagree with views expressed about people who have mental illnesses. Some of the items are reverse scored, and the sum of the individual item scores yields a final score that ranges from 12 to 48.<sup>[21]</sup> More devaluation–discrimination against people with mental illnesses is indicated by higher scores on the measure. Reliability coefficients for this scale range from .78 to .87.<sup>[20]</sup> Cronbach's alpha for this study was .85.

## Ethical considerations

The study was carried out with approval from the medical colleges' institutional ethical committee. Participants were informed about the objectives and methods of the study so they could choose whether or not to participate. The privacy of each respondent was protected since no identifying information was included in the data collection tools.

## Statistical analysis

For categorical variables, we presented numbers and percentages, and for continuous variables, we presented means with standard deviations. The data was analyzed using statistical analysis software, and the results were presented in tables and narratives. To interpret the data, two types of statistics were used: descriptive statistics (frequency and percentage) and inferential statistics (Chi-square test). The *t*-test was used to see if there were any significant differences in the mean stigma score. An assumption of statistical significance was made at  $P < 0.05$ .

## Results

The present study sample consists of 248 medical undergraduates of which 70.96% ( $n = 176$ ) were from 1<sup>st</sup> and 2<sup>nd</sup> year medical students and were not exposed to psychiatry training. More number (63.64%) of the students from 1<sup>st</sup> to 2<sup>nd</sup> year and

3<sup>rd</sup> year (93.06) were above 20 years old ( $\chi^2 = 22.022$ ,  $P < 0.000$ ). Most of the students were males (60.08%) and familiar with patients with Psychiatric illness (59.68%). The number of students belonging to urban domicile (59.27%) was greater than rural [Table 1].

Table 2 demonstrates the comparison of medical students' perceived stigma toward patients with Psychiatric illness between pre- and post-exposure to psychiatry training. In all of the questionnaires, there were not any significant differences between the students' perceived stigma associated with mental illness. Medical students from rural backgrounds perceive more stigma on the devaluation discrimination scale compared to urban backgrounds towards patients with psychiatric illness [Table 3]. No difference was observed between the students those have familiar with mental illness and those who were not. Gender and age-wise analysis also does not reveal significant differences on the devaluation discrimination scale.

## Discussion

The purpose of this cross-sectional study was to examine medical students' stigma levels toward mental illnesses before and after taking psychiatry training. We used the Perceived devaluation-discrimination scale in this study to investigate medical students' perceptions of stigma against people who have mental illnesses. Medical students frequently place insufficient emphasis on mental health.<sup>[22]</sup> It was anticipated that medical students exposed to psychiatric training would score considerably lower than other groups on the perceived stigma measure. Surprisingly, though, there were very few variations in the undergraduate students' perceived stigma scores [Table 2]. Medical students' reactions to patients with mental illness are less positive and are not changed by further education.<sup>[23]</sup> Previous studies also discovered that the stigma associated with mental illness was unaffected by a person's level of medical education or if they had previously completed psychiatry training.<sup>[17]</sup> Contrary to current literature on the subject, which maintains that education is meant to make beneficial alterations in medical students' beliefs toward psychiatry, this causes a negative reflection on the overall quality

**Table 1: Chisquare analysis of the study sample**

Variables	Prior to psychiatric exposure ( $n=176$ ) (70.96%)	After the psychiatric exposure ( $n=72$ ) (29.04%)	Total ( $n=248$ )	$\chi^2$	<i>P</i>
Age					
Below 20	64 (36.36)	5 (6.94)	69 (27.82)	22.022	0.00001*
Above 20	112 (63.64)	67 (93.06)	179 (72.18)		
Gender					
Male	103 (58.52)	46 (63.89)	149 (60.08)	0.6135	0.433479
Female	73 (41.48)	26 (36.11)	99 (39.92)		
Contact with Mental Illness					
Yes	107 (60.80)	41 (56.94)	148 (59.68)	0.3149	0.574684
No	69 (39.20)	31 (43.06)	100 (40.32)		
Residence					
Rural	71 (40.34)	30 (41.67)	101 (40.73)	0.0372	0.847051
Urban	105 (59.66)	42 (58.33)	147 (59.27)		

\*Significance at  $P < 0.05$

**Table 2: Pre-exposure and post-exposure comparison of perceived stigma among medical students toward Psychiatric illness**

PDDS Questionnaire	Prior to psychiatric exposure (n=176) Mean±SD	After the psychiatric exposure (n=72) Mean±SD	t	P
I would willingly accept a person who has had mental illness as a close friend	2.10±0.65	2.03±0.58	0.79	0.43
I believe that a person who has been hospitalized for mental illness is just as intelligent as the average person	2.05±0.70	2.10±0.58	0.54	0.59
I believe that a person who has had mental illness is just as trustworthy as the average citizen	2.15±0.73	2.17±0.58	0.20	0.84
I would accept a person who has fully recovered from mental illness as a teacher of young children in a public school	1.94±0.72	2.03±0.47	0.98	0.33
I believe that entering a mental hospital is a sign of personal failure	1.66±0.74	1.82±0.73	1.552	0.160
I would not hire a person who has had mental illness to take care of their children, even if he or she had been well for some time	2.39±0.82	2.31±0.70	0.726	0.468
I think less of a person who has been in a mental hospital for treatment	2.22±0.81	2.29±0.70	0.641	0.521
I would hire a person who has had mental illness if he or she is qualified for job	2.19±0.79	2.04±0.58	1.46	0.15
I would pass over the application someone who has had mental illness in favour of another applicant	2.20±0.70	2.22±0.73	0.201	0.843
Most people in my community would treat someone who has had mental illness just as they would treat anyone	2.51±0.78	2.54±0.64	0.29	0.77
Most young people would be reluctant to date someone who has been hospitalized for a serious mental disorder	2.71±0.77	2.82±0.63	1.073	0.284
Once I know a person is in a mental hospital, I will take his or her opinion less seriously	2.15±0.72	2.29±0.72	1.389	0.165

**Table 3: Mean Scores of overall stigma scale for mental illness with socio-demographic variables**

	Mean (S.D.)	t	p
Gender			
Male (n=149)	26.77±4.16	1.64	0.10
Female (n=99)	25.88±4.22		
Age			
<20 (n=70)	26.13±3.43	0.62	0.53
>20 (n=178)	26.5±4.47		
Residence			
Rural (n=101)	27.63±3.74	3.96	0.0001*
Urban (n=147)	25.54±4.30		
Contact with Mental Illness			
Yes (n=148)	26.35±4.21	0.20	0.84
No (n=100)	26.46±4.21		

\*P&lt;0.05

of psychiatric training in medical universities.<sup>[24]</sup> Participants perceived stigma for the questionnaire in PDDS in both groups is present [Table 2]. As with other studies, we found no variations in individuals' reported stigma towards mental illnesses based on their gender or contact with mental illness.<sup>[25,26]</sup> Of the participants in our study, 59.68% said they had direct interaction with someone who was mentally ill. Students who disclosed having interacted with individuals suffering from mental illnesses did not exhibit a positive disposition towards mental disorders in contrast to other studies that found persons having more life experience have less stigmatizing attitudes than those without improved mental health knowledge.<sup>[27]</sup> Studies on these metrics in medical students, however, have also shown that women are more likely to be eager to interact with those who suffer from mental illnesses and to know more about mental health issues.<sup>[28]</sup> However, we did not find any such substantial differences in our study. Our study also revealed, in keeping with previous research, that medical students

from urban centers had more positive attitudes toward individuals with mental illnesses than those from rural areas.<sup>[29,30]</sup> According to Girma *et al.*,<sup>[26]</sup> the greatest predictor of families' stigmatizing sentiments toward their mentally ill relatives was residing in a rural area. The beliefs of medical students towards mental illness are shaped by a multitude of external influences, such as their own beliefs, their immediate family, their school environment during their formative years, their social circle, and the mass media they are currently exposed to.<sup>[31]</sup> According to the author, stigmatizing attitudes were much more prevalent in rural areas than in cities, possibly as a result of a lack of mental health literacy. To alter stigmatizing beliefs about individuals with mental illnesses, an increasing number of educational programs and awareness campaigns have been launched in recent years. Before beginning medical college, students reside in a community where their families have already visited somewhere to primary care physicians, thus the primary healthcare facility must be the first to implement this. In addition to providing health services and increasing awareness among the pioneers of primary healthcare facilities, family physicians and general practitioners are the front-line providers of mental health services.<sup>[31]</sup> Physicians in primary care can inform the public and their patients about mental health issues, including how common they are and how crucial it is to get treatment.<sup>[32]</sup> Rather of classifying individuals, we can consider mental health and mental illnesses as a continuum. In addition to working together with mental health specialists, primary care physicians can direct patients seeking additional assessment and treatment to the right services.<sup>[33]</sup> This multidisciplinary approach shows that mental health issues are legitimate medical concerns that need expert care, which helps to lessen the stigma attached to mental health treatment.<sup>[34,35]</sup> Physicians in primary care can support laws and programs that lessen the stigma associated with mental illness in society and the community. They support



anti-stigma initiatives, take part in mental health awareness campaigns, and engage in community outreach to affect larger social change. Lastly, we only discovered the place of residence component to be associated with an elevated risk for perceived stigma. Gender, age, educational attainment and home location only explained 1.4% of the variance, according to a German study.<sup>[36]</sup> Primary care physicians are in a unique position to help reduce stigma in their communities by encouraging compassion, acceptance, and support for those who are experiencing mental health problems.<sup>[37]</sup>

## Limitation

There are certain limitations to our research. First off, as the study used a cross-sectional sample technique, it may be difficult to arrive at valid conclusions about the causal links or correlations between sociodemographic characteristics and felt stigma. Second, because our study was conducted using a Google form, we were unable to personally explain the questions to the participants, which may have affected how they answered. On the other hand, students were able to engage in the study without experiencing social pressure or being directed to answer in a particular way by using a Google form-based approach.

## Conclusion

Our finding suggests that perceived stigma among medical students towards patients with psychiatric illness was present and this tendency is more significant in students belonging to rural areas. Anti-stigma initiatives are crucial for the continued advancement of mental health. To ensure that students acquire a compassionate and constructive attitude towards mental health patients and their care, undergraduate primary care-based mental health education ought to be reassessed.

## Recommendations

Medical universities should think about a plan for suitable education to improve the training in psychiatry and introduce students to the field in case it becomes a career option.

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## Conflicts of interest

There are no conflicts of interest.

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