

Original Research Article

Bridging the divide: unveiling treatment gap and barriers to mental health care for medical students in Pakistan: a cross-sectional study

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ABSTRACT

Background: Depression is a common yet often underrecognized and treatable disorder among medical students. In Pakistani cohort there is limited research on barriers to accessing mental health care. This study aims to quantify the treatment gap in mental health conditions among Pakistani medical students, identify potential barriers to initiating mental health treatment, and explore demographic predictors influencing the reporting of these barriers.

Methods: A cross-sectional study was conducted between March and July 2025 involving 144 medical students. Data collection utilized the barriers to access to care evaluation (BACE v3) and the Rosenberg self-esteem scale (RSES) questionnaires. Statistical analyses were performed using SPSS version 28 to ensure rigorous examination of the data.

Results: The study examined the demographics, self-esteem levels, and barriers to seeking professional mental health care among 144 participants. The findings indicate that the majority 70.8% exhibited medium to high self-esteem, whereas approximately 29.2% reported low self-esteem. The most prominent barriers identified were attitudinal, 95.8% participants endorsing the preference to "solve the problem on my own," and stigma-related, 79.9% expressing concern about "what my family might think."

Discussion: Thematic analysis further revealed key barriers, including stigmatizing beliefs, difficulty in disclosing personal issues, a reliance on self-management, and challenges in accessing professional help.

Conclusion: Medical students face significant mental health challenges, often hindered by stigma and attitudinal barriers. Improving awareness, reducing stigma, and enhancing access to mental health services in universities are essential. Early intervention and supportive environments can help safeguard their mental well-being and academic success.

Keywords: Medical students, Mental health, Mental health services, Cross-sectional studies, Healthcare disparities, Health behavior

INTRODUCTION

Mental health is a vital part of overall health and well-being.¹ Conditions that impair mental health are

considered as mental health problems. In Pakistan, an estimated 67 million people, suffer from mental illness, including anxiety and depression.² The treatment gap-the difference between those needing care and those

receiving it is a major global challenge and especially severe in Pakistan, where over 90% of individuals with mental disorders do not receive treatment.^{3,4} Compared to other diseases like diabetes and hypertension, mental health treatment rates remain much lower.⁵ The COVID-19 pandemic has further worsened the situation. Many who do seek care often do not consistently adhere to treatment plans. Stigma is a major barrier unique to mental illness. It involves societal devaluation and discrimination, which prevent many from seeking help. People with mental illness face a dual burden: managing symptoms such as hallucinations or anxiety, which impair daily functioning, and coping with stigma rooted in societal misunderstanding and prejudice.^{6,7} Pakistan's shortage of mental health professionals worsens the crisis, with just 0.19 psychiatrists per 100,000 people and services largely limited to urban areas.⁸ World Health Organization (WHO) studied major depressive disorders in 21 countries and found that 52.6 % of individuals in low-income countries received treatment after recognizing their need, only 20.5 % received minimally adequate care.¹⁰ Globally, more than 56 % of people with depression do not receive adequate treatment.¹¹ Students in health professions experience significant stress, due to academic demands, competition, limited leisure time, and other factors affecting their mental health.¹² Worldwide, about 12–50 % of undergraduate university students experience one or more mental health challenges.^{13,14} Research shows that physician burnout, a serious issue among medical professionals, begins early. Approximately 44.2 % of global medical students, even before residency, show signs of burnout.^{15,16} Despite generally being aware of mental health issues, many medical students hesitate to seek or use mental health services during medical school.^{17,18} While access to mental health services is expected to be greater for medical students, financial worries, personal dilemmas, access challenges, and insufficient awareness reduce their willingness to seek help. Additionally, cultural factors such as family background, social norms, and religion influence how they deal with mental health issues.¹⁹⁻²² A meta-analysis of 183 studies across 43 countries found

the prevalence of depression among medical students to be 27%. Moreover, 11% reported suicidal ideation, and over 80 % felt under-supported.²³⁻²⁶ The aim of this study is to examine how barriers to accessing and navigating mental health services arise and intersect with challenges to service provision in the unique context of medical student mental health.

METHODS

This cross-sectional study involved 144 medical students from various medical colleges across Pakistan, selected between March and July 2025 using stratified multistage sampling. Participants ranged from first to fifth academic year and completed the Barriers to Access to Care Evaluation (BACE v3) and Rosenberg Self-Esteem Scale (RSES) questionnaires. The sample size was calculated based on a 92.8% prevalence of stress among medical students, resulting in a required size of 113 at a 95% confidence level using Cochran's formula. Both instruments demonstrate strong psychometric properties, including validity, reliability, and acceptability, reflecting good participant engagement. The questionnaires assessed factors that might have hindered, delayed, or discouraged participants from seeking professional mental health care in the previous three months. A pilot study was conducted to refine the questionnaire, followed by consultations with a mental health expert experienced in adapting such tools. Statistical analyses were performed using SPSS version 28, a reliable software for data analysis. The study adhered to strict ethical guidelines, ensuring participant confidentiality and protection. Ethical principles of beneficence, non-maleficence, and justice were followed, which contributed to the validity and integrity of the research findings.

RESULTS

Out of total 144 participants, 76.4% were females and 23.6% were males. Table 1 displays the demographic characteristics of the sample.

Table 1: Socio-demographic characteristics of the participants (n=144).

Variable	Frequency	%
Gender	Male	23.6
	Female	76.4
Year of study	1 st year	18.1
	2 nd year	20.8
	3 rd year	22.2
	4 th year	27.8
	Final year	11.1
Marital status	Married	0.7
	Any other	1.4
	Single	97.9
Permanent place of residence	City	85.4
	Village/town	14.6
Monthly income	50,000-1Lac	30.6
	Less than 50,000	9.0
	More than 1 Lac	60.4

Table 2: Percentages, frequencies, and mean scores on the BACE treatment stigma subscale.

Stigma-related barrier items	Reporting item as not a barrier % (n)	Reporting item as a barrier to any degree % (n)	Reporting item as a major barrier % (n)	Mean (SD)
Feeling embarrassed or ashamed	27.1 (39)	72.92(105)	9.0 (13)	1.13 (0.918)
Concern that it might harm my chances when applying for jobs	44.4 (64)	55.56 (80)	8.3 (12)	0.90 (0.978)
Concern that I might be seen as weak for having a mental health problem	35.4 (51)	64.58 (93)	6.9 (10)	1.01 (0.931)
Concern about what my family might think, say, do or feel	20.1 (29)	79.86 (115)	22.9 (33)	1.60 (1.053)
Concern that I might be seen as ‘crazy’	50.0 (72)	50.00 (72)	4.9 (7)	0.79 (0.923)
Concern that people I know might find out	39.6 (57)	60.42 (87)	11.8 (17)	1.10 (1.063)
Not wanting a mental health problem to be on my medical records	37.5 (54)	62.50 (90)	12.5 (18)	1.09 (1.044)
Concern about what my friends might think, say or do	40.3 (58)	59.72 (86)	6.9 (10)	0.97 (0.960)
Concern about what people at work might think, say or do	47.9 (69)	52.08(75)	6.3(9)	0.82 (0.936)
Concern that people might not take me seriously if they found out I was having professional care	36.1 (52)	63.89(92)	9.7(14)	1.04 (0.981)

Table 3: Percentages, frequencies, and mean scores on attitudinal barrier items of the BACE.

Attitudinal barrier items	Reporting item as not a barrier % (n)	Reporting item as a barrier to any degree% (n)	Reporting item as a major barrier % (n)	Mean (SD)
Dislike of talking about my feelings, emotions or thoughts	29.2 (42)	70.83 (102)	16.7 (24)	1.33 (1.071)
Concerns about the treatments available (e.g. medication side effects)	25.7 (37)	74.31 (107)	11.1 (16)	1.31 (0.977)
Wanting to solve the problem on my own	4.2 (6)	95.83 (138)	39.6 (57)	2.18 (0.816)
Thinking that professional care probably would not help	46.5 (67)	53.47 (77)	6.3 (9)	0.91 (0.982)
Fear of being put in hospital against my will	54.2 (78)	45.83 (66)	6.9 (10)	0.75 (0.957)
Thinking the problem would get better by itself	16.7 (24)	83.33 (120)	20.1 (29)	1.58 (0.993)
Having had previous bad experiences with professional care for mental health	60.4 (87)	39.58 (57)	0.7 (1)	0.56 (0.773)
Thinking I did not have a problem	38.9 (56)	61.11 (88)	7.6 (11)	1.01 (0.975)
Preferring to get help from family or friends	32.6 (47)	67.36 (97)	11.8 (17)	1.22 (1.032)
Preferring to get alternative forms of care	29.2 (42)	70.83 (102)	14.6 (21)	1.22 (1.027)

Table 4: Percentages, frequencies, and mean scores on instrumental barrier items of the BACE.

Instrumental barrier items	Reporting item as not a barrier % (n)	Reporting item as a barrier to any degree % (n)	Reporting item as a major barrier % (n)	Mean (SD)
Not being able to afford the financial costs involved	47.2(68)	52.78(76)	3.5(5)	0.80 (0.882)
Being too unwell to ask for help	43.8(63)	56.25(81)	6.9(10)	0.85 (0.923)
Difficulty taking time off work	34.7(50)	65.28(94)	6.3(9)	1.08 (0.947)
Being unsure where to go to get professional care	26.4(38)	73.61 (106)	16(23)	1.32 (1.035)
Problems with transport or travelling to appointments	41.7(60)	58.33(84)	13.2(19)	1.05 (1.073)
Having no one who could help me get professional care	39.6(57)	60.42(87)	9.0(13)	0.94 (0.959)
Professionals from my own ethnic or cultural group not being available	47.9 (69)	52.08 (75)	4.9 (7)	0.78 (0.889)

Table 5: Self-esteem categories and average RSES scores by demographic groups.

By Gender					
Gender	Average RSES score	Overall distribution	Low self esteem	Medium self esteem	High self esteem
			0-14	15-25	26-30
Male	18.32	23.61% (34)	9.03% (13)	10.42% (15)	4.17% (6)
Female	18.25	76.39% (110)	20.14% (29)	50.00% (72)	6.25% (9)
By Year					
Year			0-14	15-25	26-30
1st Year	16.27	18.06% (26)	6.94% (10)	9.72% (14)	1.39% (2)
2nd year	18.90	20.83% (30)	4.17% (6)	15.28% (22)	1.39% (2)
3rd year	20.19	22.22% (32)	4.17% (6)	13.89% (20)	4.17% (6)
4th year	17.73	27.78% (40)	11.11% (16)	14.58% (21)	2.08% (3)
Final year	17.88	11.11% (16)	2.78% (4)	6.94% (10)	1.39% (2)
By marital status					
Marital status			0-14	15-25	26-30
Single	18.13	97.92% (141)	29.17% (42)	59.72% (86)	9.03% (13)
Married	21.00	0.69% (1)	0.00% (0)	0.69% (1)	0.00% (0)
Any other	27.00	1.39% (2)	0.00% (0)	0.00% (0)	1.39% (2)
By place of residence					
Residence			0-14	15-25	26-30
City	18.15	85.42% (123)	25.69% (37)	51.39% (74)	8.33% (12)
Village/ Town	18.95	14.58% (21)	3.47% (5)	9.03% (13)	2.08% (3)
By household income					
Income			0-14	15-25	26-30
More than 1 lac	18.15	60.42% (87)	18.06% (26)	34.72% (50)	7.64% (11)
50 thousands-1 lac	18.64	30.56% (44)	8.33% (12)	20.14% (29)	2.08% (3)
Less than 50 thousands	17.85	9.03% (13)	2.78% (4)	5.56% (8)	0.69% (1)

Table 6: Self-esteem score summary.

Self-esteem category	Total count	%
Low self-esteem	42	29.17
Medium self-esteem	87	60.42
High self-esteem	15	10.42

Tables 2-4 illustrate the frequency with which all participants reported the extent to which each barrier item would "stop, delay, or discourage" them from seeking professional help. Over two-thirds of participants anticipated that each stigma item would serve as a barrier to some degree if they were to seek help in the future. The most highly rated stigma barrier was 'concern about what my family might think, say, do, or feel', with 79.9% (n=115) of participants anticipating that this would prevent or delay them from seeking professional help. The most commonly-anticipated attitudinal barrier was 'wanting to solve my problem on my own', whereby 95.8% (n=138) of participants anticipated that this would serve as a barrier to some degree and 39.6% (n=57) thought that it would act as a major barrier to them seeking professional help in the future. The most commonly-rated instrumental barrier was 'being unsure where to go to get professional care' involved in seeking professional help, with 73.6% (n=106) of participants anticipating that this would serve as a barrier to some degree and 16% (n=23) thinking that it would act as a major barrier to help-seeking.

The probability plot of RSES scores, which shows a normal distribution with a significant p value of 0.02. The mean score for RSES (N=144) was 18.27, with a standard deviation of 5.637. Tables 5 and 6 illustrate the self-esteem categories and average RSES scores by demographic groups.

DISCUSSION

Mental health needs, when not addressed, are believed to place a significant stain on the health and productivity of the community.²⁹ Medical students are believed to have a higher prevalence of mental health disorders compared to individuals in the general population.³² It is widely known that doctors and medical students are reluctant to engage when it comes to mental health issues. Furthermore, there is a belief that doctors stigmatize mental illness more than the general population because they fear that seeking care for a mental health condition could negatively impact their legal license to practice medicine.^{17,33}

In our study, results showed that the most prominent and major three reasons in regard to stigma-related barriers that were deterring the students from seeking psychological help are "concern about what my family might think, say, do, or feel" (22.9%), "not wanting a mental health problem on my medical records" (12.5%), and "concern that people I know might find out" (11.8%).

The aforementioned findings align with a Saudi Arabian study that showed mental illness as a consequence of inadequate religiosity. This belief persists among a significant number of individuals who are hesitant to seek professional assistance, despite notable progress in the mental health care system.¹⁹ The study on Egyptian medical students, in which the primary concern was what the family might think, further supports this finding.³⁴

Moreover, in regard to attitudinal barriers, "wanting to solve the problem on my own" (39.6%) ranked on top. This observation is in line with a previous study that identified a preference for self-management as a significant obstacle to seeking formal mental health care among university students experiencing depression and anxiety.³⁵ Furthermore, stigma may primarily contribute to the urge to independently resolve the problem, even if it received a high score. So, a continuous effort to improve the accessibility and acceptance of mental health services early in their careers is crucial. Lastly, the most significant barrier to seeking mental health care was "not knowing where to go for professional care," as reported by 16% of respondents.

The participants rated instrumental barriers the lowest overall, but in contrast, the Egyptian medical students identified them as their most significant barrier.³⁴ It is worth noting that affordability and financial costs for seeking professional mental health care were not a major barrier (3.5%). Uncertainty about where to seek professional health support and insufficient knowledge in this area posed a significant concern (16%). Self-esteem predicts a series of outcomes, and in the social sciences, it is one of the most widely studied constructs.^{36,37} Nearly half of the empirical studies published in major scientific journals that assess self-esteem use the Rosenberg Self-Esteem Scale as their main instrument.³⁸

Converging evidence indicates that phrasing all questions in the same direction can lead to the emergence of response artifacts like social desirability, potentially leading to questionable test outcomes. We intentionally designed the RSES to include five positively worded items and five negatively worded items to help reduce the potentially invalidating impact of acquiescence.³⁹ However, using both positive and negative wording to assess the same dimension may introduce response bias, potentially compromising validity; this phenomenon is known as the wording effect.⁴⁰ A large-scale cross-cultural study, which included nearly 17,000 participants from 53 countries, discovered that people tended to respond honestly to positively worded items, while they

significantly concealed their true responses to negatively worded items. This suggests that individuals from various cultures often exhibit a bias against negatively worded items. Moreover, a study conducted across three countries found that some respondents struggle to effectively answer negatively worded questions, leading to significant issues such as reduced scale reliability.

Most individuals in our study scored between 12 and 16, with the highest crowding at 14. A study on demographic groups living in the US calculated the average self-esteem score among a sample of 503 adults to be 22.62 (SD=5.8). The mean score in our study was 18.27 (SD=5.6), which is near the cut-off point (a score of 20 or more), indicating generally positive self-evaluation but proving that the self-esteem levels in medical students are comparatively less than the general population. In general, participants performed well on the RSES. The majority of the participants fell in the category of average self-esteem (60.42%), in contrast to those with low self-esteem (29.17%). The statement most strongly agreed with was “I feel that I am a person of worth at least on an equal plane with others” (43.7%).

The study’s findings contribute significantly to the literature addressing the stigma and barriers faced by medical students when it comes to seeking help for mental health issues. This could potentially aid in comprehending and providing guidance on how to lessen the impact of mental health problems on medical students. The study revealed that the primary barriers to unmet treatment needs were student attitudes and stigma, not the availability of mental health care.

Therefore, university mental health service providers could benefit from taking specific steps to address this issue. This can include providing comprehensive orientation sessions about available services and their locations, as well as encouraging them to seek appropriate mental health treatment. Moreover, we can organize workshops to enhance awareness and reduce stigma while also emphasizing the roles of mentorship and counseling.

CONCLUSION

Medical students face significant mental health challenges, often hindered by stigma and attitudinal barriers. Cultural and regional factors strongly influence their reluctance to seek help. Improving awareness, reducing stigma, and enhancing access to mental health services in universities are essential. Early intervention and supportive environments can help safeguard their mental well-being and academic success.

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