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Assessment of Mental Health and Mental Health Literacy Among Medical Students of HITEC-IMS

Sidra Farooq, Anwar Bibi, Furqan Basim, Waqas Khan, Abdul Rehman Sani, Muhammad Shoaib Ali, Aashi Ahmed

Department of Community Medicine, Hi-Tech Institute of Medical Sciences, Taxila Pakistan

ABSTRACT

Objectives: To Assess Mental Health and Mental Health Literacy among medical students in HITEC-IMS, evaluate their relation to sociodemographic variables, and determine the correlation between Mental Health and Mental Health Literacy.
Study Design: Cross-sectional study.
Place and Duration of Study: Department of Community Medicine, HITEC-IMS, Taxila Pakistan, from Nov 2023 to Apr 2024.
Methodology: Two hundred six participants from MBBS students of HITEC-IMS participated, using a consecutive sampling method (five groups based on year of study). The structured proforma with three parts was used, the first part started with collecting demographic variables. The second part consisted of the pre-validated Mental Health Literacy Scale for assessing Mental Health Literacy, and the third part included the Warwick-Edinburgh Mental Well-Being Scale for evaluating mental health. SPSS version 28 was used for data analysis.
Results: Out of total students, 92(41.8%) students were males and 128(58.2%) were females. However, 85(38.6%) students had mild Mental health, 131(59.5%) had moderate mental health and 4(1.8%) had high mental health. Furthermore, 134(60.9%) students had low mental health literacy, 38(17.3%) had below average, 45(20.5%) had average and 3(1.4%) had above average. Correlation between Mental Health and Mental Health Literacy resulting in a considerable positive correlation (r=0.192, *p*=0.004).
Conclusions: Mental Health Literacy is an important concept, with its relation to Mental Health, highlighting the need for timely interventions necessary for the improvement of Mental Health Literacy, and to achieve meaningful outcomes in the realm of Mental Health.

Keywords: Anxiety, Burnout, Depression, Gender Socialization, Mental Health, Mental Health Literacy, Social Stigma.

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INTRODUCTION

Mental health is a cornerstone of overall well-being, encompassing our emotional, psychological, and social state.[1] It significantly influences how we think, feel, and behave. There is a growing concern about the prevalence of mental health disorders globally. These disorders not only impact the quality of life for patients but also challenge healthcare professionals. Unfortunately, studies suggest that physicians often overlook these important factors.[2]

This article explores the significant burden of mental health disorders to necessitate healthcare professionals, particularly medical students for improved Mental Health and Mental Health Literacy. The global picture is concerning, with an estimated 970 million people suffering from a mental disorder in 2019, with a heavy burden on lower-middle-income countries. Medical Students due to the massive academic pressure of their curriculum and practice have increased rates of mental illness like depression (25%) anxiety (33%), suicidal ideation (22%), and burnout (44%),[3] consequently resulting in a negative quality of care.

The study's rationale was to investigate the current state of mental health knowledge and attitudes among HITEC-IMS medical students which would help identify areas where educational interventions may be needed. Overall, this study has the potential to improve the mental health of medical students and patients.

METHODOLOGY

This cross-sectional study was conducted at HITEC-IMS, Taxila Pakistan, between November 2023 and April 2024 after obtaining approval from the Institutional Ethical Review Board (HITEC-IRB-29-2024).

Sample size was calculated using Raosoft sample size calculator taking confidence level 95%, margin of error 5%, Population size: 500, Response Distribution: 50 %.[4] The estimated sample size came out to be 216 undergraduate medical students.

Inclusion criteria: All students of MBBS in HITEC-IMS by using consecutive sampling technique.

Correspondence: Dr Sidra Farooq, Department of Community Medicine,Hi-Tech Institute of Medical Sciences, Taxila Pakistan
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Exclusion criteria: Medical students who were diagnosed cases of any mental illness were excluded from the study.

The questionnaire was distributed to 220 medical students across all MBBS years at HITEC-IMS. A random distribution of 44 questionnaires per academic year to ensure an equal chance to participate. The first portion of the form pertained to socio-demographic variables; the second portion consisted of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS),[5] and the third portion contained the Mental Health Literacy Scale (MHLS).

The 14-item scale WEMWBS is very simple to score. The total score is obtained by summing the score for each of the 14 items. The scoring range for each item is from 1–5 and the total score is from 14-70. Low well being where total score is less than 43, moderate 43-60 and high for greater than 60. A MHLS score is presented and the scoring approach uses qualitative descriptors to categorise this score. The ranges for these descriptors were determined using percentiles derived from a community sample of 372 university students obtained from a study by O'Connor and Casey. Low (score of 35-110) (less than or equal to the 10th percentile). Below Average (score of 111 – 118) (percentile between 10 and 24). Average (score of 119 - 136) (percentile between 25 and 75). Above Average (score of 137 - 143) (percentile between 76 and 89). High (score of 144 - 160) (greater than or equal to the 90th percentile).

Data was analyzed by using Statistical Package for Social Sciences (SPSS) 28.00. Quantitative data was represented using mean±SD. Qualitative data was represented by using percentage and frequency. Chi square test (for qualitative variables) and spearman correaltion were applied and *p*-value of ≤0.05 was considered as statistically significant".

RESULTS

A total of 220 (44 to each class) students were included in this study. Mean age was 21.11±1.75 years rang form 17-25 years. Out of total students, 92(41.8%) students were males and 128(58.2%) were females. 14(6.4%) students diagnosed with mental disorder and 25(11.4%) students had family history of mental illness. However, 85(38.6%) students had mild mental health, 131(59.5%) had moderate mental health and 4(1.8%) had high mental health. Furthermore, 134(60.9%) students had low mental health literacy, 38(17.3%) had below average, 45(20.5%) had average and 3(1.4%) had above average. Table-I shows the association of Mental Health (MH) and social demographic variables. There was stylistically significant association among MH and class (*p*-value=0.038) and age as *p*-value=0.049. Table-II shows the association of Mental Health Literacy (MHL) and social demographic variables wheres class and accommodation showed significant association as *p*-value<0.05.

Table-I: Association of Mental Health (MH) and Social demographic variables (n=220)

Social demographic variables	Mental Health (MH)			*p*-value
	Mild (n=85)	Moderate] (n=131)	High (n=4)	
Gender				
Male	31(36.5%)	59(45.0%)	2(50.0%)	0.434
Female	54(63.5%)	72(55.0%)	2(50.0%)	
Class				
1st Year	10(11.8%)	32(24.4%)	2(50.0%)	0.038
2nd Year	13(15.3%)	31(23.7%)	0(0%)	
3rd Year	18(21.2%)	26(19.8%)	0(0%)	
4th Year	19(22.4%)	24(18.3%)	1(25.0%)	
5th Year	25(29.4%)	18(13.7%)	1(25.0%)	
Age				
17-21 Years	37(44.0%)	80(61.1%)	2(50.0%)	0.049
22-25 Years	47(56.0%)	51(38.9%)	2(50.0%)	
Accommodation				
Day Scholar	25(29.4%)	39(29.8%)	1(25.0%)	0.978
Hostilities	60(70.6%)	92(70.2%)	3(75.0%)	

Table-II: Association of Mental Health Literacy (MHL) and Social demographic variables (n=220)

Social demographic variables	Mental Health Literacy (MHL)				*p*-value
	Low (n=134)	Below Average (n=38)	Average (n=45)	Above Average (n=3)	
Gender					
Male	66(49.3%)	12(31.6%)	14(31.1%)	0(0%)	0.030
Female	68(50.7%)	26(68.4%)	31(68.9%)	3(100.0%)	
Class					
1st Year	25(18.7%)	11(28.9%)	07(15.6%)	1(33.3%)	0.145
2nd Year	28(20.9%)	08(21.1%)	08(17.8%)	0(0%)	
3rd Year	28(20.9%)	08(21.1%)	08(17.8%)	0(0%)	
4th Year	20(14.9%)	09(23.7%)	13(28.9%)	2(66.7%)	
5th Year	33(24.6%)	02(5.3%)	09(20.0%)	0(0%)	
Age					
17-21 Years	71(53.4%)	25(65.8%)	21(46.7%)	02(66.7%)	0.346
22-25 Years	62(46.6%)	13(34.2%)	24(53.3%)	01(33.3%)	
Accommodation					
Day Scholar	32(23.9%)	13(34.2%)	17(37.8%)	3(100.0%)	0.011
Hostilities	102(76.1%)	25(65.8%)	28(62.2%)	0(0%)	

Figure shows the correlation between MH and MHL resulting in a considerable positive correlation (r=0.192, *p*=0.004), which could be indicative that a lower MHL could contribute to lower MH with the alternative being vice versa, which is unlikely considering that low health literacy is associated with adverse and poorer health outcomes and not the other

way round.[6] Table-III shows percentage mean values across various MHL domains.

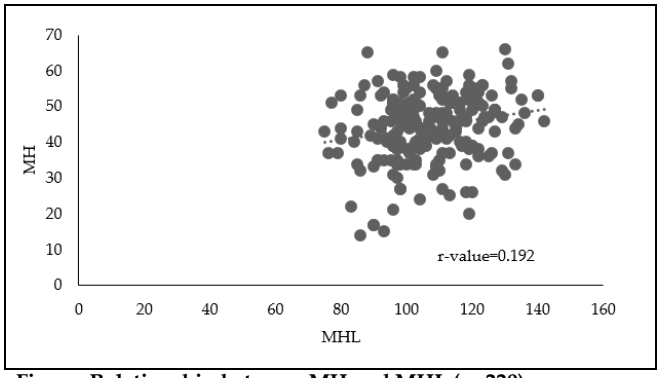

Figure: Relationship between MH and MHL (n=220)

Table-III: Mean Scores across various MHLS Domains (n=220)

	%age of the Obtained Mean Score
Ability to recognize disorders	70.0%
Knowledge of risk factors and causes	64.6%
Knowledge of self-treatment	65.3%
Knowledge of professional help availability	69.0%
Knowledge of where to seek information	71.9%
Attitudes that promote recognition or appropriate help-seeking behavior	64.3%

DISCUSSION

This study displays medical students in HITEC-IMS had lower MHL (66.8%) compared to studies carried out among students in other countries. For instance, scores in the UK were 79.8%, France 76%, Nepal 74%, and Iran 71.5%.[7,8] This significant gap highlights the need for improved mental health education for medical students in Pakistan. With better MHL, future doctors will be better equipped to identify and manage mental health issues effectively in their patients.

The study reveals that female medical students possessed higher MHL than males, a consistently replicated finding with other studies. In those studies, Gender Socialization Theory has been postulated as a possible reason for such a difference,[9] but explicit deliberation through a separate study is imperative for good measure of this postulate.

Hostelite leaned towards a lower MHL compared to day scholars. This observation is a perplexing one involving a multitude of inter-playing factors, but it should be intuited that those coming from far-flung areas usually reside in hostels and those of day scholars typically arrive from nearby urban centers.

Another finding of importance is that socioeconomic status had a strong association with MHL which supplements the conclusions of a study conducted on the general population in China.[10] To assert that the economic conditions responsible for individual upbringing and cultural development duly affect MHL would not be incorrect. In addition, the study depicts that medical student had only moderate mental health, which worsened as they progressed through their years of study. This suggests increasing stress and pressure, potentially due to academic burden,[11] consistent burnout,[12] or lower need satisfaction.

Pakistan's significant stigma surrounding mental health disorders[13] is even more concerning among healthcare providers.[14] The study found the lowest MHL scores in the area of "help-seeking behavior." This suggests medical students might be reluctant to seek help for mental health issues, perhaps due to concerns about appearing incompetent, which aligns with previous research.[15]

This study establishes that a lower MHL could contribute to lower MH, which has slight correspondence to studies conducted in undergraduates[16] but certain studies do not project a significant correlation between them, and therefore, uncertainty still exists.[17]

Interestingly, females in this study reported lower mental health compared to males. This aligns with findings in the US[18] and might be linked to socio-cultural factors specific to women in Pakistan. A previous study suggests "social stigma" is a significant barrier for women seeking mental health support.[19]

Although a point of friction can be alluded to, the MH of females was relatively low despite having greater MHL compared to males. A possibility could be that females due to high MHL reached the current MH status.

The study found some interesting links between parental occupation and MHL/MH. Students with fathers in farming had the lowest MHL, while those in the military had the highest MHL and MH. Students with teachers as parents had lower MHL/MH. More research is needed to understand these complex relationships.

Being an urgent public health concern, it is crucial to implement interventions in earnest to improve MHL firstly among healthcare students and professionals and then proceeding onward to

influential figures in society to improve the MHL of the general population as a whole.

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ETHICAL CONSIDERATION

Approval of the study was obtained from the Institutional Review Board of HITEC-IMS. Informed consent was obtained from all participants. The data was solely used for this study. The privacy of the individuals was ensured with no risk to them. Relevant permission was obtained from the authors for the use of MHLS and WEMWBS.

LIMITATION OF STUDY

The study design, being cross-sectional, cannot adequately ascertain the causal inference between MHL and Mental Health, nevertheless gives a cue about the MHL and Mental Health of students. Also, due to the choice of sampling, this study cannot be adequately generalized. In addition, the study was conducted at a single medical college, which duly affects its representativeness across other contexts.

CONCLUSION

Mental health literacy is crucial for good mental health. Stronger MHL allows for earlier intervention and better outcomes for Medical Practitioners. However, a gap may exist between urban and rural areas in Pakistan. Using validated MHL/ MH scales specific to Pakistani demographic variables could help us understand this gap and improve mental health for all.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript:

SF & AB: Data acquisition, data analysis, critical review, approval of the final version to be published.

FB & WK: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

ARS, MSA & AA: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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