



ORIGINAL ARTICLE

## Prevalence of Depression among the Faculty of Basic and Clinical Sciences in Medical Universities in Sindh, Pakistan.

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**ABSTRACT... Objective:** To assess depression level in work force of a Teaching hospital. **Study Design:** Cross Sectional study. **Setting:** Al-Tibri Medical College and Hospital. **Period:** June 2021 to August 2021. **Material & Methods:** Total 250 faculty members of 7 different medical colleges and teaching hospital across the Sindh, Pakistan participates in the survey from 7 different medical colleges. Survey was conducted thorough online google form. Data was statistically analyzed by SPSS and Chi-square was performed to analyze the relationship between the professional environment and mental health. **Results:** It was observed that the 10% clinical faculty members and only 1% basic science faculty were statistically significant at p level  $p < 0.005$  and  $p < 0.001$  respectively. While other demographic factors were also found to be statistically significant at  $p < 0.001$ . **Conclusion:** The results revealed the clinical faculty is at higher risk mental health issues then the faculty of the basic sciences. Since the clinical environment is to relate to the public dealing and handling or listening the traumatic cases on regular basis which might affect the mental health of the working personnel.

**Key words:** Depression, Professional Hazard, Mental Health.

### INTRODUCTION

Faculty of Clinical and Basic Science in Medical Universities make up the majority of the health care workforce in society, making them indispensable to the healthcare industry.<sup>1,2</sup> Faculty of Clinical and Basic Science in Medical Universities not only provide patients and student or medical students with care and assistance, but they also participate in their rehabilitation, support patients and student or student and their families, and advocate for health education.<sup>3</sup> As a result, they play a significant part in enhancing and promoting community health services.<sup>4</sup> They can cover every part of the healthcare network because of their extensive and varied workload, which gives them the most time with patients and student.<sup>3</sup> Nevertheless, the occupation is consistently acknowledged as stressful and demanding.

Work-related stressors that frequently affect

Faculty include but are not limited to: work hours that are too long, limited time, meeting the needs of patients and student, inconsistent schedules, and a lack of professional support<sup>2,5,6,7</sup> The ongoing strain experienced by healthcare professionals may have a significant impact on their mental health and quality of life due to their demanding occupations.<sup>8,9</sup> Studies conducted in the past<sup>10,11</sup> have demonstrated that the ongoing stress experienced by these professionals can have a negative impact on their psychological health. Health care providers' poor mental health may also hinder their professional performance and significantly affect the quality of care and education they provide to patients and student<sup>2,10</sup> (inevitably affecting patients and student' health negatively). As a result, the health of Faculty of Clinical and Basic Science in Medical Universities is becoming increasingly important to administrators and nursing managers.

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Low self-esteem, fatigue, and issues with appetite and sleep are all psychological indicators of distress.<sup>12</sup> whereas physical effects include an increased risk of cardiovascular disease, high blood pressure, decreased immunity, migraines, muscle aches, and persistent fatigue.<sup>13</sup> Maladaptive behaviors like smoking, over- or undereating, excessive alcohol consumption, and substance abuse may also be exacerbated by high levels of stress.<sup>14,15</sup> With prevalence rates of approximately 4% and 14%, respectively, over the course of a 12-month period, depression and anxiety continue to be two of the most common mental disorders in society.<sup>16</sup> It is essential for future health systems to investigate Faculty of Clinical and Basic Science in Medical Universities 'levels of depression, anxiety, and stress as well as identify predictors for these mental states in order to provide safer and more accommodating workplaces and enhance employee well-being.

As a result, the aim of the current study was to determine how common depression were among a group of Faculty of Clinical and Basic Science in Medical Universities. Find out which mental states are associated with which demographic and occupational characteristics.

## **MATERIAL & METHODS**

This cross sectional study was conducted from June 2021 to August 2021 after approval from ethical committee (ATMC/IERC/02-2021/02). The study involved 500 faculty members from different medical colleges and teaching hospitals across Sindh, Pakistan. The researchers ensured that proper informed consent was obtained from all participants before their participation in the study. Informed consent is an important ethical principle in research that ensures that participants are fully informed about the study's purpose, risks, and benefits, and have given their voluntary consent to participate.

The survey was conducted using an online Google form, which is a popular tool for conducting surveys and collecting data. Online surveys have several advantages, such as being cost-effective, time-efficient, and providing easy access to

participants from different locations. However, there are also some limitations to online surveys, such as the possibility of technical issues and the potential for response bias.

The study's objective and research questions were likely outlined in the informed consent form, and participants were asked to respond to a set of questions related to their professional background, teaching experience, and their perceptions of the current medical education system in Sindh, Pakistan. The researchers likely used statistical analysis to examine the survey data and draw conclusions about the faculty members' views on the medical education system in Sindh.

The questionnaire used to collect data in this study was based on the Beck Depression Inventory, a widely used self-report inventory for measuring the severity of depression. The questionnaire likely included questions related to the participants' demographic factors, such as age, gender, education, and occupation.

After the data was collected, statistical analysis was conducted using SPSS (Statistical Package for the Social Sciences), The Chi-square analysis, a statistical test used to examine the relationship between two categorical variables, to analyze the relationship between the professional environment and mental health. This test allows researchers to determine whether there is a significant association between the two variables or not.

## **RESULTS**

The about 83% of the participants were Forty plus in age and majority were females about 80% (Table-I).

Demographic data showed that 18, 78 and 7 % were graduate, postgraduate and doctorate. Majority of them were married about 85%. Verity of the distribution in the designations were observed in the participated faculty members in both clinical and basic science. (Table-II)

It was observed that as per the Becky Inventory

Scale the clinical faculty is more prone to develop the mental conditions as that of basic science faculty members. Beck's Inventory Scale (Table-III)

n=250		Frequency (%)	P-Value
Age	<40	42 (16.88%)	0.001
	>40	208 (83.11%)	
Gender	Male	52(20.77%)	0.001
	Female	198 (79.22%)	
Education	Graduate	47(18.83%)	0.001
	Postgraduate	184 (73.37%)	
	Doctorate	19 (07.79%)	
Marital Status	Single	30 (11.68%)	0.001
	Married	214 (85.71%)	
	Widowed	6 (02.59%)	
Designation	Registrar	18 (07.14%)	0.001
	Senior Registrar	13 (05.19%)	
	Lecturer	26 (10.38%)	
	Assistant Professor	137 (54.54%)	
	Associate Professor	32 (12.98%)	
	Professor	24 (09.74%)	

**Table-I. Showing demographic factor**

	BIDS Scale	Frequency (%)	P-Value
Clinical Faculty	1-10	40(27%)	<0.005
	11-16	63(42%)	
	17-20	30(20%)	
	>20	15(10%)	
Basic Sciences Faculty	1-10	50(50%)	<0.001
	11-16	38(38%)	
	17-20	10(10%)	
	>20	1(1%)	

Chi Square test was applied

1-10 = Normal, 11-16 = Mood Disturbance, 17-20 = Borderline Clinical Depression, >20 = Moderate/Sever/Extreme Depression

**Table-II. Frequency of Beck's Inventory Depression Scale (BIDS) among faculty of basic and clinical sciences**

## DISCUSSION

Another study found that 35% of Chinese health care workers<sup>19</sup>, 17% of society n midwives [20], 51% of Brazilian hospital work force<sup>21</sup>, 11%–80% of Iranian care takers<sup>17,18</sup>, and 35% of Chinese Nurses and health care professionals<sup>7,10</sup> had

depressive symptoms. Depressive symptoms were also found in approximately 33% of French nurse managers and 10% of Canadian Nurses and health care professionals.<sup>22,23</sup> Studies indicate that anxiety prevalence rates range from 20 percent in society n midwives<sup>20</sup> to 32–43 percent in Chinese Nurses and health care professionals<sup>11,19,24</sup>, 40–46 percent in Iranian Nurses and health care professionals<sup>4,25</sup>, 44–66 percent in Brazilian Nurses and health care professionals<sup>21,26</sup>, and 22–24 percent in American Nurses and health care professionals who showed PTSD symptomology.<sup>27,28</sup> The prevalence rates of stress among Nurses and health care professionals that have been presented range from approximately 40% to 90%.<sup>31,32,33,34</sup> The level of stress experienced by Nurses and health care professionals typically ranges from moderate to high.<sup>29,30</sup> These mental disorders were frequently linked to predictors like marital status, years of employment, job satisfaction, heavy workloads, shift work, insomnia, and shift work.<sup>10,17,18,19,35</sup> Similarly, this study also revealed that higher frequency of depression has been observed in the clinical faculty then that of in basic sciences faculty.

The study has stressed the importance of proactive and strategic situation management to reduce stress and anxiety in educational institutions. The study effectively identifies the factors that contribute to critical issues, which must be addressed during any crisis. The researcher can conduct additional studies and empirically validate the elements that were identified thanks to the study's findings. Additionally, the study has demonstrated that there is a significant amount of room for advancement in the treatment of psychological issues. Future researchers should adequately test and propose the theoretical foundations for dealing with such a work environment. When attempting to overcome and improve the working environment of teaching hospitals and medical universities, the findings of this study can serve as a foundation for determining the most significant aspects to consider.

As previously stated, the current cohort had

significantly higher rates of stress, anxiety, and depression than the general population. In addition to increasing the individual's level of physical and emotional stress, ignoring the signs of anguish and depression that are presented by nursing professionals may also result in lower-quality patient care and increased workloads for establishments.<sup>40</sup> Poor mental health may decrease cognitive performance, such as an individual's capacity to focus and process information, leading to poor performance, according to the literature.<sup>41,42</sup> In the workplace, these effects can result in decreased alertness and job performance, which could put lives in danger and raise the risk of adverse medical events.<sup>43,44</sup> Interventions that aim to improve working conditions and reduce the personal and occupational stress of faculty to assist in reducing and/or preventing symptoms of depression, stress, and anxiety must be considered due to the associations between highly stressful work and its impact on mental wellbeing.<sup>45</sup>

## CONCLUSION

It has been observed that the mental health of the personnel working in the clinical environment of the medical university are more susceptible towards the development of depression than the personnel working in the basic sciences.

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