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Prevalence of psychological distress among students of medical colleges at Prince Sattam Bin Abdulaziz University

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ABSTRACT

No group is exempt from mental diseases and mental health issues affect society as a whole; yet, students experience much higher levels of mental discomfort than their peers in the community. It can affect patient's daily life and can lead to variety of emotional and physical problems. Since medical students have long years of studying and Nemours responsibilities included saving people's life, we will start cross-sectional research to recognize the percentage of psychological distress among students of medical colleges in (PSAU) Prince Sattam bin Abdulaziz University in Al-Kharj city. This is a cross-sectional study and the sample size will be collected was from students of medical health in PSAU University. Each participant filled out an anonymous, self-administered questionnaire that asked about their socio-demographic characteristics and the (BSI 18) Brief Symptom Inventory 18, a tool for detecting psychological distress. In Addition, the (K10) 10-item Kessler Psychological Distress Scale will measure psychological distress and anxiety. It was shown that students generally had a significant prevalence of psychological distress. The questionnaire was successfully completed by 203 students in total. Based on the BSI-18 scale, 30% of those were found to have psychological discomfort. On the somatization test, females scored considerably better than males. This conclusion requires serious efforts to be made to create appropriate screening and intervention programs that are specifically targeted at this population.

Keywords: Emotional disorders, Medical students, Prevalence, Mental health.

1. INTRODUCTION

For the previous ten years, Saudi Arabia's top 11 primary causes of disability and lowered quality of life have included mental health issues (Hakami,

2018). People who experience psychological distress have a higher risk of illness, death and poorer general health (Stallman, 2008). In addition to mental diseases, a wide notion known as psychological discomfort includes additional mental health issues that might not fit the usual diagnostic criteria. Numerous facets of health, including academic success, interpersonal interactions, future career, substance misuse and marital stability, are affected by mental health issues (Giang et al., 2010). According to studies using Saudi samples, female students, medical students and people who were experiencing personal, financial or emotional difficulties were more likely to report mental health issues such sadness, stress and anxiety (Ibrahim et al., 2013).

Despite mental distress is very common among undergraduate students; the Saudi population has not been thoroughly studied in this regard. The majority of current research on this subject has solely included medical students (Alkot et al., 2017; Alhatmi et al., 2022; Mufti et al., 2022; Eltanahy et al., 2023). A Canadian survey of undergraduate students found that 30% of them had psychological distress, which was much greater than the adult prevalence rate for the country's general population of Canadians (Adlaf et al., 2001). It is unknown whether university students who are enrolled in particular academic programs or fields of study are more likely than those who are enrolled in other courses to experience psychological anguish. Certain "high-pressure" academic courses that lead to professional practice are thought to be a factor in increased levels of student psychological suffering. As a result, various studies have looked into the mental health of students studying medicine or law. The current study's goal is to ascertain how common psychological distress is among medical students at PSA University. The results of this study will advance our knowledge of the psychological issues that young adult students face and their correlates, which is important for creating effective screening and intervention programs to shield this demographic from psychological issues.

2. METHODS

It is a cross-sectional study, which is targeting the students of medical health at Prince Sattam Bin Abdulaziz University during the period from October 2022 to April 2023. The institution's ethical committee gave their prior consent (SCBR-048-2023). The Inclusion measures contained the following: Being on all undergraduate students in medical health specialties and acceptance in participating in the survey. Exclusion criteria included non-medical health students in PSU, refusing to participate in the survey. The participants were anonymous in order to ensure anonymity and participation in the study was voluntary. These requirements were listed in the introduction page that was sent with the questionnaire papers. Verbal consents were then collected from the students after they had been gathered in their separate lecture halls and classes. Participants shared information about their age, sex, grade point average, year of study (first-year undergraduate or following year undergraduate), location and average number of hours worked each week.

The K10 (10-item Kessler Psychological Distress Scale) calculates anxiety and psychological distress. It is a popular, straightforward self-report tool that can be used to identify people who need additional evaluation for depression and anxiety. Although this measure was intended for use in the general population, it may be useful in the clinical setting.

The K10 is a valid questionnaire that composed of 10 questions, each question assessed throw a five-point scale (never, little, some, most, always). Each item is scored from one (NEVER) to five (always). The score of ten items is then summed, a minimum of 10 and a maximum of 50. Less than 24 are likely to be well and more than 24 indicate psychological distress. The K10 has excellent psychometric qualities in predicting DSM-IV anxiety and mood disorders across key socio-demographic subsamples (Meijer et al., 2011). Participants were asked to rate, on a 5-point scale, how frequently in the past 4 weeks have physical health issues been the primary cause of these symptoms in order to attempt and gauge the contribution of physical sickness to psychological discomfort.

Other method was used to assess psychological distress. The questionnaire asked questions about the respondents' personal information, including their age, gender, family income, faculty type and place of residence, as well as the BSI 18 (Brief Symptom Inventory 18), a tool for detecting psychological distress. A self-report scale called the BSI-18 has been used to measure psychological distress in a variety of populations, including high school and college students and research has demonstrated that it has strong internal consistency. In contrast to its predecessors, the BSI-18 only has three subscales, each with six items: Somatization, depression and anxiety. Each item is scored between 0 and 4, with a higher score indicating more mental health issues (Kessler et al., 2008). SPSS and the chi-square test were used to evaluate the difference in psychological distress and depression and anxiety between males and females.

3. RESULTS

A total of 203 (92.2%) of the 220 students who received the questionnaire answered and filled it out. 203 students made up the final sample after accounting for missing values and deleting skewed questionnaires. 39.9% of these were females. According to the respondents' colleges, there were 78 students (38.4%) from the college of medicine, 51 from the school of Applied Medical Sciences

(25.1%), 40 from the school of Pharmacy (19.7%) and 34 from the school of Nursing (16.7%) (Table 1, Figure 1). In terms of where the students lived, 74 (36.4%) were from urban areas and 129 (63.5%) were from rural ones. Table 2 displays the frequencies and percentages of possible cases of psychological distress, with 17.2% of females and 12.8% of males matching this criterion. In terms of college type, Applied Medical Sciences (15.2%) and Medicine (8.8%) students were found to have the highest rates of psychological discomfort (Figure 2). Compared to students who thought their family's monthly income was "poor" or "good," those who thought it was "very good" reported increased psychological distress. Table 3 displays the average student results on the three BSI-18 subscales, with higher scores indicating worse mental health, despite the fact that K10 ratings significantly varied among colleges (Table 4).

Table 1 Socio-demographic features of the study sample

Features		Male	Female	Total
College	Medicine	45	33	78
	Applied Medical Sciences	33	18	51
	Pharmacy	24	16	40
	Nursing	20	14	34
Residence	Rural	72	57	129
	Urban	50	24	74
Perceived economic condition of the family	Very good	59	47	106
	Good	43	25	68
	Poor	20	9	29

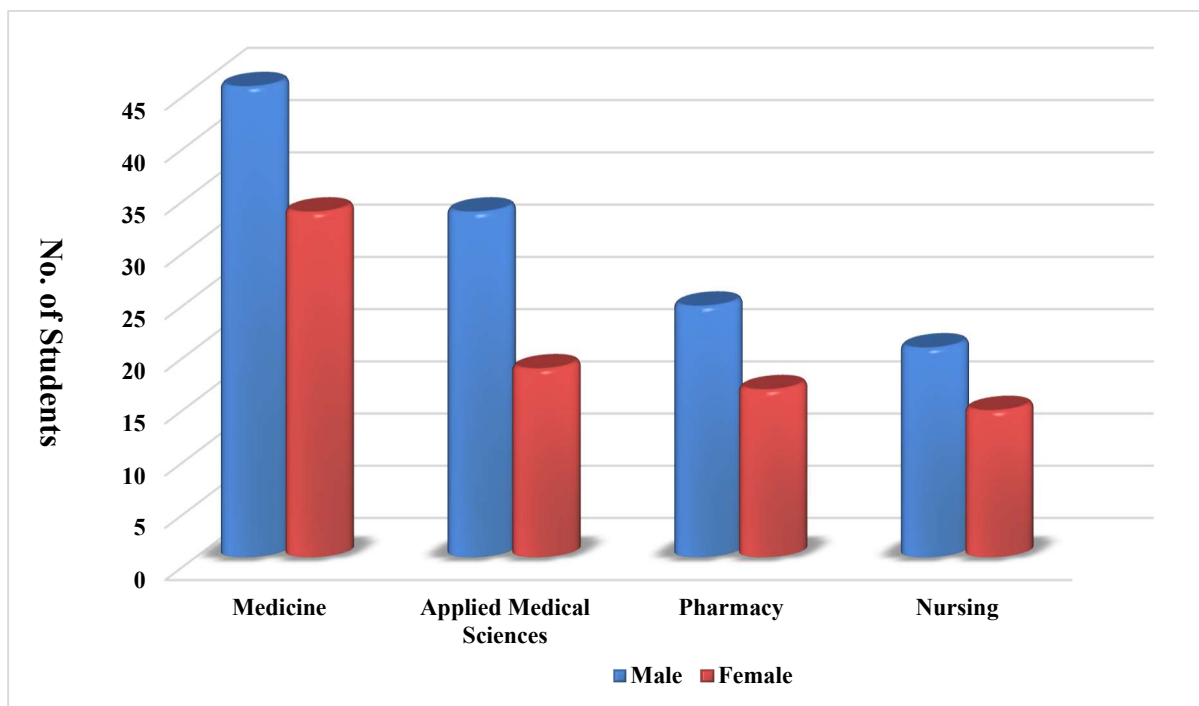


Figure 1 Number and sex distribution in different colleges

Table 2 Basic psychological distress demographics

Features		Psychological distress	Percentage
Gender	Male	26	12.8%
	Female	35	17.2%
College	Medicine	18	8.8%
	Applied Medical Sciences	31	15.2%
	Pharmacy	8	3.9%

	Nursing	4	1.9%
Residence	Rural	39	19.2%
	Urban	22	10.8%
Perceived economic condition of the family	Very good	32	15.7%
	Good	22	10.8%
	Poor	7	3.4%

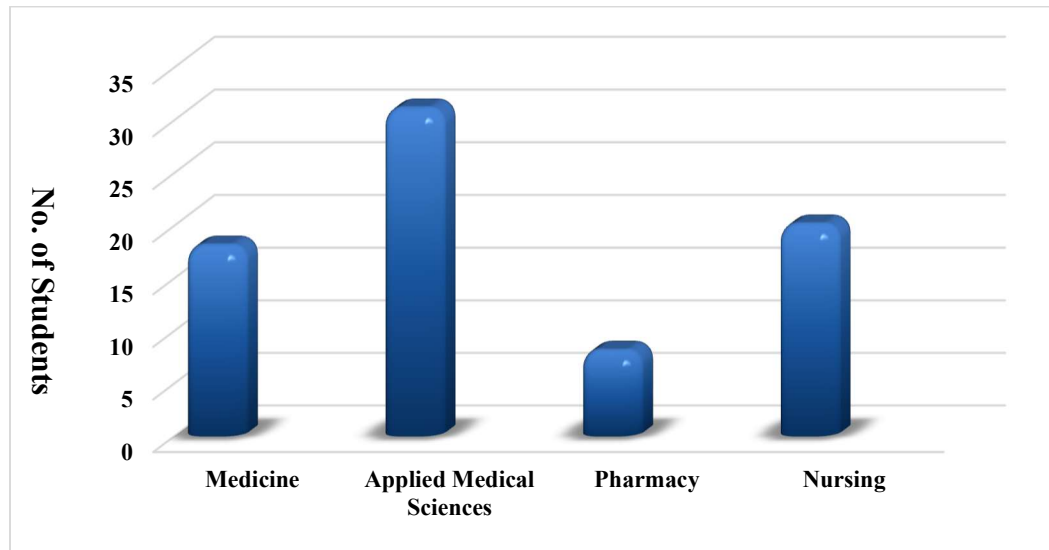


Figure 2 Distribution of cases of psychological distress among various colleges

Table 3 Standard deviations and means of students' scores on Brief Symptom Inventory's 18 subscales by gender

BSI-18 subscales		Males		Females	
		Mean	Standard Deviation	Mean	Standard Deviation
Somatization Disorder (Mean 6.77, SD 5.22)	Feel helpless	2.44	1.98	1.99	1.87
	Retching	1.88	1.54	0.99	1.74
	Numbness	1.97	1.62	0.78	0.76
	Unsteadiness	0.48	0.45	0.76	0.87
Depression (Mean 6.33, SD 5.46)	Feeling sad	1.79	1.78	1.89	1.91
	Not feeling interested in things	1.27	1.54	0.85	1.66
	Loneliness	1.94	1.62	0.38	0.96
	Having low hopes for the future	0.98	0.45	0.74	0.57
	Feeling useless	0.78	0.95	0.94	0.77
Anxiety (Mean 7.44, SD 6.44)	Feeling nervous	1.59	1.87	1.32	1.34
	Agitation	1.29	1.55	0.89	1.43
	Feeling afraid	1.94	1.68	0.75	0.87
	Panic attacks	0.95	0.39	0.79	0.76
	For no reason suddenly afraid	0.89	0.86	0.59	0.54
	Feeling uncomfortable	0.77	0.39	0.49	0.96

Table 4 K10 questionnaire of 202 participants

Questions	Score less than 24	Score more than 24	Percentage of people score more than 24
How many times did you feel tired in the last month?	103	99	49.0
How many times did you feel nervous in the last month?	112	90	44.6
How many times did you feel nervous that is hard for you to calm down in the last month?	124	78	38.6
How many times did you feel hopeless in the last month?	135	67	33.2
How many times did you feel restless or fidgety in the last month?	109	93	46
How many times did you feel restless that you could not sit still in the last month?	138	64	31.7
How many times did you feel depressed in the last month?	117	85	42.1
How many times did you feel that everything was an effort in the last month?	114	88	43.6
How many times did you feel sad that nothing could make you happy in the last month?	126	76	37.6
How many times did you feel worthless in the last month?	141	61	30.2

4. DISCUSSION

Students have significant rates of psychological distress during their undergraduate studies, which can be sensitive and demanding for them (Eskin et al., 2016). Psychological distress has mostly only been examined among medical students in Saudi Arabia, where the frequency of mental distress is already high due to the demanding nature of medical education. About 30% of the undergraduate participants in the current study, which included students from PSA University's four colleges, reported experiencing psychological distress. This result is consistent with findings from earlier research from the United States (Firth, 1986) and Spain (Sender et al., 2004). The percentage, however, was higher than that recorded in Australia (Stallman, 2008) and lower than that reported in Singapore (Zaid et al., 2007). The use of different measurement tools and their cutoff scores, as well as culturally variations and changes in how self-evaluation, social self-confidence and adaptive behavioral patterns are understood, may both contribute to these discrepancies in the prevalence of mental health problems.

Numerous studies compared medical students to non-medical students and assessed the prevalence of depression and anxiety. According to a meta-analysis, there was no appreciable difference in the depression rates of medical students and non-medical students (Puthran et al., 2016). In contrast, a Portuguese study found that medical students had much higher rates of anxiety symptoms than non-medical students (De-Sousa et al., 2018). According to a narrative review study, depression is more common among students from Middle Eastern nations. These illnesses affect women more frequently than they do men (Mirza et al., 2021).

The connections between increased psychological distress and time demands among university students require further study. However, research has shown that persistent stress and unresolved emotional issues are linked to a number of detrimental side effects, such as the emergence of adult depression and behavioral disorders. According to Dahlin et al., (2005), 2.7% of students had previously attempted suicide and 5.4% of medical students at a Swedish institution had suicidal thoughts in the year preceding the survey. Common coping mechanisms for stress and emotional disturbances have been shown to be beneficial, including talking to family and friends for support, exercising and engaging in spiritual and social activities. Another element linked to psychological stress was discovered to be academic factors. Two times as many students as their peers experienced mental distress when their grade was lower than expected. The current study, however, did not investigate the relationship between mental health and academic achievement.

5. CONCLUSION

According to this questionnaire, around 30% of PSAU University's medical students experience psychological distress. This study emphasizes the necessity for serious efforts on the part of university officials and health care specialists to establish appropriate support services for students in this group. Therefore, it is advised that decision-makers, college administrators, non-governmental organizations, parents, students and other concerned entities give mental suffering the attention it deserves and take appropriate corrective action.

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Authors' Contributions

All authors contributed to the research and/or preparation of the manuscript. Ali Hassan A Ali and Abdullah J Alsomali participated in the study design and wrote the first draft of the manuscript. Ahmad S Alonazi and Ameer S Alsaad collected and processed the samples. Meshary A Alhashemy and Abdulaziz S Al-Altheeb (<https://orcid.org/0000-0003-1781-5161>) participated in the study design and performed the statistical analyses. All of the authors read and approved the final manuscript.

Ethics Approval

All series of steps that were implemented in this study that included animal models were in compliance with Ethics Committee of Prince Sattam Bin Abdulaziz University Institutional Review Board (SCBR-048-2023).

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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