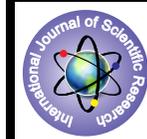


## High Prevalence of Stress Among Male Medical Students in Al Hasa, Saudi Arabia According to Kessler Psychological Distress Scale (K10)



### Medical Science

**KEYWORDS :** Kessler Psychological Distress Scale, K10, Medical Students, Saudi Arabia

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### ABSTRACT

*This cross-sectional, descriptive, study aims to determine the level of stress among male undergraduate medical students. It was conducted in King Faisal university in Al-Hasa, Saudi Arabia from December 2015 to March*

*2016. Kessler Psychological Distress Scale (K10) was applied in this study. After taking the proper approval, a self-administered questionnaire was distributed to medical students from 2nd to 6th year. 200 student filled the questionnaire. The average stress score was found to be 24.62 (SD=7.72) from a range of 10 to 50. The total number of students suffering from stress was found to be 134 (67%). The majority of students were found to have severe stress (38%) with a significant relationship between stress and academic year (P=0.003). Students of 2nd and 4rd years scored higher than those of 3th,5th, and 6th. According to Kessler K10 Psychological distress scale.*

*The major finding of severe stress among male medical students in Saudi Arabia is of concern. Stress management programs should be properly established to help medical student overcome their academic-related difficulties.*

### Introduction

Among all other professions, health care professionals have a high prevalence of physiological distress (1). The reasons behind that may include the fact that they face critical situations, they need to deal with multiple responsibilities, and the nature of their work pressure (1). Medical students are not far from the equation. In fact, a large study of nearly one thousand medical students showed that more than half suffer from stress (2). Stress is defined as the body's non-specific response to demands made upon it, or to disturbing events in the environment. It is not just a stimulus or a response but rather, it is a process by which we perceive and cope with environmental threats and challenges (3) (4). Medical school is known to be stressful, whether the source of such stress is academic, social, or personal, it needs to be properly addressed to avoid negative effects on academic learning. Our study aims to determine the prevalence of stress among male medical students in King Faisal university in Al-Hasa, Saudi Arabia.

### Methods

This cross-sectional study was conducted from December 2015 to March 2016. A self-administered, English version of Kessler Psychological Distress Scale (K10) was used, instructions were clearly given as how to fill the questionnaire. The total number of medical student is 650, out of them 220 samples were collected. 20 were excluded as they were incompletely filled, leaving 200 as the final sample size. Medical students from 2<sup>nd</sup> to 6<sup>th</sup> year were included in this study. Of the 200 students, 48 students (24%) were in second year, 27 (14%) were in third year, 67 (33%) were in fourth year, 40 (20%) were in fifth year, and only 18 (9%) were in sixth year.

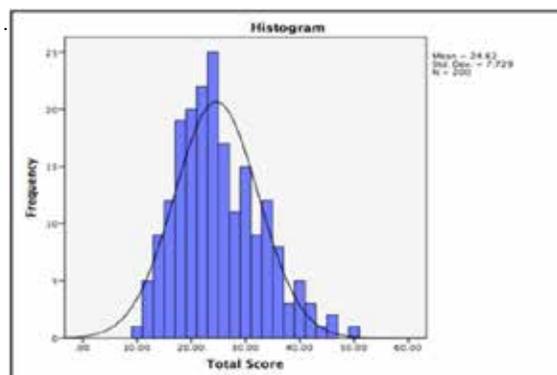
Kessler Psychological Distress Scale (K10) is composed of 10 questions, each with a 5-point score. The lowest possible score is 10 and the highest possible score is 50. Kessler score under 20 does not indicate measurable

stress, 20-24 indicates mild stress, 25-29 indicates moderate stress, and 30-50 indicates severe form of stress.

Data analysis was carried out using SPSS 21.0 (SPSS Inc, Chicago, IL, U.S.A.)

### Results

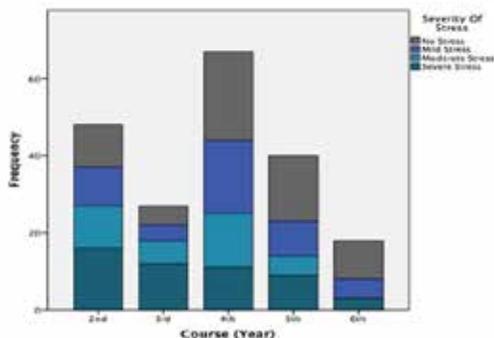
Out of 200 students, 70% (141) are living in Al-Hasa, 8% (16) reported family issues, 69.5% (139) are interested in medicine, and only 2.5% (5) are married. The average stress score of Kessler's scale was 24.62 (SD=7.72) from a range of 10 to 50 (Fig 1). The total number of students suffering from stress was 134 (67%) The majority of students were experiencing severe stress, 51 (38%), followed by 47(35%) and 36 (26.8%) as mild and moderate stress, respectively. There was a significant relationship between stress and academic year (P=0.003)(table1). According to our result, 2<sup>nd</sup> and 4<sup>th</sup> medical years are reported to be the most stressful by students(Fig2)



**Figure 1: Stress score distribution of subjects from a range of 10 to 50, Al Hasa, Saudi Arabia (n=200) Mean= 24.62 (SD=7.7)**

Year	Mild	Moderate	Severe	Total	P value
2nd Year	10	11	16	48	0.003
3rd Year	4	6	12	27	
4th Year	19	14	11	67	
5th Year	9	5	9	40	
6th Year	5	0	3	18	
	47	36	51	200	

**Table1: Severity of stress based on K10 showing dominance in severe stress. Also a significant P value with mild downhill relationship between stress and academic year can be seen . Al Hasa, Saudi Arabia (n=200)**



**Figure 2: Distribution of stress severity according to academic year showing higher stress scores in 2<sup>nd</sup> and 4<sup>th</sup> years. Al Hasa, Saudi Arabia (n=200)**

**Discussion**

This study was carried out on 200 subjects from 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> year. Overall prevalence of stress was 67% and was higher in initiative and clinical years. 38% of students are experiencing severe stress. Our results are higher than similar studies conducted in Malaysia (29.6%) (5), Pakistan (41.7%) (6) and Bangladesh (54%) (7). In Saudi Arabia, a 2011 published study conducted in Riyadh using Kessler’s scale showed comparable results (63%) proving the extension of stress across the country (8). However, another study in Al-Hasa using a self-constructed survey had 53% prevalence of stress (9). The difference between our results and latter could be due to the use of different instruments. One interesting finding in the present study is the increased level of stress in both intuitive and clinical years.

It is known that most medical colleges in Saudi Arabia follow a 6-year curriculum plan, with the first year being preparatory, the real beginning for medical student is 2<sup>nd</sup> year, which may explain why students find it stressful. On the other hand, 4<sup>th</sup> year is the first clinical year in which student start to have hospital rotations, interacting with patients and medical staff. Therefore, clinical exposure for the first time is the most likely cause of their stress in this particular time of their academic learning. However, these are only assumption, we believe that our results can be subjected for further studies in order to determine the cause of stress in intuitive and clinical years.

**Conclusion**

The major finding of severe stress among male medical students in Saudi Arabia is of concern as it may affect their ability to learn which ultimately leads to poor patient care in future generations. Dedicated stress management programs should be established to help student overcome their academic-related difficulties. Well-designed orientation programs for students of intuitive years and those about to enroll in clinical practice should also be an angle of focus.

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