



Journal Homepage: -www.journalijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI:10.21474/IJAR01/6999
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/6999>



RESEARCH ARTICLE

STRESS AND IT IS IMPACT AMONG MEDICAL STUDENTS IN HAIL UNIVERSITY.KSA.

**Fatimah Farhan Khaleef Alkhmshee, Haifa Saud Albrahim, Meral Fayeز Nasser Albishi, Rahaf Turki
 Saliman Aldhaban and Abeer Elhaj.**

4th year students and Department of family and community medicine (College of Medicine, Hail University).

Manuscript Info

Manuscript History

Received: 19 February 2018
 Final Accepted: 21 March 2018
 Published: April 2018

Abstract

Background: Medical education is perceived as being stressful, and a high level of stress may have a negative effect on cognitive functioning and learning of students in a medical school. This study was conducted to assess the perceived stress among medical undergraduate students and find an association of perceived stress with academic characteristics and various stressors. A cross-sectional study was conducted among medical undergraduate students in colleges of medicine, dentistry and pharmacology in Hail University, KSA. A total of 312 medical students from 2nd year to 6th year in the 3 colleges were invited to participate in the study. Self-administered questionnaire was used to collect data regarding sociodemographic profile, perceived stress, academic, psychosocial and environmental stressors and spss was used to analyze the data. The study found that, 95.5% of participants were suffering from stress during their academic year. Vastness of academic curriculum and fear of poor performance in examination were important determinants of perceived stress. The perceived stress was higher among higher age group and final year medical students. Academic, psychosocial, and environmental stressors are associated with perceived stress. Reframing the academic curriculum and examination patterns, incorporating recreational activities in the institution is needed.

Copy Right, IJAR, 2018,. All rights reserved.

Introduction:-

Stress and its effects are inherent in human life and are a major source of concern in the modern day society. Stress in individuals is defined as anything that disrupts the normal person's physical or mental wellbeing. It arises due to the inability of an individual to meet the demands made on him. A mild form of stress may manifest as a bad mood while an extreme one may lead to an act of violence, burnout or suicide. (1) Medical education is perceived as being stressful, as it is characterized by many psychological changes in students. Studies have shown that medical students experience a high level of stress during their undergraduate course. High level of stress may have a negative effect on cognitive functioning and learning of students in the medical school. In many medical schools, the environment itself is an all prevailing pressure situation, providing an authoritarian and rigid system, one that encourages competition rather than cooperation between learners .It is not just the undergraduate study period which brings stress but it may continue during the internship, postgraduate study period, and later into physician's practical life. The stress may also reach burnout levels. (2) A student's life is subjected to different kinds of stressors, such as the

Corresponding Author:- Fatimah Farhan Khaleef Alkhmshee.

Address:- 4th year students and Department of family and community medicine (College of Medicine, Hail University).

pressure of academics with an obligation of success, uncertain future and difficulties envisaged for integration into the system. These students face social, emotional, physical, and family problems, which may affect their learning ability and academic performance. It is noteworthy that stress on medical students need to be recognized, and strategies developed to improve it should be focused on both individual and situational factors. (3) Poor academic performance and poor attendance is often indicative of difficulties in adjusting to new environment. On one hand, studies have reported that stress can be inversely related to academic performance, on the other hand, studies failed to detect an association between stress and academic performance. Interestingly, perceived stress and coping may be influenced by stress as well. (4) The present study was, therefore, carried out to determine the prevalence of self-perceived stress among medical students and to observe any possible association between the levels of stress and medical education process. (5)

Methods and Materials:-

Study design:-

This is a cross sectional study of medical students stress and its impact that was carried out to cover the prevalence and factors of it in Hail, KSA in the period between October 2017 and April 2018.

Study strategies:-

A standardized questionnaire was distributed to all students of medicine, dentistry and pharmacology colleges.

Study sampling:-

A total of 312 medical students from faculty of medicine, dentistry and pharmacology participated in this study.

Data collection:-

Data was collected by using standardized questionnaire via email and hard copies.

Analysis of data:-

Data was analyzed using Statistical Package for Social Sciences (SPSS) program.

Ethical consideration:-

Informed Consent was addressed during this study

Results:-

Regarding participant profile, the study finding showed that 59% from participants were from Medicine College, 22.1% from dentistry, and 18.9% from Pharmacology College. It observed that most of students were single (98.1%), and only 1.9% were married. Most of respondents were females (81.7%), with 18.3% for males. lastly, residency of students were mostly at home (83.3%), and only 16.7% in a hostel. (Table 1)

Table1:-Participants profile

Parameter		Count	%
College	Medicine	184	59.0%
	Dentistry	69	22.1%
	Pharmacology	59	18.9%
Marital status	Single	306	98.1%
	Married	6	1.9%
Gender	Male	57	18.3%
	Female	255	81.7%
Residence	At home	260	83.3%
	In a hostel	52	16.7%

The study found that, 95.5% of participants were suffer from stress during their academic year. Level of stress was classified into 3 categories, where highest percentage for sever level with 45.3%, 42.3% for moderate, and only 12.4% for mild level. The most important factor that affecting student's outcome was academic factor with 65.8%, next factor was psychological factor with 24.4%, and only 6.4% factor related to family issues and 3.4% for social reasons.

Participants expressed their actions to relieve stress via some activities, where sleep was highest percentage with 33.4%, communication with others (19.8%), meditation (13%), shopping (11.9%), exercise (10.6%). Other minor activities such eating, crying, TV, Movies, games, Music, Drawing, Dancing, Time management, and never go out were used to relieve stress. (Table 2)

Table 2:-Stress characteristics profile among medical students

Parameter		Count	%
Do you suffer from any stress during your academic year?	Yes	298	95.5%
	No	14	4.5%
If yes, what is the level of your stress? (n=298)	Mild	37	12.4%
	Moderate	126	42.3%
	Sever	135	45.3%
What is the most important factor that affects your outcome?	Academic	194	65.8%
	Social	10	3.4%
	Family	19	6.4%
	Psychological	72	24.4%
How can you relieve your stress?	Exercise	31	10.6%
	Communication with others	58	19.8%
	Shopping	35	11.9%
	Meditation	38	13.0%
	Sleeping	98	33.4%
	Eating	5	1.7%
	Crying	5	1.7%
	TV, Movies, and Games	5	1.7%
	Music, Drawing and Dancing	6	2.0%
	Time management	4	1.4%
	Never go out	8	2.7%

Regarding factors that cause stress, students perceived agreement that academic factors are causing stress, as compressed studding, and high expectation from teachers or self. However, they tend to disagree in regards to learning skills difficulty as one factor that causing them stress.

Less agreement perceived regards competitive and complicated environment as social factor that cause stress. On the other hand, 70.5% from students disagreed in regards lack of support as family factor that cause stress, while they tend to agree that high expectation from parents was one of the family factor that cause them stress.

Lastly, feeling not confident about self, feeling lonely, and anxious and having no one to turn to and understand are psychological factors that causing stress for 51%, 46.8%, and only 39.5% from participants, respectively. (Table 3)

Table 3:-Sources of stress Factors

Dimension	Parameter	Cause stress			
		Agree		Disagree	
		Count	%	Count	%
Academic factors	Compressed studding	282	95.6%	13	4.4%
	High expectation from teachers or self	234	79.9%	59	20.1%
	Learning skills difficulty (Computer, Language)	126	42.7%	169	57.3%
Social factors	Competitive environment	164	55.6%	131	44.4%
	Complicated environment	161	54.6%	134	45.4%
Family factors	Lack of support	87	29.5%	208	70.5%
	High expectation from parents	166	56.3%	129	43.7%
Psychological factors	Feeling not confident about yourself	150	51.0%	144	49.0%
	Feeling lonely	138	46.8%	157	53.2%
	Anxious and having no one to turn to and understand	116	39.5%	178	60.5%

The study found out there no relationship between college and prevalence of stress during academic year, (P-value more than 0.05), as all medical line study cause stress. (Table 4)

Table 4:-Relationship Between College And If Suffer From Any Stress During Academic Year Or Not

College		Do you suffer from any stress during your academic year?		Total	P-value
		Yes	No		
Medicine	Count	173	11	184	.296
	% within suffer from any stress	58.1%	78.6%	59.0%	
Dentistry	Count	67	2	69	
	% within suffer from any stress	22.5%	14.3%	22.1%	
Pharmacology	Count	58	1	59	
	% within suffer from any stress	19.5%	7.1%	18.9%	

Regarding relationship between college and level of stress, table 5 showed that there is a relationship between them (P-value less than 0.05), where medicine students were higher than other students in other colleges affecting on stress, with 81.1% from who have mild stress were from medicine college, 66.7% from who have moderate stress were from medicine college, and finally 43.7% from who have sever stress were from medicine college also.

Table 5:-relationship between college and level of stress

College		If yes, what is the level of your stress?			Total	P-value
		Mild	Moderate	Sever		
Medicine	Count	30	84	59	173	.000
	% within level of your stress?	81.1%	66.7%	43.7%	58.1%	
Dentistry	Count	3	25	39	67	
	% within level of your stress?	8.1%	19.8%	28.9%	22.5%	
Pharmacology	Count	4	17	37	58	
	% within level of your stress?	10.8%	13.5%	27.4%	19.5%	

The study showed that there is no relationship between college and most important factor that affects outcome (P-value more than 0.05). (Table 6)

Table 6:-Relationship between College and most important factor that affects outcome

College		What is the most important factor that affects your outcome?				Total	P-value
		Acad.	Social	Family	Psycho		
Medicine	Count	106	7	15	43	171	.127
	% within factor affects outcome	54.6%	70.0%	78.9%	59.7%	58.0%	
Dentistry	Count	42	1	4	19	66	
	% within factor affects outcome	21.6%	10.0%	21.1%	26.4%	22.4%	
Pharmacology	Count	46	2	0	10	58	
	% within factor affects outcome	23.7%	20.0%	0.0%	13.9%	19.7%	

Discussion:-

The elite college students are the national capital in the academic field. In accordance with the findings of the present study, the prevalence of stress in this study was (81.7%) among female students and (18.3%) among male students. In comparison to Jazan study, stress was (76.9%) for females and (63.7%) for males. Also in Tikrit University study stress was higher among female students (69.9%) than their counterpart males (42.9%). (6) The overall prevalence of stress in the this study was (95.5%) which is almost similar to Aga Khan University study (>90%)(6), but higher than king Saud university study (63.7%)(1), and jazan university study (71.9%)(7).

The Level of the stress was classified into 3 categories, where the highest percentage is for the severe level with 45.3%, 42.3% for moderate, and only 12.4% for mild.

This is different than Tikrit study, where the highest percentage is for the mild level 30%, 14.4% for moderate, and only 12.8% for the severe level.(8) this is maybe due to individual's variations.

An interesting finding of the present study was that the level of stress decreased as the 5th year is reached. This is different than Tikrit study where the severity was more in fifth and sixth stages (16.7% suffered from severe stress).(8)

The most important factor that is affecting students outcome was the academic factor with 65.8%, then the psychological factor with 24.4%, and only 6.4% for the factor that is related to family issues and 3.4% for social reasons. This is almost similar to Tikrit study which shows that the main source of stress among medical students is due to academic factors. Exams account for (73%) followed by the load of study (49.5%), and the lowest rate was the family problems. (8)

Participants expressed their actions to relieve stress via different activities, sleep was the highest one with (33.4%), communication with others (19.8%), meditation (13%), shopping (11.9%), exercise (10.6%). Other minor activities are eating, crying, tv, movies, playing games, listening to music, drawing, dancing, time management. This is different than Tikrit study which shows that students prefer spending time with friends as the main coping strategy (43.9%) followed by sleeping (43.3%) (8).

Results in table 3 observed the detailed factors that cause stress. Students perceived agreement that the academic factors are really causing stress as compressed studding, and high expectation from teachers or self. However, they tend to disagree regarding the learning skills difficulties as one of the factors. This is different than Umm Alqura University study which shows that English language skills were rated as the second greatest factor facing them. (mean rank 3.95). (9)

Not highly agreement perceived regarding to competitive and complicated environment as a social factor that causes them to stress. In a compression to Umm Alqura University study the majority of the students considered peer competition to be the greatest difficulty facing them in the first year . (9)

On the other hand, 70.5% from students disagreed in regards lack of support as family factor that cause stress. While they tend to agree that high expectation from parents was one of the family factors that cause them stress. This is almost similar to Nepal study which shows that high parental expectations was the second most common source of stress to the students. (10)

Conclusion:-

In conclusion the results of this study are suggestive as to the necessary components of a stress management program specific to the needs of college students. Regarding the detrimental effects of stress on health and academic performance, college administrators should consider incorporating stress management training in orientation activities. A better approach may be the use of a stress management workshop, specifically geared to the stressors encountered by college students. Certainly, stress in the college setting cannot be eliminated but we can and should do a better job preparing students to manage it.

Recommendation:-

For college administrators.

1. Identify student's stress as soon as possible and provide adequate support.
2. Incorporate career development programs in to formal curricula.
3. Design general curriculum on stress and stress coping strategies.
4. Pay attention to students' stress in learning.

For students:-

1. Make use of family support and release stress-reduced emotions.
2. Effectively manage emotions and develop an optimistic view of life.

3. Get involved with campus activities.

References:-

1. Stewart SM, Lam TH, Betson CL, Wong CM, Wong AM. A prospective analysis of stress and academic performance in the first two years of medical school. *Med Educ.* 1999;33:243–50. [[PubMed](#)]
2. Singh G, Hankins M, Weinman JA. Does medical school cause health anxiety and worry in medical students? *Med Educ.* 2004;38:479–81. [[PubMed](#)]
3. Wilkinsos TJ, Gill DJ, Fitzjohn J, Palmer CL, Mulder RT. The impact on students of adverse experiences during medical school. *Med Teach.* 2006;28:129–35. [[PubMed](#)]
4. Balkishan Sharma, Rajshekhar Wavare, Ajit Deshpande, Richa Nigam and Ramkrishna Chandorkar - A study of academic stress and its effect on vital parameters in final year medical students at SAIMS Medical College, Indore, Madhya Pradesh, *Indmedica*, Vol. 22, No. 3 (2011-07 - 2011-09).
5. Augustine LF, Vazir S, Rao SF, Rao MVV, Laxmaiah A, Nair KM. Perceived stress, life events & coping among higher secondary students of Hyderabad, India: a pilot study. *Indian J Med Res.* 2011 Jul;134:61–8.
6. https://www.researchgate.net/profile/Babar_Shaikh/publication/7888674_Students_Stress_and_Coping_Strategies_A_Case_of_Pakistani_Medical_School/links/02bfe50ff750d1b06c000000.pdf
7. http://gulfmedicaljournal.com/download/Prevalence_of_stress_among_medical_students_in_Jizan_University_Kingdom_of_Saudi_Arabia.pdf
8. Zafarmand AH, Sabour S. Social factors affecting education quality of Iranian medical & dental students. *Oral Health Dent Manag.* 2014; 13: 693–697. [[PubMed](#)]
9. Motlagh Z, Mazloomi-Mahmoodabad S, Momayyezi M. Study of Health-promotion behaviors among university of medical science students. *Tabib-e-Shargh J Zahedan Univ Med Sci Health Serv.* 2011; 13: 29–34.
10. Firth J. Levels and sources in medical students. *BMJ.* 1986;292:1177–80. [[PMC free article](#)] [[PubMed](#)]