RESEARCH ARTICLE

Stress-related conditions among female students in Almaarefa Colleges, Riyadh, Saudi Arabia.

Dr. Mona Mohammed Hassan Ata Al Fadeel MD\(^1\), Aysha Hawsawi\(^2\), Shuaa Alduraibi\(^2\), Mayada Alkhelai\(^2\), Maymouna Altartouri\(^2\), Esra Alhwsawi\(^2\), Lamya Alomar\(^2\), Lama Alomar\(^2\), Alaa Alzahran\(^2\), Amani Almutairi\(^2\) and Sarah Bakhsh\(^2\).

1. Assistant professor, College of Medicine, Almaarefa Colleges for Science & Technology, Riyadh, Saudi Arabia- P.O.Box 71666 Riyadh (Diriyah) 11597.
2. Medical students in Al Maarefa Colleges.

Abstract

Introduction: Stress can play a role in exacerbating the symptoms of a wide variety of disorders and illnesses. Researchers estimate that 75 to 90 percent of all visits to primary care physicians were for complaints and conditions that were, in some way, stress-related.

Objectives: This study aimed to measure the proportion of stress related conditions, and to identify the factors that are related to stress among female students in the different departments of ALMaarefa Colleges

Methodology: Hundred female students were selected by simple random sampling to participate. They represented a variety of health specialties. Data was collected by close ended questionnaire. The data was cleared, coded, entered and analyzed by SPSS(Statistical Package For Social Science).

Results: from the stressful situations that faced the students, the most common was feeling guilty when taking a break and do nothing (91%) and over thinking about future in 80%. Feeling upset or having stomach quivers (77%), hair falls (73%), were the most frequently encountered symptoms related to stress. Stress was aggravated by ”anger about things being out of control” in 83% of cases and “becoming upset when something happens unexpectedly” in 75%. Eighty nine percent of students reported that they found refuge from stress in prayers, or taking a bath in 87%.

Conclusion: In conclusion, more than half of the students reported significant frequencies of being stressed. At the same time, more than half of the samples are suffering from symptoms related to the stress.

Introduction: It is a built-in physiologic response to a threat.\(^{[1]}\) Stress is an intense physical and/or emotional response to a difficult or painful experience. For many people, stress is so common place that it has become a way of life. Stress-related illnesses are physical or mental problems that sometimes seem to be brought on or made worse by stress.\(^{[2]}\) Long-term exposure to stress can lead to serious health problems. Chronic stress disrupts nearly every system in your body.\(^{[3]}\)

Corresponding Author:- Dr. Mona Mohammed Hassan Ata Al Fadeel MD.
Address:- Assistant professor, College of Medicine, Almaarefa Colleges for Science & Technology, Riyadh, Saudi Arabia- P.O.Box 71666 Riyadh (Diriyah) 11597.
Stress can play a role in exacerbating the symptoms of a wide variety of disorders and illnesses. Stress can contribute to the development of headaches or cause headaches to occur more frequently. It may contribute to sleep disorders. For a lot of students eating disorders or disordered eating are associated with stress. Diseases such as irritable bowel syndrome, constipation and diarrhea can also be attributed to stress, and so are acne-like benign skin condition and Muscle spasms.

Researchers estimate that 75 to 90 percent of all visits to primary care physicians were for complaints and conditions that were, in some way, stress-related.

**Objectives:**
1. To describe the common stress related conditions and their presenting symptoms among female students in the different Colleges of ALMaarefa Colleges.
2. To identify the aggravating and relieving factors that are related to stress.

**Methodology:**
It was cross sectional – university based study design. It was conducted in female students, AL-Maarefa College, Riyadh, Saudi Arabia, Including students who were studying in a variety of health specialties: (Medicine, pharmacy, nursing and respiratory care) and computer students and it excluded visitors. 100 students were selected by simple random sampling to participate.

Data was collected by close ended questionnaire. The data was cleared, coded, entered and analyzed by SPSS.

**Results:**
After data collection we realized that 35% of students that participate in this study were in the third year (levels 5-6). Forty nine percent of the sample were medical students. The majority of students participating in the study have good monthly income and 89% were single. Ninety one percent were covered by scholarship.

Of the stressful situations that faced the student, the most common was feeling guilty when taking a break and do nothing (91%). That was followed by over thinking about future in 80%, having no time for many interests or hobbies outside of study in 73%, being preoccupied and overwhelmed by thinking about problems in 68% and not coping with all the things to be done in 61% of respondents. This and less frequent stressful situations are shown in table 1.

Table 2 shows the most frequently encountered symptoms related to stress. These were feeling upset or having stomach quivers (77%), hair falls (73%), difficulty concentrating (66%), trouble remembering things (62%). Other common complaints were insomnia, anorexia or bulimia, bowel problems and headache.

The factors that aggravate stress are shown in table 3. Anger about things being out of control was a factor in 83% of cases. Other factors were becoming upset when something happens unexpectedly (75%) and bottling up of feelings when annoyed (70%). Less frequent factors were criticism of others, anger with family members and taking exams.

Eighty nine percent of students reported that they found refuge from stress in prayers. Taking a bath was the second common factors that relieved stress (87%). The other factors were ranked as follows: crying in 66%, have a massage in 65%, changing place in 61%, and exercise in 56%.

**Discussion:**
In this study, stress manifested in many forms, and was highly prevalent among the respondents. This is supported by a study done at the Center for Disease Control which found that a high percentage of people in a similar aged bracket of 18 and older had experienced adverse health effects from stress (Goode et al., NA). The same proportion of stress related conditions encountered in this study, was reported by researchers at the American Institute of Stress estimate that 75-90 percent of all visits to health-care providers result from stress-related disorders. This supports the result that young group (especially college students) are exposed to higher level of stress. The manifestation of such stress related conditions may be due to social, environmental, life style and emotional problem. A study conducted in Western Maharashtra, India observed a greater prevalence of environmental and social factors which were identified as stressors. This high occurrence of stress related conditions in this study and other studies among college students could also be attributed inexperience in time management.
As the result showed, most of the participants reported varying proportions of stress related symptoms. A study conducted by the American institute of stress found more or less almost the exact signs and symptoms of stress reported in this study \cite{14}. This suggests that stress symptoms appear to be a universally prevalent entity in most college students. A study conducted at Jizan University among medical students showed a high prevalence sleeping problem among those exhibiting of stress related conditions \cite{15}. In this study insomnia was reported as one of the symptoms. A study by (Ginsberg, 2006) exhibited a negative relationship between academic stress and length of sleep \cite{16}.

The factors reported to aggravate stress in this study, seem to be different from findings of other research. Few students in this study reported having new responsibilities, financial problems, and roommate conflicts as stressful factors. This is in contrast to a study done on 100 students at Midsized Midwestern University where the major stressful factors were having new responsibilities, financial problems, and roommate conflicts \cite{17}. Chulalongkorn University in Vietnam reported the most common cause of stress were relationship difficulties as “finding new friends” and financial problems \cite{18}. This may be related to several factors first community traditions, cultural differences and different personality perception.

All people use coping strategies to keep stress under control. In this study the religious part was taking more interest as relieving factor like praying. For many people spirituality and religious activity have been a source of comfort and relief from stress. In fact, according to a study from the University of Florida in Gainesville and Wayne State University in Detroit, adults use prayer more than any other alternative therapy for health; the majority of study participants use prayer specifically to cope with stress. \cite{19} Opposite to that according to Washington university \cite{20}, the relieving factors that help in facing stressful was being around friends, taking a deep breath, sleeping, sports and eating healthy food. This may be due to different faiths and religions priorities in life. Taking massage as a stress reliever was reported by Eisenberg \cite{21} and Meeks. \cite{22} as early as1993. It was also a strong option in this study.

![Figure 1. Common stress relieving factors reported by the study population.](image-url)
### Table 1: Common stress related conditions among the study population.

| Stress related conditions                                      | Yes  | No  |
|---------------------------------------------------------------|------|-----|
| Feeling guilty when taking a break and do nothing             | 91   | 9   |
| Over thinking about future                                    | 83   | 17  |
| Having no time for many interests / hobbies outside of study   | 73   | 27  |
| Preoccupied and overwhelmed by thinking about problems        | 68   | 32  |
| Not able to cope with all the things to be done               | 61   | 39  |
| Unable to control the important things in life                 | 52   | 47  |
| Having a hard time to feel really relaxed                     | 49   | 51  |
| Illness or loss one of family members                         | 27   | 73  |
| Family social problems                                        | 19   | 81  |
| Relationship difficulties                                     | 17   | 83  |

### Table 2: Common stress related symptoms among the study population.

| Symptoms                                      | No  | Yes |
|-----------------------------------------------|-----|-----|
| Feeling upset and stomach quivers             | 77  | 23  |
| Hair falls                                    | 73  | 27  |
| Difficulty concentrating                      | 66  | 34  |
| Trouble remembering things                    | 62  | 38  |
| Sleep difficulties                            | 62  | 38  |
| anorexia or bulimia                           | 59  | 41  |
| Bowels problems(constipation, diarrhea)        | 59  | 41  |
| Episodes of headache                          | 52  | 46  |
| Tension or muscle spasms                      | 51  | 49  |
| Skin problem like:(acne or rashes)            | 50  | 50  |

### Table 3: Common stress aggravating factors reported by the study population.

| Aggravating factors                            | Yes  | No  | Missing data |
|-----------------------------------------------|------|-----|--------------|
| Angry of things that were outside control      | 83   | 16  | 1            |
| Upset when something happens unexpectedly      | 75   | 25  | -            |
| Bottling up your feelings if something or someone really annoys you | 70   | 30  | -            |
| Sensitive to the criticism of others           | 37   | 61  | 2            |
| Angry with family members                      | 36   | 64  | -            |
| Taking a lot of exams                          | 33   | 66  | -            |

### Conclusion:
In conclusion, more than half of the students reported significant frequencies of being stressed. At the same time, more than half of the samples are suffering from symptoms related to the stress. Feeling upset and having stomach quivers. Anger about losing control of things, becoming upset when something happens unexpectedly and bottling up of feelings when annoyed were the important factors aggravating stress. Most of the students resort to prayers and taking a bath as the most common actions that relieve stress.

### Recommendations:
Further studies are necessary to improve knowledge and awareness about the specific factors that students reported as sources and outlets of stress. Studies into the predictors of stress related conditions are needed so that interventions can be targeted. It is important for educational institutions to provide various stress management awareness programs and skills trainings to cope with stress.
References:
1. RM Griffin .10 Health Problems Related to Stress That You Can Fix, Web MD , 2010.
2. Jeanne Segal, Ph.D., Melinda Smith, M.A., Robert Segal, M.A., and Lawrence Robinson . Stress Symptoms, Signs, and Causes http://www.helphguide.org/
3. Davidson JR, Crawford C. stress related diseases. University of Maryland Medical Center. 2013.
4. Mark H. Pollack, MD and /etal” Sleep Disorders”, Anxiety And Depression Association of America, 2010-2014.
5. Alexander.R' 'Illnesses Caused by Stress'. February 20, 2014
6. Davidson JR, Crawford C. stress related diseases,University of Maryland Medical Center. [December 12, 2013].
7. LeylaMuedin MS, RD, CDN. Skin disorders, drhoffman,January, 2014.
8. Stöppler, MC. Stress.medicinenet.com. 2004.
9. Harvey, A.G.and /etal .Acute Stress Disorder. 31 August 2000.
10. Alexander.R’'Illnesses Caused by Stress”. 2014.
11. Mary -Jo DelVecchio Good, Byron J. Good, Alberta J. Nasi . Patient requests in primary health care settings: Development and validation of a research instrument . Journal of Behavioral Medicine June 1983, Volume 6, Issue 2, pp 151-168
12. Kiev, Ari. Managing stress to achieve success. Executive Health, p. 1-4.(1987, October).
13. Behere SP1, Yadav R, Behere PB. A comparative study of stress among students of medicine, engineering, and nursing. Indian J Psychol Med. 2011 Jul;33(2):145-8
14. Pace, C.R., & Stern, G.G. (1958). An approach to the measurement of psychological characteristics of college environments. Journal of Educational Psychology, 49(5): 269-277.
15. Sani M, Mahfouz MS, Bani I, Alsomily AH, Alagi D, Alsomily NY, et al. Prevalence of stress among medical students in Jizan University, Kingdom of Saudi Arabia. Gulf Medical Journal. 2012;1(1):19-25.
16. Misra, R., & McKean, M..College Students’ Academic Stress and Its Relation to Their Anxiety, Time Management, and Leisure Satisfaction.American Journal of Health Studies, 16(1), 41-51,(2001).
17. Ross, Shannon E.; Niebling, Bradley C.; Heckert, Teresa M. Sources of stress among college students . College Student Journal;Jun99, Vol. 33 Issue 2, p312
18. Dinh do. Q . depression and stress among the first year medical students in university of medicine and pharmacy. faculty.mu.edu.sa. 2017.
19. Scott.E , M.S. Spirituality and Mental Health: Benefits of Spirituality,about.com, Updated November 02, 2007.
20. J.Dougherty ,anxiety /stress related disorder. Washington University School of Medicine in St.Louis. reviewed 20th may 2014.
21. Eisenberg, D. M., Kessler, R. C., & Foster, C. (1993). Unconventional medicine in the United States: Prevalence, costs, and patterns of use. New England Journal of Medicine, 328(4), 246-252.
22. Meeks, S. S. Effects of slow stroke back massage on relaxation in hospice clients. IMAGE-Journal of Nursing Scholarship, 25(1), 17-21(1993).