



activities. Emphasizing the role of religion and non-governmental organizations in allying levels of stress and cope with it.

**Keywords: Vulnerability to Stress, Coping, Undergraduate Students**

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## INTRODUCTION

Undergraduate students, like all young adults, need to cope with psychological and psychosocial changes that are pertinent to the development of an autonomous personal life. As well, students must cope with the academic and social demands that they encounter in university studies and in their preparation for professional careers <sup>(1)</sup>. Thus, the period of undergraduate education is a sensitive period in an individual's life span, and this period is regarded by many as important for developing systems and intervention methods that may prevent or reduce mental problems <sup>(2)</sup>. Evidence that suggests that university students are vulnerable to mental health problems has generated increased public concern in Western societies <sup>(3)</sup>. Enrolling university is a positive experience for many students but can be a stressful experience for some. Stress has been defined as 'a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being' <sup>(4)</sup>. College students have to adapt to numerous new situations <sup>(5)</sup> and experience a high level of stress due to examinations, assignments, time pressure and uncertainty <sup>(6)</sup>. While, not all stress can be viewed as negative <sup>(7)</sup>, mental and physical health problems above a certain level can be associated with poorer academic outcomes <sup>(8-9)</sup>. Stress has become an important topic in academic circles. Many scholars in the field of behavioral science have carried out extensive research on stress and its outcomes and concluded that the topic needed more attention <sup>(10)</sup>. Stress in academic institutions can have both positive and

negative consequences if not well managed <sup>(11)</sup>. Challenging stimulus can lead to positive outcomes such as motivation and improved task performance while threatening ones or distress can result in anxiety, depression, social dysfunction and even suicidal intention <sup>(12)</sup>. Stress is the relationship between the person and the environment that is considered by the person as something that outweighs his/her capabilities and resources and is endangering his/her well-being. Stress is a person's physical and psychological reaction to a perceived or actual demand for change <sup>(13)</sup>. The demand itself is called a stressor and the steps people take to resolve or avoid the stressor are referred to as coping <sup>(14)</sup>. As the university student should adjust to changing situations and life in whole, the greater the stress, which is acquired. Stress is a combination of factors that affect each individual differently. In other words, what is stressful to one person may not be so to another, and reactions to stressors vary among different groups of individuals and even among sisters and brothers. This is especially seen among university students, they are young and their behavior and actions are so inconsistent that some of them do not feel stresses at all, while others can be in stressful state almost all the time. Different reasons influence them, including family relations, friendship, financial state, way of life, etc. <sup>(15)</sup>. There are two kinds of stress response: appraisal and coping. Appraisal refers to the responses a student has to everyday situations. Those situations create a number of thoughts. These thoughts fuel a student's emotions (fear,

sadness, happiness, anger, etc.). So, if the thoughts are negative, the emotions will be, too. Neutral thoughts are less likely to provoke a stress response<sup>(16-17)</sup>. Coping refers to the way a person responds to his appraisal. If his appraisal tends to arouse his nervous system, his coping will be affected, sometimes negatively. If he chooses a coping behavior that's not appropriate to the situation, running away from conflict with his roommate, or denying that he is not pre-pared for a test for example, he will ultimately add to his stress. Examples of coping responses include denial, discounting, blaming himself or others, distraction, social strategies<sup>(13)</sup>. In general, action-based coping strategies, for example exercise emotion-based strategies; distraction and social strategies, such as support from friends, family etc. are good coping skills to have<sup>(18-20)</sup>. Apart from the direct active coping strategies there are also the indirect active coping strategies, that university students can adopt in an attempt to reduce their stress by releasing it or engaging in activities known to reduce stress. Those strategies do not, however, attempt to change the source of the stress<sup>(16, 21)</sup>.

## OBJECTIVES

The aims of the study were to 1. Determine the level of vulnerability to stress perceived by students and the sources of stress, 2. Identify strategies do students frequently use to relieve their stress, and 3. Find out the association between study variables and vulnerability to stress.

## METHODOLOGY

**Design:** A cross-sectional, descriptive design.

### Participants and Setting

A purposive "non-probability" sample of 335 undergraduate students who were recruited from six colleges at Bab Al-Mu'aadham region (Arts, Languages, Fine Arts, Medicine, Pharmacy and Nursing).

Approximate numbers of students were selected from these colleges (45 from each of three colleges and 50 from each of the other three colleges). These students were volunteered to participate in this study. Data were collected on one occasion in the end of semester in December 2012 through January 2013. A total of 400 questionnaires were distributed and 360 were returned. Of these 25 were excluded due to incomplete or missed data. Thus 335 questionnaires were analyzed with a response rate of 83.75%. The questionnaires were distributed and collected in a manner by which anonymity was maintained.

### Instruments

Vulnerability to stress was measured using the Vulnerability to Stress Questionnaire, a 20-item questionnaire with a rating scale from 1 (Always) to 5 (Never). One item was separated into two items in order to be most appropriate to our reality. The total score (range 1–105). The less the value of the total scores the excellent resistance to vulnerability to stress. The coping strategies were measured by the Coping Self-Efficacy Scale, version 06-08-10, a 26-item visual analogue scale with a rating from 0-10. The score close to 0 means that the individual cannot do it at all, while the score close to 10 means that the individual is certain can do it. The test–retest reliability (two weeks interval) in college students revealed that the Guttman Split-Half Coefficient was 0.79 and the Cronbach's Alpha was 0.89 which means a satisfactory internal consistency.

### Data Analysis

Data were analyzed by using the statistical package of the social science software version 20. Descriptive statistical measures (frequency, percent, mean, standard deviation, weighted mean and the relative sufficiency (the weighted mean divided by the highest value for the corresponding item), and the inferential statistical measure (linear regression) were used.

**RESULTS****Table (1) Participants' socio-demographic characteristics**

List	Variable	M(SD)	
1	Age	21.92 ± 3.7	
		<b>Number</b>	<b>Percentage</b>
2	Sex Female Male	230 105	68.7 31.3
3	Social Status Single Married	309 26	92.2 7.8
4	Number of brothers and sisters	5.45 ± 2.243	
5	Housing Own Rent Other	301 27 7	89.9 8.1 2.1
6	Residency Urban Suburban Rural	257 70 8	67.7 20.9 2.4
7	College Arts Fine Arts Languages Medicine Nursing Pharmacy	50 50 45 45 50 50	14.92 14.92 13.43 13.43 14.92 13.43
8	Academic Achievement Poor Fair Good Very Good Excellent	45 143 96 35 16	13.4 42.7 28.7 10.4 4.8

Table (1) shows that the mean age of the participants in the study was 21.92 years (SD = 3.7), ranging from 17 to 34 years. Females and males students accounted for 68.7% and 31.3% of the study sample, respectively. The vast majority of them are married (n= 309; 92.2%), and the number of brothers and sisters was ranging from 1-14, mode is 4 (n=62; 18.5%), less than one quarter of them came in the first rank among their brothers and sisters (n=78; 23.3%), followed by a lesser amount who came in the second rank (n= 67; 20.0%). The vast majority of participants lives in owned houses (n= 301; 89.9%), most of them live in urban areas (n= 257; 67.7%), approximate numbers of students were recruited from six colleges (50 students from each college of Arts, Fine Arts, and Nursing, and 45 students from each college of Languages, Medicine and Pharmacy), less than the half of them has fair level of academic achievement (from 60-69) (n= 143; 42.7%).

**Table (2): Levels of vulnerability to stress**

Vulnerability Level	Frequency	Percent
Excellent resistance to vulnerability to stress (0-10)	0	0.0
Little resistance to vulnerability to stress (11-29)	0	0.0
Some vulnerability to stress (30-49)	69	20.6
Serious vulnerability to stress (50-74)	247	73.7
Extreme vulnerability to stress ( 75)	19	5.7
Vulnerability Level according to Sex		M (SD)
Female	60.02 ± 9.57	
Male	54.51 ± 10.25	

Table (2) reveals that about (75%) of study participants has serious vulnerability to stress (n=247; 73.7%). Female students have more vulnerability to stress than male students (M= 60.02, SD= 9.57) (M= 54.51, SD= 10.25) respectively.

**Table (3) Mean, standard deviation, weighted mean and relative sufficiency for vulnerability to stress**

List	Item	M (SD)	Weighted Mean	Relative Sufficiency
1	I eat at least one hot, balanced meal a day	2.26 ± 1.059	49.87	0.40
2	I get 7-8 hours of sleep, at least 4 nights a week	2.44 ± 1.295	54.47	0.51
3	I give and receive affection regularly	3.00 ± 3.189	63.6	0.74
4	I have at least 1 relative within different areas on whom I can rely	3.19 ± 1.484	71.27	0.73
5	I exercise to the point of perspiration at least twice a week	3.72 ± 1.410	83	0.58
6	I smoke less than half a pack of cigarette a day	4.42 ± 1.317	68.67	0.25
7	I drink fewer than 5 alcoholic drinks a week	4.50 ± 1.240	100.4	0.36
8	I am the appropriate weight for my height	2.07 ± 1.193	46.33	0.33
9	I have an income adequate to meet my basic needs	2.34 ± 1.342	51	0.42
10	I get strength from my religious/spiritual beliefs	1.67 ± 1.117	37.2	0.16
11	I regularly attend club	4.24 ± 1.212	95.13	0.44
12	I have a network of friends and acquaintances	2.43 1.214	54.27	0.57
13	I have one friend in whom I can confide about personal matters	1.84 ± 1.287	41.07	0.2
14	I am in a good health (including eyesight, hearing, teeth, etc.)	1.85 ± 1.082	41.27	23.85
15	I am able to speak openly about feelings when angry or worried	2.32 ± 1.265	51.8	0.42
16	I have conversations with housemates about domestic problems	2.18 ± 1.309	48.6	0.32
17	I do something fun at least once a week	2.10 ± 1.284	46.93	0.29
18	I am able to organize my time effectively	2.66 ± 1.170	59.47	0.51
19	I drink fewer than 3 caffeine drinks a day	2.44 ± 1.369	54.4	0.45
20	I take quiet time for myself during the day	3.10 ± 1.300	69.27	0.76
21	I attend regularly the social activities	3.56 ± 1.253	79.4	0.76

Table (3) presents that the most of stressful items were (I take quiet time for myself during the day, I attend regularly the social activities, I give and receive affection regularly, and I have at least 1 relative within different areas on whom I can rely) relative sufficiency

(0.76, 0.76, 0.73) respectively, while the items that give students resistance to vulnerability to stress were {I get strength from my religious/spiritual beliefs, I have at least one friend in whom I can confide about personal matters, I am in a good health (including eyesight, hearing, teeth, etc.), I smoke less than half a pack of cigarette a day, and I do something fun at least once a week} relative sufficiency (0.16, 0.2, 23.85, 0.25, 0.29) respectively.

**Table (4) Mean, standard deviation, weighted mean and relative sufficiency for coping strategies**

List	Item	M (SD)	Weighted Mean	Relative Sufficiency
1	Keep from getting down in the dumps	5.07 ± 2.850	30.9	0.42
2	Talk positively to yourself	6.19 ± 2.764	37.67	0.66
3	Sort out what can be changed, and what cannot be changed	6.53 ± 2.459	39.8	0.64
4	Get emotional support from friends and family	6.91 ± 2.710	42.09	0.65
5	Find solutions to your most difficult problems	6.07 ± 2.571	37.02	0.71
6	Break an upsetting problem down into smaller parts	5.43 ± 2.666	34	0.61
7	Leave options open when things get stressful	5.94 ± 2.830	36.18	0.71
8	Make a plan of action & follow it when confronted with problem	6.15 ± 2.797	37.44	0.73
9	Develop new hobbies or recreations	5.76 ± 3.066	35.24	0.80
10	Take your mind off unpleasant thoughts	5.42 ± 3.171	33.05	0.77
11	Look for something good in a negative situation	6.39 ± 2.917	38.93	0.68
12	Keep from feeling sad	5.39 ± 3.120	32.89	0.75
13	See things from other person's point of view during argument	6.15 ± 2.818	37.47	0.67
14	Try other solutions to your problems if first solutions don't work	6.69 ± 2.513	40.76	0.77
15	Stop yourself from being upset by unpleasant thoughts	5.42 ± 2.829	33.04	0.53
16	Make new friends	6.05 ± 3.169	36.84	0.64
17	Get friends to help you with the things you need	6.48 ± 2.873	39.45	0.69
18	Do something positive for yourself when you feeling discouraged	6.22 ± 2.644	37.95	0.76
19	Make unpleasant thoughts go away	5.70 ± 3.032	35.07	0.69
20	Think about one part of the problem at a time	5.27 ± 2.765	26.8	0.43
21	Visualize a pleasant activity or place	6.76 ± 2.900	42.25	0.59
22	Keep yourself from feeling lonely	6.38 ± 3.021	39.04	0.67
23	Pray or meditate	8.24 ± 2.272	50.18	0.36
24	Get emotional support from community organizations or resources	2.31 ± 2.926	14.07	0.09
25	Stand your ground and fight for what you want	7.69 ± 2.658	46.84	0.40
26	Resist the impulse to act hastily when under pressure	6.05 ± 2.818	36.95	0.57

Table (4) shows that the most of students was used coping strategies as develop new hobbies or recreations, take your mind off unpleasant thoughts, try other solutions to your problems if your first solutions don't work, do something positive for yourself when you are

feeling discouraged, and keep from feeling sad) relative sufficiency (0.80, 0.77, 0.77, 0.76, 0.75) respectively. While, the less used coping strategies as get emotional support from community organizations or resources and pray or meditate, relative sufficiency (0.09, 0.36) respectively.

**Table 5. Association between study variables and vulnerability to stress**

	Standardized Coefficients		df	F	Sig.
	Beta	Bootstrap (1000) Estimate of Std. Error			
Sex	-.225-	.077	1	8.414	.004
Age	-.178-	.125	2	2.007	.136
Social Status	.114	.151	2	.569	.567
Is father alive?	.106	.132	1	.647	.422
Is mother alive?	.072	.090	2	.641	.527
Did you live with?	-.161-	.179	3	.806	.491
Number of brothers and sisters	-.198-	.139	3	2.012	.112
Rank among brothers and sisters	.247	.110	3	5.005	.002
Housing	.048	.064	3	.554	.646
Residency	.041	.092	1	.198	.657
College	.030	.105	1	.084	.773
Class	.068	.118	2	.333	.717
Academic Performance	-.075-	.113	1	.445	.505
Coping Total	-.145-	.072	2	4.033	.019

Table (5) presents that there were highly significant association between rank among brothers and sister, sex, and coping strategies and vulnerability to stress (p-value=.002), (p-value=.004) (p-value=.019) respectively.

## DISCUSSION

The mean age of the participants in the study was 21.92 years (SD = 3.7), ranging from 17 to 34 years. The mean age was greatly approximate to that found by the Serbian study which found that the average age was  $21.9 \pm 2.0$  <sup>(22)</sup>, and higher than that found in an Egyptian study which revealed that students' age ranged from 17-22 years with a mean of  $18.8 \pm 1.2$ . 68 % of Female and male students accounted for 68.7% <sup>(23)</sup>. Few of them came in the first rank among their brothers and sisters. About most of study participants has serious vulnerability to stress (n=247; 73.7%). The level of stress was higher than that found in the Egyptian study which indicated that (40.2%) of

students encounter severe stress (High stress) <sup>(23)</sup>, and Papazisis et al. who reported that about (12.4%) reported very high levels of stress <sup>(24)</sup>. Female students were more vulnerable to stress than male ones. This result is consistent with the Serbian study which revealed that the prevalence of stress was significantly higher in female students than in male students <sup>(22)</sup>. The study findings revealed that the sources of stress were not taking quiet time for students during the day, not attending regularly the social activities, not giving and receiving affection regularly, and not having at least one relative within different areas on whom students can rely) respectively. Such sources of stress were different from that reported by Egyptian study which found

that the most frequently reported stressors were fear of future, self reported anxiety and depression, increased class workload, accommodation problems and congested classrooms <sup>(23)</sup>, and different from that reported by the Irish study which revealed that the most frequently reported stressors were time demands of the course, accommodation, amount of material to be learnt in the course, and personal finance respectively <sup>(25)</sup>. The most used coping strategies were (Develop new hobbies or recreations, Take your mind off unpleasant thoughts, Try other solutions to your problems if your first solutions don't work, Do something positive for yourself when you are feeling discouraged, and Keep from feeling sad) relative sufficiency respectively. Such coping strategies were different from that reported by a study conducted in Hong Kong which demonstrated that most frequently used coping strategies were eating large meals and taking a long sleep, keeping an optimistic and positive attitude in dealing with everything in life, adopting different strategies to solve problems, and avoiding difficulties during clinical practice respectively <sup>(26)</sup>. While, the less used coping strategies were (Get emotional support from community organizations or resources and Pray or meditate) respectively. The study findings revealed that there were highly significant associations between rank among brothers and sister, sex, and coping strategies and vulnerability to stress respectively. This could be attributed that the rank of student, especially the first rank takes upon himself the greatest responsibility in comparison to his smaller brothers and/or sisters, and in turn the increased level of stress. Concerning sex, the female students have more level of vulnerability to stress that could be attributed to that female students may have a smaller social networks of friends to whom they can express their concerns and what make them feel stressed. Finally, the association between coping strategies and

vulnerability to stress, this indicates that coping is a significant factor for the reduction of stress.

## CONCLUSION

Stress disorders are very widespread among university students. In the process of preparing students for their future professions, a great deal is needed than absolute professional skills and necessary knowledge. So, launching support and mentorship is of great importance so that risk factors for stress disorders may be identified and treated at an early stage. Early detection shortens the duration of emotional disorder events and results in less social deterioration in the long run.

## RECOMMENDATIONS

The researcher recommends the following:

1. Initiating university-based programs for stress management that include cognitive behavioral problem-solving and relaxation induction and enable them to regulate their times during the day which in turn help students in performing academic tasks and requirements, besides their activities of daily life and provide them the chance to attend regularly the social activities.
2. Emphasizing the role of religion and non-governmental organizations in allying stress and cope with it.
3. Emphasizing the importance of providing recreation facilities and its access.

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