Academic stress and anxiety among faculty of nursing students

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Abstract: Academic stress and anxiety among nursing students have been researched on, and researchers have identified stressors as too many assignments, competition with other students, failures and lack of pocket money. Nursing students suffer from a great deal of anxiety, which sometimes interferes with both classroom and clinical performance. **Aim:** To explore academic stress and anxiety among the faculty of nursing students at Assiut University and to evaluate correlation between academic stress and anxiety. **Sample:** A systematic random sample (one by one) was selected from the first and fourth grade students. The number of them was 249 students. **Design:** A descriptive correlation design was employed. **Setting:** Faculty of Nursing at Assiut University. **Tools:** A self-report questionnaire included three parts: Socio demographic data, academic stress scale and Hamilton anxiety scale. **Results:** The mean age of students was 19.34 ± 1.54 years. 96.4% of them were single, 66.7% of them were residing in rural areas and from the first grade respectively. It was found that, 53.4%, 45.8%, 43.4%, and 43.0% experienced extreme academic stress related to waiting for results/grades, continuous poor performance, academic workload and feeling of not having enough knowledge for the practical test. Also, 53.6% of students had severe academic stress and 27.7% had moderate academic stress. While, 24.1% had mild to moderate level of anxiety and 24.9% of them had severe to extreme anxiety level. Academic stress was positively and significantly correlated with anxiety (r = 0.415) and (*p* value = 0.000). **Conclusion:** More than half of students have severe academic stress, and more than one quarter have moderate academic stress. Also, a great number of them experienced various anxiety levels which ranged from mild to moderate and severe to extreme levels. Academic stress was positively and significantly correlated with anxiety **Recommendations:** Stress management program is essential to diminish academic stress and anxiety levels among nursing students.
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Key words: Academic stress, anxiety, and faculty of nursing students

1. Introduction:

Stress has become an important topic in academic circle. Academic stress among students has long been researched on, and researchers have identified stressors as too many assignments, competition with other students, failures and lack of pocket money (Fairbrother and Warn, 2003). 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 (Ellison, 2004; Ongori and Agolla, 2008; Agolla, 2009). Stress in academic institutions can have both positive and negative consequences if not well managed (Tweed *et al.,* 2004; Stevenson and Harper, 2006). Academic institutions have different work settings compared to nonacademic and therefore one would expect the difference in symptoms, causes, and consequences of stress in the two set up (Elfering *et al.,* 2005; Chang and Lu, 2007). It is important for the university to maintain well balanced academic environment conducive for better learning, with the focus on the students' personal needs.

Student nurse stress is an area of concern in nursing education. Some students described feeling stressed when performing new skills, while others experienced stress when managing new or complex client situations. All students shared stories regarding stressful interactions with staff nurses, physicians, clients, families, and previous clinical instructors (Lachlan, 2013).

In a qualitative study of 12 nursing students, four major themes emerged from the data: meeting conflicting demands, feeling overworked, feeling unprepared, and seeking support and respect from faculty (Magnussen & Amundson, 2003). Another qualitative study of 11 nursing students found that departure from the program was a result of a cumulative effect of multiple stressors from a variety of sources (Wells, 2007). Quantitative and qualitative studies in several countries have also found that the clinical experience component of a nursing program is a major stressor, citing feelings of inadequacy and insecurity, fear of making mistakes, and a perceived lack of skill and experience in caring for patients (Shipton, 2002, Higginson, 2006 & Gibbons *et al.,* 2008).

Similarly, **(**LeDuc, 2010) reported that, some of the major stressors for nursing students include academic workload, heavy examination schedules, feelings of doubt about nursing as a career choice, feelings of inadequacy and insecurity in the clinical setting, personal inadequacy, and fear of making a mistake. Stress in nursing students does not just have a negative effect on them; ultimately it will have negative effects on the nursing workforce as stress may lead to a shortage of nurses entering clinical practice.

Anxiety is a psychological and physiological state characterized by physical, emotional, cognitive, and behavioral components. It is considered to be a normal response to stress. It may help an individual to cope with the demands of life but in excess it may be considered as anxiety disorder (National Institution of Mental Health, 2008).

Nursing students suffer from a great deal of anxiety, which sometimes interferes with both classroom and clinical performance. Those students who suffer from severe anxiety may experience impaired academic performance, low grades, and in some cases high dropout rates. Nursing programs provide learning experiences in the classroom and through a variety of clinical rotations in hospitals, clinics, and community settings. Clinical experiences have been identified by nursing students as one of the most anxiety-producing components of the nursing program as reported by (Sharif & Armitage, 2004). On the other hand, Afolayan *et al.* (2013) concluded that, students expressed anxiety during examination which is seen as physiological, psychological and behavioral changes and abnormality.

Similarly, Moscaritolo (2009), reported that, clinical experience is a significant learning environment that presents challenges may cause nursing student experience anxiety. It is one of the most anxiety producing components of the nursing program which has been identified by nursing students. Lack of clinical experience, unfamiliar areas, difficult patients, fear of making mistakes and being evaluated by faculty members were expressed by the students as anxiety-producing situations in their initial clinical experience, fear of the hospital environment, and fear of failure as anxiety producing situations.

Preparation for practice entails more than developing skills in the on campus lab. It requires developing an ability to provide safe and effective care to other human beings in various clinical settings. This aspect of developing expertise as a student nurse can be very stressful to nursing students and create anxiety. High levels of anxiety can affect student's learning, performance (Sharif & Armitage, 2004 & Moscaritolo, 2009) and in some cases retention within a nursing program (Moscaritolo, 2009).

The negative impact of anxiety may be reduced when faculty acknowledges anxiety and provide a supportive learning environment for nursing students where mistakes are accepted as a part of the learning process. Educating nursing faculty regarding teaching strategies that decrease anxiety will both promote a positive and safe learning environment for students and build trusting relationships between faculty and students (Purfeerst, 2011).

So, it is important for clinical faculty to reduce student anxiety through support and promote a positive learning environment. More nursing programs would be willing to integrate anxiety reducing interventional strategies into curriculum if nursing research provided evidence-based practice models to improve students' clinical performance, success, and retention (Moscaritolo, 2009).

Aims of study:

1. To explore academic stress and anxiety among the faculty of nursing students at Assiut University.
2. To evaluate the correlation between academic stress and anxiety.

2. Subjects and methods:

Setting:

The study was carried out at the faculty of nursing, Assiut University.

Sample:

A systematic random sample (one by one) was selected from the first and fourth grade students. The number of them was 249 students. Data were collected during the first semester in 2013- 2014.

Tools of study:

A self- report questionnaire included three parts:

The first part included socio demographic data about students as name, age, grade, residence……..etc.

The second part composed of academic stress scale which developed by researchers based on related literature and similar studies. It includes 32 items based on 5 point Likert scale (1= not stressful, 2= mildly stressful, 3= moderately stressful, 4= severely stressful and 5= extremely stressful). The scores are distributed as (1-32= not stressful; 33-64= mildly stressful; 65- 96= moderately stressful; 97- 128= severely stressful; and 129- 160= extremely stressful).

The third part incorporated Arabic version of Hamilton Anxiety Scale (http://www.atlantapsychiatry.com). Classification of symptoms is rated as (0 - absent; 1 - mild; 2 - moderate; 3 - severe; 4 – extreme). The scores of anxiety levels are categorized as: < 17 mild; 18 - 24

mild to moderate; 25 - 30 moderate to severe and more than 30 is considered severe to extreme.

Both academic stress and Hamilton rating scales were tested for validity and reliability. Validity was carried out by jury from 5 experts of psychiatric and other nursing fields. Reliability was tested by using Cronbach alpha; it was 0. 894 for academic stress scale and 0.891 for Hamilton anxiety scale.

Procedure:

- Permission obtained from responsible personnel to carry out the study.
- The purpose and the nature of research explained to students and oral consent was obtained from them.

Pilot Study:

A pilot study was carried out on 30 students from both first and fourth grades to ensure clarity of questionnaire. They were included in the study because there no any modification was done.

Design:

A descriptive correlation design was employed.

Data analysis:

Statistical Package for Social Science (SPSS) version 19 was used to analyze the data. Descriptive statistics were calculated as frequency, percentage, mean, standard deviation. Chi square test and Pearson correlation of coefficients were utilized. Probability (*p*-value) is considered significant at or less than 0.05.

3. Results:

Table (1) reveals that, the age of 46.6% of the students ranged between 17 - 18 years and the mean age was (19.34 ± 1.54) years. The majority of students (96.4%) were singles, 66.7% of them were residing in rural areas and 66.7% were from the first grade.

Academic stress among the studied sample is shown in table (2). It was found that, 30.9%, 29.3% and 28.9% of students reported that they experience moderately stress related to contributing to class discussions, unclarity of the required time for task assessment and the format used to assess theoretical content. In addition, 26.1% and 30.9% experienced severe stress related to studying for exams and lack of time to rest respectively. More over, 53.4%,45.8%, 43.4%,43.0%, 41.8% and 40.2 % experienced extreme stress related to waiting for results/grades, continuous poor performance, academic workload, feeling of not having enough knowledge for the practical exam, feeling insecurity or fear while taking theoretical exams, and fear of making mistakes while assisting patients respectively.

Figure (1) illustrates academic stress levels among the studied sample. It was shown that 53.6% of students have severe academic stress, 27.7% have moderate academic stress. However, 14.9% have extreme academic stress.

Table (3) shows the manifestations of anxiety among the studied sample. It was found that 29.7%, 28.9% and 28.5% experienced mild autonomic symptoms, fears and gastrointestinal symptoms. In addition, 36.1%, 32.5%, 30.5%, and 30.5% of students experienced moderate anxiety manifestations related to anxious mood, behavioral changes at interview, intellectual changes and depressed mood respectively. While 33.7%, 28.5% and 26.5% of them experienced severe tension, anxious and depressed mood respectively.

Anxiety levels among the studied sample are illustrated in figure (2). It was noticed that, 30.5% of students have mild anxiety, 24.1% have mild to moderate level of anxiety and 24.9% of them have severe to extreme anxiety level.

It was found that 59.5% of students whom age ranged between 17- 18 years have severe academic stress. In addition, it was found that 56.6% of the first grade students and 54.2% of those residing in rural areas have severe academic stress. There was a significant relationship between age and academic stress. However, residence and grade were not related to academic stress as clarified in table (4).

Relationship between socio demographic data of the studied sample and levels of anxiety is revealed in table (5). It was noticed that 26, 7% of students whom age ranged between 17- 18 years have severe to extreme anxiety. Also, 26.5% of rural students and 25.9% of the first grade students have severe to extreme anxiety. Socio demographic data were not significantly related to anxiety.

Correlation between academic stress and anxiety of the studied sample is illustrated in figure (3). It was found that academic stress was positively and significantly correlated with anxiety (r = 0.415) and (*p* value = 0.000).

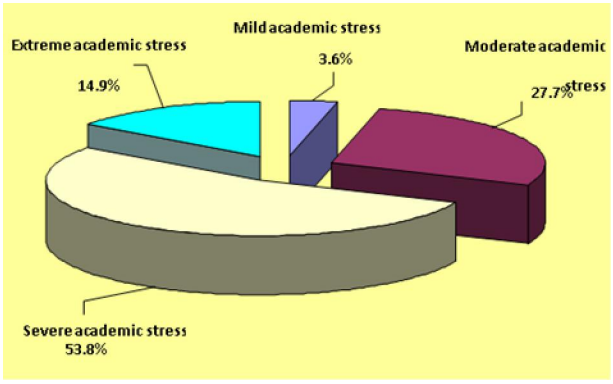

Figure (1): Distribution of the academic stress levels among the studied sample

Table (1): Socio demographic data of the studied sample

Socio demographic data	No. (n= 249)	%
Age:		
17 - 18 years	116	46.6
19 - 20 years	52	20.9
> 20 years	81	32.5
Mean ± SD (Range)	19.34 ± 1.54 (17 – 23)	
Marital status:		
Single	240	96.4
Married	9	3.6
Residence:		
Rural	166	66.7
Urban	83	33.3
Grade:		
First	166	66.7
Fourth	83	33.3

Table (2): Distribution of academic stress among the studied sample

Academic stress items	Not stressful		Mildly stressful		Moderately stressful		Severely stressful		Extremely stressful	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. Contributing to class discussions	62	24.9	55	22.1	77	30.9	36	14.5	19	7.6
2. Writing essays and assignments.	63	25.3	61	24.5	54	21.7	36	14.5	35	14.1
3. Obligation to do extra-class assignments	25	10.0	33	13.3	61	24.5	46	18.5	84	33.7
4. Group-work assignments	85	34.1	55	22.1	47	18.9	29	11.6	33	13.3
5. Not attending lectures.	54	21.7	22	8.8	49	19.7	55	22.1	69	27.7
6. Doing oral presentations.	40	16.1	40	16.1	57	22.9	51	20.5	61	24.5
7. Continuous poor performance.	27	10.8	28	11.2	37	14.9	43	17.3	114	45.8
8. Assessment items which have heavy weightings.	62	24.9	30	12.0	63	25.3	43	17.3	51	20.5
9. Studying for exams.	32	12.9	28	11.2	31	12.4	65	26.1	93	37.3
10. Sitting of exams.	25	10.0	37	14.9	43	17.3	47	18.9	97	39.0
11. The format used to assess theoretical content.	29	11.6	49	19.7	72	28.9	53	21.3	46	18.5
12. Waiting for results/grades.	10	4.0	16	6.4	34	13.7	56	22.5	133	53.4
13. Achieving my academic goals.	45	18.1	35	14.1	52	20.9	50	20.1	67	26.9
14. Expectations from self to do well.	40	16.1	42	16.9	55	22.1	60	24.1	52	20.9
15. Unfair treatment by friends.	36	14.5	45	18.1	57	22.9	46	18.5	65	26.1
16. Conflict with my fellow students.	52	20.9	40	16.1	56	22.5	45	18.1	56	22.5
17. Conflict with my lecturers or instructors.	59	23.7	53	21.3	60	24.1	46	18.5	31	12.4
18. Identification of contradictory attitudes among lecturers and instructors.	40	16.1	63	25.3	60	24.1	51	20.5	35	14.1
19. Expectations from others to do well.	42	16.9	34	13.7	47	18.9	58	23.3	68	27.3
20. Inadequate resources to do assignments.	23	9.2	32	12.9	69	27.7	64	25.7	61	24.5
21. New situations which I face them in clinical practice.	22	8.8	42	16.9	64	25.7	66	26.5	55	22.1
22. Environment at the training clinical unit.	41	16.5	45	18.1	69	27.7	50	20.1	44	17.7
23. Overcrowded lecture halls.	39	15.7	32	12.9	67	26.9	56	22.5	55	22.1
24. Transportation.	29	11.6	32	12.9	35	14.1	56	22.5	97	39.0
1. Fear of making mistakes while assisting patients.	15	6.0	29	11.6	46	18.5	59	23.7	100	40.2
2. Feeling of not having enough knowledge for the practical exams.	14	5.6	22	8.8	39	15.7	67	26.9	107	43.0
3. Feeling insecurity or fear while taking theoretical exams.	15	6.0	23	9.2	46	18.5	61	24.5	104	41.8
4. Low motivation.	32	12.9	25	10.0	54	21.7	64	25.7	74	29.7
5. Unclarity of the required time for task assessment.	25	10.0	28	11.2	73	29.3	67	26.9	56	22.5
6. Lack of time to rest.	16	6.4	32	12.9	51	20.5	77	30.9	73	29.3
7. Lack of time for family and friends.	15	6.0	38	15.3	47	18.9	53	21.3	96	38.6
8. Academic workload.	12	4.8	13	5.2	52	20.9	64	25.7	108	43.4

Table (3): Distribution of anxiety manifestations among the studied sample

Anxiety manifestations	Absent		Mild		Moderate		Severe		Extreme	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. Anxious mood	18	7.2	34	13.7	90	36.1	71	28.5	36	14.5
2. Tension	22	8.8	34	13.7	59	23.7	84	33.7	50	20.1
3. Fears	59	23.7	72	28.9	53	21.3	49	19.7	16	6.4
4. Insomnia	53	21.3	64	25.7	75	30.1	31	12.4	26	10.4
5. Intellectual changes	23	9.2	62	24.9	76	30.5	47	18.9	41	16.5
6. Depressed Mood	27	10.8	54	21.7	76	30.5	66	26.5	26	10.4
7. Somatic complaints-muscular as muscle ache	88	35.3	57	22.9	56	22.5	36	14.5	12	4.8
8. Somatic complaints-sensory as blurred vision	82	32.9	59	23.7	65	26.1	25	10.0	18	7.2
9. Cardiovascular symptoms	60	24.1	65	26.1	67	26.9	39	15.7	18	7.2
10. Respiratory symptoms	100	40.2	59	23.7	51	20.5	29	11.6	10	4.0
11. Gastrointestinal symptoms	70	28.1	71	28.5	53	21.3	35	14.1	20	8.0
12. Genitourinary symptoms	81	32.5	54	21.7	68	27.3	34	13.7	12	4.8
13. Autonomic symptoms	65	26.1	74	29.7	60	24.1	30	12.0	20	8.0
14. Behavior change at interview	38	15.3	51	20.5	81	32.5	48	19.3	31	12.4

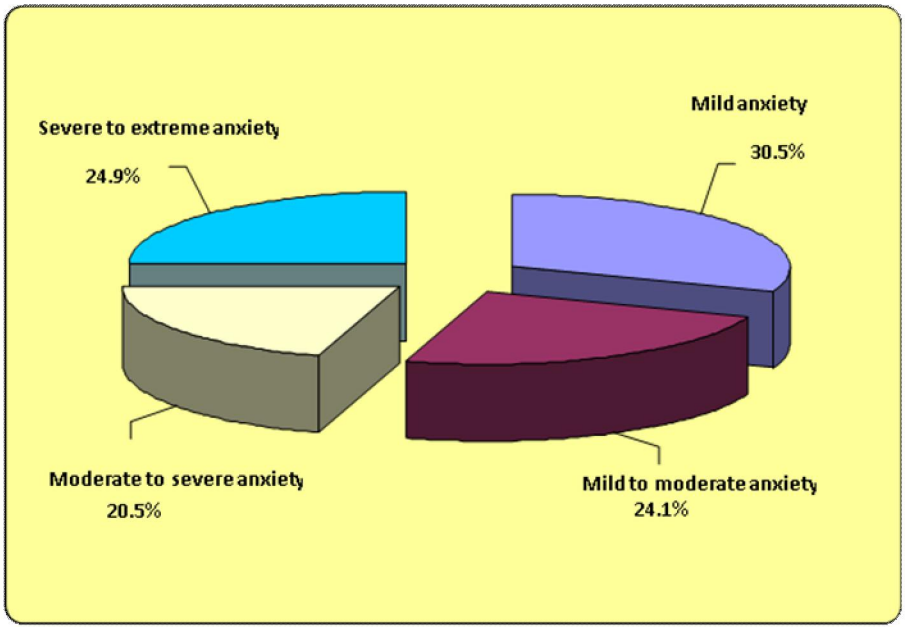

Figure (2): Distribution of the anxiety levels among the studied sample

Table (4): Relation between socio demographic data of the studied sample and academic stress

Socio demographic data	Mild academic stress (n= 9)		Moderate academic stress (n= 69)		Severe academic stress (n= 134)		Extreme academic stress (n= 37)		*P*-value
	No.	%	No.	%	No.	%	No.	%	
Age:									
17 - 18 years	3	2.6	29	25.0	69	59.5	15	12.9	0.045*
19 - 20 years	4	7.7	18	34.6	27	51.9	3	5.8	
> 20 years	2	2.5	22	27.2	38	46.9	19	23.5	
Residence:									
Rural	4	2.4	46	27.7	90	54.2	26	15.7	0.526
Urban	5	6.0	23	27.7	44	53.0	11	13.3	
Grade:									
First grade	7	4.2	47	28.3	94	56.6	18	10.8	0.082
Fourth grade	2	2.4	22	26.5	40	48.2	19	22.9	

Chi-square test * Statistical significant difference (P < 0.05)

Table (5): Relation between socio demographic data of the studied sample and levels of anxiety

Socio demographic data	Levels of anxiety								*P*-value
	Mild (n= 76)		Mild to moderate (n= 60)		Moderate to severe (n= 51)		Severe to extreme (n= 62)		
	No.	%	No.	%	No.	%	No.	%	
Age:									0.879
17 - 18 years	33	28.4	29	25.0	23	19.8	31	26.7	
19 - 20 years	18	34.6	9	17.3	12	23.1	13	25.0	
> 20 years	25	30.9	22	27.2	16	19.8	18	22.2	
Residence:									0.813
Rural	51	30.7	39	23.5	32	19.3	44	26.5	
Urban	25	30.1	21	25.3	19	22.9	18	21.7	
Grade:									0.893
First	50	30.1	38	22.9	35	21.1	43	25.9	
Fourth	26	31.3	22	26.5	16	19.3	19	22.9	

Chi-square test

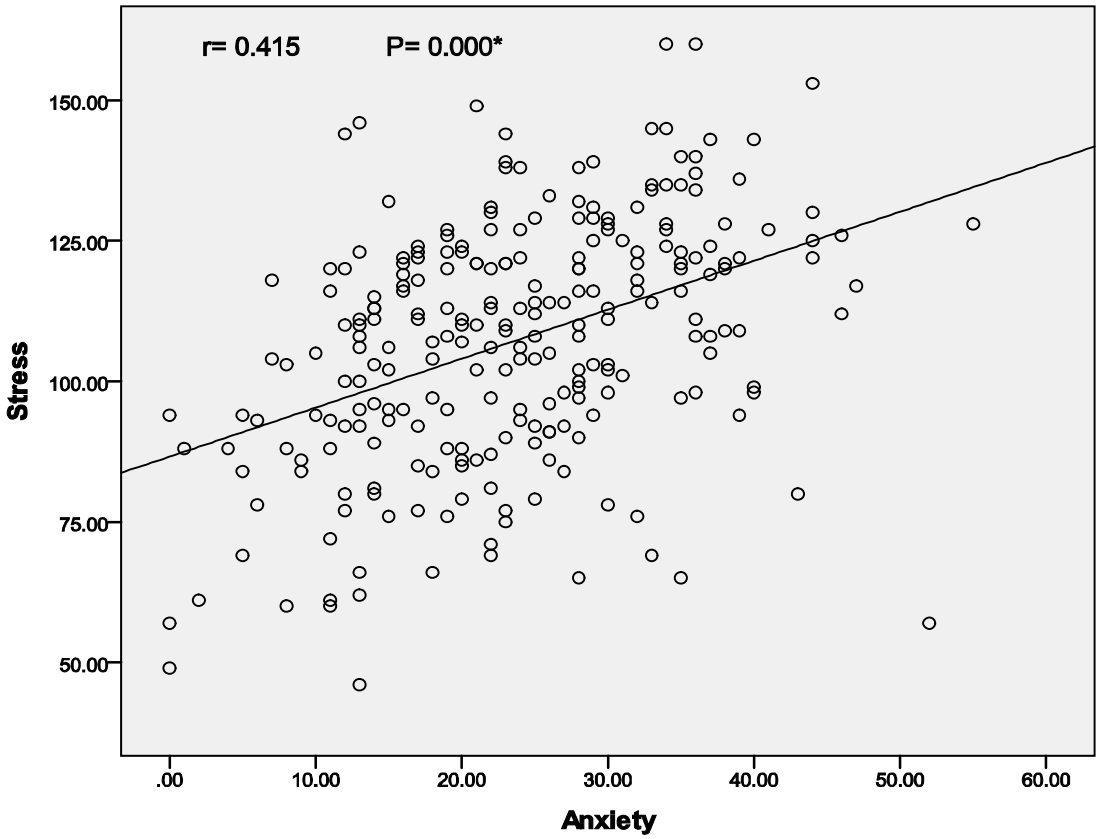

Figure (3): Correlation between academic stress and anxiety of the studied sample

4. Discussion:

The current study revealed slightly less than one- third of the study sample experienced moderate academic stress related to contributing to class discussions, unclarity of the required time for task assessment and the format used to assess theoretical content and lack of time to rest. While, slightly more than half of students experienced extreme stress related to waiting for results/grades and less than half experienced extreme academic stress related to continuous poor performance, academic workload, feeling of not having enough knowledge for the

practical test, feeling insecurity or fear while taking theoretical exams, and fear of making mistakes.

This finding is partially supported by Mohamed *et al.* (2012) who stated that, being away from families and friends for those who came from the western region to study nursing in the central region, the nature of the study as students transferred to more structured academic environment, academic work load and courses requirements, clinical practice, exams, and time restrain are major stressors. Abouserie (1994) noticed that, students report experiencing academic stress predictably, with the greatest sources of academic stress being found in taking and studying for exams and with respect to grade competition and the large amount of content to master in a small amount of time. A similar study identified the major academic stressors among college students to be tests, grade competition, time demands, professors and classroom environment, and career and future success (Robert *et al.,* 2009).

Moreover, Agolla & Ongori (2009) indicated that (56%) of the students view continuous poor performance as stressful. Inadequate resources to do assignments such computers and books were rated by (66%) of the students as stressful. Students (55%) rated overcrowded lecture halls as stressful, since they have to take their lectures while standing outside or inside due to shortages of seats or accommodation. This finding is consistent with earlier studies (Ongori, 2007; Topper, 2007; McCarty *et al.,* 2007; Awino and Agolla, 2008; Agolla, 2009) which revealed that overcrowded lecture halls are causing students a serious problem as some have to take their lectures while standing due to lack of seats or outside because there is no space inside the lecture halls. Students' stressors are academic workload, academic performance and fear of failing, (Awino and Agolla, 2008), inadequate resources, financial problems, overcrowded lecture halls, poor relationship with girlfriend / boyfriend, family / academic life conflicts and fear of getting job after completing studies.

However, the current finding is not in agreement with Sharma (2011) who found the common academic factors leading to stress were lack of leisure time, overburden with the assignments, and poor satisfaction with performance. The practical work which students have to perform as part of curriculum was also considered as stressful by fifty percent of the subjects and about half of the subjects felt stress due to poor interest in studies and serious arguments with teachers. Other researchers have identified stressors as too many assignments, competitions with other students, failures and poor relationships with other students or lecturers (Fairbrother & Warn, 2003). The pressure to perform well in the examination or test and time allocated makes academic environment very stressful (Erkutlu & Chafra, 2006). Low or lack of motivation among the students has been rated by (68%) of the respondents who stated that is stressful (McCarty *et al.,* 2007 &Agolla & Ongori 2009). This could be attributed to cultural differences or various methodologies.

In the present study, it was noticed that more than half of students had severe academic stress and more than one quarter of them had moderate academic stress. This finding is consistent with Bayram & Bilgel, 2008 carried out a study on stress in first-year nursing students and found that over half of the students reported significant stress and Jimenez *et al.* (2010), concluded that Spanish nursing students (2^{nd} & 3^{rd} year) reported greater stress related to academic load than the novice (1^{st} year) students and workload of nursing education was found to be more stressful among the second year students.

Similarly, Kurebayashi *et al.,* 2012 concluded that, students presented high levels of stress and Omigbodun *et al.,* 2004 found that, Nigerian nursing students have high levels of stress, with the most common stressors including excessive schoolwork, financial problems, inadequate recreational facilities, and overcrowded accommodations. However, this is contradicted with the study of Dhar *et al.,* 2009 that revealed 48.83% were having mild stress and only 11.62% had moderate stress.

The majority of students in the current study experienced various levels of anxiety ranged from mild to moderate and severe. This result is supported by (Bayoumi *et al.,* 2012) who found that, the majority of students had mild to moderate anxiety levels. Also, the current finding is partially consistent with Kim (2003) found 36% of the students experienced a moderate level of anxiety. In this respect, Ruth (2002) found nursing students have a higher level of anxiety. Similarly, Kurebayashi *et al.,* 2012 concluded that, students presented high levels of anxiety. However, the current finding is contradicted with (Sprengel & Job, 2004) who found that, freshman nursing students reported a reduction in anxiety level as a result of peer mentoring.

The present study revealed positive and significant correlation between academic stress and anxiety. This is in agreement with Kurebayashi *et al.,* 2012 and Apóstolo *et al.,* 2011 who found positive correlations between anxiety and stress. However, it is contrary with Bastos *et al.* (2008) who found negative correlation between levels of anxiety, depression, stress and physical exercise.

Conclusion:

More than half of students have severe academic stress, and more than one quarter have moderate academic stress. Also, a great number of

them experienced various anxiety levels which ranged from mild to moderate and severe to extreme levels. Academic stress was positively and significantly correlated with anxiety

Recommendations:

Stress management program is essential to diminish academic stress and anxiety levels among nursing students.

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