

Academic Stress and Its Contributing Factors among Faculty Nursing Students in Alexandria

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Abstract

*Academic stress is a particularly important issue in education because it has the potential to decline learning and performance. Nursing education is challenging and places heavy demands on the students creating high level of stress affecting their health and wellbeing as well as their academic performance. **Objective:** Assess faculty nursing students' academic stress level and identify its contributing factors. **Setting:** The study was carried out at Faculty of Nursing, Alexandria University. **Subjects:** Subjects of the study were 600 baccalaureate nursing students. **Tools:** Two tools were used for data collection. The first tool was nursing students' basic data structured interview schedule to identify data related to students' personal and socio-demographic characteristics in addition to their academic performance data. The second tool was Perceived Stress Scale (PSS) to assess the nurse students' academic stress levels. **Results:** Findings of the present study revealed that more than three quarters (79.7%) of the students had high academic stress which is mainly related to patients' care, assignments and work load. The academic stress was significantly correlated with the students' sociodemographic characteristics such as age, sex, residence, social level as well as academic performance and regular attendance. **Conclusion:** The study concluded that baccalaureate nursing students experience high levels of academic stress during their nursing education which reflected on their performance. **Recommendations:** Stress management and healthy coping skills as well as life style modifications are required to empower nursing students to control their academic stress and stressors.*

Keywords: Student nurses; Academic stress.

Introduction

Stress has been tagged as a global phenomenon. It has become an integral part of life and is said to be the price that all human beings pay for the struggle to stay alive⁽¹⁾.

Stress is a particularly important issue in education because it has the potential to impede concentration, memory, and problem-solving ability, which in turn adversely affect academic performance and learning⁽²⁾.

In the college academic environment, there are high expectations, information overload, academic pressure, unrealistic ambitions, limited opportunities, and high competitiveness, which cause academic stress⁽¹⁾.

Nursing education is challenging and place heavy demands on the students. Undergraduate nursing students also have similar demands like other college students combined with a rigorous course load and clinical competency requirements. In addition to continuous examinations, research papers and other assignments and longer study hours associated with lack of free times as nursing students have a lot of prerequisites before their clinical assignment^(3,4).

Academic stress can be deleterious to students and lead to physical and psychological distress. The students may become irritable, show lack of concentration, poor inter-personal relations, insomnia and absenteeism. It could result into emotional exhaustion, depersonalization, and decreased personal

achievements. This physical and psychological distress may hamper students' academic performance and hence impede their pursuit of the nursing career temporarily and permanently and can lead to shortage of nurses entering clinical career^(5,6).

It is important to the society that students should learn and acquire the necessary knowledge and skills that help them contribute positively to the development of the general economy of any nation. However, the academic environment sometimes poses great stress to the students' lives that tend to negate the positive gains that one would expect after completion of University^(7,8).

Previous researches showed that early stress management can help control its effect as well as help students improve their wellbeing. Thus, health promotion activities such as stress management and healthy coping skills as well as life style modifications are required to empower nursing students to control their academic stress and stressors⁽²⁾.

It is the role of the community health nurse to provide community health promotion services and to promote the prevention of disease, and maintenance of health and wellbeing of the individuals, families and the whole community.

Aim of the Study

The aim of the study is to identify academic stress and its contributing factors among Faculty Nursing students in Alexandria.

Research Questions:

- What is the level of academic stress experienced by the nursing students in the Faculty of Nursing, Alexandria University?
- What are the contributing factors to faculty nursing students' academic stress in Faculty of Nursing, Alexandria University?

Materials and Method

Materials

Design: The descriptive design was adopted to carry out this study.

Setting: The study was conducted in the Faculty of Nursing, Alexandria University.

Subjects: The sample size was estimated using Epi info 7 statistical program using the following parameters; Expected frequency 50%, and 99% confidence level with 5% maximum error. The minimum sample size estimated was 542 students. Accounting for a non-response error of 10%, final sample size was calculated to be 600 students.

By using the equal allocation method, a random sample of 150 (75 males, 75 females) faculty nursing students was selected from each of the 4th grades during the academic year 2015- 2016.

Tools: In order to collect the necessary data for the study, the following tools were used:

Tool I: Nursing Students' Basic Data Structured Interview Schedule

This was developed by the researcher to collect the necessary data from the students. It included the following parts:

First part: Socio demographic data about the students such as age, birth order and academic level. Additional data about student's parents background such as their level of education, occupation, marital status and family social leveling which was assessed using Fahmy and El-Sherbini Scale⁽⁹⁾.

Second part: Physical and social health status: It included data about the health status of the students and presence of health problems as well as data about leisure time activities and extracurricular activities and work.

Third part: Academic performance: It included data such as last year GPA, previous academic failure, and regular attendance.

Tool II: Perceived Stress Scale (PSS)

It is a self-reported questionnaire developed by Sheu et al in 1997 to examine student nurses stress levels and types of stressors⁽¹⁰⁾. It consists of 29 items using 5-point Likert-type scale grouped into six subscales including stress related to patient care (8 items), teachers and nursing staff (6 items), assignments and workload (5 items), peers and daily life (4 items), lack of professional knowledge and skills (3 items), and stress related to the clinical environment (3 items). Response to each of the (29) items ranging from never = zero to always = 4 creating a total score of 0-116, which was converted into % score and classified into low stress 0-38, moderate stress 39-77 and high stress 78-116. The reliability coefficient of the entire scale by Cronbach's alpha was 0.89.

Method

- Approvals of the responsible authorities were obtained from the Faculty of Nursing after explanation of the purpose of the study.
- After reviewing the recent relevant literature, tool (I) was developed by the researcher. It was validated by juries of (5) experts in the field of Community Health Nursing. Their suggestions and recommendations were taken into consideration.
- An English version of tool II was used.
- A pilot study was carried out on 60 nursing students in order to ascertain the relevance, clarity and applicability of the tools, test wording of the questions and estimate the time required for the interview. Based on the obtained results, the necessary modifications were done. These students were not included in the study sample.
- Data was collected by the researchers during the academic year 2015-2016 over a period of 3 months (from March 2016 to May 2016).

Ethical considerations:

- Informed written consents were obtained from the students after explaining the purpose of the research.
- The anonymity and confidentiality of responses, voluntary participation and right to refuse to participate in the study were emphasized to students.

Statistical Analysis

- The collected data were coded and analyzed using PC with the statistical package for social sciences (SPSS version 20) and tabulated. Frequencies and percentages were calculated.
- The level of significance selected for this study was P equal to or less than 0.05.

Results

Table (1) shows the socio demographic characteristics of the nursing students. The table reveals that the students' age ranges from 18 to 25 years with a mean of 20.52 ± 1.47 years. More than half (55.8%) of the students were 20 to less than 22 years old, while more than two fifths (42.8%) of them were ranked as the third child in their families and only 6% of them were married.

The table also reveals that less than two thirds (62.2%) of the students lived in urban areas and around one third (33.0%) of them lived away from their families during studying years as well as less than one quarter (22.8%) of the students had chronic diseases.

Table (2) presents the sociodemographic characteristics of the students' families. It was noticed that the majority (80.3%) of the students' parents were married. Nearly more than one third (36.8%) of the fathers and 37% of the mothers had secondary education, while less than one third (32.2%) of the fathers compared to less than one fifth (17.1%) of the mothers had university education. On the other hand, more than three quarters (76.2%) of the students' mothers compared

to 19.7% of fathers were not working. Additionally, only 10% of the students were from high social level compared to 21.2% of them who were from low social level.

Table (3) portrays that around one fifth (20.2%) of the students got excellent grades during the last academic year compared to 13% of them who had satisfactory grades. Furthermore, only 2% of them had previous academic failure, while 7% of the students reported irregular attendance. On the other hand, less than half (47.2%) of the students reported studying for less than 4 hours per day with a mean of 3.83 ± 1.69 hours and one quarter (25%) of them reported practicing extracurricular activities such as (athletics, art and social activities).

Table (4) shows the academic stress levels and its related factors. More than three quarters (79.7%) of the students had high academic stress level and the rest (20.3%) of them had moderate academic stress. Moreover, less than three quarters of the students had high academic stress regarding patient care and assignment and workloads (74.3% and 70.0% respectively), while less than two thirds (63.8%) of them had high academic stress regarding teachers and nursing staff. On the other hand, more than half (52.2%) of the students had high academic stress regarding peers and daily life. High academic stress from clinical environment and lack of professional knowledge and skill constituted 49.3% and 28.7% of the students respectively.

Figure (1) reveals the distribution of total academic stress among male and female nursing students. The majority (80.7%) of male students experienced high total academic stress compared to 79.0% of female students, while none of male and female students had low academic stress level.

Figure (2) shows that first year students experienced the highest percentage (84.0%), of high academic stress during the first year, followed by second year students (80.0%), third year students (77.3%) and finally fourth year students (74.7%).

Table (5) portrays that the first cause of total academic stress was patient care with a mean of (25.54 ± 5.43) , followed by teachers and nursing staff (18.42 ± 3.65) , assignments and workload (16.77 ± 3.02) , peers and daily life (10.99 ± 2.85) , clinical environment (8.13 ± 2.56) , and finally lack of professional knowledge and skills (60.27 ± 2.95) . Furthermore, higher mean scores were noticed among female students with respect to patient care, teachers and nursing staff and assignments and workload (25.86 ± 5.48) , 18.39 ± 3.47 , and 16.82 ± 2.96 respectively). On the other hand, male students got higher mean scores mainly the same as female students, with a statistical significant difference between them in lack of professional knowledge and skills, clinical environment and total academic stress ($F=8.327$ $P=0.004$, $F=4.056$ $P=0.044$, and $F=2.784$ $P=0.052$ respectively).

Table (6) shows the relation between total academic stress mean scores and the students' sociodemographic characteristics. It was found that male students had higher total mean scores than females (86.87 ± 11.12) , and 85.36 ± 11.09 respectively) with a statistically significant relation between academic stress and students' sex ($F=2.784$, $P=0.052$).

Moreover, the table shows that the lower the students' age, the higher the mean academic stress scores as those students aged less than 20 years had the highest mean scores (87.87 ± 10.49) compared to those students aged 22 years and more (81.84 ± 11.60) with a significant difference between them ($F=4.266$, $P=0.000$).

Additionally, the lowest academic stress mean scores were observed among students enrolled in the fourth year (84.70 ± 11.39) compared to those enrolled in the first year who had the highest mean scores (89.08 ± 10.25) , with a significant difference between them ($F=4.946$, $P=0.002$).

It could be observed from the table that academic stress mean score was higher (86.22 ± 11.28) among married students with a significant impact of the marital status on students' academic stress ($F=1.749$,

P=0.022). Furthermore, those students lived in rural areas and away from their families during study years shows higher mean scores (87.43 ± 11.138 and 87.60 ± 3.782 respectively) with a significant relation between place of residence and academic stress ($F=5.333$, $P=0.005$).

The table also reveals that highest academic stress mean scores were encountered among those students who complained from chronic health problems (86.55 ± 11.346) with a significant difference between them ($F= 4.428$, $P=0.012$).

Table (7) shows the relation between total academic stress mean scores and the students' families characteristics. It was noticed that higher academic stress was lowest among those students of married parents (86.07 ± 11.230 respectively) with no statistically significant relation.

With respect to parents' working status, academic stress mean score was higher among students of non-working fathers and working mothers (88.17 ± 10.96 and 86.28 ± 11.091 respectively). A statistically significant relation was observed between fathers' working status and academic stress ($F=3.258$, $P=0.039$).

The table also illustrates that the lowest academic stress mean scores was observed among students whose fathers and mothers had university education (84.74 ± 6.37 , and 84.05 ± 12.067 respectively). Both fathers' and mothers' educational level had a significant impact on the students' academic stress ($F=3.284$, $P=0.003$, and $F=2.387$, $P=0.027$ respectively).

Lastly, the table also reveals that higher academic stress mean score was noticed among those students in low social level (86.89 ± 11.459) compared to those in high social level (83.73 ± 12.77). A significant relation was detected between academic stress and students' social status ($F=1.579$, $P=0.009$).

Table (8) shows the relation between total academic stress mean scores and the students' academic performance. The table reveals that students with satisfactory

performance had lower academic stress mean scores than those with excellent performance (84.05 ± 11.24 and 88.95 ± 10.54 respectively) with a statistically significant relation between them ($F=5.184$, $P=0.002$).

Furthermore, higher academic stress mean score was noticed among those students who reported previous academic failure (86.20 ± 11.132), while academic stress was higher among those students with irregular attendance (90.43 ± 12.979) with a significant difference between them ($F=6.851$, $P=0.009$).

Additionally, the lowest academic stress mean scores were in those students who study for 8 hours and more per day (83.17 ± 9.759) with no significant difference between them studying hours and academic stress.

Moreover, a significant relation was found between academic stress and practicing extracurricular activities ($F=6.482$, $P=0.002$) as academic stress was less encountered among those students who reported performing extracurricular activities (83.90 ± 11.306).

Discussion

During nursing education and training, nursing students are frequently exposed to various stressors which may directly or indirectly impede their learning and performance. The nature of clinical education presents challenges that may cause students to experience stress. Moreover, the practical components of the program which is important in preparing students to develop into professional nurse role by its nature have made the program even more stressful than other programs⁽¹¹⁾.

Nursing students and persons employed in the nursing profession have been identified as a population with an elevated stress level because of the complexity of the nursing program which classified into didactic courses and practicum portion. Stressors for student nurses included adjusting to a rigorous

program of theory, long hours of study and pressures of clinical practice^(6,8).

The Results of the present study demonstrated that all nursing students had perceived moderate and high levels of academic stress where more than three quarters of them were under high academic stress and the rest were moderately stressed. Findings of this study calls for a greater challenge for nurse educators in planning strategies to prevent academic stress among students while keeping them motivated to achieve for a greater learning. This finding is in keeping with the results obtained by Gurbinder K et al. 2011⁽¹²⁾, Singh C et al. 2011⁽¹³⁾ and Mohamed B et al. 2012⁽¹⁴⁾ who found that the majority of nursing students experienced more stress than do students in other health care disciplines.

Several studies suggested that there are many sources of stress during undergraduate nursing education and training^(15,16). The most common sources of academic stress identified by students were related to academic demands, assignments and examinations, high workload, combining clinical work and interaction with patients, health care team members and teaching staff^(17,18).

Without any doubt, clinical practice is one of the crucial components in nursing education. However, students may face many challenges or threats in dynamic and complex clinical environments such as how to use high technology medical equipment, how to maintain good relationships with clinical staff and instructors, how to manage changes in a patient's condition and how to deal with the demands of patients' relatives^(19,20).

In the clinical rotations, nursing students have to carry a high level of responsibility and accountability while dealing with patients. Sometimes, nursing students deal with seriously ill or dying patients which cause an increase in stress for them⁽²¹⁾. The same was revealed by the results of the present study which found that less than three quarters of the nursing students had high stress regarding patient

care, and it was the first source of academic stress expressed by the students. A possible explanation for why taking care of patients was the highest ranked stressor is that nursing students might meet a wide range of patients with complex bio-psychosocial problems and needs, which requires nursing students to be competent in developing and sustaining therapeutic relationship and equipped with adequate knowledge and skills in order to provide effective nursing care to such patients. These findings also come in line with the results of Chen et al 2014, Nolan et al 2008 who noticed higher patient care stress among nursing students^(22,23).

Previous researches have proposed that the teacher and other nursing staff in the clinical settings may influence the students' stress in clinical practices^(5,12,15). Mohamed et al. 2012, and El-Zayyat et al. 2014 added that the students in their studies experienced academic stress in the clinical environment and perceived the interaction with staff nurses as stressful^(24,25). There were conflicts in maintaining a good interpersonal relationship with the clinical instructor and nursing staff in the clinical areas. This comes in line with the findings of the present study where less than two thirds of the students reported academic stress in relation to teachers and nursing staff. A possible explanation is that in order to enhance teaching quality, clinical instructors might need formal training plan with an in-depth orientation to the educational program, anticipated clinical outcomes, required assignments and report, and time management plan, which reflect the complexity of the nursing program and affect the quality of the student-teacher relationship^(19,21).

Another explanation is that in the clinical areas, the head nurse may assign the students a substantial amount of clinical work due to heavy workload and shortage of staff, so the students could be distracted from the goals that were set for their clinical experience and forced to take on tasks that they were not prepared for. Additionally,

clinical staff members may sometimes pose negative comments to the students, which could be perceived by the students that the clinical nursing staffs are unfriendly or even hostile toward the students. Although this is of a rare occurrence, it might seriously affect students' learning.

Many times, the environment in the ward may be unfriendly, which adds to the student's sense of self-doubt and insecurity. The stressful nature of the clinical environment along with concern about own well-being elicits an appraisal by the nursing student which may result in threat or challenge^(26,27). While some students might perceive a particular clinical incidence and setting to be challenging, the same clinical incidence might create fear, anxiety and related stress for others^(15,19). This could explain the results of the present study as around half of the nursing students had a high academic stress related to the clinical environment. These findings shed the light on the importance of students' clinical orientation and usage of nursing laboratories in creating a simulated picture of the real situation of the clinical areas and settings. So, it may be beneficial to lessen the students' stress and enhance their practices. The same results were reported by Chan et al 2009, and Hsiao et al 2010 who found that clinical environmental factors are source of major stress to the nursing students^(28,29).

Nursing students experience unique stressors because of the nursing program, which determine professional standards of performance on didactic and practical courses. The nursing curriculum has the greatest number of required clinical training hours before the culmination of the program. These imply clinical competence, in addition to assignments submission, excessive homework, assessment deadlines, projects, reports, term papers, quizzes, and examinations making the program tighter and heavier compared to other programs^(18,21). This could explain the results of the present study indicated that less than three quarters of the students had

high academic stress related to assignments and workload. Similar findings which were reported by Leodoro 2013, Yusoff et al. 2011 who found that nursing students perceived heavy workload from clinical assignments especially nursing care plans^(30,31).

In spite of the rigid and rigorous training, in both class room and clinical area, students felt that they still have a lot more to be learned and thus, they feared of committing mistakes while performing nursing skills in the clinical areas or of having low grades in examinations. They expressed concern about lack of experience, implementing technical skills, and the need for more time in the ward⁽¹⁶⁾. This was reflected in the current study, as only one fifth of the students had low academic stress regarding lack of professional knowledge and skills. Similar findings were reported by Jimenez et al. 2010 and Khater et al. 2014 who found that the second perceived academic stress among nursing students was lack of professional knowledge and skills especially among junior students^(32,33).

Student nurses' academic stress is also related to peers and daily life. The current study found that more than half of students expressed high peer and daily life stress. Consistent findings were reported by Gibbon et al. 2008 and Misra et al. 2011^(34,35). College students are destined to experience issues such as financial concerns, lack of free times and problems related to family obligations which have significant influence on a students' level of retention and academic achievement^(7,16). These issues are common among the students generally, but they are more pronounced of the nursing students because of the increased courses demands; as it is a vocational course, which by definition limits career options, and because those demands affect significant number of students where the changes have to be incorporated into home and family commitments.

It is evident that academic stress is a pervasive and widespread phenomenon of

multidimensional causes or risk factors. As regards the students' risk factors, it was found that the students' sex has a great influence on the experience of academic stress as in the present study males were more exposed to academic stress than female students. Similar findings were reported by Abdulghani et al. 2011, and Chen et al. 2013^(36,37). This finding could be attributed to the fact that female students are more sincere, punctual, accountable and 'serious' in their academic activities compared to male students. Male students are 'deadline driven', they seldom make class notes, rarely participate in co-curricular activities and often discard internal assessments. But when the examination approaches, they try to accomplish the whole academic year's task in a single month. This deadline driven approach may contribute to higher academic stress among them^(38,39).

Several studies indicated that senior students' nurses present lower levels of stress compared to junior students. In junior students, the imbalance in the perceived and actual complexity of the nursing education as they were novice to nursing education. Additionally, the academic expectations in college can be abrupt change from those in the secondary schools causing the highest percentages of them to be stressed as in the present study finding where academic stress was more experienced by first year students. As the students get into higher levels, they were able to adapt and adjust to the academic and clinical requirements of the program. Moreover, they have already acquired and gained mastery in nursing skills necessary in the clinical experiences and develop more or less effective and efficient ways in dealing with different stressors^(15,17,22). This come in line with the present study findings as stress was more encountered among those students aged less than twenty years. These findings come in line with the results of Al Zayyat et al. 2014⁽²⁴⁾, and Yusoff et al. 2011⁽²⁶⁾.

Another interesting finding in the present study is that the students with

excellent academic performance in the last semester were found to be more academically stressed. This can be attributed to that they want to sustain their similar performance in the subsequent tests. On the other hand, students with satisfactory performance thought that whatever they performed that is as per their capacity. However, those low performer students need special guidance from the faculty, so they can complete the course successfully^(11,13). On the opposite the findings indicated by the current study revealed that academic stress was more prevalent among those students with previous history of academic failure as well as among those students with less studying hours per day and those with irregular attendance to the faculty, which may adversely affect the student's performance and achievement again and cause more academic stress. In the same line, the results of Elias et al. 2011 and Younis et al. 2011^(15,21).

It is well documented that practicing extracurricular activities like regular physical activity improves physical, mental and social wellbeing. Moreover, physical activity and sports play an important role in enhancing self-esteem and confidence and decrease the risk of diseases. It helps to control anger and relieve stress. It is evident that nursing students experienced higher levels of academic stress and strain when an individual is experiencing strain he may develop negative emotion including anger, depression and anxiety. Practicing sports play a key role in mediating the effect of stress and strain. In the same line, the results of the present study which indicated that exposure to academic stress was higher among those students who did not practice any extracurricular activities. Similarly, Christopher et al. 2013 who asserted that physical inactivity linked with poor health, poor concentration, low grades⁽⁴⁰⁾.

With respect to student's employment, results of the present study revealed that academic stress was higher among working students. It could be explained by the fact

that working brings adverse consequences of poor time management due to imbalance between work and faculty requirements. Work beside education may lead to irregular attendance & frequent absenteeism. Moreover, it may cause fatigue, exhaustion and sleeping problems which all reflected on performance and achievement, and in turn the working students find themselves in great distress before assignments and exams^(26,33). This come in line with the results of Banu et al. 2015 and Amr et al. 2011 they found that students who work more than 20 hours per week during the academic year are significantly more likely to report academic stress which have a negative impact on their academic progress or performance and that they reduced their academic course load due to this stress^(41,42).

Regarding students' health problems, the results of the current study showed that academic stress was more encountered among students with chronic health problems. Similar findings were noticed by Kadayam et al. 2013 and Edwards et al. 2010^(43,44). Possible explanation is that chronic illness can add tasks that need adaptation to accompanied complaints and self-care tasks which can influence the students' quality of life, social participation, self-management and academic performance. Furthermore, those students with poor health are more likely to miss lectures or clinical rotation because of illness, to perform worse which may further influence their psychological status.

Concerning the student' place of residence, the findings, of the current study showed that academic stress was more prevalent in those students from rural than urban dwellers. Consistent findings were postulated by Younis et al. 2011 and Sharma et al. 2011^(15,45). This may be attributed to the great efforts exerted by the students in reaching the faculty every day and the daily struggle in transportation, being on time, as well as increased financial cost.

Regarding the students' socioeconomic status, the results of the present study revealed that academic stress was more among students who belonged to the lower social strata. In this respect, Abdulghani et al. 2011, and Amr et al. 2011 reported that poverty had significant association with stress among medical and nursing students^(36,42). These findings could be explained as poverty may be a cause of marital disagreement which is often constraints parents from providing nurturing care due to lack of time and economic resources as well as feeling of depression and powerlessness. This picture would be reflected on the students' performance and achievement adversely and in turn cause academic stress⁽⁴⁴⁾. This finding was supported by the current study results where academic stress was less encountered among students of married parents which shed the light on the importance of a stable family life in the students' normal development.

Conclusion

The findings of the present study revealed that academic stress is a prevalent problem among nursing students as all nursing students experienced moderate and high stress level. Academic stress is a multidimensional problem that have multiple risk factors such as students' age, sex, academic year, place of residence, marital status, social level, Last GPA and presence of chronic health problems.

Recommendations

- Nurse educators and curriculum planners should make a positive contribution towards minimizing the stress of student nurses.
- Efforts should be made to identify at risk students as early as possible. These students should be referred to student support services for tutoring, counseling or psychological aids.
- Stress management and coping skills workshops should be provided to students especially in orientation week to make sure that students can adapt the coping strategies.

Table (1): Distribution of faculty nursing students according to their socio demographic characteristics

Students characteristics	Total N=600	
	No	%
Age (years)		
- 18-	112	18.7
- 20-	335	55.8
- 22+	153	25.5
X±SD	20.52 ±1.47	
Marital status		
- Single	564	94.0
- Married	36	6.0
Family residence		
- Urban	373	62.2
- Rural	227	37.8
Student residence during study		
- With the family	402	67.0
- Away from the family	198	33.0
Work beside education		
- Yes	150	25.0
- No	450	75.0
Presence of health problems		
- Yes	137	22.8
- No	463	77.2

Table (2): Distribution of faculty nursing students according to their families' characteristics

Students' families characteristics	Total N=600	
	No	%
Parents' marital status		
- Married	528	88.0
- Divorced / Widowed	72	12.0
Fathers education	N=559	
- Illiterate/ read & write	100	17.9
- Basic education	73	13.1
- Secondary/technical education	206	36.8
- University education	180	32.2
Fathers occupation		
- Working	449	80.3
- Not working	110	19.7
Mothers education	N=579	
- Illiterate/ read & write	120	20.7
- Basic education	146	25.2
- Secondary/technical education	214	37.0
- University education	99	17.1
Mothers occupation		
- Working	138	23.8
- Housewives	441	76.2
Family's social level	N=600	
- Low	127	21.2
- Low middle	178	29.7
- High middle	235	39.2
- High	60	10.0

Table (3): Distribution of faculty nursing students according to their academic performance

Items	Total N=600	
	No	%
Academic performance		
- Excellent	121	20.2
- Very good	179	29.8
- Good	222	37.0
- Satisfactory	78	13.0
Previous academic failure		
- Yes	12	2.0
- No	588	98.0
Regular attendance		
- Yes	558	93.0
- No	42	7.0
Studying hours per day		
- 2-	283	47.2
- 4-	218	36.3
- 6-	77	12.8
- 8+	22	3.7
X ± SD	3.83 ±1.69	
Practicing extra curricula activities		
- Yes	150	25.0
- No	450	75.0

Table (4): Distribution of faculty nursing students according to their academic stress level and related factors

Students' academic stress	Level of Stress					
	High		Moderate		Low	
	No	%	No	%	No	%
- Patient care	446	74.3	149	24.8	5	0.8
- Assignments & workload	420	70.0	133	22.2	47	7.8
- Teachers and nursing staff	383	63.8	163	27.2	54	9.0
- Peers & daily life	313	52.2	272	45.3	15	2.5
- Clinical environment	296	49.3	256	42.7	48	8.0
- Lack of professional knowledge and skills	172	28.7	308	51.3	120	20.0
- Total PSS score	478	79.7	122	20.3	0	0.0

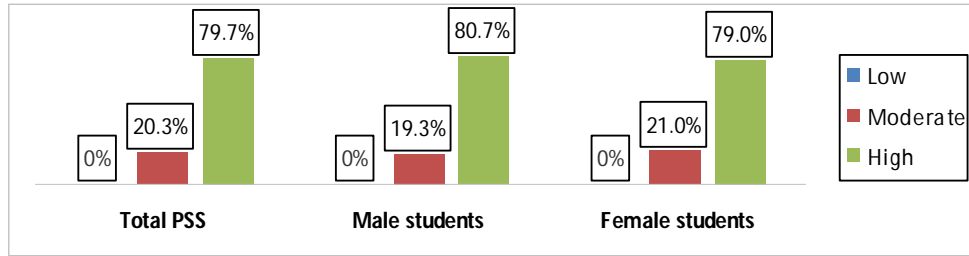


Figure (1): Faculty nursing students' total academic stress level by gender

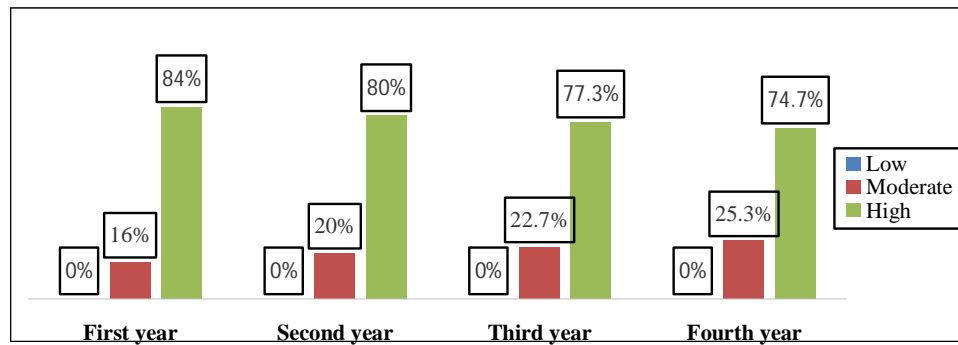


Figure (2): Academic stress level among faculty nursing students' by grade

Table (5): Mean scores of the students' academic stress related factors

Students' academic stress	Mean Scores X± SD		Total Mean Scores X± SD	Test of Significanc e
	Male	Female		
- Patient care	25.21±5.38	25.86±5.48	25.54±5.43	F=2.106 P=0.147
- Teachers and nursing staff	18.45±3.47	18.39±3.83	18.42±3.65	F=0.050 P=0.823
- Assignments & workload	16.73±3.09	16.82±2.96	16.77±3.03	F=0.143 P=0.706
- Lack of prof. knowledge and skills	6.61±3.05	5.92±2.79	6.27±2.95	F=8.237 P=0.004*
- Peers & daily life	10.88±2.83	11.09±2.88	10.99±2.85	F=0.838 P=0.380
- Clinical environment	8.34±2.55	7.92±2.65	8.13±2.56	F=4.056 P=0.044*
Total academic stress	86.87±11.12	85.36±11.09	86.12±11.12	F=2.784 P=0.052*

Table (6): The relation between faculty nursing students' academic stress mean scores and their socio demographic characteristics

Students' Characteristics	Total academic stress mean scores Mean \pm SD	Test of Significance
Sex		
- Male	86.87 \pm 11.12	F= 2.784
- Female	85.36 \pm 11.09	P= 0.052*
Age (years)		
18 -	87.86 \pm 10.49	F= 4.266
20 -	86.58 \pm 11.17	P= 0.001*
22 +	81.84 \pm 11.60	
Academic year		
- First year	89.08 \pm 10.25	F= 4.946
- Second year	85.44 \pm 10.84	P= 0.002*
- Third year	85.25 \pm 11.53	
- Fourth year	84.70 \pm 11.39	
Marital status		
- Married	86.22 \pm 11.28	F= 1.749
- Not married	84.44 \pm 9.32	P= 0.022*
Place of residence		
- Urban	85.02 \pm 11.30	F= 5.333
- Rural	87.43 \pm 11.14	P= 0.005*
With whom student live		
- With the family	86.43 \pm 10.98	F= 2.568
- Away from the family	87.60 \pm 3.78	P= 0.090
Work beside education		
- Yes	86.49 \pm 11.40	F= 0.221
- No	85.99 \pm 11.04	P= 0.638
Have health problems		
- Yes	86.55 \pm 11.35	F= 4.428
- No	80.64 \pm 8.03	P= 0.012*

F= One-way ANOVA test

* Statistically significant at 0.05

Table (7): The relation between faculty nursing students' academic stress mean scores and their families' characteristics

Students' Characteristics	Total academic stress mean scores Mean ± SD	Test of Significance
Parents' marital status		
- Married	86.07 ± 11.23	F= 0.257
- Divorced / Widowed	86.81 ± 9.79	P= 0.774
Father's education		
- Illiterate/ read & write	88.02 ± 12.92	F= 3.284
- Basic education	87.18 ± 12.13	P= 0.003*
- Secondary/technical education	85.61 ± 11.56	
- University education	84.74 ± 6.37	
Father's occupation		
- Working	85.45 ± 11.39	F= 3.258
- Nonworking	88.17 ± 10.96	P= 0.039*
Mother's education		
- Illiterate/ read & write	88.65 ± 10.14	F= 2.387
- Basic education	85.00 ± 9.93	P= 0.027*
- Secondary/technical education	83.71 ± 11.61	
- University education	80.05 ± 12.07	
Mother's occupation		
- Working	86.28 ± 11.09	F= 0.189
- Nonworking	85.61 ± 10.95	P= 0.828
Family's social level		
- Low	86.89 ± 11.46	F= 1.579
- Low middle	86.65 ± 11.15	P= 0.009*
- High middle	85.51 ± 9.95	
- High	83.73 ± 12.78	

F= One-way ANOVA test

* Statistically significant at 0.05

Table (8): The relation between faculty nursing students' academic stress mean scores and their academic performance

Students' academic performance	Total academic stress mean scores Mean \pm SD	Test of Significance
Last year GPA		
- Excellent	88.95 \pm 10.54	F= 5.184
- Very good	87.69 \pm 11.37	P= 0.002*
- Good	86.39 \pm 10.66	
- Satisfactory	84.05 \pm 11.24	
Previous academic failure		
- Yes	86.20 \pm 11.32	F= 1.481
- No	82.25 \pm 10.44	P= 0.224
Regular attendance		
- Yes	85.79 \pm 10.92	F= 6.851
- No	90.43 \pm 12.98	P= 0.009*
Studying hours		
- 2-	87.27 \pm 9.60	F= 1.457
- 4-	86.02 \pm 12.22	P= 0.160
- 6-	84.61 \pm 9.78	
- 8+	83.17 \pm 9.76	
Practicing extracurricular activities		
- Yes	83.90 \pm 11.31	F= 6.482
- No	87.79 \pm 10.85	P= 0.002*

F= One-way ANOVA test

* Statistically significant at 0.05

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