Stress, Anxiety, and Depression among Baccalaureate Nursing Students

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Abstract: **Stress among nursing students is a paramount concern of nursing education because it is known that stress is associated with the development of anxiety and depression, these three problems lead to poor psychological wellbeing that interferes with learning and limit the academic performance of students. This study aimed to investigate levels of stress, anxiety, and depression among baccalaureate nursing students. Descriptive research design was employed in the present study, and the study was conducted in faculty of nursing Tanta University in Tanta city, Egypt. The actual number of study sample was 382 nursing students. Study tool was consisted of two parts, Part one*: socio-demographic data and academic data; it was developed by researcher. Part two*: Depression, Anxiety, and stress scales (DASS-42); it developed by *Lovibond S.h and Lovibond P.F (1995)*.The results of the present study concluded that symptoms of stress, anxiety, and depression are highly among undergraduate nursing students. There are a positive association between stress, anxiety and depression. Moreover the female students were more experienced than male. Based on these findings the following recommendations are suggested: Nursing students should be evaluated routinely by mental health professional to detect any psychological discomfort and that affect mental status and academic achievements. Nursing educators should help nursing students to recognize sources of stress and offer various opportunities to enhance their coping effectively, and engage nursing students in to training program about learn solving skills, stress management, effective coping methods, communication skills, time management, and solving conflict.**

Keywords: **anxiety, depression, Baccalaureate Nursing Students.**

1. INTRODUCTION

Academic stress has significant national and international interest, university students experience countless situations that contribute to their growth and development, and also generate feelings such as frustration, fear, and anguish. Thus, the environment that can be contributed to the development of professional knowledge sometimes becomes the trigger of pathological disorders [1]. The process of education is stressful experience [2,3], and university students encounter a great deal of academic, personal, and social stress during their academic activities such as: being away from home, adjust to a new social achievement, financial worries, maintain a high level of academic achievement, and maladjustment with peer groups during practical training [4,5].

Nursing is one of the most stressful professions in the world [6,7]. Although nursing students do not have the same responsibilities as the nurses, they need to adapt to a new model of life, and adjusting to a nursing career [8,9,10]. Students run into situations which require the taking of important decisions for patient care; the insecurity and anxiety which result from this process and high level of cognitive skills and attitude are constantly required among students to deal with those situations [11]. Nursing students already have limited knowledge and experiences during interaction with patients and their health problems. In addition to class room learning, students have to acquire skills in laboratories and clinical setting, and undergo extensive evaluation process consisting of theory and practice examination, that lead to complex learning environment [12].Regardless of the desired outcome, the process of education can be very stressful experiences [13]. Due to

the complexity of nursing education and dealing with human boundaries, nursing students may develop feelings of stress, anxiety inadequacy regarding the activities required professional education [14,15].

There is considerable evidence that depression, anxiety, and stress are higher in nursing students and these rates continue to remain elevated when these students become nurses in future [16]. researches confirm that medical and health care students are under higher risk of mental disorders development comparing to their colleagues from other academic studies due to their exposure to increase emotional pressures arising from facing various human suffering [17].

Stress among nursing students is a paramount concern of nursing education because high stress levels often lead to decrease learning and higher dropout rates. Moderate to high levels of stress a negative effect on learning and academic achievement, personal wellbeing and long – term professional capabilities, and may put students at risk for physical or psychological problems [18]. It well be known that stress is associated with the development of anxiety and depression, and a positive relationship between stress, anxiety, and depression is well established [2,3,19]. These three problems lead to poor psychological wellbeing that interfere with learning and limit the academic performance of students , and lower productivity , increase suicidal thoughts , and minimize quality of life [12]. Internationally, there are numerous studies related to stress, anxiety, and depression among nursing students, these studies show that stress, anxiety, and depression symptoms are highly prevalent [2, 20-23].

2. REVIEW OF LITERATURE

Theoretically stress was defined by *lazarus & folkman (1987)* as "a particular relationship between a person and an environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her wellbeing [24]. Stress is not categorized as good or bad, but classified according to degree, type, and situations in which it arises. Coping is the cognitive and behavioral efforts for managing specific external and /or internal demands. Stress and coping affect health in physical, psychological and social aspects [25].

Currently , the word stress is understood as an experience of tension , irritation, where an individual reacts to physical or psychological components when a situation that cause fear , excitement or confusion [26] Bio-psychosocial pressures are responsible for imbalances in individual's homeostasis, impairing performance in the most varied circumstances. Although some degree of stress is essential to stimulates and motivate individual to achieve their goal, stress can be a barrier for concentrating, problem solving, decision making, and other necessary abilities of individuals [27].

Stress has been identified as an important psycho- social factor in the educational process because it may influence academic performance and student well – being [25]. *Rhead (1995)* suggested that stress may become troublesome during nursing school. According to the literature, three major sources of stress have been faced nursing students: i) Academic stressors such as workload exams, fear of failing and relations with academic staff. ii) Clinical stressors such as handling clinical emergencies, lack of professional knowledge and skills, patients suffering, relations with clinical staff. iii) External stressors such as interference with daily life and financial stressors [28].

Anxiety is a set of responses that includes complex combination of the feelings fear, excessive worry, depression, nervousness and irrelevant thinking of from an individual and accompanied by physical sensations such as palpitations, chest pain, and / or shortness of breath. In moderate level, anxiety stimulates anticipatory and adaptive responses to challenging and stressful events [29]. Excessive anxiety occurs in response to an actual or anticipated situation or as pathological state . Adolescence is more vulnerable to anxiety, especially students. Nursing students experience a variety of stresses during their nursing education program which in turn anxiety in them [18]. Anxiety and depression are common psychological disorders throughout the global. Both conditions have been association with stressful environment. Moreover depression often comes with symptoms of anxiety [16].

Depression is an illness that affects both the mind and the body and is a leading cause, most of people have felt sad or depressed at times. Feeling depressed can be a normal reaction to loss, life's struggles, or an injured self-esteem. But when feelings of intense sadness including feeling helpless, hopeless and worthless last for many days to weeks and keep individual from functioning normally, it may become medical condition of mental disorder [30]. Depression as a common mental disorder presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self- worth, disturbed sleep or appetite, low energy, and poor concentration and the 4th leading contributor to the global burden of disease

(WHO) [18]. Medical and nursing students repeatedly experiences different stress which renders them more vulnerable to psychological problems that may affect their emotional psychosocial and physical health [19].

Aim of the study: Investigate levels of stress, anxiety, and depression among baccalaureate nursing students.

Research questions:

1- If baccalaureate of nursing students experience stress, anxiety, or depression?

2- If present, what are the levels of stress, anxiety, and depression among nursing students?

Research design: Descriptive research design was employed in the present study.

Sitting: The study was conducted in faculty of nursing Tanta University in Tanta city, Egypt.

Subjects: The study sample included all undergraduate nursing students in fourth academic year in second semester (total number = 503 students). The researcher selected students in this academic year for two reasons: *first* ; during this academic years the students were enrolled in the psychiatric nursing educational course and direct interaction with psychiatric patients and this considered more stressful experiences to students, *second*; the fourth academic year was the last year in the undergraduate faculty program and the students will be supposed to graduate well qualified and professional and able to cope with stressful work effectively .

The actual number of study sample was 382 students. Whereby fifty students who involved in a pilot study were excluded and 49 students were withdrawal from the actual study. In addition to 22 students were not met inclusion and exclusion criteria. The Inclusion criteria of the present study was; 1) students who were present on the schedule dates of data collocation. Exclusion criteria was 1) long absentees, 2) seriously physical ill, or/ and diagnosed with mental illness.

Study tool: It consisted of two parts

Part one: socio-demographic data and academic data; it was developed by researcher. It involved: sex, age, marital status, residence, work beside their study, number of students' siblings, order of students among their siblings, mother and father s' education and occupation.

Part two: Depression, Anxiety, and stress scales (DASS-42); it developed by ***Lovibond S.h and Lovibond P.F (1995)*** [31]. The DASS is a 42 – items self- report instrument divided in to three subscales (depression, anxiety, and stress). Each subscale comprises of 14 items. This instrument designed to measure the three negative emotional states of depression, anxiety, and stress. Respondents were required to indicate the present of these symptom(s) over the past week on a four – point likert scale scoring from 0 to 3 (0: did not apply at all over the last week; 1: applied some of the time ; 2: applied a good part of time ; 3: applied most of time. The more sever the symptoms in each subscale, the higher subscale score. Scoring systems was explained in table (1)

Table (1): scoring system of (DASS-42)

Subscales	Normal	Mild	Moderate	Sever	Very sever
Depression	0-9	10-13	14-20	21-27	28+
Anxiety	0-7	8-9	10-14	15-19	20+
Stress	0-14	15-18	19-25	26-33	34+

Reliability and validity of the DASS applied by ***Lovibond & lovibond (1995)*** on nonclinical samples indicates good internal consistency with alphas of 0.91 for depression, 0.84 for anxiety, and 0.90 for stress. The reliability coefficient (cronbach's alpha) of the DASS in the present study sample was tested after translated to Arabic language, and found to be 0.968 for depression, 0.97 for anxiety, and 0.964 for stress.

3. METHOD

Written official permission to conduct the study was obtained from the Dean of Faculty of Nursing, Tanta University. The tool of the present study was translated by the researcher to Arabic language, and validated by a jury composed of five experts in psychiatric field to ensure its' content validity, some modification were done accordingly. A pilot study was applied on 10% of all baccalaureate nursing students (50 students). This sample were selected randomly by using simple

random sampling design, and applied on them inclusion & exclusion criteria. This sample was excluded from actual study. Few words were changes and replaces with other to clearer field. Tool reliability was tested for internal consistency by cronbach's alpha test (∞). The tool had high internal consistency.

Ethical consideration:

1- An approval to conduct the study was obtained from the ethical committee of the research unite at college of nursing.

2- Voluntary participation was assured, and nursing students were inform that their withdrawal from this study was not affected their evaluation in their academic course.

3- Subjects were assured about the confidentiality, and anonymity of the collected data, and it will be only used by the researcher for the purpose of the present study.

4- Formal consent was obtained from the study subjects to participate in the study before data collection.

5- Short explanting about study and its aim was attached to the front page of the questionnaire sheet.

Actual study:

All 4th academic year students were invented to participate in the study voluntarily after explained the purpose of the study and schedule of data collection. The data collection schedule was three days per week in learning class room after the academic clinical day, where each student attended only one time that available to him / her. The students who didn't agree to participate in the study the researcher withdrawal them from data collection procedure. Those who agree to participation were attended in the learning classroom according to study schedule, and gave informed consent. The researcher applied on them inclusion and exclusion criteria. The researcher was available during the data collection in the classroom to answer any question from the students. The duration of data collection was four weeks.

Statically analysis:

Data was collected, organized tabulated, and statistically analyzed using SSPSS, Software computers statistically package, version 18. Data were presented as number and percentage, student t- test was used for data presented in mean and stander deviation and to test association between two variables in the same group, Spearman's rank Correlation was used to determine type of association between two or more variables, the level of statistically significance was adopted at $P < 0.05$.

4. RESULTS

Table (1): Distribution of nursing students according to their socio-demographic data

Socio-demographic data		No. (382)	%
Sex	Male	82	21.5
	Female	300	78.5
Age	20 -	148	38.8
	22 -	178	46.6
	23 -	47	12.3
	24 – 25	11	2.3
	Mean ± SD	21.79 ± 0.77	
Marital status	Single	327	85.6
	Married	55	14.4
Residence	Rural	270	70.7
	Urban	112	29.3
	Same city	36	9.4
	Close to faculty	129	33.8

	Fairway from faculty	178	46.6
	University City	39	10.2
Work of students beside their studies	Work	70	18.3
	Not work	312	81.7
The order of students among beside their siblings	The old	135	35.3
	The middle	177	46.3
	The Younger	69	18.1
	Alone	1	0.3
Father education	Illiterate	16	4.2
	Primary	49	12.8
	Secondary & diploma	188	49.2
	University	79	20.7
	Dead from several year	50	13.1
Father occupation	Manual work	6	1.6
	Craft work	15	3.9
	Professional work	44	11.5
	Employed	180	47.1
	Business man	52	13.6
	Not work	35	9.2
	Dead from several years	50	13.1
mother education	Illiterate	46	12.0
	Primary	48	12.6
	Secondary & diploma	204	53.4
	University	50	13.1
	Dead	34	8.9
mother occupation	Housewife	250	65.5
	Craft work	2	0.5
	Professional work	11	2.9
	Employed	82	21.5
	House wife	3	0.8
	Dead from sever year	34	8.9

Table one represents distribution of studied nursing students according to their socio- demographic data. From this table appear that the majority of students were female (78.5%), and the mean of students' ages was 21.79 years with ± SD 0.77. Regarding to their marital status, the almost of studied students were single (85.6%), and 70.7% of nursing students from the rural area and only 29.3% from urban. Furthermore 46.6% of them inhibit in fairway from faculty, 33.8% inhabit in area closed to faculty, 10.2% stayed in University City, and only 9.4% stayed in the same city of faculty. In addition to 81.7% of the studied subjects didn't work beside to their academic study. Regarding to students' order among their siblings; 46.3% of them were middle, 35.3% were the older children among their siblings, and 18.1% were younger, and only 0.3% hadn't siblings. Concerning on students' father education; the around half of them (49.2%) had secondary degree of education or diploma , and the other had different level of education , and 13.1% of students ' father dead from several years . More over 47.1% of students' father were employee and the other had different jobs, Regarding to students' mother education and their occupation, the around half of the mothers (53.4%) had secondary level of education or diploma and more than half (65.5%) were house wife.
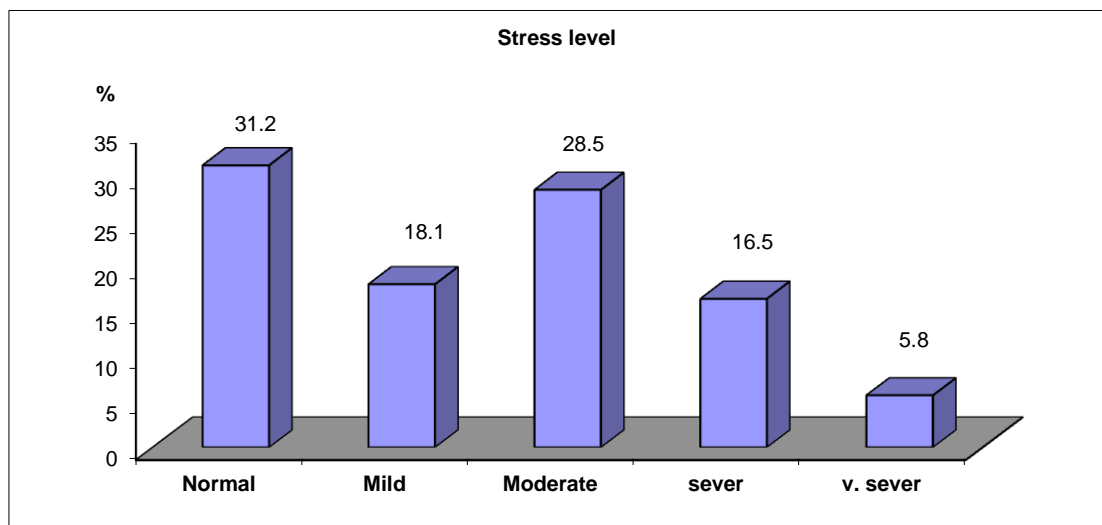
Figure (1): Distribution of studied nursing students according to their levels of stress

Figure one show the levels of stress among the studied nursing students. It appears that a round one third of students (31.2%) were normal, 18.1% of them had mild stress, 28.5% had moderate, 16.5% had saver, and 5.8% had very severe stress during time of data collection.

Table (2): distribution of studied nursing students according to mean score stress items

Stress items	Mean	S. D
Found myself getting upset by quit trivial things	1.61	0.93
Tended to over – react to situations	1.41	0.94
Found it difficulties to relax	1.40	0.93
Found myself getting upset rather easily	1.43	0.92
Felt that I was using a lot of nervous energy	1.59	0.93
Found myself getting impatient when I was delayed in any way.	1.33	0.93
Felt that I was rather touchy	1.47	0.97
Found it hard to wind down	1.20	0.97
Found that I was very irritable	1.37	0.94
Found it hard to calm down after something upset me	1.26	0.93
Found it difficult to tolerate interruption to what I was doing	1.24	0.90
Was in a state of nervous tension	1.32	0.94
Was intolerant of anything that kept me from getting on with what I was doing	1.29	0.92
Found myself getting agitated	0.97	0.95

Table two concern on mean score of stress items that responded by studied students. The items that had higher mean score were; getting agitated (0.97±0.95), getting upset by quiet trivial things (1.61± 0.93), using a lot of nervous energy (1.59±0.93), felt was rather touchy (1.47±0.97), getting upset rather easily (1.43±0.92), over react to situation (1.41±0.94), and difficult to relax (1.40±0.93).
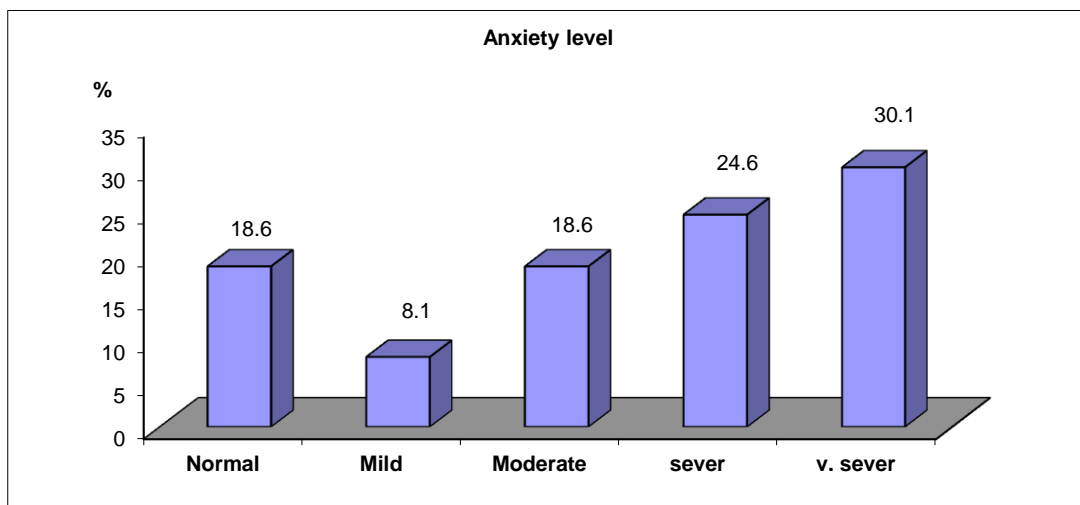
Figure (2): Distribution of students according to their levels of anxiety

Figure two explore the levels of anxiety among studied nursing students. It show that 18.6% of them were normal, 8.1% had mild level of anxiety, 18.6% had moderate level, and nearly to one quarter (24.6%) had sever level , and around one third (30.1%) had very sever level of anxiety**.**

Table (3): distribution of studied students according to mean score anxiety items

Anxiety items	Mean	S. D
Was aware of dryness of my mouth	1.30	0.90
Experienced breathing difficulty	1.10	0.89
Had a feeling of shakiness	1.23	0.97
Found myself in situations that made me so anxious I was most relived when they ended.	1.75	0.93
Had a feeling of faintness	0.74	0.84
Perspired noticeably	0.82	0.91
Felt scared without any good reason	1.02	0.94
Had difficulty in swallowing	0.71	0.81
Was aware of the action of my heart in the absence of physical exertion	1.21	0.98
Felt I was close to panic	0.99	0.95
Feared that I would be " thrown " by some trivial but unfamiliar task	1.20	0.95
Felt terrified	0.90	0.86
Was worried about situation in which I might panic and make a fool of myself	1.10	0.92
Experienced trembling	1.06	0.96

Table three focus on the mean score of anxiety items that expressed by studied nursing students. It appears that the items had higher mean score were: close to panic (0.99± 0.95), felt terrified (0.90±0.86), perspired noticeably (0.82±0.91), found in situations that made so anxious (1.75±0.93). Feeling of faintness (0.74±0.84), difficulty in swallowing (0.71±0.81).
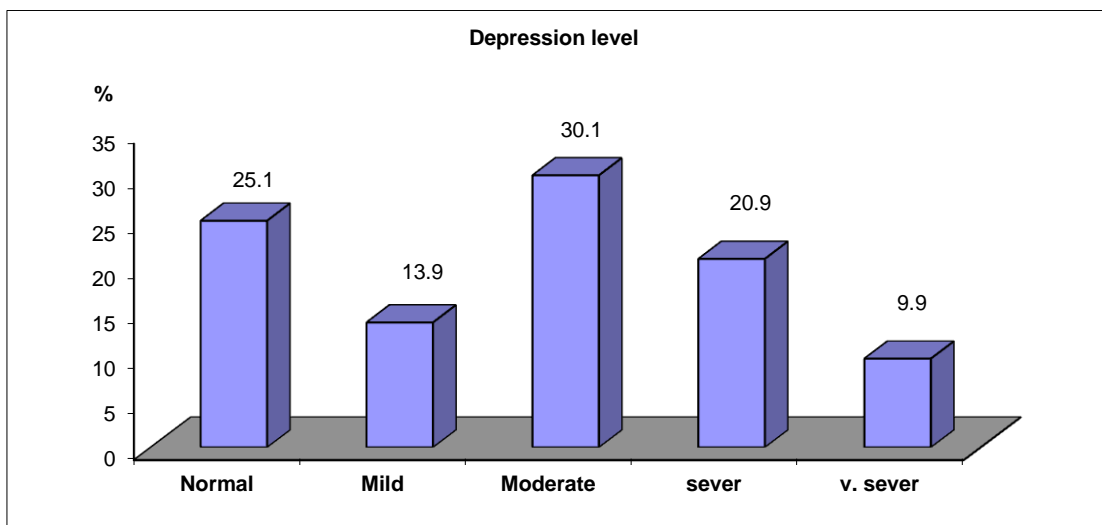
Figure (3): Distribution of nursing students according to their levels of depression

Figure three show the levels of depression among studied nursing students. It was found that around quarter (25.1%) of them were normal, and 13.9% had mild level of depression, and around one third (30.1%) had moderate level, 20.9% had sever, and 9.9% had very sever of depression.

Table (4): distribution of studied nursing students according to mean score of items of depression

Depression items	Mean	S. D
Couldn't seem to experience any positive feelings at all	1.14	0.94
Just couldn't seem to get going	1.18	0.90
Felt that I had nothing to look forward to	1.15	0.92
Felt sad and depressed	1.57	0.91
Felt that I had lost interest in just about everything	1.23	0.93
Felt I wasn't worth much as a person	0.82	0.90
Felt that life wasn't worthwhile	1.13	1.01
Couldn't seem to get any enjoyment out of the things I did	1.14	0.91
Felt down – heart and blue	1.38	1.03
Was unable to become enthusiastic about anything	1.13	0.88
Felt was pretty worthless	0.96	0.96
Could see nothing in the future to be hopeful about	1.08	0.94
Felt that life was meaningless	1.07	0.95
Found It difficult to work the initiative to do things	1.19	0.96

Table four represent the mean score of depression items that responded by studied nursing students. From this table appear that the most items that expressed by the subjects were the follows; pretty worthless (0.96±0.96), wasn't worth much as a person (0.82±0.90), sad and depressed (1.57±0.91).

Table (5): Correlation between nursing students', stress, anxiety and depression

Items	Depression		Anxiety	
	r	P value	r	P value
Stress	0.793	0.001*	0.792	0.001*
Anxiety	0.734	0.001*	-	-
Depression	-	-	0.734	0.001*

Table five appears the correlation between nursing students' stress, anxiety, and depression. There were statistically significant positive correlations between each of other. It means that if stress increased among nursing students, their feeling of anxiety and depression were consequently increased.

Table (6): relation between nursing students stress and their socio-demographic data (No. 382)

Socio demographic data		mean score of students stress			
		Mean	± S. D	t. test	p. value
Sex	Male	16.44	± 9.17	8.839	0.003*
	Female	19.56	± 8.21		
Marital status	Single	18.75	± 8.59	0.621	0.431
	Married	19.73	± 8.02		
Residence Address	Rural	18.79	± 8.32	0.130	0.719
	Urban	19.13	± 8.98		
	Same city	18.53	± 8.28	0.144	0.933
	Close to faculty	18.69	± 8.14		
	Fairway from faculty	19.19	± 9.09		
	University City	18.51	± 7.32		
The order among their siblings	The old	18.79	± 8.05	0.182	0.909
	The middle	18.82	± 8.72		
	The Younger	19.33	± 8.97		
	Alone	14.00	± 0		
Work of students beside studies	Work	18.77	± 8.96	0.017	0.898
	Not work	18.92	± 8.42		
Father education	Illiterate	19.38	± 6.53	1.331	0.264
	Primary	19.12	± 9.27		
	Secondary & diploma	19.84	± 8.34		
	University	17.58	± 8.47		
Mother education	Illiterate	17.33	± 7.98	1.152	0.137*
	Primary	18.15	± 8.52		
	Secondary & diploma	19.91	± 8.26		
	University	16.66	± 9.05		
Father occupation	Work	19.12	± 8.43	0.099	0.753
	Not work	19.60	± 8.72		
Mother occupation	Work	18.89	± 8.87	0.002	0.969
	Not work	18.85	± 8.29		

*Statically significant at ≥ 0.05

Table six explores the relation between mean score of nursing students' stress and their socio-demographic data. It was found that a statistically significant relation between students' sex and mean score of their anxiety. Whereby mean score of stress among female was more than male.

Table (7): relation between nursing students' anxiety and socio-demographic data (No. = 382)

Socio-demographic data		Anxiety scale			
		Mean	± S. D	t. test	p. value
Sex	Male	12.50	± 7.48	12.554	0.001*
	Female	15.84	± 7.60		
Marital status	Single	15.05	± 7.71	0.208	0.648
	Married	15.56	± 7.57		
Residence	Rural	15.32	± 7.70	0.579	0.447
	Urban	14.66	± 7.67		
Address	Same city	13.25	± 6.94	0.905	0.439
	Close to faculty	15.15	± 7.35		
	Fairway from faculty	15.54	± 8.04		
	University City	14.87	± 7.79		
The order	The old	15.64	± 7.73	0.655	0.581
	The middle	15.16	± 7.87		
	The Younger	14.04	± 7.17		
	Alone	15.00	± 0		
Work beside studies	Work	14.93	± 7.16	0.056	0.813
	Not work	15.17	± 7.81		
Father education	Illiterate	16.56	± 6.21	1.476	0.221
	Primary	14.20	± 7.06		
	Secondary & diploma	16.02	± 7.70		
	University	14.30	± 8.03		
Mother education	Illiterate	12.74	± 6.84	1.910	0.109
	Primary	13.90	± 7.55		
	Secondary & diploma	16.27	± 7.66		
	University	13.92	± 8.02		
Father occupation	Work	15.38	± 7.76	0.013	0.910
	Not work	15.23	± 6.70		
Mother occupation	Work	14.53	± 7.29	0.859	0.355
	Not work	15.38	± 7.84		

*Statically significant at ≥ 0.05

Table seven represents the relation between nursing students' anxiety and their socio-demographic data. From this table show that a statically significant relation between students' anxiety and their sex. The mean score of female students was more than male**.**

Table (8): relation between nursing students' depression and their socio-demographic data (No.= 382).

Socio-demographic data		Mean score of depression			
		Mean	± S. D	t. test	p. value
Sex	Male	14.23	± 9.48	4.891	0.028*
	Female	16.68	± 8.73		
Marital status	Single	16.17	± 9.10	0.006	0.940
	Married	16.07	± 8.04		

Residence Address	Rural	15.98	± 8.70	0.355	0.552
	Urban	16.58	± 9.53		
	Same city	15.19	± 7.32	1.298	0.275
	Close to faculty	15.91	± 8.26		
	Fairway from faculty	16.97	± 9.69		
	University City	14.18	± 8.76		
The order	The old	15.61	± 8.16	0.322	0.810
	The middle	16.50	± 9.22		
	The Younger	16.30	± 9.78		
	Alone	20.00	± 0		
Work beside studies	Work	17.00	± 9.85	0.761	0.384
	Not work	15.97	± 8.73		
Father education	Illiterate	17.00	± 8.42	0.269	0.847
	Primary	16.69	± 9.67		
	Secondary & diploma	16.48	± 8.91		
	University	15.54	± 9.20		
Mother education	Illiterate	14.78	± 8.62	1.733	0.160
	Primary	14.90	± 7.35		
	Secondary & diploma	17.07	± 8.96		
	University	14.94	± 9.94		
Father occupation	Work	17.00	± 9.85	0.374	0.541
	Not work	15.97	± 8.73		
Mother occupation	Work	16.03	± 9.64	0.031	0.861
	Not work	16.22	± 8.60		

*Statically significant at ≥ 0.05

Table eight shows the relation between mean score of nursing student's depression and their socio-demographic data. There were a statically significant relation between students' sex and their mean score of depression. The mean score of depression among female students was more than male.

5. DISCUSSION

While nurse educators are focused on the educational needs of students as a future nurse, they must also be realize that nursing students are young adults that at a risk for mental health problems given by their stage of development, and the demands of professional education introduce additional stressors that can further challenge their health [32]. The present study discovered that more than quarter of nursing students who participated in this study had moderate level of stress and 22.3% experienced sever to very severe stress. The most common symptoms of stress reported by nursing students in the our study were : getting agitated , upset by quiet trivial things , using a lot of nervous energy , felt very sensitive or was rather touchy , getting upset rather easily , tended to over react to situation , and found difficulty to relax.

The possible explanation of these findings is that the nursing students when entering into the field of professional nursing, they have to run into educational process which was more challenging, it involved progress in the intense academic and clinical programs, pass frequent exams, expand hours of training on skillful experiences, working with critically ill persons, moreover nursing students felt unequally to dealing with those patients.

In this context, the finding of our study is consisted with the results or others researches. *Rathnayake. S et al (2016)* explored that the majority of their nursing students reported mild to extremely severe stress (82.6%) [12].The same result appeared by *Cestar V et al (2017)* study [29]. And study by *Illankoon* and *warnakuloori (2014)* also found that there was a high prevalence of stress level among undergraduate nursing students. Moreover [33], Moreover *Javanovic V.R et al*

(2017) stated in their study 26% of their nursing students had stress score value above the threshold value [34]. In addition to *Amr.A et al (2011)* study stress among Mansoura (Egypt) baccalaureate nursing students, and found that there were numbers of stressors were significantly associated with stress among nursing students[21]. Meanwhile *Jimenez .C et al (2009)* show in their study about stress and health in novice and experienced nursing students. That the stress was suffered by nursing students during clinical practice [25].

Hence, adjusting to a nursing career is very stressful. Nursing students face stressful events in their study period that lead to negative consequences in their psychological wellbeing. This explanation also supported by *Rathnayake (2016)*, he stated that nursing students' stress is associated with lack of professional knowledge and skills, patients care and clinical performance of students [12]. In the same line *Shamsuddin.K (2013)* stated the high academic expectations are stressful and can theoretically in themselves pose risk s to students ' physical and mental health [35].

In another line the present study reach to unexpected finding. There were more than half of students who participated in this study experienced from sever to very sever anxiety. The most frequency symptoms were reported by these students were; felt close to panic; felt terrified; perspired noticeably ' found themselves in situations that made them so anxious; feeling of faintness and difficulty in swallowing.

The finding of the present study go on line with *Abdallahl.A et al (2014)* shown the prevalence of anxiety among nursing were 78.4% [36]. *Basu.M. et al (2016)* found the prevalence of anxiety among nursing students on their study was 56.59% [16] .In addition to studies of *Manpreet.K et al (2015)* (71.8%) [2]; *Cheung .T et al (2016)* (55%)[37]; *Al- Gelban K S (2007)* (48.9%)[38] ; *Arslan. G et al (2009)* (47.1%) [39]; *Chatterjee.S et al (2014)*(37.3%)[40]; *Roarigo. C et al (2010)* (28%) [41]. In contrast the result of *Hiremath .P et al (2016)* study, he found 72% of the new admitted undergraduate nursing students had no anxiety and only 11% of students were suffering with moderate level of anxiety [18]. As well as, *Metha. P et al (2013)* stated that 26% of their subjects from medical students had anxiety [42].

The finding of the present study also go online with the studies conducted by *Deary. I et al (2003)* [43], *Rella . S et al (2008)* [44], and *Thimmins. F et al (2011)* [45]. They reached that nursing students' stress and anxiety were increased overtime spent in the nursing program and were highest in the final year of the study, as well as the present study where the study subjects at the fourth and final years of their academic study, and more than half of them had highest level of anxiety. The possible explanation of this finding was that increased stress in the final year of nursing education which responsible about elevated levels of their anxiety. These contrast the findings of *wedgeworth. M (2016)*, they studied the difference between pre-nursing , early nursing , and late nursing students and revealed that late nursing students had the lowest levels of both state and traits anxiety as compared to the pre- nursing and early nursing students , While the pre-nursing and early nursing sample group had the highest levels of both state and trait anxiety [46].

Regarding to the levels of depression among nursing students in the present study, the around one third of students experienced moderate level of depression and the similar level were felt from sever to very severe depression. The most common symptoms reported by the students were felt worthless, was not worth much as a person, and felt sad and depressed. There are numbers of possible explanations for this finding. *First*; it might be related to accumulation of stressors that nursing students might be faced during their academic years, especially the students who participated in this study in the last and fourth academic years. *Second;* the studied students during this academic years 2018 studied for the first time psychiatric mental health nursing course, they began direct interact with hospitalized psychiatric patients. Those patients are totally different from other patients. Whereby the students need special skills to dealing with them, *Third*; time of data collection of this study was nearly to the time of final clinical exam, this consider another stressor was exposure to the students. All of these factors might be responsible for this condition, which suffers from nursing hardness.

This result in the present study was consisted with previous researches. *Papazisis. G et al (2008)* found 52.4% of their nursing students in creek who participated in their study experienced depressive symptoms; (34.7% mild, 12.9 % moderate, and 4.7 % several) [3]. And *Abdel Whahed . W et al (2016)* found from their study on medical fayom university students. 62.4% of their subjects suffered from depression [47], and *Chernomas W et al (2012)* result was 37.39 % among undergraduate Canadian nursing[48] , which was similar to *Cheung et al (2016)* among Hong kong nurses (35.8%) [37] and *Manpreet et al (2015)* at Punjab among postgraduate nursing students (38%) [2] . *Abdallahl et al (2014)* shown

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the prevalence of depression among first year medical students in Egypt in public university were 63.6% at menoufiya university [36]. In contrast **Hiremath. p (2016)** reported that nursing students that selected from nursing institute at karad Maharashtra. Results show that 99% of the students were hadn't any signs of depression where only one student had symptoms of mild depression [18].

The present study explored a significantly relation between gender of nursing students and their level s of stress, anxiety, and depression, whereby female were more experienced of those three psychological discomfort (emotional disorder) than male. This finding was explained by the evidence the predominance of women in nursing undergraduate course. This predominance is related to the existing prejudice around the image of the profession: historically, nursing is a feminine profession, because the idea of caring and protecting is linked to the history of women [49, 50].

This explanation supported by the results of **Cestar V. et al(2017)** who found the high prevalence of stress in women and demonstrated that this was related to responsibilities with compulsory university activities , work , care of the home, and family care and these an overload of responsibilities increases the production of hormones such as cortisol an adrenaline[29]. These hormones affect two women for each man, implying high level s of emotional exhaustion and onset of anxiety, panic and depression [52]. It also important to mention that, women as a gender are more exposed to different stressors , because their numerous roles that imposed on them in our culture.

The finding in our study also consisted with the result of **Javanovic et** *al* (2017), they stated that female participants were significantly more exposed to symptoms of anxiety, stress , and depression[34], and similarly results found by **Zaher JS et al (2016)** they compared depression , anxiety , and stress among nurses in critically care and internal surgical unite at hospital [52] .In contrast with the study of **Nagaraja G. M (2015)**, they discovered the proportion of male students had more depression symptoms which may be due to their competitiveness and future planning , less adjustment in the hostel atmosphere[30] .

It is worth mentioning that the present study showed a significant association between levels of stress, anxiety, and depression among nursing students , Thais finding consisted with the study of **Rathnayake .S et al (2016**) they found a strong significant positive association between depression, anxiety, and stress among nursing students in a public university in Sri Lanka [12] . and also the previous studies conducted by **Kurebayashi et al (2012)** [19] ; **Manpreet. K et al 2015** [31] ; **papazisis et al 2014** [19] , **and Ratanasiripong 2012** [15] . In this context, these negative emotional symptoms lead to poor psychological wellbeing that interfere with learning and limit the academic performance of these nursing students.

6. CONCLUSION

The finding of the present study concluded that symptoms of stress, anxiety, and depression are highly among undergraduate nursing students, and there are appositive association between stress, anxiety and depression. Moreover the female students were more experienced than male.

7. RECOMMENDATIONS

Based on these findings the following recommendations are suggested:

1- Nursing students should be evaluated routinely by mental health professional to detect any psychological discomfort and that affect mental status and academic achievements.

2- Nursing educates help nursing students to recognize sources of stress and offer various opportunities to enhance their coping effectively.

3- Engage nursing students in to training program about learn solving skills, stress management, effective coping methods, communication skills, to dealing with stress, time management, and solving conflict.

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