

Relation between Stress and Coping Strategies as Perceived by Nursing Students during Clinical Practice

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Abstract Background: Nursing training is a stressful process. The effects of stress on nursing students have been well documented. High perceived stress levels and lack of effective coping processes could be a barrier to achieve the challenges of profession. **Aim of the study:** Assess relation between stress and coping strategies as perceived by nursing students during clinical practice. **Design:** a descriptive design was utilized to conduct this study. **Setting:** the current study was conducted at Technical Institute of Nursing, Zagazig University, Sharkia Governorate. **Sample:** a cluster random sample of 221 nurse students were included in this study. **Tools:** Three tools were used to collect data: demographic data questionnaire & Student Nurses Stress Index, Brief Cope Inventory and Emotional Approach Coping Scale. **Results:** More than three quarters of the studied sample had low total stress, all of them used low emotional-oriented coping and more than two thirds of studied nurse students used low problem-oriented coping. A highly positive significant correlation was detected between nurse students' stress and emotion-oriented coping and emotion processing. Also, a highly positive significant correlation was found between nurse students' problem-oriented coping and emotion-oriented coping and emotion processing. **Conclusion:** Coping strategies had significant impact on lowering level of stress. **Recommendations:** Develop stress management program for nursing students to reduce levels of stress and develop proper coping strategies.

Keywords: coping strategies, nursing student, stress

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1. Introduction

Clinical training is a crucial component of nursing education designed for students to acquire the necessary professional skills and develop the attitudes that will have positive impact on the quality of patients' care [1]. The experience and skills acquired with actual patients in the clinical setting are far more useful in nursing education than standardized situations in the labs or in a classroom. Clinical practice offers the chance for nursing students to acquire the applied knowledge and the psychomotor skills necessary for their professional development [2]. Nursing spends almost half of its education in the clinical field occurs in most nursing curriculum; thus it is alarming that clinical practice is perceived as very stressful [3].

Nursing students are continually exposed to different stressors during nursing education and training, which can inhibit learning and performance directly or indirectly. The nature of clinical education poses obstacles that can lead to stress for students. Furthermore, the practical components of the curriculum, which are essential in preparing students to become qualified nurses, have made the programs even more difficult than other programs [4].

Stress can be described as a multi-dimensional phenomenon based on a complex relationship between people and the environment. However, some degree of stress is vital to encourage and empower individuals to accomplish their goals, stress can be a barrier to concentrate, problem-solving, decision-making, and other learning skills required for students [5].

Stress among nursing students could have significant outcomes (positive or negative), on both thinking and learning. It is recognized that students with high levels of stress have problems in their education, which could result in a diversity of physical and mental health related problems. Conversely, low levels of stress were detected to be a motivation for the students [6].

Nursing is one of the utmost stressful professions in the world. Therefore, adjusting to a nursing career is very stressful. Nursing students face stressful events in their study period that result in negative outcomes in their academic, personal and professional life [7]. Besides class room learning, they have to acquire skills in laboratories and clinical settings, and undergo extensive evaluation processes comprising of theory and practical examinations that result in a complicated learning environment [8].

In addition, nursing students are faced with numerous stressors in clinical practice involving: paper-work assignments,

carrying out clinical procedures in a real life situation, moving between diverse specialties as community, and psychiatric nursing, establishing interpersonal relationships and interacting with patients, peers and staff [9].

Moreover, clinical stressors include fear of unknown, fear of being late and get punished, lack of knowledge and skills. Stress among nursing students is not limited to their studies but it may arise from a diversity of sources that include health condition, financial status, and romantic relationship [10].

Coping strategies can be defined as positive or negative and as active or reactive. Active strategies that deal with real stressful situations however, reactive strategies mean coping with the individual's own thoughts and feelings [6,11]. Students' stress can be altered and affected by the coping strategies they select to use in their clinical practice. Effective coping strategies assist students to achieve significantly better study performance; coping strategies also help to alleviate the tension of students. The most efficient coping mechanisms have been described as follows: problem solving, transition (efforts to maintain a positive attitude to the stressful situation) and unrelenting optimism [12,13].

In addition, **Lazarus and Folkman [14]** identified two forms of stress coping strategies were: problem-focused and emotion-focused. Problem focused strategy involves ideas, actions and approaches aimed at reducing the stressful situation, happening once the student has confidence in his ability to alter the situation, so he has selected the best solution to put it into action. Emotion-focused strategy comprises thoughts, behaviors, and approaches aimed to control and diminish stressful emotions connected with a stressful situation, occur when the student realize that he has to tolerate the stressor to reduce his suffering, since the situation is beyond his capacity to alter it. These two strategies can be utilized to face the stressful situations by the students.

Moreover, effective coping strategies for stress are very essential and can change a highly stressful situation into a manageable one. Many coping strategies listed include social support, family problem solving, self-reliance, spiritual strategy, transition, avoidance and denial. Researchers have described the social support approach as very successful in assisting students cope with stressful situations and are utilized more frequently [1].

1.1. Significance of the Study

High perceived levels of stress and deficiency of effective coping skills could be an obstacle to the nursing profession's challenges. Interpersonal and environmental stress may be faced by student nurses. Stress brings advantages and disadvantages to nursing students. Stress can create people become stressful and be emotionally affected. Conversely, stress gives motivation and evoked to be more up holding and persistence in the study in order to meet the ultimate goal and accomplish success in the future. Also, coping processes may play significant roles in the perception and effect of work stress.

Stress is an important area for investigation, particularly in educational settings, where it has the potential to interfere with learning of nursing student and functioning.

Stress may result in higher levels of attrition which is a major problem for nursing programs worldwide.

It is hoped that the findings of our study might have important implications for both research and practice: It would help the universities in designing necessary programs for the students to more effectively manage stress, so that they enhance their academic performance. Also, it would guide the adoption of proper teaching and learning methods, so stress-related clinical practices will be at a minimum and developing an effective clinical teaching strategy for education of nursing. Furthermore, little research is done about stress and coping strategies in clinical practice among nursing students at Technical Institute of Nursing. Therefore, the current study intended to assess relation between stress and coping strategies as perceived by nursing students during clinical practice.

1.2. Aim

This study aims to assess relation between stress and coping strategies as perceived by nursing students during clinical practice. Through the following objectives:

- Assess levels of stress of nursing students.
- identify types of coping strategies utilized by nursing students.
- Assess relation between stress and coping strategies as perceived by nursing students during clinical practice.

1.3. Research Questions

- What are the levels of stress as perceived by nursing students?
- What are the types of coping strategies utilized by nursing students?
- Is there a relation between stress and coping strategies as perceived by nursing students during clinical practice.

1.4. Research Design

A Descriptive research design was used to conduct this study.

2. Sample and setting

2.1. Study Setting

The study was conducted at Technical Institute of Nursing, Zagazig University, Sharkia Governorate. Technical Institute of Nursing is located in building No. 62 above faculty of dentistry. It consists of two floors, the third and fourth floor. Which contain seven scientific departments namely: Nursing administration, Psychiatric and Mental health nursing, Medical surgical nursing, Maternal and newborn health nursing, Pediatric nursing, Community health nursing and Geriatric nursing.

2.2. Study Subjects

The subjects consisted of a cluster random sample of 221 nursing students were chosen from above mentioned setting. From the first year 104 and second year 117, the total number of nursing students during the study=221 and

they accept to participate in the study according to the following equation:

$$n = \frac{N * p(1-p)}{\left[N-1 * (d^2 + z^2) + p(1-p) \right]}$$

The researcher randomly selected the required sample 221 students from each stratum using simple random sample technique in which the researcher wrote the names of all students on papers and put them in a container then picked them up randomly until the required sample size of male and female students were obtained [15].

2.3. Tools of Data Collection

Three tools were utilized to collect data for this study:

First tool: It consists of two parts:

First part: 1) Demographic characteristics of students and their parents e.g. Age, gender, academic year, family income, father education, mother education etc.

Second part: Student Nurses Stress Index (SNSI).

This scale was constructed by **Jones and Johnston [16]** to assess nursing students' perceived work stress. It included (22 items), and divided into four categories as follows: academic load, clinical concerns, personal problems and interface worries.

The scoring system:

The scale items were graded on 5-point likert scale with response options of: not stressful (1), weakly stressful (2), moderate stressful (3), strongly stressful (4) and extremely stressful (5) for each nurse student then total score was calculated and converted into percent score by dividing nurse students' total score by the maximum possible score. These scores were measured as follows:

- Not stressful < 20 %
- Weakly stressful = 20% - ≤ 40%
- Moderate stressful = 40% - ≤ 60 %
- Strongly stressful = 60% - ≤ 80 %
- Extremely stressful = 80 % - ≤ 100%

Second tool: The Brief Cope Inventory

This scale was designed by **Carver, et al. [17]** to assess problem -focused coping. It included (28-items), assessing coping in several domains. In this study, the Brief Cope was adapted to ask respondents what they did when they experienced a stressful event related to their role as a student nurse during the past semester. The four items assessing problem-focused coping were of specific importance to this study and were summed to create a problem-focused coping subscale score. These items were: "I've been concentrating my efforts on doing something about the situation I'm in", "I've been taking action to try to make the situation better", "I've been trying to come up with a strategy about what to do" and "I've been thinking hard about what steps to take".

The scoring system:

The scale items were ranked on 4-point Likert scale, ranging from I usually didn't do this at all (1) to I usually did this a lot (4), for each nurse student then total score was calculated and converted into percent score by dividing nurse students' total score by the maximum possible score. These scores were calculated as follows:

- I usually didn't do this at all = < 25%
- I usually did this a little bit =25%- ≤ 50%

-I usually did this a medium amount=50%- ≤ 75%

-I usually did this a lot=75%- ≤ 100%

Third tool: Emotional Approach Coping Scale (EACS)

This scale was developed by Stanton, et al. [18] to assess emotional approach coping. It included (8- items), and divided into two categories as follow:1) Emotional processing coping (four items), such as I take the time to figure out what I'm really feeling. 2) Emotional expression coping (four items), such as I take time to express my emotions.

The scoring system:

The scale items were rated on 4-point Likert scale: I usually didn't do this at all (1), I usually did this a little bit (2), I usually did this a medium amount (3), and I usually did this a lot (4), for each nurse student then total score was calculated and converted into percent score by dividing nurse students' total score by the maximum possible score. These scores were computed as follows:

- I usually didn't do this at all = < 25%
- I usually did this a little bit =25%- ≤ 50%
- I usually did this a medium amount=50%- ≤ 75%
- I usually did this a lot=75%- ≤ 100 %

2.4. Operational Design

The operational design will include preparatory phase, validity, reliability, pilot study, administrative design and data collection procedure.

2.5. Preparatory Phase

Based on review of the current and past local and international literature related the various aspect of the problem using textbooks, articles, magazines and internet. This review helps the researcher to be acquainted with problem, and guide to prepare tools of data collection.

2.6. Validity

Before the pilot study and data collection, the validity of the tools was ascertained through the process of translation retranslation and review by experts. Validity of the study tools was revised by five experts in the field of psychiatric and administration nursing. Who revised the tools for clarity, relevance, applicability and understanding, and according to their opinion, minor modification was done.

2.7. Reliability

Reliability of the tools was done by using the questions to collect data from group similar to the study group (test and retest) and applied in different of time to be assure consistency of answers. Also, the reliability of the tool was measured through estimating its internal consistency using the Cronbach alpha coefficient, and it was 0.82 for stress scale and 0.70 for coping scale.

2.8. Pilot Study

A pilot study was carried out on 10 % of the studied sample after the development and modification of the

tools and before starting data collection. The purpose of the pilot study was to assess tools contents clarity, consistency and applicability of tools, it also assisted to estimate the time needed to complete the data collected forms. All of them received clear explanation on the study purpose. According to the results of pilot study no modifications done of the tools. The pilot study subjects were excluded from the study sample.

2.9. Data Collection Procedure

The researcher started data collection by introducing herself to students and explain the procedure of selecting student and title of research, purpose and its importance to students. All questions were answered and detailed clarification was given to obtain their acceptance and cooperation during filling the tools of the study. The researcher distributed the three tools of the study to each student in the first year and takes her time to fill them and collect them from students. The filling of questionnaire took 30-45 min by participants. The researchers spent 3 days every week. The researcher was repeated this procedure with all students in the second year. Data collection lasted for three months, starting from the beginning of October 2016, to the end of December 2016.

2.9.1. Administrative Design

An official permission was taken from the Dean of the Technical Institute of Nursing after clarifying the nature of the work. The approval for participation of the nursing students was obtained after the aim of the study was explained to them. The students were assured about confidentiality of the information and it's used only for the purpose of the study. They were given a chance to refuse to participate and they could draw at any phase of the research study.

2.9.2. Statistical Design

The collected data were computerized, revised, categorized, tabulated, analyzed, and presented in descriptive and associated statistical form utilizing statistical package for the social sciences, version 20 (SPSS Inc., Chicago, Illinois, SA). Appropriate descriptive statistics such as frequencies, and percentages have been utilized for qualitative variables, while, quantitative variables have been employed for means and standards deviations. Chi-square test & T-test and Pearson correlation were used to detect the relation between the variables. Probability (p-value) less than 0.05 was considered significant and less than 0.01 was considered as highly significant. When the expected values in one or more of the cells in a 2 x 2 tables were less than 5, Fisher exact test was utilized instead and correlation coefficient (r) test was utilized to detect the closeness association between the study variables.

3. Results

Table 1 displays the socio-demographic characteristics of the studied sample. More than half of the studied sample (52.9%) was in the second academic year. And more than half of the study sample (57.9%) aged less than

20 years with mean±SD of 19.3 ± 0.7 and their age ranged from 18-20 years. Also, this table shows that, more than half of them (52.9%) were single. The majority of studied nurse students (84.2%) were living in rural areas. As regards having siblings, most of them (95.9%) had more than 2 siblings with mean±SD of 3.7 ± 1.7 and more than two thirds (68.3%) of nurse students were the oldest of their siblings with mean±SD of 2.6 ± 1.7 .

Table 1. Demographic Characteristics of Nursing Students in the Study Sample (n=221)

Demographic Characteristics	Frequency	Percent
Academic year:		
First year	104	47.1
Second year	117	52.9
Age (in years):		
<20	128	57.9
20+	93	42.1
Range	18.0-20.0	
Mean±SD	19.3±0.7	
Median	19.0	
Marital Status:		
Single	117	52.9
Engaged	60	27.1
Married	44	19.9
Residence:		
Rural	186	84.2
Urban	35	15.8
Numbers of Siblings:		
1	9	4.1
2+	212	95.9
Range	1-13	
Mean±SD	3.7±1.7	
Median	3.0	
Birth order:		
1	70	31.7
2+	151	68.3
Range	1-9	
Mean±SD	2.6±1.7	
Median	2.0	

Table 2 shows the family characteristics of nursing students in the studied sample. More than three quarters of studied families (79.6%) had income more than 1200 pounds per month with a mean of (1646.5 ± 793.8) . More than half of studied nurse students' Fathers (56.6%) had basic / intermediate education and nearly half of them (48.9%) were worker. More than half of studied nurse students' mothers (57.0%) had basic/intermediate education and the majority of them (83.7%) were house wife.

Table 3 and Figure 1 illustrates that, more than two thirds of studied nurse students (71.5%) had low student role stressors. The majority of the studied sample (81%) had low clinical experience stressors, more than half of studied nurse students (54.3%) had low other academic stressors. More than three quarters of the studied sample (76.9%) had low total stress. The same table represents that, more than two thirds of studied nurse students (71.5%) had low problem- oriented coping. The entire studied sample (100%) had low emotional-oriented coping. The same table clarifies that, nearly two thirds of the studied sample (61.1%) had low emotion processing. In

relation to emotion expression, most of the studied sample (91.9%) had low emotion expression.

Table 2. Family Characteristics of Nursing Students in the Study Sample (n=221).

Family characteristics	Frequency	Percent
Family Income (LE):		
<1200	45	20.4
1200+	176	79.6
Range	200.0-10000.0	
Mean±SD	1646.5±793.8	
Median	1500.00	
Father Education:		
No formal education	53	24.0
Basic/intermediate	125	56.6
University	43	19.5
Father job:		
Unemployed	13	5.9
Employee	100	45.2
Worker	108	48.9
Mother Education:		
No formal education	74	33.5
Basic/intermediate	126	57.0
University	21	9.5
Mother job Status:		
Housewife	185	83.7
Working	36	16.3

Table 3. Frequency Distribution of Stress and Coping among Nursing Students in the Study Sample (n=221)

Stress and Coping	Frequency	Percent
Stressors related to:		
Student role:		
Low	158	71.5
High	63	28.5
Clinical experience:		
Low	180	81.4
High	41	18.6
Other academic:		
Low	120	54.3
High	101	45.7
Total stress:		
Low	170	76.9
High	51	23.1
Problem-oriented coping:		
Low	159	71.9
High	62	28.1
Emotional-oriented coping:		
Low	221	100.0
High	0	0.0
Emotion processing:		
Low	135	61.1
High	86	38.9
Emotion expression:		
Low	203	91.9
High	18	8.1

Table 4 declares that, there is a statistically significant relation between nurse students' total stress and emotion processing (P = 0.04).

Table 5 reports that, there is a highly positive significant correlation between nurse students' stress and emotion-oriented coping (r=.29**) and emotion processing (r =.21**). There is a highly positive significant correlation between nurse students' problem-oriented coping and emotion-oriented coping (r=.324**) and emotion processing (r=.211**). Also, There is a highly positive significant correlation between nurse students' emotion- oriented coping and emotion processing (r=.263**). There is a highly positive significant correlation between nurse students' emotion processing and emotion expression (r=.230**). There is a positive significant correlation between nurse students' emotion-oriented coping and emotion expression (r=.148*).

Table 6: Indicated that, there is a positive significant correlation between nurse students' scores of emotion processing and No. of siblings (r =.141*).

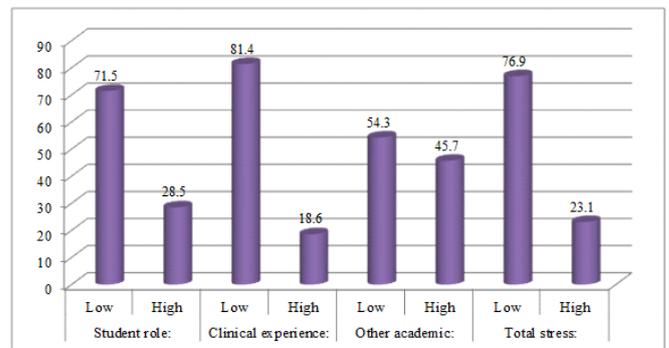


Figure 1. Distribution of Stress Level among Nursing Students in the Study Sample

Table 4. Relation between Students' Total Stress and their Coping strategies

Items	Total Stress				X2 test	p-value
	Low		High			
	No.	%	No.	%		
Problem-oriented coping:						
Low	124	78.0	35	22.0	0.36	0.55
High	46	74.2	16	25.8		
Emotion processing:						
Low	110	81.5	25	18.5	4.06	0.04*
High	60	69.8	26	30.2		
Emotion expression:						
Low	154	75.9	49	24.1	Fisher	0.26
High	16	88.9	2	11.1		

(*). Statistically significant at p<0.05.

Table 5. Correlation matrix of students' scores of stress and coping strategies

Scores	Spearman's rank correlation coefficient					
	Stress	Problem-oriented coping	Emotion-oriented coping	Emotion Processing	Emotion Expression	Social Support
Stress						
Problem-Oriented Coping	0.11					
Emotion-Oriented Coping	.29**	.324**				
Emotion Processing	.21**	.211**	.263**			
Emotion Expression	0.00	0.10	.148*	.230**		

(*). Statistically significant at p<0.05, (**) statistically significant at p<0.0.

Table 6. Correlation between Students' scores of Stress, Coping and their Characteristics

Characteristics	Spearman's rank correlation coefficient				
	Stress	Problem-oriented coping	Emotion-oriented coping	Emotion Processing	Emotion Expression
Age	-0.03	0.13	-0.06	-0.01	0.03
Numbers of siblings	0.02	-0.01	0.00	.141*	-0.13
Birth order	0.04	0.11	0.01	0.01	-0.09
Family income	-0.12	0.00	-0.12	-0.08	-0.09
Father education	-0.05	-0.01	-0.12	-0.05	-0.05
Mother education	-0.10	-0.06	-0.12	-0.05	-0.03

(*) Statistically significant at $p < 0.05$.

4. Discussion

The nursing program comprises clinical and theoretical courses that complement each other. The nursing curriculum is aimed at preparing competent and proficient nurses to apply their knowledge and skills in their work process. Therefore, during clinical learning and training, emphasis should be placed on the stress of nursing students as it affects all the clinical skills; psychomotor, affective and theoretical knowledge [6].

Clinical learning may be influenced by many factors, which may be related to the learner, teacher, or the environment. One of the important and frequently reported factors that may affect students' learning, especially in clinical settings, is stress [3]. Effective coping mechanisms promote return to a balanced state that diminishes the negative consequences of stress. Coping has been described as a stabilizing factor that can help individuals to maintain psychosocial adjustment during stressful events [19]. Therefore, the aim of the current study was to assess relation between stress and coping strategies as perceived by nursing students during clinical practice.

The result of the current study showed that, more than half of students were in the second academic year. This was an expected finding because the already registered number of nurse student in the second academic year was more than those in first academic year. This result agreed with, Shukla, et al. [20] who conducted a study in India and found that, more than half of nursing students from the second year.

Regarding the age, more than half of students aged less than 20 years with mean \pm SD of 19.3 ± 0.7 and their age ranged from 18-20 years. This could be attributed to that this age group has lack of interpersonal skills to cope with life stress and inability to interpret the situation that occurs in person- environment relationship. This result was in agreement with, Al Bedaiwi, et al. [21] who conducted a study in a Saudi Arabian teaching hospital and found that, most of students were in the age group 21 years, they also mentioned that this age group was unable to cope with interpersonal stressors, lack in sense of wellbeing, mal-adaptation occurred that can shift the balance toward illness and diminish self-concept. In the same line, similar finding was supported by Shukla, et al [20] who conducted a study in India and they found that, the mean age was 19.27 ± 0.78 years.

Concerning marital status, the current study demonstrated that, more than half of students were single. This might be due to that, it is difficult to match between marriage and studying. This result is consistent with that of, Hanafi [22] who conducted a study in Faculty of Nursing, Cairo

University and found that majority of Cairo University students was single. This result is in contrast with, that of previous studies from the West such as Howard [23] who found that, a large number of nursing students were married have financial responsibilities regarding their families, and therefore have an additional time management burden because they are employed and also need to pursue nursing studies.

Regarding residence, the majority of students were living in rural areas. It might be due to the fact that the location of the study of Technical Institute of Nursing in Zagazig City coincides with a larger rural catchments area. Also, this is an end result of the system for admission to institutes in Egypt, which depends on student's grade and geographical distribution. This study result was supported by El-Ezazy [24] reported in study was done at Faculty of nursing, Zagazig University; the majority of students lived in rural areas.

The current study results found that, most of students had more than 2 siblings with mean \pm SD of 3.7 ± 1.7 . This is may be a common finding in the rural Egyptian families, which still value the large family with a lot of children. These results were in agreement with, Amr, et al. [25] who conducted a study in Faculty of Nursing, Mansoura University and found that, more than half of study sample had family size of more than 5 persons. This result also was consistent with, Osman [26] who conducted a study in Faculty of nursing, Zagazig University, and detected that, more than two thirds of students had 2-4 siblings, in addition to more than one-fourth having five or more siblings. This result was in contrast with, Shukla et al. [20] who found that, more than half of the study sample were from families of small size less than 5 members, while more than one third of them were from large families.

The current study revealed that, more than three quarters of study sample families had income more than 1200 pounds per month with a mean of (1646.5 ± 793.8). This is quite expected in a sample living in rural areas, which reflects a tendency towards insufficiency or poverty. This result disagreed with, Amr, et al. [25] who found that more than three quarters of study sample families' income were satisfactory. The findings of the current study were also inconsistent with that of, Altiok and Ustun [27] who conducted a study in Department of Nursing, Health School, Adnan Menderes University and found that, more than half of the students stated that, their income was equal to their expenses while one third of them stated that their income was less than their expenses, and minority of them stated that their income was more than their expenses.

The current study result showed that, more than half of students' fathers and mothers had basic / intermediate

education and nearly half of fathers were worker while the majority of mothers were house wives. This result could explain the low level of income. Where the available resources to family to meet student's demands and needs are limited, which may lead to increased feelings of stress and tension between family members. This result was consistent with, Kumar and Nancy [28] who conducted a study in Punjab and found that, only more than one quarter of student's father and less than one quarter of mother had their education up to graduation and one third of fathers were farmers and three quarters of mothers were house wife. However, Amr, et al. [25] found in their study that, more than three quarters of fathers and mothers of the respondents were of secondary and above secondary education level and more than two thirds of fathers were working as professionals.

The current study revealed that, more than two thirds of students had low student role stressors. This result may be explained by some of institute subjects are explained previously to those students in nursing schools. This result disagreed with, Shukla et al. [20] who found that, overall perceived level of stress was high and academic load was the main sources of stress. This may be explained by fact that, a sub-item analysis of the student nurse stress index scale showed that, most students' perceived fear of failure in the test and being unsure of what is expected of them in both academic and clinical work are extremely stressful. In a similar study, of Jensen [28] who conducted a study in California and found that, a study's sample of nursing students was experiencing significantly more stress in their roles as student nurses. Also, Kyriakon [30] with Lee and Wang [31] reported that a high level of occupational stress is linked to workload and responsibility.

The current study indicated that, majority of the study sample had low clinical experience stressors. This result might be explained by the majority of the study sample was nursing school graduates. Meanwhile the minority of them who had high clinical experience stressors were secondary school graduates. This result supported with, Shukla et al. [20] who reported that, stress from clinical source was perceived comparatively less important. On the other hand, Abd El-Hady [32] who conducted a study in Faculty of Nursing, Alexandria University, Egypt and found that, stressors connected with the clinical environment were the main source of stressors associated with the inconsistency of school goals, inadequate supplies and equipment, and inappropriate physical environment in clinical areas. The clinical practices are reported to create the highest level of stress. In addition, Kaur, et al. [33] reported that, clinical experience is the most anxiety producing component of nursing program. Moreover, Martos et al. [34] and Timmins et al. [35] who conducted a study in University of Jaén, Spain and Ireland respectively and found that, the clinical practices are reported to create the highest level of stress.

The current study revealed that, more than half of studied nurse students had low other academic stressors, while nearly half of them had high other academic stressors. This percentage of high other academic stressors may be due to engage, marriage, new girl or boyfriends, changing in living conditions, financial problem in the family and lack of time to spend with family. This result was consistent with, Hamid [36] who conducted a study in

Iranian and found that, the most nursing students had high level of stress by experiencing interpersonal and environmental sources of stress such as placed in unfamiliar situation, change in living condition, divorce between parents, new responsibility, financial difficulties, marriage, severe injury and death of family members.

The finding of the current study indicated that, more than three quarters of the studied sample had low total stress, while nearly one quarter of them had high stress. This might be due to many of the program's demands, expectations and internal and external tension can lead students to encounter stress and even give up on their future profession, as nursing is considered an extremely stressful occupation due to frequent exposure to human suffering. This result supported with Ahmed et al. [37] stated that, nearly one quarter of nurse s recorded moderate to severe psychological distress on the General Health questionnaire. In this regard, Papazisis et al. [38] who conducted a study in Greece and found that, nearly three quarters of nursing students perceived stress, most of them had mild levels while about 12.4% had very high levels of stress.

The result of the current study was inconsistent with that of, Amr et al. [25] who found that, more than one third of nursing students had high stress. The differences between various studies are certainly related to the nature of the study setting and the community within which the study was done. Similarly, Mahfouz and Alsahli [39] who studied "Perceived Stress and Coping Strategies among Newly Nurse Students in Clinical Practice in Riyadh " and reported that, most of nursing student 94.1% had high stress while, 5.9% had moderate stress, while there is no one of the students has a low stress.

Regarding students' problem-oriented coping, the present study result revealed that, more than two thirds of studied nurse students had low problem-oriented coping, while more than one quarter of them had high problem-oriented coping. This might be attributed to students are unable to use problem-oriented measures or prefer to spend time in studying heavy nursing subjects, preparing assignments and attending clinical training rather than attempting to identify, discover a solution to faced problems. However, student nurses who engage in direct, problem-oriented coping seem to adjust better to stressful environments and have more positive health related outcomes. This result in contrast with, Jensen [28] who reported that, a person may be more likely to engage in problem-focused coping when the individual appraises the situation to have some foreseeable solution in which they have believe that they have adequate resources to address (e.g. managing stress pre- presentation by looking over notes and practicing the speech). Similarly, these findings were consistent with those of, Hafeznia [40] who mentioned that, task-oriented problem solving coping strategy as the most adaptive way of dealing with workload pressures, in adequate resources, role ambiguity and other sources of stress.

As regards students' emotional-oriented coping, the current study finding revealed that, the entire studied sample had low emotional-oriented coping. This might be explained by students that nothing can be done to change the stressful situation. This result was inconsistent with, Stanton et al. [18] who conducted a study in united States and reported that, emotional approach coping may

serve as an adaptive function as this coping style allows individuals to express and process feelings surrounding their life experiences, possibly relieving distress. Also, El Zeny [41] who conducted a study in Faculty of nursing, Zagazig University, and found that, the effective coping strategies utilized by the nurse educators were cognitive and emotional coping.

The current study indicated that, nearly two thirds of the studied sample had low emotion processing, while more than one third of them had high emotion processing. This might be attributed to emotional processing is another form of emotion approach coping in which an individual attempts to identify and think about their emotions including efforts to understand them in relation to a stressful experience. In the same line, Osman [26] found that, only a small minority (2.9%) of adolescents' students expressed emotions through instrumental anger or internalization. Thus, about one-fourth of them left class without permission during anger, while a very small percentage had thoughts about starting fires after anger provoking situation

However, Nicole et al. [42] who conducted a study in Botswana and reported that, adjustment and adaptation to different emotional situations tend to play a critical role in the student coping profile. The students surveyed seem to need a balance in their strategies for controlling emotions and strategies for dealing with stressors between engagement and disengagement. This general approach can benefit from the cultural background where group cohesion, respect for cultural norms and limited outward demonstration of strong emotions are valued.

The current study result showed that, most of the study sample had low emotion expression. This indicates that, emotional expression coping encompasses strategies that the individual engages in to express their emotions surrounding a stressful event. This result was supported with, Al Zayyat, et al. [11] who conducted a study in Jordan and reported that, nursing students are not prepared with effective coping strategies that are inherent in their therapeutic training to cope with clinical stress. Therefore, coping mechanism for avoidance and transition impaired the ability of the students to cope efficiently with clinical stress. The result of the current study was inconsistent with that of, Richardson and Halliwell [43] who mentioned that, outward expression of anger in modern life is common. They found that 45% of adolescents in their study were regularly losing temper during anger, with half of them having reacted to computer problems by hitting or screaming at their personal computers, or screaming at or abusing their colleagues.

The result of this study revealed that, there was a statistical significant relation between nurse students' total stress and emotion processing. This indicates that, positive attitude helps the student nurses to cope with the stressful events and may help to maintain and can buffer the stressful effects of the work overload. In this regards, Jensen [29] reported that, distress significantly related to both emotional processing coping and emotional expressive coping.

The current study results revealed that, there is a highly positive significant correlation between nurse students' problem oriented coping and emotion oriented coping and

emotion processing. This might be explained by that, the student nurse used both coping strategies and there no contradiction between them as problem focused coping is positively related to feeling of personal accomplishment while emotion focused coping was positively related to emotional exhaustion.

In the same line, Abasimi et al. [44] who found in a study in Ghanathat, students primarily used emotion-focused coping compared to problem-focused coping, and this probably explained why they were emotionally exhausted and stressed as problem focused coping was found to be associated with less distress and tension. Similarly, Pheko et al. [45] in their study of "acculturation stressors faced by university students in Botswana", they found that, strategies that promote problem-solving and interaction, may lead to better longterm adjustment for students rather than avoidance.

The current study concluded that, there is a highly positive significant correlation between nurse students' stress and emotion-oriented coping. This might be attributed to the most prevalent approaches among nursing students in stressful situations were negative, as they were based on the control of emotion rather than on problem solving. In this regards, Jensen [29] reported that, coping research which examines emotional approach coping has found that individuals who utilized emotional expression and processing tended to respond better to stressful situations.

The current study results presented that, there is no statistically significant correlation between nurse students' stress and emotion expression. However, Jensen [29] found that, emotional expressive coping were negatively correlated with distress. This result was supported with, Hirsch et al. [46] who conducted a study in Brazil and found that, difficulties related to professional education were directly associated with the utilize of coping strategies such as denial, problem /expressing emotions.

The current study results suggested that, there is a highly positive significant correlation between nurse students' emotion processing and emotion expression. This might be attributed to that, expressing and processing emotions may be particularly important for nursing students as they are encountering many stressors likely to invoke strong emotional reactions (e.g. academic concerns, working in a new and stressful environment, caring for seriously ill patients and working with their families). Therefore, taking the opportunity to express and process one's emotions around these stressors may be helpful in reducing distress and maintaining mental health. In the same line, Stanton et al. [18] reported that, coping research examining emotional approach coping has found that individuals who utilized emotional expression and processing tended to respond better to stressful situations.

The results of current study revealed that, there is a positive significant correlation between nurse students' scores of emotion processing and numbers of siblings. This result was consistent with Karen, et al. [47] who reported that, increased numbers of siblings in the family gives the chance to the student nurse to talk about her emotions, identify and understand them. In fact, home and family are important aspects of adolescent psychology; they have a substantial influence on the developing mind of teenagers.

5. Conclusion

The study concluded that, coping strategies had significant impact on lowering level of stress. More than three quarters of the studied sample had low total stress. All of them used low emotional-oriented coping. More than two thirds of studied nursing students used low problem-oriented coping, and also, there was a highly positive significant correlation between nurse students' stress and emotion-oriented coping and emotion processing.

6. Recommendations

Depending on the current study results, the following recommendations were deduced:

- Attending ongoing educational program about how to reduce nurse students' stressors.

- Establishing psychosocial counseling sessions to support nursing students after exposure to stress in the working environment.

- Nursing Students need to realize that they play an important role in health care service; they need to learn how to manage their own stress by engaging in stress management training, so that they can take care of clients during their nursing career.

- Increasing students' stress management abilities and teaching them how seek support from the institute, which should play an active role in stress management.

- Holding workshops for nursing teaching staff to identify students under stress, help them to identify the stressors and guide them in using effective coping strategies.

- Further research should be done to investigate the relation between work stressors and the actual using of coping process of nursing students.

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