

# Foundations of Stressors and Coping Behaviors in Different Clinical Practice Areas among Undergraduate Nursing Students in Faculty of Nursing Tanta University

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**Abstract:** Stress among nursing students is familiar especially during their training as the students exposed to new areas with different types of patients, clinical, equipment's and hospitals; these stressors could have significant consequences (positive or negative), on both thinking and learning.

**The aim of the study:** was to identify stressors and coping behaviors in different clinical practice areas among undergraduate nursing students in Faculty of Nursing Tanta University.

**Subjects and method:**

**Study design:** descriptive cross-sectional, study design was used in this study.

**Study settings:** The study had been conducted at three different academic years in Faculty of Nursing Tanta University, second year: (Medical- Surgical Nursing), third year: (Obstetrical and Gynecological and Pediatric Nursing) and fourth year: (Community, Psychiatric, and Administrative Nursing departments).

**Study subjects:** Stratified random sampling and simple random sample techniques were used. Tools of data collection: Three tools were used in this study. Tool I: Structured questionnaire sheet, tool II: -Stress levels and types of stressors and tool III: Coping behavior Inventory (CBI).

**Results:** The studied subjects were 398 students with the mean age (20.72±1.072). Nearly three-quarters of studied students (73.9%) were female, more than half (59%) of them from urban and 67.8% were interesting in nursing. Nearly one quarter (22%) of them had the high level of stress and one quarter and more than half of them (26 & 52%) respectively had the moderate and low level of stress. More than two-thirds of them (74%) had low coping behaviors with stress. There was a statistically significant difference between all domains of stressors and all domains of coping behaviors (significant at the 0.01 level).

**Conclusion:** The most common type of stressors perceived was related to working with various kinds of patients followed by stress related to the assignment. The most common coping behaviour utilized by the students was problem-solving followed by transference.

**Recommendations:** Nursing instructors should encourage students to discuss their feelings and their stressors in order to provide appropriate interventions

**Keywords:** Nursing students, coping behaviors, clinical stressors.

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## 1. INTRODUCTION

Stress among nursing students could have important outcomes (positive or negative), on both thinking and learning. The students with high levels of stress have hardness in their education, which could lead to a variety of mental and physical health-related problems. On the other hand; low levels of stress were discovered to be a motivator for the students<sup>(1-4)</sup>.

Clinical training is considered to be an essential and integral part of the nursing education program. Clinical training environments play an important role in the acquisition of professional abilities and train the nursing students to go into the nursing profession and become a registered nurse. Furthermore, the clinical area of nursing education is very important for nursing students in the selection or rejection of nursing as a profession. Students' exposure and preparation to enter the clinical setting are one of the important factors affecting the quality of clinical training<sup>(5-7)</sup>.

Clinical practice is one of the crucial components in nursing education and it can be highly stressful for students. Nursing students may face many challenges or dangers in dynamic and complex clinical environments, such as how to use high-tech medical equipment, how to maintain good relationships with clinical staff and instructors, how to manage sudden changes in a patient's condition, and how to deal with the demands of patients' relatives. Lack of clinical experience, unexperienced areas, hardness patients, fear of making errors and being evaluated by faculty instructors were expressed by the students as anxiety-producing situations in their initial clinical experience<sup>(7)</sup>.

Stress has a multidimensional influence; it can have physical, emotional, intellectual, social, and spiritual consequences, through threaten a person's physiologic homeostasis, can produce negative or non-constructive feelings about the self, may influence a person's perceptual and problem-solving abilities, alter a person's relationships with others and can challenge one's beliefs and values<sup>(7-9)</sup>.

The contact with illnesses, pain, suffering, disability, patients death, the need of establishing relationships with several health professionals and patients, as well as the fact of developing a new role which they are not completely prepared for all of them are considered the stimulus which produces stress from healthcare systems. Also linking nursing students to clinical, academic, social and interpersonal areas have been described by other researchers as the main stress sources to them<sup>(1,6)</sup>.

Coping is the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful, and the emotions they generate. While stressors are being appraised, stress emotions appear and disease may follow. Coping, defense and adaptation act as mediators to blunt the perceived threat and to smooth away stress emotions. Students' stress in their clinical practice can be altered and influenced by the coping strategies they choose to employ. Effective coping strategies help students to perform markedly better in regards to their studies; also aid in relieving students' stress. Ineffective coping methods may lead to prolonged stress, feeling of powerlessness and eventual burnout and attrition. It was observed that the best and most useful coping strategies are as follows: problem-solving, transference (efforts to keep a positive attitude toward the stressful situation), and unrelenting optimism<sup>(2,3,10)</sup>

An individual can simultaneously deal with stressors using both types of coping: problem-focused coping and emotion-focused coping. However, problem-focused coping is used more often when the person thinks that something constructive can be done about the situation, recreation and sport (gardening, music, exercise, or laughing), social support (friends, classmates, family, teachers, tutors) and tension reduction strategies (smoking, drinking, crying, or meditation). Emotion-focused coping, on the other hand, is used more often when an individual feels that the stressor is something that must be endured. Some of the emotion-focused coping methods which were identified as effective were praying, self-assurance or using relaxation techniques such as deep breathing exercises, and music therapy. Maladaptive emotion-focused strategies used by nursing students and nurses (which were judged not to be very effective) were: using escape and avoidance, crying, screaming, over eating, smoking, and alcohol use, confronting, hostility, fantasy and wishful thinking<sup>(10-14)</sup>.

### Significance of the study:

The clinical setting is a stressful environment, it is important to provide a supportive environment for students to facilitate their learning, to achieve this goal, clinical educators, students, and clinical staff should work together. Identifying stressors or challenges with which nursing students are faced with the clinical learning environment in all dimensions could improve training and enhance the quality of its planning and the promotion of the students. Therefore, the aim of the present study was to identify stressors facing undergraduate nursing students in clinical areas and their coping behaviors to dealing with it in Faculty of Nursing Tanta University.

**Aim of the study:**

The aim of this study was to identify stressors facing undergraduate nursing students in clinical areas and their coping behaviors to dealing with it in Faculty of Nursing Tanta University.

**Research questions:**

1. What types of stressors are commonly experienced by nursing students during their clinical practice?
2. What is the level of stress perceived by undergraduate nursing students during clinical practice?
3. What coping strategies do nursing students frequently use to relieve their stress?

## 2. SUBJECTS AND METHOD

**Subjects:****Study design:**

Descriptive cross-sectional design was used in this study to identify stressors facing undergraduate nursing students in different clinical areas and their coping behaviors to dealing with it in Faculty of Nursing Tanta University.

**Study settings:**

The study had been conducted at three different academic years in the faculty of nursing Tanta University.

**Study subjects:**

Stratified random sampling and simple random sample techniques were used in this study to select 398 of nursing students in the second, third and fourth academic years of the Baccalaureate Nursing Program. The three academic years were selected because they were more contact with clinical areas. The first year of nursing students was not included in the scope of the study because they have not contact with patients in clinical areas. The total number of nursing students in the Faculty of Nursing Tanta University is about 1884 undergraduate students. The total number of students of the second year: (Medical-Surgical Nursing), third year, (Obstetrical and Gynecological and Pediatric Nursing) and the fourth year, (Community, Psychiatric and Administrative Nursing departments) were (425, 644 and 525 respectively) students. The researchers took 25% of each academic year; the total number of students from each academic year was (106,161 and 131 respectively) so the final sample size was 398.

**Tools of data collection:**

In order to collect the necessary data, three tools were be used in this study.

**Tool I: Structured questionnaire sheet:-**

A structured questionnaire sheet was developed by the researchers. It composed of socio-demographic characteristics of the students such as sex, age, academic year, marital status, family income, place of residence, interesting in nursing and course enrolled.

**Tool II: -Stress levels and types of stressors<sup>(1,7)</sup>.**

It depends on The Perceived Stress Scale (PSS) which was developed by Sheu et al. (1997) and student clinical stressor scale (SCSS). The SCSS questionnaire evaluates the main stressors affecting nursing students during their practical training **adapted** by the researchers in order to examine nursing students' stress levels and types of stressors. The questions cover seven areas: first area was stressors from assignments and workload (five items), second area was stressors from lack of professional knowledge and skills (three items), third area was stressors from teachers and nursing staff (six items), fourth area was stressors from evaluation by supervisors (ten items), fifth area is stressors due to career (six items), sixth area is stressors due to training environmental stressors (eleven items), the last area is stressors related to working with different types of patients (seventeen items).

**Scoring system:**

Using point Likert like scale as follows: Un stressful= 0; 1= Slightly stressful; 2= Moderately stressful; 3= Markedly stressful; and 4= Highly stressful.

The total score range from 0-232. A lower score means lower degrees of stress while the higher score means higher levels of stress.

- Lower stress: - Less than 60% (less than 139).
- Moderate stress: - From 60 %to less than 70 %( from 139 to less than 162).
- High stress :- More than 70% (more than 162to 232)

### **Tool III: Coping behavior Inventory (CBI) <sup>(1)</sup>**

It developed by Sheu et al. (2002) <sup>(1)</sup> and adapted by the researchers it was used to identify nursing students' coping strategies. It consisted of nineteen items are divided into four subscales. Subscales included **avoidance behaviors** (efforts to avoid the stressful situation) (6 items); **problem-solving behaviors** (efforts to manage or change the stress arising out of a stressful situation) (6 items); **optimistic coping** behaviors (efforts to keep a positive attitude toward the stressful situation) (4 items), and **transference behaviors** (efforts to transfer one's attention from the stressful situation to other things) (3 items).

#### **Scoring system:**

5-point Likert like scale (0=never; 1= infrequently; 2=sometimes; 3=frequently; 4=always).

Higher scores of each item indicate more frequent use, and greater effectiveness of a certain type of coping behavior. The total score of coping behaviors ranged from 0- 76.

- High coping behaviors ranged from 53 to 76 (more than 70%).
- Moderate coping behaviors ranged from 45 to less than 53 (from 60 %to less than 70 %).
- Low coping behaviors ranged from 0 to less than 45 (less than 60%).

#### **Method:**

- 1- An official permission to carry out the study was obtained from responsible authorities at the faculty of nursing at Tanta University.
- 2- Ethical considerations:
  - a) The purpose of the study was explained to the students and their verbal consent to participate was received and those who were willing to participate were given a questionnaire and asked them to fill it, and then return it to the researchers immediately.
  - b) Confidentiality and privacy were put into consideration regarding data collection.
- 3- The study tool part one was developed by the researchers and all tool parts were organized by them based on literature review.
- 4- Face and content validity of the tool was performed by five experts in the field of nursing .The expert panels were asked to evaluate the developing questions.
- 5- The pilot study was conducted on 10% of nursing students (40 students who were excluded from the study subjects), to identify the obstacles and problems that may be encountered in data collection. Accordingly, the necessary modification was done.
- 6- The reliability of the part I was assessed in different studies and revealed Cronbach's alpha coefficient of .76-.80 (Chan et al., 2009; Sheu et al., 2002<sup>(3, 13)</sup>). In the current study, the reliability of the total of structure questionnaire sheet, part II and part III of the tool was tested by using Cronbach Alpha test it was 0.899, 0.921and 0.915 respectively.
- 7- The questionnaires were distributed to nursing students ( $n = 450$ ).The English versions of instruments were used as participants are nursing students who read and write English after finishing their lecturer or laboratory training.
- 8- Responding time to all questions in the tool consumed (25-30) minute.
- 9- The study was done during the academic year 2016-2017, in November and December months.

**Statistical analysis:**

Data were analyzed using the Statistical Package for Social Science (SPSS version 20). The obtained data were coded, analyzed and tabulated. Descriptive analysis was performed in this study including frequencies and percentage. Chi-square, p- value and the correlation between variables were also calculated for statistical significance.

**3. RESULTS**

**Table (1): Distribution of the studied students according to their socio-demographic characteristics**

| Variables  | The studied subjects (n=398) |                      |
|--|------------------------------|----------------------|
|  | N                            | %                    |
| <u>Age</u><br>Range<br>Mean±SD   | (19-25)<br>20.72±1.072       |                      |
| <u>Sex</u><br>Male<br>Female   | 104<br>294                   | 26.1<br>73.9         |
| <u>Residence</u><br>▪ Rural<br>▪ Urban   | 235<br>163                   | 59.0<br>41.0         |
| <u>Marital status</u><br>▪ Single<br>▪ Married<br>▪ Divorced   | 358<br>37<br>3               | 89.9<br>9.3<br>0.8   |
| <u>Family income</u><br>▪ Enough and save<br>▪ Enough<br>▪ Not enough and borrow   | 26<br>358<br>14              | 6.5<br>89.9<br>3.5   |
| <u>Interesting in nursing field</u><br>▪ Yes<br>▪ No   | 270<br>128                   | 67.8<br>32.2         |
| <u>Course enrolled</u><br>▪ Medical surgical nursing (second year)<br>▪ Obstetric and Gynecological nursing( third year)<br>▪ Community health nursing( fourth year) | 106<br>161<br>131            | 26.6<br>41.5<br>32.9 |
| <u>Training needs for transportation</u><br>▪ Yes<br>▪ No  | 232<br>166                   | 58.3<br>41.7         |

**Table (1):** This table shows the distribution of nursing students in relation to socio-demographic data. In relation to age, students' age ranged from 19 to 25 years old and mean of age was 20.72±1.072. Nearly three - quarters 73.9 % of the studied subjects were female and more than half 59 % of students were lived in rural area. The majority of students 89.9% was single and had enough income. Nearly two- thirds of studied students 67.8% were interested in the study of nursing. More than half 58.3 % of students their clinical training was needed for transportation.

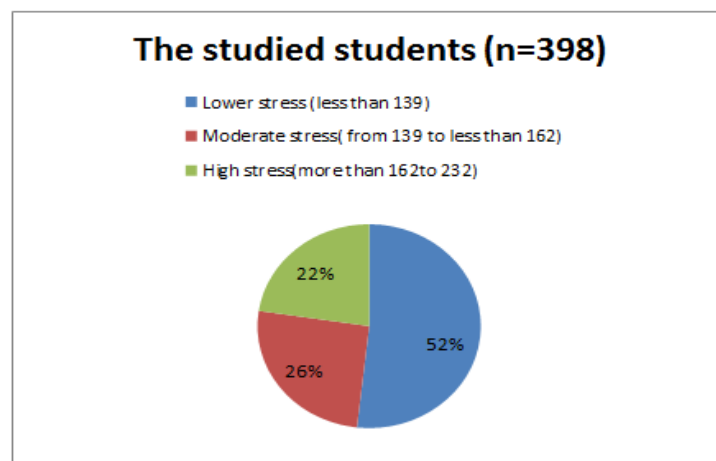
**Table (2): Mean scores of stressors domains and coping behaviors scales among studied students**

| Items   | The studied students (n=398) |              |
|---|------------------------------|--------------|
|   | Range                        | Mean±SD      |
| I. Working with various kinds of patients           | (0-68)                       | 39.98±12.745 |
| II. Stress factors due to the training environment. | (0-44)                       | 25.28±8.802  |
| III. Stress from the evaluation by supervisors.     | (0-40)                       | 23.31±7.848  |
| IV. Stressors due to the career.                    | (0-24)                       | 14.81±5.023  |

|   |                |                      |
|---|----------------|----------------------|
| V. Stress from teachers and nursing staff                   | (0-24)         | 13.86±5.359          |
| VI. Stress from assignments and workload.                   | (0-20)         | 13.62±4.193          |
| VII. Stress from Lack of Professional Knowledge and skills. | (0-12)         | 6.37±3.152           |
| <b>Total score of stressors. (44-232)</b>                   | <b>(0-232)</b> | <b>137.24±36.842</b> |
| I. Problem Solving behaviors                                | (0-24)         | 11.16±5.264          |
| II. Avoidance behaviors                                     | (0-24)         | 10.12±4.980          |
| III. Stay Optimistic behaviors                              | (0-16)         | 7.73±3.590           |
| IV. Transference  | (0-12)         | 6.00±2.731           |
| <b>Total score of coping behaviors. (0-76).</b>             | <b>(0-76)</b>  | <b>35.01±13.556</b>  |

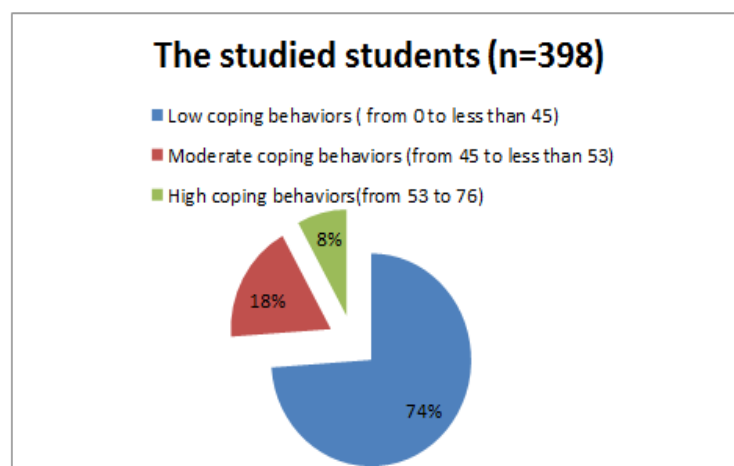
\* Significant at P <0.05.

**Table (2):** This table represents the mean scores of stressors domains and coping behaviors scales among studied students. The table showed that the highest domain of stress was from working with various kinds of patients (39.98±12.745) compared to stress from lack of professional knowledge and skills (6.37±3.152). Regarding the coping behaviors the table also showed that problem solving & transference behaviors (11.16±5.264&6.00±2.731) respectively the highest and the lowest domains of coping strategies



**Figure (1):** Distribution of the studied students according to their levels of stress

**Figure (1):** This figure represents the distribution of the studied students according to their levels of stress. More than half 52 % of studied students had lower clinical stress while (26 % & 22%) respectively had moderate and high clinical stress.



**Figure (2):** Distribution of the studied students according to their score of coping behaviors with stress



**Figure (2):** This figure shows the distribution of the studied students according to their score of coping behaviors with stress. Nearly three – quarters 74% of studied students had low coping behavior, about one fifth and the rest of them (18% & 8%) respectively had moderate and high coping behaviors.

**Table (3):** Distribution of the studied students according to their relationship between levels of stress and the score of coping behaviors

| Variables                                   | Average of coping behaviors                    |   |                                      | $\chi^2$<br>P    |
|---|--|---|--------------------------------------|------------------|
|   | Low coping behaviors ( from 0 to less than 45) | Moderate coping behaviors (from 45 to less than 53) | High coping behaviors(from 53 to 76) |                  |
| Lower stress (less than 139)                | 142<br>35.6%                                   | 40<br>55.5%   | 24<br>75%                            | 11.885<br>0.018* |
| Moderate stress( from 139 to less than 162) | 86<br>29.2%                                    | 14<br>19.4%   | 2<br>6.2%                            |                  |
| High stress(more than 162to 232)            | 66<br>22.4%                                    | 18<br>25%   | 6<br>18.75%                          |                  |

\* Significant at P <0.05.

**Table (3):** This table represents the distribution of the studied students according to their relationship between levels of stress and the score of coping behaviors. The table showed that there was a statistical significant difference between the three levels of stress and the score of coping behavior (P =0.018\*).

**Table (4):** Distribution of the studied students according to their relationship between levels of stress and their academic year

| Variables<br>(Academic years) | Levels of stress             |      |   |      |                                  |      |       | $\chi^2$<br>P |               |
|-------------------------------|------------------------------|------|---|------|----------------------------------|------|-------|---------------|---------------|
|                               | Lower stress (less than 139) |      | Moderate stress( from 139 to less than 162) |      | High stress(more than 162to 232) |      | Total |               |               |
|                               | No                           | %    | No  | %    | No                               | %    | No    |               | %             |
| Second year                   | 50                           | 47.2 | 23  | 21.7 | 33                               | 31.1 | 106   | 26.6          | 8.575<br>.073 |
| Third year                    | 91                           | 56.5 | 44  | 27.3 | 26                               | 16.2 | 161   | 40.5          |               |
| Fourth year                   | 65                           | 49.6 | 35  | 26.7 | 31                               | 23.7 | 131   | 32.9          |               |
| Total                         | 206                          | 51.8 | 102   | 25.6 | 90                               | 22.6 | 398   | 100           |               |

**This table (4) shows the distribution of the studied students according to their relationship between levels of stress and their academic year.** The table showed that the highest level of stress (31.1% & 23.7%) respectively was found among students of second and fourth academic year. There was no a statistical significant difference between the three levels of stress and students’ academic year (p=0.073)

**Table (5):** Distribution of the studied students according to their relationship between average score of coping behaviors with stressors and their academic year

| Variables<br>(Academic year) | Average of coping behaviors                    |       |   |       |                                      |      | Total |      | $\chi^2$<br>P  |
|------------------------------|--|-------|---|-------|--------------------------------------|------|-------|------|----------------|
|                              | Low coping behaviors ( from 0 to less than 45) |       | Moderate coping behaviors (from 45 to less than 53) |       | High coping behaviors(from 53 to 76) |      | No    | %    |                |
|                              | No   | %     | No  | %     | No                                   | %    | No    | %    |                |
| Second year                  | 69   | 65.1  | 18  | 17    | 19                                   | 17.9 | 106   | 26.6 | 22.76<br>.000* |
| Third year                   | 117  | 72.7  | 35  | 21.7  | 9                                    | 5.6  | 161   | 40.5 |                |
| Fourth year                  | 108  | 82.4  | 19  | 14.5  | 4                                    | 3.1  | 131   | 32.9 |                |
| Total                        | 294  | 73.9% | 72  | 18.1% | 32                                   | 8%   | 398   | 100% |                |

\* Significant at P <0.05.

**Table (5): this table represents the distribution of the studied students according to their relationship between average score of coping behaviors and their academic year.** This table showed that the majority 82.4%, nearly two-thirds 65.1% and nearly three – quarters 72.7% of studied students in fourth, second and third academic year respectively had low coping behavior with stress. Also, the table showed that the highest percent of coping behavior with stress (17.9%) was found among students of the second academic year.

**Table (6): Correlation between seven domains of stress scale and the total score of stress scale with four domains of coping behaviors scale and the total score of coping behaviors**

| Variables   | Avoidance behaviors | Problem solving behaviors | Stay optimistic behaviors | Transference behaviors | Total score of coping behaviors |
|---|---------------------|---------------------------|---------------------------|------------------------|---------------------------------|
|   | r<br>p              | R<br>p                    | r<br>p                    | R<br>P                 | r<br>P                          |
| Stress from assignments and workload                  | .119-<br>.017*      | .090-<br>.073             | .154-<br>0.002**          | .133-<br>0.008**       | .146-<br>0.003**                |
| Stress from lack of professional knowledge and skills | .082<br>0.104       | .131-<br>0.009**          | .130-<br>0.010**          | .073-<br>0.144**       | 130-<br>0.009**                 |
| Stress from teachers and nursing staff                | .128-<br>0.010*     | .109-<br>0.030*           | .223-<br>0.000**          | .144-<br>0.004**       | .178-<br>0.000**                |
| Stress from evaluation by supervisors                 | .131-<br>0.009**    | .078-<br>.119             | .164-<br>0.001**          | .076<br>.131           | .137-<br>0.006**                |
| Stress due to the career                              | .176<br>0.000**     | .095-<br>0.058            | .190-<br>0.000**          | .083-<br>0.97          | .169-<br>0.000**                |
| Stress factors due to the training environment        | .161-<br>0.001**    | .112-<br>0.026*           | .218-<br>0.000**          | .114-<br>0.023*        | .183-<br>0.000**                |
| Stress from working with various kinds of patients    | .108-<br>0.032*     | .130-<br>0.009**          | .233-<br>0.000**          | .157<br>0.002**        | .183-<br>0.000**                |
| Total score of stress                                 | .167-<br>0.001**    | .139-<br>0.006**          | .254-<br>0.000**          | .151-<br>0.002**       | .213-<br>0.000**                |

\*\* . Correlation was significant at the 0.01 level (2-tailed).

\*. Correlation was significant at the 0.05 level (2-tailed).

**Table (6):** This table shows a correlation between seven domains of stress scale and the total score of stress scale with four domains of coping behaviors scale and total score of coping behaviors. There was a highly significant negative correlation between the total score of the seven domains of stress and four domains of coping behaviors and the total score of coping behaviors and seven domains of stress ( $p < 0.01$ ).

#### 4. DISCUSSION

Nursing students in different academic years of nursing studies are facing many types of clinical stressors, which affect their clinical performance and abilities to become highly qualified professional nurses, so students began to follow many coping behaviors to enhance their welfare<sup>(15&16)</sup>. Therefore, this study was conducted to identify stressors facing undergraduate nursing students in different clinical areas and their coping behaviors to dealing with it in Faculty of Nursing Tanta University.

Regarding the socio-demographic characteristics of the studied students nearly two-thirds of them from rural areas, this result was conflicting with **Kumar and Nancy ( 2011)**<sup>(17)</sup>, who assess stress and coping strategies among nursing students, they found that nearly one third only of their studied students come from rural areas. This result from the researcher’s point of view is considered realistic because Tanta city is surrounded by several villages and therefore the nursing college receives a large number of these rural students. Also this study locate that the majority (89.9%) of the studied students were single, this result corresponding with **Ismaile S (2017)**<sup>(18)</sup>, who was conducting his own research about the perceived clinical stressors among Saudi students, which indicated that (85.5%) of the studied nursing students were single. This result is expected due to the same culture between Saudi and Egyptian society in determining the age of marriage for girls.



Regarding the student's interested in nursing studies, this study found that two- third of studied nursing students were interesting in nursing compared to the majority of nursing students in Saudi Arabia were interesting in nursing <sup>(18&19)</sup>. From the point of view of those who are responsible for the current research, this result is somewhat acceptable because the Egyptian society's view of the nursing profession is still influenced by the society's view of this great profession in the past. This affects many students significantly and makes them practice this profession just for obtaining financial return and jobs abroad, in contrast to Arab countries, including King Saudi Arabia.

The results of current study showed that the highest domain of stress among the studied students was working with various kinds of patients, this results corresponding with the results of other researchers **Al-Zayyat & Al-Gamal (2014)** <sup>(20)</sup>, **Chen & Hung (2014)** <sup>(21)</sup> and **Mohamed & Ahmed (2012)** <sup>(22)</sup> they found that the most influential cause of stress among nursing students was taking care of patients . On the other hand this result was inconsistent with **Kaneko et. al.(2015)** <sup>(23)</sup>, who stated that relationships with teachers and clinical instructors consider the highest cause of students stress. **Shaban et. al., (2012)** <sup>(20)</sup> found that stress from assignments and workload was the highest source of stress.

The present study shows that the lowest source of stress among students was lack of professional knowledge and skills, it is obvious that there are similarity between this result and the result of **Ismaile (2017)** <sup>(18)</sup>, who found that the lowest source of stress among students was lack of professional knowledge, this result disagreement **Khater et.al. (2014)** <sup>(24)</sup>, who stated that daily planning of clinical practice, nature, and quality of clinical practice were the lowest causes of stress respectively.

Highest coping behavior used by the students in the present study was problem solving and the lowest coping behavior was transference. This result accordance with **Al-Zayyat & Al-Gamal (2014)** <sup>(20)</sup> who found that problem solving followed by staying optimistic was the highest coping behaviors' and conflicting with **Bahadir and Yilmaz (2016)** <sup>(25)</sup>, in their study to assess academic and clinical stress, stress resources and ways of coping among Turkish first-year nursing students in their first clinical practice, who found that students mostly used self-confident and optimistic approaches as a highest coping behaviors. Other studies of **Salman (2017)** <sup>(19)</sup>, who found that avoidance and seeking professional support respectively were the lowest coping behaviors.

The researchers of the present study found that more than half of studied students had lower level of clinical stress and nearly one quarter of them had moderate and high level of stress, this result was compatible with **Samson- Akpan et al., (2017)** <sup>(26)</sup> in their study to evaluate stress and coping strategies among undergraduate nursing students in Calabar, Nigeria, who found that nearly half of students experienced low level of stress. Also this result disagreement with **Mohamed & Ahmed (2012)** <sup>(22)</sup> and **Samson et al., (2017)** <sup>(26)</sup>, who found that the majority of students had the high level of stress . Also the present study shows that three quarters of students with low level of stress had the high coping behaviors and more than one quarter of students with moderate and high stress had the low coping behaviors, from the researchers point of view this result due to that clinical practice with low stress give the students suitable environment for coping suitable coping behaviors without pressure and to deal with the patients and clinical instructors correctly. This result contradicted with **Salman (2017)** <sup>(19)</sup> who found that there was no statistically significant correlation between the level of stress and coping behaviors.

The present study showed that there were a relationship between the level of stress and academic year, one third of second year and one quarter of the fourth year students had the high stress and more than half of third year students had the low stress, this results expected because the second year students had less qualification, knowledge, clinical practice experience and consider the first direct contact with patients in hospitals, so they facing more stress during this year , moreover increase the expectation of clinical instructors from the students of fourth year regarding clinical practice experience and knowledge increase the level of stress among them which affect their coping behavior negatively. This result on the line with the results of, **Kumar R & Nancy (2011)** <sup>(16)</sup>, who found that stress level of nursing students was significantly associated with their academic year, students of first clinical experience reported moderate and higher level of stress. On the other hand, this result was contradicted with **Mingliu et al., (2015)** <sup>(27)</sup> in their study to assess the perceived stress among Macao nursing students in the clinical learning environment, they found that the level of stress among second year students was lower than those in other years. Also other studies of **Mohamed & Ahmed (2012)** <sup>(17)</sup> who stated that no significant relationship between academic year and stress.

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The finding of the present study found that there was highly significant negative correlation between the total score of stress and the four domains of coping behaviors. This result was accordance with **Kaneko & Momino (2015)** <sup>(23)</sup> who stated that there were negatively correlation between total score of stress domains and coping behaviors domains. The results of the present study provided valuable information for clinical instructors in identifying students' needs, facilitating their learning in the clinical setting and developing effective interventions to reduce the stress they encounter during their clinical practice.

### 5. CONCLUSION

Based on the findings of the present study it can be concluded that the most common type of stressors perceived by nursing students during clinical areas was related to working with various kinds of patients followed by stress related to the assignment. The most common coping behaviour utilized by the students was problem solving followed by transference.

### 6. RECOMMENDATIONS

Based on the results of the present study the following recommendations were suggested:-

1. Faculty staff of nursing should build a rapport relationship with their students.
2. As clinical instructors, understanding how their student's level of stress and coping behaviors can affect their clinical performance.
3. Nursing instructors should encourage students to discuss their feelings and their stressors in order to provide appropriate interventions.
4. Finally, instructors need to give continuous and more positive feedback along with the negative ones to their students.

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