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### Abstract

Background: Emotional intelligence and coping with stressors is a major contributing factor that affecting success in nursing profession. Therefore, it is very important for the faculties of nursing to help their students to grow up their emotional intelligence and coping skills to achieve great success in nursing. Aim of the study: to assess emotional intelligence and it's relation to stress coping strategies and academic achievement among Faculty of Nursing students. Research design: A descriptive correlational research design. Sample: A representative sample of nursing students among four academic years during 2016-2017 (N= 384). Setting: Faculty of Nursing at Minia University. Tools of data collection: included two tools; first tool emotional intelligence scale; second tool ways of coping questionnaire. Results: There were highly statistically significant relations between seven stress coping strategies and emotional intelligence scores ( $p= 0.000$ ), while escaping avoidance strategy was the only one that had no statistically significant relations with emotional intelligence and negatively correlation ( $r= -0, 060$ ,  $p= 0.240$ ). There were no statistically significant differences between scores of emotional intelligence components and academic achievement; while the stress coping had statistically significant differences with academic achievement. Conclusion: High emotional intelligence leads to higher coping with stressors that affect positively on academic achievement of nursing students. Recommendation: Periodical workshops for students to develop their EI competences and stress coping.

Keywords: emotional intelligence, stress coping strategies, academic achievement.

### Introduction

Nursing is a challenging profession because it requires expertise in a broad range of skills and abilities. The nursing profession demands the nurse in the process of care to interact with the patients, the medical fraternity, and with the health care workers constantly. This interaction is not just conversation, but also a complex process that involves nurse perception, understanding of the patient emotions, and utilization of the perceptions; in order to manage patient problems that achieve the goal of effective patient care which facilitated when nurses having emotional intelligence (EI)(1).

Moreover, to be able to practice nursing, the nursing student should have the ability to understand the views and needs of a wide variety of people; as well as to remain sensitive and empathic to patient concerns; be able to keep personal emotional reactions in perspective; handle stress and promote social responsibility which is encompassing within the framework of EI (2). Goleman defined EI as the capacity for recognizing one's own feelings and those of others, motivating oneself and others, and managing emotions well in own self and in the relationships (3).

Nursing and medicine are professions that have a lot of social demands and stress (4). Thus nursing students, practice in the clinical setting which has a major source of stress. The mild levels of stress can have a positive effect on students by offering alternative solutions to problems and increasing motivation, while high stress levels can lead to depression (5). Therefore, determining main stress sources is fundamental in order to know which skills must be mastered and, in this way, contributing to the future of health and, indirectly, to have a better care of ill patients (6).

Moreover, nursing students must be prepared to communicate and make emotional connections with the diverse patient populations from various cultures with a highly stressful environment. Emotional responses to patient care, especially in the highly stressful environments, requires the ability to handle stress which based on the skills such as; accurately recognize the emotional state of patients; use emotions to facilitate thinking and reasoning; manage the emotions in others as well as one's self; and understand emotions. These are the attributes of the emotionally intelligent nurse (7).

Recently, authors of nursing knowledge have emphasized the importance of EI in enhancing nursing students' performance (8). Academic performance in faculty can be adversely affected by stress and ability of students to manage their stress. Stress among college students was identified as the number one impediment to academic performance (9). EI played a significant role in process of student coping. Stress and the way it is handled by students have a direct relationship to academic performance and affects academic performance and grade point average (GPA) (10).As well it was found that those who had high EI; had low perceived stress; controlling their emotions; and had high adaptability to the environment. Also, it is founded that those who have high EI show high academic performance (11).

### Significance of the study

Today, the nurses' job requires them to gain the knowledge of self, interpersonal and intrapersonal skills. Subsequently, nurses should use the features of EI in their interactions with colleagues and patient (12). Also, the selection processes of most nursing programs today are solely based on academic ability; however, it is clear that

non-academic skills, such as empathy, self-efficacy, and emotional stability which considered under the umbrella of EI are important for the success in nursing school and in the nursing profession (2). In Egypt Abouelfetoh and Al-Ateeq (2013) found that students' high EI level was significantly correlated with low perceived stress score (13). Therefore, there is need to study EI and its relation to stress coping strategies and academic achievement among nursing students.

### **Aim of the study**

The aim of the current study is to assess emotional intelligence and its relation to stress coping strategies and academic achievement among Faculty of Nursing students.

### **Research questions:**

- What is the relationship between emotional intelligence and stress coping strategies among nursing students?
- What is the relationship between emotional intelligence and academic achievement among nursing students?
- What is the relationship between stress coping and academic achievement among nursing students?

### **Subjects and Methods**

#### **Research design:**

A descriptive correlational research design was used to achieve the aim of the current study.

#### **Setting:**

The study was conducted at the Faculty of Nursing, Minia University.

#### **Subjects:**

A representative sample of 35% of total number of nursing students was used. It consisted of the nursing students at 1st, 2nd, 3rd, and 4th academic year during the academic year 2016-2017. Total number of subjects was (384) students.

#### **Tools of Data collection:**

##### **Two tools was used for the data collection**

##### **Tool (I) – it consisted of two parts:**

Part I: Socio- Demographic data sheet was attached with tools to get information about nursing students. It was including student code, gender, age, residences, academic year and last academic achievement (which was classified into: Fail, satisfactory, good, very good, and excellent).

Part II: Emotional intelligence scale:

This tool was developed by Abo Elela (2004) (14) and was adopted by the researcher to measure nursing student's EI. It consisted of 35 items with five components of EI as follows: self-awareness, self-management, self-motivation, empathy and relationship management. Each statement was measured by four point Likert scale ranged as

(1 = scarcely, 2= sometimes, 3 = often, and 4 = always). The scoring system of total EI was 35 to 140.

Tool (II) – ways of coping questionnaire:

This tool was developed by Folkman and Lazarus (1985) (15) and modified by the investigator to measure stress coping strategies. It was consisting of 66 items. The subscales that represent the different ways of coping are confrontive, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal. Each subscale was measured by using four point Likert scale ranged as follows (0 = not used, 1 = used somewhat, 2 = used quite a bit, and 3 = used a great deal). Nursing students were asked to direct their ratings of real life stresses experienced during the last 7 days. The scoring system of total stress coping strategies was 0 to 150.

#### **Tools Validity and reliability**

The tools were submitted to a panel of five experts in the field of nursing administration at Minia and Assuit University confirmed its validity. Modifications on the tools were done according to the panel judgment in relation to appropriateness of the content and accuracy of items.

Reliability of the tools (tool I, II) was performed to confirm consistency of tool. The internal consistency measured to identify the extent to which the items of the tool measure the same concept and correlate with each other by Cronbach's alpha test. (Tool I  $\alpha=0.881$ , tool II  $\alpha=0.908$ ).

#### **Pilot study:**

A pilot study was conducted on 10% of participants which equal 40 students to ascertain applicability of the tools: accessibility to study subjects and served to estimate the time required for filling the questionnaire sheets which was 30 minutes. The process of pilot study took two weeks.

#### **Ethical consideration**

A written initial approval was obtained from the research ethics committee of the Faculty of Nursing, Minia University. Approval to conduct the study was obtained from the dean, Vice Dean for Education and Student Affairs and heads of departments of Faculty of Nursing at Minia University. Participants were informed that their participation in the study was completely voluntary and acceptance of participants was obtained. Written informed consent was obtained from participating students after explaining the nature and benefits of the study. Each assessment sheet was coded and student names did not appear on the sheets for the purpose of anonymity and confidentiality.

#### **Data collection procedure:**

An official letter was granted from the dean, Vice Dean for Education and Student Affairs and heads of departments of Faculty of Nursing at Minia University. This letter was included a brief explanation of the objectives of the study. The researcher interviewed students to explain the nature and purpose of the study. Data collection tools were introduced to students to be filled. Data was collected on

Sunday and Monday per week during the academic year 2016-2017.

**Statistical design:**

Statistical analysis was done by using Statistical Package for the Social Science (SPSS 20.0). Quality control was done at the stages of coding and data entry. Data were

**Results**

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

Socio-Demographic Data	nursing students (n=384)	
	No.	%
Gender		
Male	133	34.6
Female	251	65.4
Age / years		
18 -	210	54.7
21- 23	174	45.3
Mean ± SD	20.5 ±1.3 years	
Residence		
Rural	307	79.9
Urban	77	20.1
Academic year		
1st	117	30.5
2nd	110	28.6
3rd	82	21.4
4th	75	19.5
Last academic achievement		
Fail	15	3.9
Satisfactory	3	.8
Good	61	15.9
Very good	157	40.9
Excellent	148	38.5

Table (1) shows that about two third (65.4%) of nursing students gender were female. In relation to age, more than half (54.7%) of nursing students was ranged from (18-20) years old, with mean age (20.5 ±1.3 years).

Concerning the residence, it was noted that the majority of nursing students (79.9%) were from rural area.

presented by using descriptive statistics in the form of frequencies and percentage for qualitative variables, and mean & standard deviation (SD) for quantitative variable. Correlation coefficient test was also used between emotional intelligence, stress coping strategies and academic achievement and statistical significance was considered at  $p < 0.05$ .

As regards to their academic year, the majority of students (30.5%) were at 1st academic year. About the last academic achievement, it was found that most high percent of students (40.9%) have got very good degree.

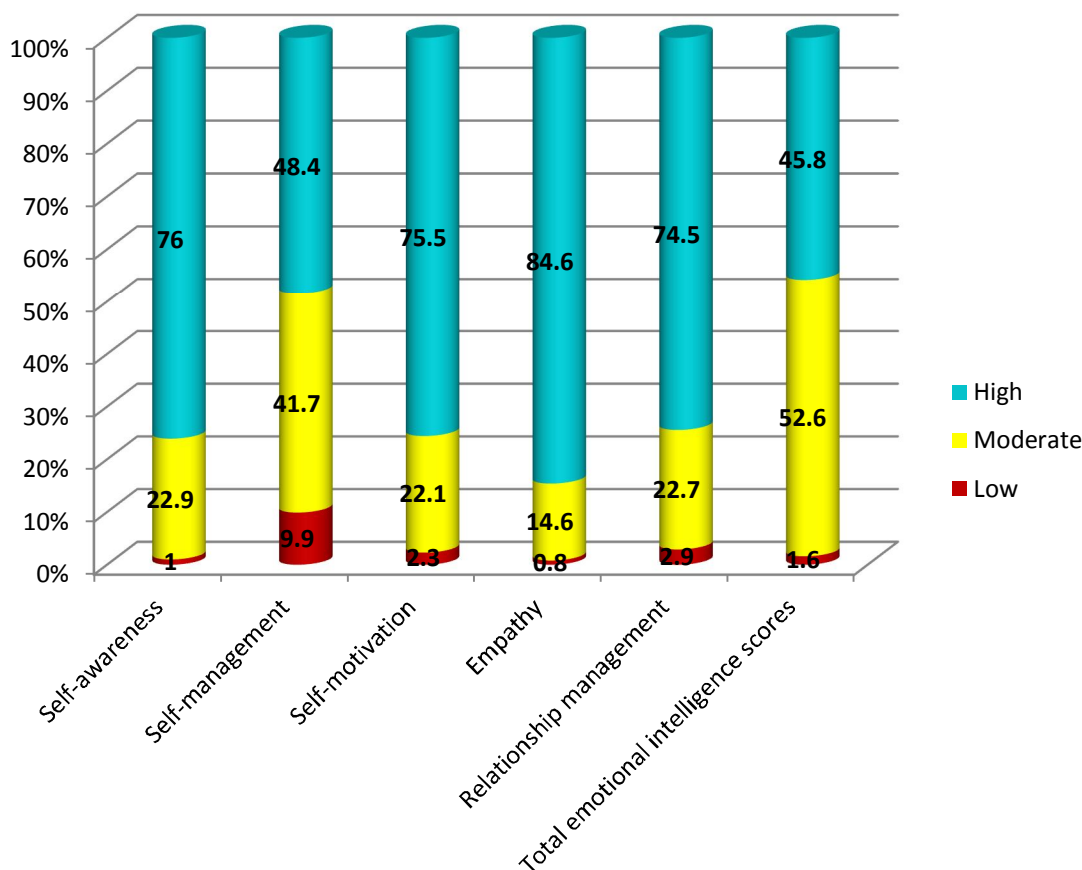


Figure (1): Levels on nursing students' emotional intelligence total scores

Figure (1) shows that more than half (52.6%) of nursing students had moderate level of EI, (45.8%) of nursing students had high level of EI, and (1.6%) of nursing students had low level of EI. The Figure also, shows that the highest level of EI components was for the empathy

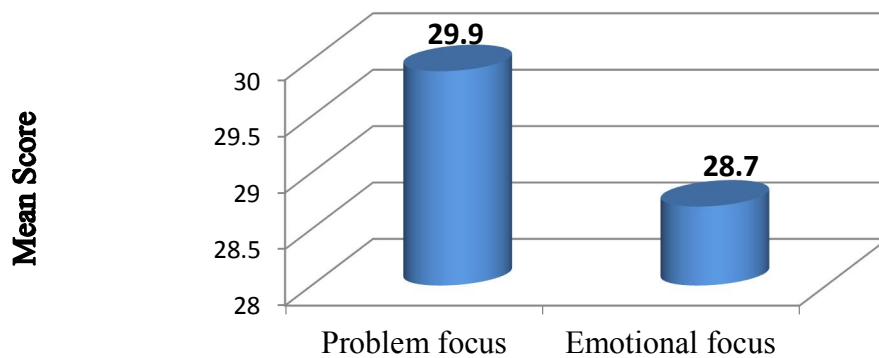
component with percentage (84.6%), followed by self-awareness (76.0%), self-motivation (75.5%), belonging to the relationship management (74.5%), and finally self-management component (48.4%) among nursing students.

Table (2): Mean scores of nursing students as regard to total scores of stress coping strategies

stress coping strategies	Mean ± SD	Min	Max.	Relative score %
Confrontive coping	9.3 ± 2.9	1	18	12
Distance	8.6 ± 3.1	0.0	18	11
Self-controlling	12.2 ± 3.4	1	21	13
Seeking social support	10.1 ± 3.8	0.0	18	12
Accepting responsibility	7.9 ± 2.3	0.0	12	15
Escaping avoidance	12.7 ± 3.9	1	22	12
Planful problem solving	10.4 ± 3.4	0.0	18	13
Positive reappraisal	12.2 ± 3.6	1	21	13

Table (2) displays that the nursing students had the highest mean scores, for the following stress coping strategies, escape avoidance (12.7±3.9), followed by positive reappraisal (12.2±3.6), then self-controlling (12.2±3.4), while the lowest mean score was for accepting responsibility strategy (7.9±2.3). This table also shows the

relative scores of the eight coping strategies, as the higher score of using stress coping strategies was for accepting responsibility strategy (relative score 15%) but the lower relative score was for distancing strategy (relative score 11%).



**figure (2) Mean scores of nursing students regarding stress coping strategies (n= 384)**

Figure (2) shows that the nursing students had higher mean scores (29.9±7.9) for problem focused coping strategies, than emotional focused coping strategies (28.7±6.9).

**Table (3): Correlation between emotional intelligence and stress coping strategies among nursing students**

Stress coping strategies	Emotional intelligence	
	R	P - value
Confrontive coping	0.287**	0.000
Distance	0.238**	0.000
Self-controlling	0.351**	0.000
Seeking social support	0.181**	0.000
Accepting responsibility	0.200**	0.000
Escaping avoidance	-0.060	0.240
Planful problem solving	0.465**	0.000
Positive reappraisal	0.380**	0.000

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

\* p≤0.05 (significant)

PCC: P – value based on Pearson correlation coefficient

Table (3) shows that there were highly statistically significances differences between seven stress coping strategies and EI scores (p= 0.000), while escaping

avoidance strategy was the only one that had no statistically significant differences with EI and negatively correlation (r= -0, 060, p= 0.240).

**Table (4): Correlation between emotional intelligence and last academic achievement among nursing students**

Emotional intelligence components	Last Academic achievement among nursing students (n=384)	
	R	P - value
Self-awareness	0.053	0.443
Self-management	0.101	0.01*
Self-motivation	0.047	0.060
Empathy	0.034	0.605
Relationship management	0.077	0.268
Total emotional intelligence scale	0.027	0.987

\* p≤0.05 (significant)

\*\*Correlation is significant at the 0.01 level

PCC: P – value based on Pearson correlation coefficient

Table (4) shows that only self-management component of EI had statistically significant differences with academic achievement (r=0.101 & p=0.01). Also, there

was no significant correlation between total EI scores and last academic achievement.

Table (5): Correlation between stress coping strategies and last academic achievement among nursing students

Stress Coping Strategies	Last academic achievement (n=384)	
	R	P - value
Confrontive coping	0.076	0.250
Distance	0.082	0.196
Self-controlling	0.023	0.859
Seeking social support	0.020	0.315
Accepting responsibility	0.035	0.335
Escaping avoidance	0.125**	0.040*
Planful problem solving	0.093	0.267
Positive reappraisal	0.048	0.224
Total stress coping strategies	0.171	.001**

\*\*Correlation is significant at the 0.01 level

\* p<0.05 (significant)

PCC: P – value based on Pearson correlation coefficient

Table (5) shows that there was only statistically significant difference and positive correlation between escaping avoidance strategy and last academic achievement

### Discussion

Nursing is a stressful profession so that perception of how to cope with stress is important to manage stress (16). EI is an important trait for handling stress at work place (17). It is an attribute that may enable individuals to recognize and manage emotions evoked by stressful experiences. Moreover; high EI individuals may apply coping strategies with more positive outcomes (18). Therefore, the present study was conducted to assess EI and its relation to stress coping strategies and academic achievement among Faculty of Nursing students.

This study revealed that the majority of nursing students at Faculty of Nursing have moderate EI and near half of them have high EI level. Also, they had high scores in all components of EI which were self-awareness, managing emotions, motivation, empathy and social skills. These results might be due to the large experiences that they acquired through the practicing of nursing at hospitals and treating with different types of people which help them to gain information about individuals' personalities and their ways of thinking. This is in accordance with Mahmoud and Mousa (2013) who found that the majority of all students had moderate level in all elements of EI (3). As well it was supported by Benson et al (2010) found that the majority of undergraduate nursing students across the four years had average to moderate EI (19).

This study find out that more than two thirds of nursing students have the highest percentage score in empathy component of EI. This result might be due to the emotional nature of the Egyptian people, also the nursing instructors who can work as a role model for empathy with patients which can help students to develop their empathy skills. This result is consisted with Rochester et al (2005) who asserted that the highest ranked interpersonal aspect of EI was empathy (20). However Yu and Kirk (2008) asserted that acquired empathy can be taught as a skill and can be developed with practice and experience. Thus, through a human trait the professional state, the communication process and caring relationship, the concept of empathy can be developed and grow (21).

( $r = .125$  &  $p = .040$ ). Also, there was statistically significant positive correlation between total stress coping strategies and academic achievement ( $r = 0.125$ ,  $P = 0.001$ ).

While, this study revealed that self- management have the lowest percentage among EI components which might be due to lack of empowerment among nurse educators to students to deal with their own feelings as well as patients feelings. This is supported by Majerníková and Obročníková (2017) who used the EI trait model in his study and asserted that nursing students have higher level scores in all areas of EI except Self-control, which is similar to self-management component of EI (22).

Regarding stress coping strategies this study showed that the majority of nursing students had the highest mean scores for escape avoidance coping strategy. This might be due to dissatisfaction of nursing students with the courses which lead them to deal with stressors of nursing education through illusory or imaginary ways, fantasizing situations and minimizing the seriousness of the situation, which helps them to denial, ignore and escape from stressful situations. As, during data collection the students said comments about how to deal with stressful situations as "when I expose to stressful situations, I wish a miracle happen to end this situation", "when I expose to stressful situations; I try to remember happy memories to relieve this stress". Thus, it makes students more likely to use escaping avoidance coping strategy.

Also, accepting responsibility was the lowest stress coping strategy that used among nursing students, this may be due to their personnel characteristics as a student who still take orders and instructions from teachers and supervisors that they should follow without resistance. Also, they can't take full responsibility in making decisions because they are students who have low experiences to deal with variant stressful situations, so that they almost depend on others.

This is in accordance with the study of Hirsch et al (2015) who asserted that the escape-avoidance dimension had the highest mean, which indicating that this type of strategy is the most one used by nursing students. But accepting responsibility was the lowest stress coping strategy that used among nursing students (23).

Moreover, this study revealed that the nursing students used both problem focused coping strategies and emotional focused coping strategies, but students had higher mean scores for problem focused coping strategies, than emotional focused coping strategies. This might be due to availability of using both strategies according to situation; in which if the situation is changeable, the students should use problem focused strategies; and if the situation is unchangeable, the students should use emotion focused strategies. Also, using of problem focused coping more frequently by nursing students is considered adaptive healthy coping.

This was in agreement with Abdullah et al (2010) who asserted that students used both emotion-focused and problem-focused strategies to manage stressful events or situations due to the transition for higher institution. This finding supports the notion that adaptive coping involves a flexible repertoire and combined use of stress coping strategies which imply that people tend to employ both emotion- and problem-focused coping (24).

Furthermore, this study showed that there were highly statistically significant relationship between seven stress coping strategies and EI scores, this result means that EI is associated with stress coping, and this will reflect on developing and applying EI and stress coping together to raise EI of nursing students. This is in harmony with Salovey and Schluyster (1997) who identified adaptive coping as one of the competencies related to EI (25). They suggested that emotionally intelligent individuals cope with distressing emotions with self-regulation strategies such as problem solving, support seeking, distancing, and distracting. Similarly, Por et al (2011) who found that EI was positively correlated with active coping (26). This is disagreeing with Hall (2007) who revealed that there was no relationship between principals' overall levels of EI and their coping mechanisms for stress (27).

This study revealed that escaping avoidance strategy was the only one that had no statistically significances differences with EI and negatively correlation. This might be due to considering escaping avoidance coping strategy as one of maladaptive coping strategies that means avoidance of problems and deal with problems with ignorance or minimizing of its importance which not consist with the nature of EI that based on interaction, understanding and managing of problems. This result is consistent with Shah and Thingujam (2008), MacCann et al (2011), Kim and Han (2015) and Shemesh (2017) who found that emotional regulation was negatively correlated with escape avoidance way of coping (28-31). These results disagree with Kim and Agrusa (2011) who asserted that students with higher EI use both task coping and avoidance coping while they use lower emotional coping (32).

As regards academic achievement, this study displayed that there were no statistically significances differences between EI components and last academic achievement, while self-management component of EI was the only component had statistically significances differences with academic achievement. Also, there was no significant correlation between total EI scores and last academic achievement. This might be due to importance of self-management component of EI in helping students to manage their time and skills and make proper use for it to achieve the possible highest academic achievement.

This is consisted with Olatoye et al (2010), who found that there were no significant relationship and no correlation between EI and students' academic achievement (33). Also, Radford (2010) found no correlation between trait EI and nursing student success and asserted that due to the lack of correlation, one may be tempted to dismiss EI as an important concept in nursing education (2).

Furthermore, the study showed that there was only statistically significance difference and positive correlation between escaping avoidance strategy and last academic achievement. While no statistically significant differences between the rests stress coping strategies. This is might be due to the isolation of those students from participation in leisure activities, which can lead to decreased social interaction and progressive isolation, and provide more time for studying lessons and concentrate in studying, that consequently leads to higher academic achievement. However, this is supported by Kuncharin and Mohamed (2014) who found that 84.50% of students agreed that they used avoidance coping strategies to cope with academic performance problem (34). This is not agreeing with Abdullah et al (2010) who asserted that escape-avoidance correlate negatively with academic achievement and students' adjustment to university (24).

## **Conclusion**

It can be concluded from the current study that EI and coping with stressors have direct and indirect role in success in nursing profession, as EI help students to cope with nursing profession through helping the students to understand and manage themselves, communicate with different people, and solve problems more easily. Moreover, stress coping can be considered as a competence of EI and also, mediated the relationship between EI and academic achievement. Moreover, high EI leads to higher coping with stressors that lead to improvement of adaptability, motivation, planning skills and decision making that affect positively on academic achievement of nursing students.

## **Recommendations:**

- Use of EI test and test of stress coping as a pretest for selection of nursing students who will to enter Faculty of Nursing.
- Periodical workshops for students to develop their EI competences and stress coping.
- A study to compare EI versus intelligence quotient.
- A study to determine the effect of nurses' EI on quality of patient care.

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