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Relationship between Self-Esteem and Stress Coping Strategies among Internship Nursing Students

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Abstract

BACKGROUND: Self-esteem is an essential personality trait in nursing professionals and nursing students need to have a high self-esteem and effective coping strategies to be successful in their future career.

AIM: This study aimed to assess the relationship between the level of self-esteem and the stress coping strategies, used by internship nursing students (intern-nurses), at the completion of their internship training.

METHODS: A descriptive correlational cross-sectional design was used to measure self-esteem and identify the stress coping strategies of intern-nurses at Alexandria University. Data were collected with a self-administered questionnaire, including the Rosenberg self-esteem scale and the Brief Coping Orientation to Problems Experienced (Brief COPE). The questionnaire was distributed to all intern-nurses (273 intern-nurses) during their last rotation in the internship training. In total, 150 completed the survey, resulting in 54.9% response rate. SPSS software was used for the analysis.

RESULTS: In total, 150 intern-nurses participated in the study. The majority of the sample had a moderate to high self-esteem, and the mean total self-esteem was 29.21/40 ± 4.44. The most frequently used coping strategy was problem-solving, followed by social support, positive thinking, and lastly an avoidance coping strategy. There was a positive correlation between self-esteem with both the problem-solving and social support coping strategies. However, there was a negative correlation between the self-esteem score and the avoidance coping strategy.

CONCLUSION: The majority of the sample had a moderate to high self-esteem and they use problem-solving and social support coping strategies to manage stress. Intern-nurses with a high self-esteem cope positively and effectively with stress. Conversely, intern-nurses with a low self-esteem cope negatively with stress. Counseling and stress intervention programs are essential to promote nursing students self-esteem and assist them to develop positive and active stress coping strategies.

Introduction

Nursing education is a stressful and difficult process and nursing students experience higher levels of stress compared to students in other health sciences fields [1]. In addition to daily stress and challenges met in a university context, the students experience stress and problems daily in the clinical environment. They experience stressful events such as dealing with instructors and health care professionals, caring for patients with serious injuries, pain, and they witness death from the 1st day of their clinical training [2], [3], [4]. Because avoidance of these stressors is not possible, coping is important to maintain wellbeing [5]. The type of coping strategy is important as it can affect the physical, emotional, and mental health status of an individual [3], [6].

Coping is defined as the cognitive and behavioral efforts to manage and reduce specific external and/or internal threats. Coping mechanisms is classified in two categories: problem-focused and emotion-focused [7]. Problem-focused coping (or positive coping) is an attempt to decrease stress by targeting the root cause of the stress. It is an effective approach of dealing with stress and includes behavior such as planning and employing strategies to manage problems [8], [9], [10]. Emotion-focused coping (or negative coping) is efforts directed to manage and lessen adverse emotional and psychological responses as a result of stressful

experience rather than the causes [9]. Examples include avoidance and self-distracting activities [8], [9]. Literature report that nursing students use different types of coping strategies, which may or may not be effective. Literature is inconsistent in term of the coping strategy most frequently used, some indicating problem-solving strategies [9], [11], [12], [13], and others avoidance coping [3], [14], [15]. Studies also reported that negative or passive coping strategies were positively associated with psychological problems [6], [16], [17], and positive or active coping strategies with positive mental health outcomes [6].

Self-esteem is the overall evaluation of one's worth or value [5], [18]. Self-evaluation plays an important role in how people feel, think, and behave. Lower levels of self-esteem are a risk factor for mental health problems, with the higher levels considered as a mental health safety factor [6], [19]. Self-esteem is an essential personality trait in nursing professionals and nursing students need to have a high self-esteem and effective coping strategies to be successful in their future career [4], [5], [18]. Self-esteem is a developmental process affected by new situations [20], which can change over time in response to a variety of internal and external influences [17]. Nursing education plays an important role in the development and modeling of self-esteem in college students [1], [21], [22]. With the progression of students to the higher education years, it is expected that changes would occur in their levels of self-esteem [21]. However, previous studies report contradicting results. Some studies reported that self-esteem improves as the students' progress to the higher levels, with the final year students showing the highest levels of self-esteem [16], [23], [24]. Other studies, though, indicated that students' self-esteem is higher at the beginning of the nursing education and reduce with each educational year [25], with the lowest level at the end of the nursing program [17].

Understanding self-esteem and coping strategies and the relationship between them in nursing students are important for nursing students, faculty, and the nursing profession. All the governmental universities in Egypt have bachelor of nursing programs, preparing nursing graduates as specialist registered nurses. After the 4 years of study, students are required to complete an internship year. Internationally, several studies investigated self-esteem and coping strategies in undergraduate nursing students, but there is no study investigating the topic at the completion of the internship training, the exit point of the undergraduate nursing program. To date, little or nothing is known about the self-esteem and coping strategies and the relationship between them among the nursing students in Egypt. The objectives of this study were to estimate the relationship between the levels of self-esteem and type of coping strategy of intern-nurses at the end of internship training.

Methods

Design

A descriptive cross-sectional design was used to measure the intern-nurses' level of self-esteem and their coping strategies as well as the relationship between their self-esteem and coping strategies.

Participants and setting

All nursing students in the internship training, male and female, of the Faculty of Nursing at Alexandria University, were invited to participate in the study. Nursing students from the lower years of study were excluded. Participation was voluntary, not a requirement of graduation, and did not impact their evaluation.

Data collection tool

The tool consisted of three sections. The first focused on the socio-demographic and academic data of the sample, including age, gender, marital status, residence, family size, the grade point average (GPA), the personal desire to study nursing, and considering to leave the nursing program. The second section included the Rosenberg Self-Esteem Scale (RSES), developed by Rosenberg (1965) [26] a widely-used instrument to measure individual self-esteem. It is a 10 item scale, with a 4-point Likert scale format, ranging from strongly disagree (1 points) to strongly agree (4 point). Five items are positive with the rest negative needed reverse scoring with strongly disagree (4 points) and strongly agree (1 point). The total score ranged from 10 to 40, with a higher score indicating higher self-esteem. The score was classified as follows: total score ≤ 50% (10−20) low self-esteem, 50-75% (>20−30) moderate self-esteem, and 75% and higher (>30) high self-esteem. The content validity of the RSES has been established via numerous studies. In our study, the Cronbach alpha coefficient for RSES was 0.71.

The third section contained the Brief Coping Orientation to Problems Experienced (Brief COPE) inventory, developed by Carver *et al*. [27]. The scale consists of 28 items, representing 14 separate coping strategies (14 subscales with 2-items per subscale), namely self-distraction, self-blame, planning, active coping, behavioral disengagement, denial, acceptance, substance abuse, religion, emotional support, venting, positive reframing, instrumental/information support, and humor. Baumstarck *et al*. [28] grouped the 28 items and 14 subscales of the brief COPE in a 4-factor structure: Problem-solving, social support, positive thinking, and avoidance. Intern-nurses rated items on a 4-point Likert rating scale, ranging from 1 assigned to "not doing this at all" to 4 to "doing this a lot." A high score in any subscale indicates that coping strategies

in that subscale were more frequently used. The validity of the brief COPE has been reported in many research studies. In this study, the brief COPE had a Cronbach alpha coefficient of 0.85.

The tools were translated from English to Arabic, and back translated to English and compared with the original questionnaires. Subsequently, they were submitted to four experts in the related fields to determine the content validity. A pre-test study was done with 15 intern nurses, representing about 5% of the total number of the intern-nurses. They were selected randomly to test the clarity of the content and the applicability of the tools, assess the response time required, and to identify any problems that may arise during data collection. These students were excluded from the actual study. From 1 to 30 September 2019, the questionnaire was distributed to all intern-nurses during their last rotation of the internship training.

Ethical considerations

Ethical approval was granted by the College of Nursing, Alexandria University. Before asking the intern nurses to complete the questionnaire, the study aim and the steps to complete the questionnaires were explained. The participants were informed that their participation is entirely voluntary. To maintain confidentiality and anonymity, no names or any potential identity information was requested. The intern-nurses were reassured of the confidentiality of the data and their written consent was obtained.

Statistical analysis

The data were coded and analyzed using the SPSS version 16 for Windows. The self-esteem score was normally distributed. Descriptive statistics were done using frequency, percentage, mean, and standard deviation. The analysis of differences between two subgroups was performed with the independent sample t-test. An ANOVA test (F test) was used to compare more than two groups. When the ANOVA test was significant, the *Post hoc* (Scheffee test) test was done. The correlation between the self-esteem and the coping strategies was done with the Pearson's correlation test.

Results

A total of 273 questionnaires were distributed to the intern-nurses of the Faculty of Nursing at Alexandria University. In total, 150 completed the survey, resulting in 54.9% response rate. Table 1 indicates that the majority of the sample was female

Table 1: Participants' sociodemographic characteristics

Variables	n (%)
Total	150 (100)
Gender	
Male	44 (29.3)
Female	106 (70.7)
Age (years)	
23–25	114 (76.0)
> 25	36 (24.0)
Residence	
Inside university hostel	74 (49.3)
Outside university hostel	76 (50.7)
Marital status	
Single	146 (97.3)
Married	4 (2.7)
Family size☐	
2–4	39 (26.0)
5–6	83 (55.3)
> 6	18 (12.0)
GPA	
A	4 (2.7)
B	90 (60.0)
C	56 (37.3)
Did you enroll in the College of Nursing due to personal desire?	
Yes	103 (68.7)
No	47 (31.3)
Have you considered leaving the nursing program?	
Yes	56 (37.3)
No	94 (62.7)

☐10 (6.7%) missing values. Numbers (percentages) may not always add up to 150 (100%) due to missing values. GPA: Grade point average.

(70.7%) and unmarried (97.3%). The mean age was 24.85 ± 1.1 years and half resided in the University hostel. The majority (55%) had a family size from 5 to 6 members, 26% 2−4 members, and 12% more than 6 members. The majority (60%) had a grade point average (B), with only 2.7% a grade point average (A). Most of the sample (68.7%) enrolled in the college of nursing due to personal desire and only 37.3% considered leaving the nursing program.

In regard to the intern-nurses' self-esteem, the majority of the sample (96.7%) had a high or average levels of self-esteem and the mean total score of self-esteem was 29.21/40 ± 4.44. The results of ANOVA tests showed that the family size had significant effect on the intern-nurses' self-esteem (p = 0.01). *Post hoc* analysis showed that intern-nurses with a family size of 2−4 persons had a significantly higher self-esteem than the intern-nurses with a family size of more than six persons. Similarly, the results revealed that the grade point average (GPA) had significant effect on the intern-nurses' self-esteem (p = 0.009). Surprisingly, *post hoc* analysis showed that intern-nurses with a grade point average (A) had a significantly lower self-esteem compared to the intern-nurses with grade point average (B) and (C). Interestingly, the results showed no significant effect for the other intern-nurses' characteristics on their self-esteem. There was no significant difference in the intern-nurses' self-esteem based on their age, gender, marital status, residence, satisfaction with studying nursing and intention to leave the nursing program (Table 2).

Table 3 presents the 14 stress coping strategies subscales of brief COPE and the participants' mean scores on each subscale. The 14 subscales (with 2-items per subscale) grouped into four main coping strategies: Problem-solving, social support, positive thinking, and avoidance. The result indicates that the most frequently used strategy to minimize stress was problem-solving

Table 2: Effect of participants' sociodemographic characteristics on their self-esteem

Characteristic	Self-esteem score, mean ± SD	p
Total	29.2 ± 4.4	
Gender		
Male	29.1 ± 4.7	0.80
Female	29.3 ± 4.3	
Age (years)		
23–25	29.2 ± 4.4	0.79
> 25	29.4 ± 4.5	
Residence		
Inside university hostel	29.85 ± 4.2	0.082
Outside university hostel	28.6 ± 4.6	
Marital status		
Single	29.2 ± 4.5	0.41
Married	31.0 ± 3.2	
Family size		
2–4	30.72 ± 4.1	0.01*
5–6	29.0 ± 4.6	
> 6	27.1 ± 3.4	
GPA		
A	23.0 ± 5.2	0.009*
B	29.7 ± 4.5	
C	28.9 ± 4.0	
Did you enroll in the College of Nursing due to personal desire?		
Yes	29.6 ± 4.2	0.15
No	28.45 ± 4.95	
Have you considered leaving the nursing program?		
Yes	28.8 ± 4.7	0.41
No	29.45 ± 4.3	

*Statistically significant at p ≤ 0.05. GPA: Grade point average, SD: Standard deviation.

strategy (2.80 ± 0.78), followed by social support strategy (2.69 ± 0.59), and positive thinking strategy (2.45 ± 0.59), and the least used strategy, was the avoidance coping strategy (2.11 ± 0.50). In the problem-solving coping strategy, frequently used coping activities include planning (2.81 ± 0.91), followed by active coping (2.80 ± 0.89). In the social support strategy, the frequently used coping activities in descending order were religious (3.07 ± 0.88), instrumental/information support (2.75 ± 0.87), emotional support (2.65 ± 0.78), and venting activities (2.32 ± 0.64). In the positive thinking strategy, the frequently used coping activities in descending order were positive reframing (2.61 ± 0.79), humor (2.22 ± 0.92), and acceptance (2.22 ± 0.92). In general, the least used coping activities were substance abuse (1.34 ± 0.72) and the behavioral disengagement (1.81 ± 0.76).

Table 3: Brief coping orientation to problems experienced inventory mean scores

COPE sub-scales	Mean ± SD
Social support	2.69 ± 0.59
Venting	2.32 ± 0.64
Emotional support	2.65 ± 0.78
Instrumental/information support	2.75 ± 0.87
Religion	3.07 ± 0.88
Problem-solving	2.80 ± 0.78
Active coping	2.80 ± 0.89
Planning	2.81 ± 0.91
Avoidance	2.11 ± 0.50
Behavioral disengagement	1.81 ± 0.76
Self-distraction	2.65 ± 0.86
Substance abuse	1.34 ± 0.72
Denial	2.10 ± 0.91
Self-blame	2.62 ± 0.89
Positive thinking	2.45 ± 0.59
Humor	2.22 ± 0.92
Positive reframing	2.61 ± 0.79
Acceptance	2.52 ± 0.78

COPE: Coping Orientation to Problems Experienced, SD: Standard deviation.

The correlation between the overall self-esteem and the stress coping strategies was determined with the Pearson's correlation (Table 4). A positive correlation (p = 0.00) existed between self-esteem and

Table 4: Correlation between self-esteem and coping strategies in the sample (n = 150)

Coping strategies	Self-esteem Correlation coefficient	
	r	p
Social support	0.166	0.043*
Venting	−0.024	0.771
Emotional support	0.227	0.005*
Instrumental/information support	0.133	0.104
Religion	0.130	0.112
Problem-solving	0.290	0.000*
Active coping	0.163	0.047*
Planning	0.336	0.000*
Avoidance	−0.189	0.020*
Behavioral disengagement	−0.231	0.004*
Self-distraction	0.060	0.47
Substance abuse	−0.085	0.303
Denial	−0.138	0.092
Self-blame	−0.182	0.026*
Positive thinking	0.113	0.169
Humor	−0.152	0.063
Positive reframing	0.216	0.008*
Acceptance	0.217	0.008*

*Statistically significant at p ≤ 0.05.

the problem-solving coping strategy and its subscales (active coping and planning). Similarly, there were a positive correlation between self-esteem and the social support coping strategy (p = 0.043) and the emotional support subscales (p = 0.005). However, there was a negative correlation between self-esteem and the avoidance coping strategy (p = −0.02) and its subscales (behavioral disengagement (p = −0.004) and self-blame (p = −0.026)). This finding indicates that the intern-nurses with a high self-esteem used problem-solving and social support coping strategies, while intern-nurses with the low self-esteem used avoidance as a coping strategy.

Discussion

This descriptive and correlational study was designed to assess the level of self-esteem and the coping strategies among intern-nurses. The findings demonstrated that the overall level of self-esteem was 29.21/40 ± 4.44 and the majority of the sample (96.7%) had an average to high level of self-esteem. Our findings support previous studies [19], [24], [29] reporting that the mean total self-esteem of nursing students ranged from 29 to 34/40, using the RSES. Chaves *et al*. [29] reported that >98% of the nursing students in Brazil had an average or high self-esteem. In contrast, Acharya and Chalise [18] reported the mean self-esteem score as 11.9/30 and that the majority of the sample (78%) had a low self-esteem. Megahed and Mohammad [30] and Dimitriadou-Panteka *et al*. [31] reported low self-esteem in nursing students in Saudi Arabia and Greece. In addition, a recent review with several studies reported a medium or low self-esteem in nursing students [20].

The high level of self-esteem found in the current study could be explained by the seniority of the sample, intern-nurses are expected to have a higher

level of self-esteem compared to junior students. During the internship training, with the acquisition of clinical skills and independence, intern-nurses also acquire greater self-esteem. Nursing education is an important component of the process through which self-esteem is developed. Although students gain the nursing profession attributes such as the knowledge, skills, attitude, and values, a gradual elevation of the students' self-esteem occurs over time. It is expected that nursing students should have a high level of self-esteem and confidence in themselves as they approached graduation [1], [21], [22]. Iacobucci *et al.* [24] and Lo [16] reported that senior nursing students had higher self-esteem compared to junior students. In addition, Begley and Glacken [23] also reported that nursing students' self-esteem increased toward the end of their educational program. In contrast, Edwards *et al.* [17] in a longitudinal study done in the United Kingdom with nursing students demonstrated that their level of self-esteem was lowest at the end of nursing program.

In this study, the coping strategies used by the intern-nurses were problem-solving and social support, with avoidance the least used strategy. These findings indicate that the intern-nurses cope positively with stressors. Yu [32] reported a higher use of active coping strategies as the year of study progressed. Intern-nurses, compared with junior students, when confronted with increased stressors due to their studies, clinical training, educators, nursing staff, peers, daily life, and society, developed coping behaviors and became more mature. With the acquisition of knowledge, skills, attitudes, and independence, nursing students also acquire emotional, social, and cultural adjustment, which may increase their ability to cope effectively with stress.

Literature supports the findings of the current study that problem-solving was the most frequently used coping strategy in Saudi nursing students [8], [11], [33], Jordanian nursing students [12], [34], British nursing students [35], Chinese female nursing students [5], and Japanese nursing students [10]. Moreover, they reported that avoidance strategy was consistently the least used [11], [34], [35]. Conversely, Gurková and Zeleníková [14] and Karaca *et al*. [3] reported that Slovak and Turkish nursing students used avoidance behavior most frequently and problem-solving less frequently. Similarly, Hirsch *et al*. [15] found that escape was the most frequently used mechanism for Brazilian nursing students in coping with stress. Avoidance is generally known as the easiest coping strategy and only a temporary measure, not a sustainable solution to manage an underlying stressor [33]. Unlike the avoidance strategy, the use of problem-solving strategy requires individual to make an active effort and to create sustainable solutions.

The findings of the current study indicated that the intern-nurses' self-esteem was correlated with problem-solving and social support coping strategies. The higher the self-esteem, the higher the use of the problem-solving and social support coping strategies. In contrast, self-esteem and the avoidance coping strategy were inversely correlated, indicating that the lower the self-esteem, the higher the use of the avoidance coping strategy. A high level of self-esteem supports the intern-nurses to develop more self-confidence and self-satisfaction which, in turn, support their ability to cope effectively with stress. The findings of the study are in accordance with Lo [16] reporting a significant correlation between positive self-esteem and problem-focused behaviors as well as a significant correlation between negative self-esteem and avoidance coping behaviors. Similarly, Ni *et al*. [5], Yıldırım *et al*. [4], and Yu [32] found that the nursing students' self-esteem was positively correlated with an active and positive coping style.

Self-esteem and self-confidence are essential elements in an individual to cope effectively with stress. A higher level of self-esteem and experiencing emotional competence and control, increase self-efficacy, which assist individuals to adopt effective and active strategies when dealing with stress and decrease mental health risks [2], [17], [35]. However, low self-esteem may limit an individual to develop and maintain their problem-solving and social support coping strategies. Negative self-perception causes students to have the belief that they cannot deal with their problems, and they subsequently develop psychological health problems. From another perspective, persons with a lower level of self-esteem are more inclined to use avoidance and fewer problem-solving strategies [2], [17].

Recommendations

Designing and implementing counseling and stress intervention programs, tailored to nursing students to promote their self-esteem and assist them to develop positive and active stress coping strategies, are fundamental. Such programs will facilitate their adaptation to stress throughout their learning journey and future career. In addition, nursing educators must provide appropriate support for their students in the academic and clinical environment to strengthen active coping behavior.

Limitations of the study

The findings of the current study should be interpreted in the context of some limitations. First, this study was conducted with intern-nurses in one academic institution. Second, this study did not assess the stress in the intern-nurses. Larger and longitudinal studies are required to gain more insight in the relationship between self-esteem and the coping strategies of Egyptian nursing students.

Conclusions

This study demonstrated that the majority of intern-nurses had moderate to high self-esteem and they used problem-solving and social support coping strategies to manage stress. Intern-nurses with high self-esteem cope more positively and effectively with stress; however, intern-nurses with low self-esteem cope negatively with the stress.

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