The Effect of Self-esteem on Stress and Coping Mechanisms among Nursing Students during Clinical Training in Palestinian Universities

Mu'taz M. Dreidi[a], Duaa A. Abed[a], Haya Z. Salameh[a], Inass Kh. Abu Sbeih[a], Saja A. Asmar[a], Sewar A. Salameh[a], Imad Tawfiq Asmar[a], Khalid Yaseen[a], Omar Almahmoud[a] & Wesam Taher Almagharbeh[b]
a: Birzeit University, Palestine; b: University of Tabuk, Saudi Arabia

Abstract

Nursing students experience a variety of stressors during their clinical training on a daily basis. This study investigated the relationship between self-esteem, stress, and coping mechanisms among nursing students during their clinical practice. A self-reported questionnaire was used to collect data from a convenience sample of 300 baccalaureate-nursing students from Palestinian universities, who had clinical training in governmental and/or private hospitals. The results showed that nursing students experienced mild to moderate stress, with stress from taking care of patients being the most common type of stress perceived (M = 9.8, SD = 5.1). Problem solving was the most prevalent coping strategy used (M = 14.2, SD = 6), followed by staying optimistic (M = 9, SD = 3.4). Avoidance and transference had significant positive correlations with all stressors, while self-esteem had a significant negative correlation with all stressors. Overall, the findings suggest that stress must be considered an important factor that may have a negative impact on clinical performance and patient care among nursing students during their clinical training.

Keywords: *clinical training, coping mechanisms, nursing, self-esteem, stressors*

Introduction

In education, stress is particularly significant since it has the ability to obstruct learning and performance (Bhurtun et al., 2019). Empirical studies advocate the view that nursing students suffer from stress in their clinical training (Labrague et al., 2018). Without a doubt, clinical training is an important part of nursing education. However, in dynamic and complex clinical environments, students may face numerous challenges or threats, such as learning to use high-tech

medical equipment, maintaining positive relationships with clinical staff and instructors, managing sudden changes in a patient's condition, and dealing with the demands of patients' relatives (Jamshidi et al., 2016). Stress has a detrimental influence on nursing students' self-esteem during their education. According to research, self-confidence and self-esteem are important variables in managing stress (Banappagoudar et al., 2022; Edwards et al., 2010). When compared to students in other health-related disciplines, nursing students have been found to have greater levels of stress, and more physical and psychological symptoms (Jimenez et al., 2010; Elias et al., 2011). In this study, we seek to identify the effects of self-esteem on stress and coping behavior among nursing students during clinical training, as well as the sources of stressors reported by students and the coping techniques they use to alleviate these stressors.

According to Wolf et al. (2015), students with high self-esteem cope better with stressful circumstances in education. Stress, avoidance coping strategies, and low self-esteem were shown to have a significant relationship; positive self-esteem and proactive coping behaviors were also found to have a significant relationship. In addition, findings in another study (Mazalová et al., 2022) revealed that throughout clinical training, nursing students had moderate to high levels of stress. Students reported the average degree of stress more frequently in their second and third years. The majority of students had high levels of self-esteem. Furthermore, higher levels of perceived stress were associated with lower levels of self-esteem (Bodys-Cupak et al., 2022). Edwards et al. (2010) showed that levels of self-reported stress and 'general' self-esteem differ significantly at different stages of the nurse's training process, and self-reported stress levels were highest at the beginning of the third year and were significantly higher when compared to reported stress at any other time point. In this study, students also reported having lower self-esteem overall at the end of their training.

Problem Statement

Stress is a natural body defense that people experience in their lives, which results in physical, emotional, and intellectual responses (Cohen et al., 1995). Clinical training is an important aspect of nursing practical education, where students can develop clinical skills with actual patients in bedside care (Ayed et al., 2020). Nursing students often experience stress during clinical training, which may lead to psychological or emotional impairment, ultimately affecting the quality of patient care they provide (Shaban et al., 2012). It is well known that the education and training of nurses can be a stressful experience (Bodys-Cupak et al., 2016) and that self-esteem is an important predictor of stress, with individuals with high self-esteem using more problem-solving coping strategies and fewer avoidance coping strategies (Yıldırım et al., 2017). However, no studies have assessed the effect of self-esteem on stress and coping mechanisms among nursing students during clinical training in Palestine to date.

Enhancing self-esteem is paramount to managing stress and improving coping mechanisms in clinical training for nursing students. It is important to minimize clinical learning-related stress and maximize coping mechanisms to reach optimal learning opportunities. Educators and clinical instructors need to acknowledge the students' stress to help them manage the uncertainties and any unexpected situations. Knowing the different modalities that nursing students adopt throughout their clinical practice will highlight the students' behaviors in the clinical settings, which may aid in identifying the major challenges and the mechanisms that the students use. Therefore, this study explored self-esteem and stress during clinical training in the hope that we may support the bridging from theory to clinical practice for nursing students.

Study Aim and Objectives

The aim of the current study was to assess the effect of self-esteem on stress and coping mechanisms among nursing students during clinical training in Palestinian universities.

This study has the following objectives:

- To identify the sources of stress that nursing students suffer from during their clinical training.

- To know the preferred coping strategies that are used by students to relieve stress.

- To assess the relationship between stressors and coping behaviors among nursing students in clinical training.

Methods

Design, Setting and Participants

The present study was a cross-sectional, descriptive, and correlational design. The study was conducted at three Palestinian universities. Participants included nursing students from the second, third, and fourth years of the nursing bachelor's degree taught at the universities, which included clinical training in governmental and private hospitals. Students in their first-year or on diploma degree programs were excluded from this study.

Instrument/ tool of data collection

A package of structured self-report questionnaires was used to collect the data. The package consisted of four parts. The authors developed the first part to assess the sociodemographic data (i.e., gender, academic level, clinical placement, and clinical instructor) of students; the second part included the Perceived Stress Scale (PSS) (Cohen et al., 1983) to assess stressors; the third part was the Cognitive Behavior Inventory (CBI) (Sheu et al., 2002) to investigate the coping mechanisms that nursing students adopt during clinical training; and the fourth part was the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) to assess levels of self-esteem.

Perceived Stress Scale (PSS)

The PSS was developed by Cohen et al. (1983) and was used to identify sources of stressors that students experience during training. It consists of 29 elements using a 5-point Likert-type scale, grouped into six factors. The factors include stress related to patient care (8 items), stress related to teachers and nursing staff (6 items), stress related to assignments and workload (5 items), stress related to peers and daily life (4 items), stress related to a lack of professional knowledge and skills (3 items), and stress related to the clinical environment (3 items).

Cognitive Behavior Inventory (CBI)

The CBI was developed by Sheu et al. (2002). It identifies nursing students' coping strategies. The CBI consists of 19 items and uses 5-point Likert-type scales divided into four behaviors. Behaviors include avoidance behavior techniques to avoid a stressful situation (6 items); problem-solving behavior practices to manage or change the stress arising out of a stressful situation (6 items); optimistic coping behavior methods to keep a positive attitude toward the stressful situation (4 items); and transference behavior approaches to transfer one's attention from the stressful situation to other things (3 items). The Arabic version was used in this study. It is valid and reliable, and its usage is recommended (Ahmad et al., 2018).

Rosenberg Self-esteem Scale (RSES)

The RSES is a 10-item self-report measure of global self-esteem (Rosenberg, 1965). It consists of 10 statements related to overall feelings of self-worth or self-acceptance. The items are answered on a four-point scale ranging from strongly agree to strongly disagree; higher scores indicate higher self-esteem.

Data Collection

After receiving the ethical approval to conduct this study in Palestinian universities, a package of self-report questionnaires was made available for participants to fill out on April 1, 2022. Participants were

invited to participate in the study via recruitment after investigating the eligibility criteria. If students agreed to participate, they provided consent via their approval to fill out the questionnaires. All the researchers participated in data collection.

Data Analysis

The Statistical Package for Social Sciences (SPSS) version 20 was used to enter and analyze the quantitative data. The data (demographic data) was examined by calculating the means, standard deviation (SD), frequencies, and percentages to generate a descriptive statistical analysis. Pearson R correlation was used to assess the relationship between RSES, PSS, and CBI.

Ethical considerations

The data were collected anonymously. In addition, all participants were informed that their participation in the study was voluntary and that they had the right to withdraw at any time and for any reason. After that, the participants were fully informed of the objectives of the study and assured that their answers were treated as confidential, and to be used for academic purposes and specific research purposes only.

Results

Demographic and clinical characteristics

A total of 300 students participated in the study; 217 of them were female (72.3%). The majority of students, 106 (35.3%), were in their 4th year. One hundred and fifty-eight (52.7%) of the students received training from both college and external instructors, while 141 (47%) received training in both governmental and private hospitals (Table 1).

Table 1:

Demographic and Clinical Characteristics of the Sample (N = 300).

Variables	Frequency (n)	Percentage %	SD
Gender **Male**	83	27.7	0.488
Female	217	72.3	
Academic Year **2nd Year**	94	31.4	0.817
3rd Year	100	33.3	
4th Year	106	35.3	
Instructor **College**	84	28	0.865
Non-college	58	19.3	
Both	158	52.7	
Hospital **Governmental**	147	49	0.981
Private	12	4	
Both	141	47	

Stress and type of stressors perceived by nursing students during clinical training

The degree of stress perceived by the participants ranged from 0 to 87, with an average score of 39.1 (SD = 14.9). Higher scores indicated that participants experienced higher stress. The most common type of perceived stressor was stress from taking care of patients (M = 9.8, SD = 5.1), followed by stress from instructors and nursing staff (M = 8, SD = 4.2). The stress from the environment (M = 4, 2.4), was the source of the least reported stress (Table 2).

Table 2:

Stressors Perceived by Nursing Students during Clinical Training (N = 300)

Sources of stress	Mean	SD	Range	Min - Max
Stress from taking care of patients	9.8	5.1	30	0 – 30
Stress from assignments and workload	7	3.5	19	0 – 19
Stress from Lack of Professional Knowledge and skills	4.7	2.4	12	0 – 12
Stress from the environment	4	2.4	12	0 – 12
Stress from peers and daily life	5.6	3.5	16	0 – 16
Stress from instructors and nursing staff	8	4.2	20	0 – 20
Stress total	39.1	14.9	87	0 – 87

Coping behaviors adopted by nursing students during clinical training

Problem solving was the most prevalent coping strategy used by the participants (M = 14.2, SD = 6), followed by staying optimistic (M = 9, SD = 3.4). The higher score indicated high coping behaviors adopted by nursing students. Transference, which is defined as the redirection of nursing students attention, focus or interest from one place to another (Sheu et al. (2002) (M = 6, SD = 2.9), was the least often used technique (Table 3).

Table 3:

Coping behavior adopted by students during clinical training (N = 300)

Coping behavior inventory	Mean	SD	Range	Min - Max
Avoidance	6.6	4.2	19	0 – 19
Problem-solving	14.2	6	24	0 – 24
Staying Optimistic	9	3.4	16	0 – 16
Transference	6	2.9	12	0 – 12

Relationship between stressors, coping behaviors, and self-esteem

Results showed that avoidance, which is defined as mental strategies that are used in an effort to avoid distressing thoughts and emotions (Borkovec et al., 2004), and transference had significant positive correlations with all stressors experienced by nursing students in clinical training (p < 0.05). These results showed that nursing students with high levels of stress tend to adopt more negative coping behaviors. On the other hand, during the clinical training, problem solving and staying optimistic had significant positive correlations with stressors related to peers and daily life (r = 0.210, p < 0.001 and r = 0.122, p = 0.035, respectively) and a lack of professional knowledge and skills (r = 0.156, p = 0.007, and r = 0.144, p = 0.013, respectively) (Table 4). Self-esteem had a significant negative correlation with all stressors, suggesting that low self-esteem leads to increased stress. Self-esteem also appeared to play an important role in the levels of stress. The highest correlation was between self-esteem and taking care of patients (r = -0.442, p < 0.001). As self-esteem increased, the stress of taking care of patients appeared to decrease. Self-esteem and stress from teachers and nursing staff had the lowest connection (r = -0.132, p = 0.022). This would mean that soon after beginning their clinical training, the students would start to feel more challenged by their professors and the nursing staff than intimidated. They had a more favorable perception of the clinical training location, which reduced the tension experienced by the teachers and nursing staff.

Table 4:

The relationship between the stressors and coping behaviors (N = 300)

Sources of stress	Avoidance	Problem solving	Stay optimistic	Transference	Self-esteem
Stress from taking care of Patients	.258**	.020	.064	.173**	-.442**
	.000	.733	.270	.003	.000
Stress from assignments and workload	.343**	.150**	.089	.168**	-.279**
	.000	.009	.123	.004	.000
Stress from lack of professional knowledge and skills	.236**	.156**	.144*	.190**	-.193**
	.000	.007	.013	.001	.001
Stress from the environment	.311**	.104	.093	.165**	-.273**
	.000	.073	.107	.004	.000
Stress from peers and daily life	.334**	.210**	.122*	.176**	-.154**
	.000	.000	.035	.002	.008
Stress from teachers and nursing staff	.306**	.101	-.012	.132*	- .132*
	.000	.082	.836	.022	.022
Stressors total	.421**	.161**	.106	.234**	-.379**
	.000	.005	.066	.000	.000

**correlation is significant at the 0.01 level (2-tailed).
*correlation is significant at the 0.05 level (2-tailed).

According to self-esteem and coping behaviors, results showed that problem solving and staying optimistic had a significant positive correlation with self-esteem, while avoidance had a significant

negative correlation with self-esteem. This suggested that students with higher self-esteem were more likely to use problem solving and stay optimistic (Table 5) in order to cope.

Table 5:

The relationship between coping behaviors and self-esteem (N = 300)

Coping behaviors	Avoidance	Problem solving	Stay optimistic	Transference
Self-esteem	-.231**	.234**	.211**	.022
	.000	.000	.000	.698

**correlation is significant at the 0.01 level (2-tailed).
*correlation is significant at the 0.05 level (2-tailed).

In addition, results revealed that there were no significant differences across instructors, gender and the stress perceived by students during clinical training. However, there was a significant difference between males and females in avoidance (t = 2.277, P = 0.024), where males used avoidance more than females (M = 7.52 and 6.30, respectively).

Discussion

This study aimed to assess the effect of self-esteem on stress and coping mechanisms among nursing students in Palestinian universities. The findings demonstrated that stress levels among nursing students were mild to moderate during clinical practice, as shown in Table 2. Similarly, two studies in Palestine and Israel showed that nursing students experienced mild to moderate stress levels (Admi et al., 2018; Ayed et al., 2020). Moderate stress levels have also been demonstrated in students from Saudi Arabia and Spain (Ahmed & Mohammed, 2019; Onieva-Zafra et al., 2020). However, Fashafsheh et al. (2015) stated that nursing students in Palestine had moderate to high levels of stress.

The results of this study showed that the most common type of stressor perceived by the students was stress from taking care of patients, followed by stress from instructors and nursing staff. This is in line with the findings of Alshahrani et al. (2018), who stated that the main source of stress is the fear of making mistakes that could harm or kill patients, followed by anxiety because it is unfamiliar to interact with and provide care to patients. Alshahrani et al. also found that students were anxious about being supervised by clinical instructors, and worried about breaking the rules and instructions of clinical placement institutions. Even though the student is only a student throughout their clinical practice period, both the clinical teacher and staff may have high expectations of them. In order to reduce superfluous stress and to help students cooperate successfully with staff, instructors should adequately communicate the goals and contents of clinical practice to students (Ayed et al., 2020). This will help students have reasonable expectations about it.

This research also revealed that the least reported stress source was the environment. However, a previous study (Admi et al., 2018) found that environmental stressors are a source of stress among nursing students. For example, inadequate preparation to cope with knowledge and skill demands was linked to second-year students, whereas conflicts between professional beliefs and reality in hospital practice were linked to third- and fourth-year students. This discrepancy in outcomes could be explained by the homogeneous nature of Palestinian hospitals. A speedy adaptation and strong resilience to clinical training settings may result from this.

In regard to coping mechanisms, problem solving was the most prevalent coping strategy used by the participants in this study, followed by staying optimistic. This is incongruent with Ahmed & Momammed's (2019) and Onieva-Zafra et al.'s (2020) findings, which found that the most common coping mechanism used by nursing students during clinical training was problem solving. An integrative review of studies in nursing found that students preferred taking a problem solving approach than using

emotion-focused coping strategies (Labrague et al., 2018). According to Lazarus and Folkman (1984), problem solving is one of the most effective strategies to deal with stress since it focuses on behaviors to control or change the problem. This may highlight the need to train nursing students on different coping strategies prior to the beginning of clinical training, including problem solving and staying optimistic, which will further increase the students' self-esteem and empower them in dealing with different stressors.

This research also revealed that transference was the least frequently used technique to manage stress, due to that it does not solve the problem of stress and may only be effective for a short time (Watson et al., 2009). In contrast, Ayed et al. (2020) found that transference was frequently used by students and was perceived as an effective coping strategy. This may be because people may not know or understand other coping strategies, and transference may be easy and convenient (Chan et al., 2009).

Self-esteem is a key determinant of one's ability to deal with stress (Lazarus and Folkman, 1984). According to the current study, as stressors increased, self-esteem decreased. The findings show that students with strong self-esteem cope better with stress during their education (Yildirim et al., 2017). Furthermore, one study indicated that students with low self-esteem were more likely to have higher levels of perceived stress (Bodys-Cupak et al., 2022). Another study found that self-esteem and social support influenced nursing students' stress coping levels (Yildirim et al., 2017). In addition, all stressors have substantial positive connections with avoidance and transference, according to this study. A prior study demonstrated a link between positive self-esteem and proactive coping strategies, as well as a link between stress, avoidance coping practices, and poor self-esteem (Lo, 2002). The negative effects created by unsatisfactory coping practices are directly associated with poor self-esteem.

The results of this study revealed that nursing students who effectively used problem solving and staying optimistic as coping mechanisms, had higher self-esteem than those who used other strategies. Similarly, Sheu et al. (2002) found that optimistic behavior and problem solving had positive effects on students' psychosocial status and self-esteem. Students were able to cope with stress more efficiently with an optimistic attitude and problem solving behavior, regardless of the amount of stress (Sheu et al., 2002). For this reason, educators and clinical instructors should encourage students to be optimistic and, at the same time, help them develop problem-solving skills. The results of our study also showed that nursing students who used avoidance had lower self-esteem. Similarly, Sheu et al. (2002) found that avoidance behavior negatively affected students' psychosocial status and self-esteem. People with low self-esteem may turn to avoidance behaviors to escape or cope with the negative feelings associated with low self-worth (Karaca et al., 2019). As such, it is important that we support students in adopting positive coping behaviors, having high self-esteem, and knowing and mastering different methods of dealing with stress.

High usage of problem solving and staying optimistic as coping mechanisms in this study suggest that most nursing students possess effective coping mechanisms. However, there is no guarantee that this will ensure that they can appropriately use and adopt these strategies in their clinical training. Additional research is needed to understand how students can be supported in engaging in combined coping mechanisms to relieve stress.

Limitations

This research has two limitations. Firstly, this study used a purely quantitative research approach with a descriptive, and correlational design. As a result, longitudinal or observational data were not collected. Future research in this area could adopt a longitudinal design so that changes in stress perception over time may be observed. Qualitative research on self-esteem and its link to stress and coping mechanisms would also be of value. Additionally, the results of this study should be cautiously generalized to nursing student cohorts, given that the sample was from only three Palestinian universities. Despite these limitations, the findings of this study appear to be consistent with past studies on the subject.

Conclusion

This cross-sectional descriptive study set out to assess Palestinian undergraduate nursing students' stress sources and preferred coping techniques, with the relationship of self-esteem with stressors and coping mechanisms. The findings revealed that these students experienced mild to moderate stress, and the most prevalent form of stressor experienced related to taking care of patients, followed by stress from instructors and nursing staff. Students commonly used problem solving techniques followed by staying optimistic to cope with their stress, and they found these methods to be effective. In light of these findings, we recommend the teaching of positive coping strategies be implemented in the nursing curriculum prior to clinical placements. Qualitative studies focusing on students' perceptions of their clinical experiences may be useful in further exploring stress during clinical experiences in nursing education.

Acknowledgements

Sources of funding

Ethical approval

Ethical approval was obtained from the ethical committee in the Faculty of Pharmacy, Nursing and Health Professions at Birzeit University and from the targeted universities.

ORCID

Mu'taz M. Dreidi	https://orcid.org/0000-0002-7662-777X
Duaa A. Abed	https://orcid.org/0009-0009-8277-327X
Haya Z. Salameh	https://orcid.org/0009-0003-6482-3057
Inass Kh. Abu Sbeih	https://orcid.org/0009-0000-7365-1187
Saja A. Asmar	https://orcid.org/0009-0001-7099-4712
Sewar A. Salameh	https://orcid.org/0009-0008-3687-0047
Imad Tawfiq Asmar	https://orcid.org/0000-0002-9378-5841
Khalid Yaseen	https://orcid.org/0000-0002-9489-306X
Omar Almahmoud	https://orcid.org/0000-0003-2899-5954
Wesam Taher Almagharbeh	https://orcid.org/0000-0002-8435-1208

References

Admi, H., Moshe-Eilon, Y., Sharon, D., & Mann, M. (2018). Nursing students' stress and satisfaction in clinical practice along different stages: A cross-sectional study. *Nurse Education Today, 68*, 86–92. https://doi.org/10.1016/j.nedt.2018.05.027

Ahmad, M. M., Alzayyat, A., & Al-Gamal, E. (2018). Coping Behavior Inventory: Psychometric Properties with Arab Universities' Students. *Journal of Nursing Measurement, 26*(1).

Ahmed, W. A. M., & Mohammed, B. M. A. (2019). Nursing students' stress and coping strategies during clinical training in KSA. *Journal of Taibah University Medical Sciences, 14*(2), 116–122. https://doi.org/10.1016/j.jtumed.2019.02.002

Alshahrani, Y., Cusack, L., & Rasmussen, P. (2018). Undergraduate nursing students' strategies for coping with their first clinical placement: Descriptive survey study. *Nurse Education Today, 69*, 104–108. https://doi.org/10.1016/j.nedt.2018.07.005

Ayed, A., Toqan, D., Batran, A., & Salameh, B. (2020). Sources of Nursing Students' Stress and Coping Behaviors during their Clinical Training. *International Medical Journal, 25*(3), 1057–1064. http://repository.aaup.edu/jspui/handle/123456789/1242

Banappagoudar, S. B., Ajetha, D. S., Parveen, A., & Malhotra, P. (2022). Self-Esteem of Undergraduate Nursing Students: A Cross-Sectional Study. *International Journal of Special Education, 37*(3), 4500–4510.

Bhurtun, H. D., Azimirad, M., Saaranen, T., & Turunen, H. (2019). Stress and coping among nursing students during clinical training: An integrative review. *Journal of Nursing Education, 58*(5), 266–272. https://doi.org/10.3928/01484834-20190422-04

Bodys-Cupak, I., Majda, A., Zalewska-Puchała, J., & Kamińska, A. (2016). The impact of a sense of self-efficacy on the level of stress and the ways of coping with difficult situations in Polish nursing students. *Nurse Education Today, 45*, 102–107. https://doi.org/10.1016/j.nedt.2016.07.004

Bodys-Cupak, I., Ścisło, L., & Kózka, M. (2022). Psychosocial Determinants of Stress Perceived among Polish Nursing Students during Their Education in Clinical Practice. *International Journal of Environmental Research and Public Health, 19*(6), 3410. https://doi.org/10.3390/ijerph19063410

Borkovec, T. D., Alcaine, O. M., & Behar, E. (2004). Avoidance theory of worry and generalised anxiety disorder. In R. G. Heimberg, C. L. Turk & D. Mennin (Eds). *Generalised Anxiety Disorder: Advances in Research and Practice*. Guilford Press; New York

Chan, C. K. L., So, W. K. W., & Fong, D. Y. T. (2009). Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. *Journal of Professional Nursing, 25*(5), 307–313. https://doi.org/10.1016/j.profnurs.2009.01.018

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 386–396. https://psycnet.apa.org/doi/10.2307/2136404

Cohen, S., Kessler, R. C., & Gordon, L. U. (1995). Strategies for measuring stress in studies of psychiatric and physical disorders. In S. Cohen & R. C. Kessler (Eds). *Measuring stress: A guide for Health and Social Scientists*. Oxford: Oxford University Press

Edwards, D., Burnard, P., Bennett, K., & Hebden, U. (2010). A longitudinal study of stress and self-esteem in student nurses. *Nurse Education Today, 30*(1), 78–84. https://doi.org/10.1016/j.nedt.2009.06.008

Elias, H., Ping, W. S., & Abdullah, M. C. (2011). Stress and academic achievement among undergraduate students in Universiti Putra Malaysia. *Procedia-Social and Behavioral Sciences, 29*, 646–655 https://doi.org/10.1016/j.sbspro.2011.11.288

Fashafsheh, I., Ayed, A., & Alkaissi, A. (2015). Stressors Affecting Baccalaureate Nursing Students in the Clinical. *Journal of Health, Medicine and Nursing, 14*(1), 42–52.

Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C., & Najafi Kalyani, M. (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal,* 1846178. https://doi.org/10.1155/2016/1846178

Jimenez, C., Navia-Osorio, P. M., & Vacas Diaz, C. (2010). Stress and health in novice and experienced nursing students. *Journal of Advanced Nursing, 66*(2), 442–455. https://doi.org/10.1111/j.1365-2648.2009.05183.x

Karaca, A., Yildirim, N., Cangur, S., Acikgoz, F., & Akkus, D. (2019). Relationship between mental health of nursing students and coping, self-esteem and social support. *Nurse Education Today. 76*, 44–50. https://doi.org/10.1016/j.nedt.2019.01.029

Labrague, L. J., McEnroe-Petitte, D. M., Al Amri, M., Fronda, D. C., & Obeidat, A. A. (2018). An integrative review on coping skills in nursing students: implications for policymaking. *International Nursing Review, 65*(2), 279–291. https://doi.org/10.1111/inr.12393

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping* (1st ed.). Springer Publishing Company. https://doi.org/10.1007/978-1-4419-1005-9_215

Lo R. (2002). A longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students: an Australian case study. *Journal of Advanced Nursing, 39*(2), 119–126. https://doi.org/10.1046/j.1365-2648.2000.02251.x

Mazalová, L., Gurková, E., & Štureková, L. (2022). Nursing students' perceived stress and clinical learning experience. *Nurse Education in Practice, 64*, 103457. https://doi.org/10.1016/j.nepr.2022.103457

Onieva-Zafra, M. D., Fernández-Muñoz, J. J., Fernández-Martínez, E., García-Sánchez, F. J., Abreu-Sánchez, A., & Parra-Fernández, M. L. (2020). Anxiety, perceived stress and coping strategies in nursing students: a cross-sectional, correlational, descriptive study. *BMC Medical Education, 20*, 370. https://doi.org/10.1186/s12909-020-02294-z

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Shaban, I. A., Khater, W. A., & Akhu-Zaheya, L. M. (2012). Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. *Nurse Education in Practice, 12*(4), 204–209. https://doi.org/10.1016/j.nepr.2012.01.005

Sheu, S., Lin, H-S., & Hwang, S-L. (2002). Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: The effect of coping behaviors. *International Journal of Nursing Studies, 39*(2), 165–175. https://doi.org/10.1016/S0020-7489(01)00016-5

Watson, R., Gardiner, E., Hogston, R., Gibson, H., Stimpson, A., Wrate, R., & Deary, I. (2009). A longitudinal study of stress and psychological distress in nurses and nursing students. *Journal of Clinical Nursing, 18*(2), 270–278. https://doi.org/10.1111/j.1365-2702.2008.02555.x

Wolf, L., Warner Stidham, A., & Ross R. (2015) Predictors of Stress and Coping Strategies of US Accelerated vs. Generic Baccalaureate Nursing Students: An Embedded Mixed Methods Study. *Nurse Education Today, 35*(1), 201–205. https://doi.org/10.1016/j.nedt.2014.07.005

Yıldırım, N., Karaca, A., Cangur, S., Acıkgoz, F., & Akkus, D. (2017). The relationship between educational stress, stress coping, self-esteem, social support, and health status among nursing students in Turkey: A structural equation modeling approach. *Nurse Education Today, 48*, 33–39. https://doi.org/10.1016/j.nedt.2016.09.014