

Assessment of Clinical Setting Related Stressors Perceived by Nursing Students in Najran University –Saudi Arabia

Dr. Amna Mohammed Idris^a; Dr. Nahid Khalil Elfaki^b; Dr. Abdalla Mohamed Ahmed Osman^b; Dr. Daif Allah D. Althubaity^c; Dr. Elwaleed Idris Sagiron^b; Dr. Yahya Hussein Ahmed^b; Dr. Zeinab Taha Omer^d; Dr. Wargaa Hashim Hussein Taha^c; Leila Abdallah Elawad^e; Dr. Aida Ahmed Fadlala^d; Mujahed Ali Alkhadher^a; Dr. Nahla Elradhi Abdlrahman^b; Dr. Neimat Mahmoud Abd-Alrhman^d; Dr. Samah Ramadan Elrefaey^{b,f}

Corresponding author email: Dr. Nahid Khalil Elfaki^b nkidrees@nu.edu.sa

a Department of Medical and Surgical Nursing, College of Nursing, Najran University, Najran, Saudi Arabia

b Department of Community and Mental Health Nursing, College of Nursing, Najran University, Najran, Saudi Arabia

c Departments of Obstetric & gynecology, College of Medicine, Najran University, Najran, Saudi Arabia

d Faculty of Applied Medical Sciences, Nursing department, Al-Baha University, Al-Baha, Saudi Arabia,

e Faculty of Applied Medical Sciences, Optometry department, Al-Baha University, Al-Baha, Saudi Arabia,

f Assistant professor of Psychiatric and Mental Health Nursing, Faculty of Nursing, Benha University, Egypt

Abstract

Background: Baccalaureate nursing students often experience high levels of stress during training that may result in psychological or emotional impairment during their professional life that might ultimately affect the quality of patient care they provide. **Aim of the study:** to assess the clinical setting related stressors perceived by nursing students in Najran University. **Methodology:** It was a descriptive cross-sectional study. A convenient sampling technique was adopted for recruiting 141 subjects to participate in the current study was used to assess the clinical setting related stressors among nursing students at the University of Najran. A self-administered questionnaire was utilized for collecting data. Descriptive analysis was followed for assessing the stressors that perceived by students, while Chi-square test was used for determining the associations with risk factors and some variables. **Results:** about (29.8%) of participants reported that anxiety was the most common emotional symptoms that nursing students suffered, (46.1%) of them had moderate stress level, and there was a highly statistically significant correlation between stress scale and students' clinical experience and enough preparation for the clinical practice significant negative correlation was observed between stress scale and students' opinion about clinical practice ($r = -0.499$, $p = 0.01^{**}$), ($r = -0.502$, $p = 0.01^{**}$). significant positive correlations are found between Student opinion about clinical practice, Enjoyable clinical experience and prepared for the clinical practice ($r = 0.399$, $p = 0.05^{*}$), ($r = 0.328$, $p = 0.05^{*}$) respectively. **Conclusion and recommendation:** Less than half of nursing students had moderate stress level in regard to clinical practice. **Recommendation:** A stress management programs along with good preparation for students before initiating clinical practices with continuing supervision until graduation is highly advisable.

Keywords: Nursing students, Stress, Clinical practice.

Introduction

Clinical practice is an essential part of nursing education as it provides nursing students the chance to apply knowledge as well as developing their psychomotor skills. Nursing research supports that nursing students identify the practicum portion of class as being particularly stressful (Rafati et al., 2020).

It is widely acknowledged that nursing education is stressful, and that high levels of stress can undermine students' cognitive functioning and learning. Numerous studies have documented that nursing students

experience a high level of stress during their undergraduate course (Wilkinsos et al; 2006; Amr et al, 2007).

Empirical research supports the view that nursing students suffer from stress in their clinical practice. Without doubt, clinical practice is an important component in nursing education. However, students may face many challenges or threats 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. Students who experience psychological distress are more likely to experience depressive symptoms (Ab Latif and Mat Nor, 2019). Moreover, Rafati et al believe that stressful events that change one's life for an extended period can lead to health related problems (Rafati et al., 2020).

Nursing students commonly experience anxiety and stress during their initial clinical training and practice. Stress during this period may result in several negative outcomes, such as poor academic performance, elevated burnout levels, and diminished personal well-being. All these are detrimental to the achievement of the goal of training, which is to prepare competent nurses. Therefore, it is vital for clinical teachers to be aware of the factors that may prompt increases in the level of stress among nursing students and the adaptation techniques they utilize to overcome stressors. There is evidence to support the idea that helping students develop positive stress coping abilities is useful for their successful adaptation to several stressors throughout their learning. Furthermore, a recent integrative review highlighted the importance of recruiting representative samples to assess nursing and midwifery students' stress and coping strategies in various institutions at specific years during their studies including prior to their clinical practice (Labrague et al., 2018). Two recent studies from Egypt and Saudi Arabia reported high rates of anxiety and stress among medical students respectively (El-Gilany et al, 2008; Amr et al, 2007). Accordingly, It is advisable for nursing educators to know the causes, and levels of stress among students, that may not only affect their health but also their academic achievements during their study period. Thus, the aim of this study was to assess the clinical setting related stressors perceived by nursing students in Najran University.

Methodology

Study area and population

The current study had been undertaken in Najran university among nursing students. A descriptive cross-sectional research design was used to assess the clinical setting related stressors perceived by nursing students

Population:

The study conducted among undergraduate nursing students enrolled in various academic years (from level 5 up to level 8 and internship) nursing students (female and male) at Najran University, Kingdom of Saudi Arabia.

Sampling Process

A Convenient Sampling Technique (CST) was adopted for recruiting the sample size which was 141 participants.

Sample technique: The convenience sample was selected from nursing students (female and male) in Najran University.

Tool for data collection: Electronic questionnaire was used for data collection, questionnaires had been distributed to participants via social media groups (Facebook, WhatsApp, E-mail, and Instagram). The questionnaire consisted of three parts: **First part:** for sociodemographic characteristics such as age, academic level, and marital status. **Second part:** perception of nursing students about clinical practice. **Third part:** Perceived Stress Scale (PSS) among nursing students. **Scoring system:** Severe Stress if score >70%, moderate 50 to 70%, mild <50%.

The questionnaire was translated into Arabic language and tested for content validity by a jury of 5 medical experts, while reliability by Cronbach's alpha test was 0.81 which showed acceptability. Furthermore, a pilot study was performed on 10 participants who were excluded from the main sample to ascertain the instrument's clarity and applicability, and accordingly, the necessary changes were undertaken.

Ethical Approval

Official permission and ethical approval were obtained from the deanship of scientific research at Najran University-Saudi Arabia. A written informed consent indicated that the participant has the right to decline or withdraw at any point during the course of the study was been put at the beginning of the questionnaire. Furthermore, confidentiality was assured to each participant.

Statistical Analysis

After cleaning and coding, data analysis was performed by using SPSS version 22 (IBM Corp. Armonk, NY, USA). Categorical variables such as age groups, gender, and educational level were summarized and reported as frequency distribution. The Chi-square test was used to examine the association between different categorical variables. Whereas, t-test or ANOVA were used for continuous variables. Multivariate logistic regression (LR) analysis that tested with OR (95% confidence intervals (CI) and P-value was performed to identify factors associated with clinical stress. A P-value of <0.05 was considered statistically significant.

Results

Characteristics of the study participants

One hundred forty six individuals participated in the current study. After checking data, 5 questionnaires were found to be incomplete or completed incorrectly, so they had been omitted. Therefore, 141 subjects were included in the current study.

Table 1 shows that the participants' mean age was 22.25 ± 2.17 (ranging between 20-25 years). In terms of gender, females are dominated in the sample (80.1%). Regarding educational level, almost one quarter of them 35 (24.8%) correspond to level seven respectively. Concerning Perception of nursing students about clinical practice, table (2) represents that almost half of them (47.5%) have neutral opinion about clinical practice. Also, more than half of them (51.8%) of them mention that they were Enjoying clinical experiences. In addition, more than one third of them (36.9%) report that Feel stressor and anxious during practical training if the medical team includes men/women. Regarding Students' expectations about acquired clinical experience, 46.1% of them are Excellent. As regard the best thing to happen during clinical practice, 19.8% of them mention Cooperation whilst 5.7% of them stat Enjoying working with patients. Moreover, Students' opinions to improve clinical practice and clinical 18.4% of them stat Increase time for demonstrating skills, but 9.2% of the mention Availability of facilities in the lab.

Regarding the worst thing to happen during clinical practice, table (3) illustrates that 21.3% of the studied students report Facing dying and death of patients. Concerning Emotional symptoms, more than one quarter of them (29.8%) mention, "I feel more anxious lately". As regard Social behavioral symptoms that students suffering during clinical practice, 22.7% of them stat "I cannot work as usual". Moreover Physical symptoms that students suffering during clinical practice, 22.7% of them inform "I experience nausea and vomiting". More than one third of them (36.9%) have fairly high degree of preparation for the clinical practice. Also, 41.8% of them have fairly high degree of a good environment. Table (4) shows the perceived stress that related to clinical practice. It illustrates that, less than half of them (42.6%) have moderate stress from taking care of patients. Also, more than one third of them (37.6%) have moderate stress from assignments and workload. More than half of them (51.8%) have low stress from lack of professional knowledge and skills. In addition, 41.1% of them have low Stress from area of practice. Moreover, 38.3% of them have low Stress from peers and daily life. And so, 51.8% of them have moderate Stress from teachers and nursing staff.

Figure (1) displayed levels of total stress levels among the studied students. Less than half of them (46%) have moderate level of stress, while 26% of them have low level of stress.

Table (5) reveals a highly statistically significant relation between the studied students' total stress level and their Age, Gender, Levels and Marital status with ($X^2=10.625$, $p=0.001^{**}$), ($X^2=12.098$, $p=0.000^{**}$), ($X^2=6.087$, $p=0.009^{**}$), ($X^2=14.157$, $p=0.000^{**}$) respectively.

Table (6) Statistically, a significant negative correlation was observed between stress scale and students' opinion about clinical practice ($r= -0.499$, $p=0.01^{**}$), ($r= -0.502$, $p=0.01^{**}$). Enjoyable clinical experience and being prepared for the clinical practice was also correlated statistically with stress levels ($r= -0.567$, $p=0.01^{**}$) respectively. A highly statistically significant positive correlation exists between Enjoyable clinical experience and prepared for the clinical practice ($r= 0.602$, $p=0.01^{**}$). Statistically significant positive correlations are found between Student opinion about clinical practice, Enjoyable clinical experience and prepared for the clinical practice ($r= 0.399$, $p=0.05^*$), ($r= 0.328$, $p=0.05^*$) respectively.

Table (1): Distribution of studied students according to their characteristics (n=141)

Items	n	%
Age:		
20 - 22	82	58.2
23 - 25	59	41.8
Mean SD	22.25±2.17	
Gender:		
Male	28	19.9
Female	113	80.1
Levels:		
Level five	29	20.6
Level six	33	23.4
Level seven	35	24.8
Level eight	20	14.2
Internship	23	16.3
Marital status:		
Single	123	87.2
Married	18	12.8

Table (2): Distribution of sample according to their Perception about clinical practice (n=141)

Items	n	%
Student opinion about clinical practice:		
Satisfactory	44	31.2
Unsatisfactory	30	21.3
Neutral	67	47.5
Enjoyable clinical experience:		
Yes	40	28.4
No	28	19.8
Maybe	73	51.8
Feel stressor and anxious during practical training if the medical team includes men/women:		
Yes	52	36.9
No	39	27.6
Maybe	50	35.5
Students' expectations about acquired clinical experience:		
Excellent	65	46.1
Good	45	31.9
Bad	31	22
The best thing to happen during clinical practice:		
Cooperation	28	19.8
Successful achievement of students	15	10.6
Encourage of students	24	17
Self- learning	20	14.2
Applying all skills	19	13.5
Good orientation to different departments	17	12.1
Helping medical team	10	7.1
Enjoy working with patients	8	5.7
Students' opinions to improve clinical practice and clinical:		
Good understanding of teachers to students	22	15.6
Continuous supervision on students	20	14.2
Increase time for demonstrating skills	26	18.4
Cooperation between student and teacher	19	13.5
Make different places available for clinical training of students	18	12.8
Encourage students	23	16.3
Availability of facilities in the lab	13	9.2

Table (3): Distribution of sample according to their Perception towards clinical practice (n=141)

Items	n	%
The worst thing to happen during clinical practice:		
Bad treatment with students	20	14.2
Mal- practicing of students	19	13.5
Lack of ideal practical learning with students	15	10.6
Lack of time	22	15.6
Facing dying and death of patients	30	21.3
Problem confronts the students during practical time	25	17.7
Lack of facilities	10	7.1
Emotional symptoms:		
I tend to be worried and nervous	21	14.9
I tend to be nervous and anxious lately	15	10.6
I often feel depressed and miserable	9	6.4
I feel afraid without any reason	14	9.9
I feel I am going to have a nervous breakdown	19	13.5
I feel more anxious lately	42	29.8
I cannot calm down	21	14.9
Social behavioral symptoms that students suffering during clinical practice:		
I am not optimistic about my future	24	17
My life is not very colorful	19	13.5
I cannot work as usual	32	22.7
I have difficulty in making decisions	20	14.2
I do not feel needed or valued	16	11.3
I cannot think as clearly as before	30	21.3
Physical symptoms that students suffering during clinical practice:		
I often feel giddy	29	20.6
I experience nausea and vomiting	32	22.7
I often have vertigo and feel dizzy	19	13.5
I feel pressure in the chest	10	7.1
My fingers and toes feel numb or painful	9	6.4
I have stomach-ache and diarrhea	10	7.1
I have difficulties in breathing for no reason	12	8.5
I catch cold more often	20	14.2
Adequately prepared for the clinical practice:		
very high degree	37	26.2
fairly high degree	52	36.9
fairly small degree	34	24.1
not at all	18	12.8
Provide a good environment to receive students:		
very high degree	33	23.4
fairly high degree	59	41.8
fairly small degree	29	20.6
not at all	20	14.2

Table (4): Distribution of sample according to their Perceived Stress related to clinical practice (n=141)

Stress domains	n	%
Stress from taking care of patients		
Severe	42	29.8
Moderate	60	42.6
Low	39	27.6
Stress from assignments and workload		
Severe	38	26.9
Moderate	53	37.6
Low	50	35.5
Stress from lack of professional knowledge and skills		
Severe	23	16.3
Moderate	45	31.9
Low	73	51.8
Stress from area of practice		
Severe	40	28.4
Moderate	43	30.5
Low	58	41.1
Stress from peers and daily life		
Severe	37	26.2
Moderate	50	35.5
Low	54	38.3
Stress from teachers and nursing staff		
Severe	49	34.8
Moderate	73	51.8
Low	19	13.4
Total:		
Severe	39	27.7
Moderate	65	46.1
Low	37	26.2

Figure (1) Distribution of studied students according to their total stress (n=141)

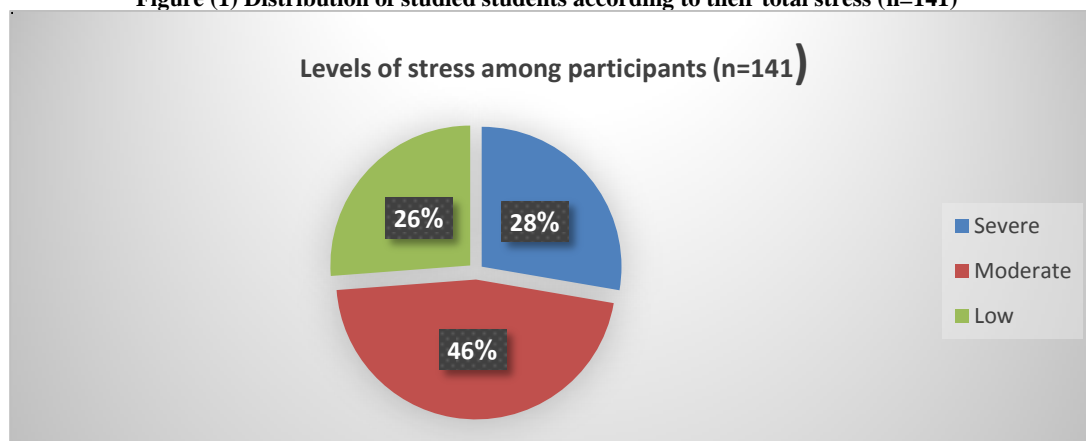


Table (5): Relation between demographic characteristics of the sample and their level of stress (n=141).

Demographic characteristics	Total stress						X ² test	p- value
	Mild n=37		Moderate n=65		Sever n=39			
	N	%	N	%	N	%		
Age group: /year								
20 - 22.	12	32.4	40	61.5	30	76.9	10.625	.001**
23 – 25.	25	67.6	25	38.5	9	23.1		
Gender							12.098	.000**
Male	20	54.1	6	9.2	2	5.1		
Female	17	45.9	59	90.8	37	94.9		
Levels:							6.087	0.009**
Level five	3	8.1	15	23.1	11	28.2		
Level six	5	13.5	18	27.7	10	25.6		
Level seven	7	18.9	19	29.2	9	23.1		
Level eight	8	21.6	6	9.2	6	15.4		
Internship	14	37.8	6	9.2	3	7.7		
Marital status:							14.157	.000**
Married.	0	0	3	4.6	15	38.5		
Single	37	100	62	95.4	24	61.5		

(*) statistically significant at $p \leq 0.05$ (**) high statistically significant at $p \leq 0.01$

Table (6) Correlation between studied variables

	Stress scale	Student opinion about clinical practice	Enjoyable clinical experience	prepared for the clinical practice
Stress scale		r. -0.499 <0.01**	r. -0.502 <0.01**	r. -0.567 <0.01**
Student opinion about clinical practice			r. 0.399 <0.05*	r. 0.328 <0.05*
Enjoyable clinical experience				r. 0.602 <0.01 **
prepared for the clinical practice				

(*) statistically significant at $p \leq 0.05$ (**) high statistically significant at $p \leq 0.01$

Discussion

During nursing students training, they are subjected to both academic and work-related stress. Organizational stresses and their interplay are key topics of the current study in the growing body of research on workplace anxiety. These include time constraints, workload, decision-making and constant changes in the workplace (Sharma et al., 2022). The objective is to assess the clinical setting related stressors perceived by nursing students in Najran University.

The present study showed that 31.2% of students were satisfied about clinical practice, the same findings had been reported in Jordan

(Shaban et al; 2012) . Also, more than half of them (51.8%) mentioned that they may be enjoy clinical experience, this result is accordance with studies done by (Ahmed et al., 2019), which showed the level of nursing students' satisfaction with their clinical practice of nursing; about 32.8% were satisfied. Another study done by (Mohamed and Ahmed, 2012), reported that the majority 90% of students, think clinical practice as enjoyable.

The present study showed that concerning emotional symptoms, more than one quarter of them 29.8% mentioned "I feel more anxious lately". As regard social behavioral symptoms that students suffering during clinical practice, 22.7% of them stated "I cannot work

as usual". Moreover physical symptoms that students suffering during clinical practice, 22.7% of them inform "I experience nausea and vomiting", these results agreed with a study done by (Sharma et al., 2022; Aedh et al., 2015), which showed student anxiety was the most common emotional symptoms that suffered.

On the other hand a study revealed by (Aedh et al., 2015), regarding to the social behavioral symptoms that students suffering during clinical practice, the students stated they cannot think as clearly as before, and regarding to physical symptoms the students informed they catch cold more often.

The current study showed less than half of students 42.6% have moderate stress from taking care of patients. In addition, more than one third of them 37.6% have moderate stress from assignments and workload. More than half of them 51.8% have low stress from lack of professional knowledge and skills. In addition, 41.1% of them have low stress from area of practice. Moreover, 38.3% of them have low stress from peers and daily life. And so, 51.8% of them have moderate stress from teachers and nursing staff, these results agreed with a study done by (Shdaifat et al., 2018 and Sheu et al.; 2002), which revealed students had low stress from lack of professional knowledge and skills, and area of practice. Another study done by (Ab Latif and Mat, 2019), showed that students had high stress level from lack of professional knowledge and skills. The same findings showed in study done by (Pun et al., 2018), showed that students had high stress level from assignments and workload, and area of practice. In addition a study done by (Shdaifat et al., 2018), reported students had high stress from assignments and workload, and teachers and nursing staff. Also moderate stress from peers and daily life.

The present study showed less than half of students (46.1%) have moderate stress, while 27.7% of them have severe stress, this result matched with a study done by (Pun et al., 2018), who showed most of nursing students 84.5% had moderate level of stress. Another study showed a similar results done by (Shdaifat et al., 2018), revealed that students perceived moderate level of stress. Also a study

done by (Rafati et al., 2020), showed 54.5% moderate, and 36.7% high stress level.

On the other hand a study conducted by (Perveen et al., 2021), documented that about 41.0% of the participants had a mild level of stress, 36.8% had no stress.

The current study showed a highly statistically significant relation between the studied students' total stress level and their age, gender, levels and marital status, this result was agreed with a study done (Rafati et al., 2020), which showed there was significant relation between the studied students' total stress level and their gender, and levels. Another study done by (Aedh et al., 2015), revealed that there was significant relation between the studied students' total stress level and their levels, and marital status. Also (Perveen et al., 2021) study reported there was significant relation between the studied students' total stress level and their age.

By contrast a study done by (Ahmed et al., 2019), showed there was not significant relation between the studied students' total stress level and their gender, and marital status.

The present study revealed highly statistically significant negative correlations between stress scale and student opinion about clinical practice, enjoyable clinical experience and so prepared for the clinical practice, this result is accordance with studies done by (Rafati et al., 2020), which found relation between stress scale and student interesting about nursing clinical setting. Another study done by (Mivšek et al., 2018), showed relation between stress scale and challenging study plan preparing for clinical practice.

On the other hand a studies done by (Boostel et al., 2018 and Labrague et al.; 2018), showed that there was relation between stress scale and lack of preparing for clinical practice.

Conclusion and recommendation

The findings demonstrated that most of the studies nursing students at Najran University have moderate stress levels. In order to overcome these stressors, students frequently employed a problem-solving approach. Nursing

students should be prepared to cope with stressors during their nursing studies, especially at the start of clinical training. Moreover, nursing college officials must adopt some effective stress-coping strategies to improve the psychological health of students in forms of sessions, which may help them to overcome stressors.

Competing interests

The authors declare no competing interests are to be addressed.

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