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Original Article

Nursing students' stress and coping strategies during clinical training in KSA

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الملخص

أهداف البحث: يواجه طلاب التمريض العديد من الضغوطات خلال دراستهم وتدريبهم. تهدف هذه الدراسة إلى تقييم درجة الإجهاد واستراتيجيات التأقلم المستخدمة من قبل طلاب التمريض بجامعة الباحة، بالمملكة العربية السعودية.

طرق البحث: أجريت هذه الدراسة الوصفية الاستعراضية بأسلوب أخذ عينة عشوائية بسيطة من ١٢٥ من طلاب التمريض أثناء الممارسة السريرية. تم جمع البيانات باستخدام استبانة ذاتية، تتكون من المتغيرات الديموغرافية، ومقياس الضغط الملحوظ ومقياس مخزون سلوكيات التأقلم.

النتائج: مما مجموعه ١٢٥، كان هناك ٤٨٪ ذكور و٥٢٪ إناث من طلاب التمريض. كانت أعمارهم ٢١ ±١.٥٦عاما معظمهم من غير المتزوجين ١١٠(٨٨٪). كان تقريبا ٦٥(٥٢٪) منهم راضين جدا بينما كان ٤١ (٣٢.٨٪) منهم راضين عن ممارستهم السريرية. وكانت الضغوطات الرئيسة هي الضجيج ٢٠ (١٦٪)، وتغيير المكان ٩ (٧.٢٪)، والتفاعل الاجتماعي ٧ (٥.٦٪) والمرض الشخصي ٧ (٥.٦٪). تضمنت العوامل المجهدة المثيرة للتوتر رعاية المرضى ١.٥٦±٠.٤٥، والواجبات وحجم العمل ١.٦ ±٠.٤٣، ونقص المعرفة والمهارات المهنية ١.٢٤ ±٠.٤٥، ومجال الممارسة ١.٤٧±٠.٤٩، والأقران والحياة اليومية ١.٨٩±٠.٦٧، والمعلمون وطاقم التمريض في المستشفى ١.٤٥±٠.٧٩. وكانت الاستراتيجيات المستخدمة من الطلاب لتقليل الضغط؛ نهج حل المشكلات ١.٨٤±٠.٦٧، وأبقى متفائلا ١،٥٦ ±٠.٦٧، والتحويل ١.٣٤±١.٢والتجنب ١.٢٣±٠.٥٦.

الاستنتاجات: يواجه طلاب التمريض في هذه الدراسة الجماعية إجهادا معتدلا نظرا لوجود ضغوطات مختلفة. كثيرا ما يستخدم طلاب التمريض نهج حل المشكلات والتجنب للتغلب على الضغوطات. ولكن، هناك حاجة إلى نظام أساسي للمساعدة في الحد من التوتر بين طلاب التمريض.

الكلمات المفتاحية: استراتيجيات التأقلم؛ الممارسة؛ طلاب التمريض؛ التوتر

Abstract

Objective: Nursing students are exposed to several stressors during their studies and training. The aim of this study is to assess the degree of stress experienced by nursing students at Albaha University, KSA and the coping strategies they subsequently employ.

Methods: A descriptive cross-sectional study was conducted by a simple random sampling technique on 125 nursing students during their clinical practice. The data were collected by a self-administered questionnaire consisting of demographic variables, the Perceived Stress Scale, and the Coping Behavior Inventory.

Results: Of the 125 participants, 48% were male and 52% were female. The mean age was 21 ± 1.56 years, and they were mostly single 110 (88%). Approximately 65 (52%) were very satisfied and 41 (32.8%) were satisfied with their clinical practice. The main stressors were noise (20; 16%), moving location (nine; 7.2%), social interaction (seven; 5.6%), and personal illness (seven; 5.6%). The perceived stress provoking factors included taking care of patients (1.56 ± 0.45), assignments and workload (1.60 ± 043), lack of professional knowledge and skills (1.24 ± 0.45), field of practice (1.47 ± 0.49), peers and daily life (1.89 ± 0.67), and teachers and nursing staff at hospitals (1.45 ± 079). The strategies used by students to minimise stress included taking a problem-solving approach (1.84 ± 067), staying optimistic (1.56 ± 076), transference (1.34 ± 1.20), and avoidance (1.23 ± 056).

Conclusion: The nursing students in the study cohort were exposed to moderate stress due to different stressors. In response, they frequently used a problem-solving approach and avoidance. However, a standard protocol

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by institutions is required to help reduce stress among nursing students.

Keywords: Coping strategies; Nursing students; Practice; Stress

Introduction

The nursing specialty consists of both theoretical and clinical courses that reinforce and support each other. The theoretical part, conducted in classrooms through lectures, case studies, and directive discussions, is complemented by clinical training to provide students with opportunities to develop the knowledge, skills, attitudes, and values taught in classrooms and labs. Furthermore, clinical training assists students in developing clinical skills, integrating theory into practice, and expanding their expectations of their future careers.[1]

Of late, clinical teaching in nursing has improved owing to advances in technology and the changing environments of health care settings. The introduction of certain technologies such as high-fidelity simulators and teaching methods such as structured scenarios in nursing curricula have several advantages in enhancing students' knowledge and skills. However, the knowledge and skills are gained when practising with actual patients in clinical settings, which is more beneficial.[2]

In most nursing programmes, clinical training begins in the first year and extends until graduation. As clinical training accounts for the majority of the nursing curriculum, stress has been commonly reported among nursing students, especially during the initial period.[3] However, depending on how students deal with stressors, stress could have either advantageous or disadvantageous outcomes[4]; while some students become more motivated when faced with stressors, others become anxious and depressed.[5] A recent study conducted on Slovenian midwifery students reflected that the challenging nature of the midwifery curriculum is one of the most motivating factors for students to achieve success.[6]

Nursing students commonly experience anxiety and stress during their initial clinical training and practice.[7] Stress during this period can result in several negative outcomes, such as poor academic performance,[8] elevated burnout levels,[4] and diminished personal well-being.[9–11] 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 utilise 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.[12] 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.[13]

The majority of the 25 governmental universities in KSA offer nursing courses that prepare graduates to be registered specialist nurses. The Bachelor of Nursing (BSc Nursing) programme is planned in accordance with National Commission for Assessment and Accreditation rules and regulations. The four-year programme is followed by a one-year internship. During the four years of study, students are assigned to clinical sites to demonstrate practical knowledge of nursing skills. Students who successfully complete the four years of study are required to complete one year of hospital clinical training (the internship year). During this year, students rotate between different floors and units according to their training plan.

In the most recent systematic review in the KSA context, it was found that during clinical training, nursing students are faced with moderate to high stress owing to, mainly, heavy workloads and taking care of patients.[14] While the findings of this systematic review were general and not specifically applicable to any year of study, the reports demonstrated that nursing students are mainly stressed while taking care of patients and that this is also a stage where they are burdened by case studies and the theoretical components of the curriculum. Accordingly, the present study aimed to evaluate the level of stress among undergraduate nursing students during their clinical training, and to identify the basic techniques they utilise in attempts to adapt to stress.

Materials and Methods

Design: A descriptive, cross-sectional study was conducted.

Study population

Nursing students enrolled in clinical training at any academic level were included in this study.

Inclusion criteria: All students (males and females) enrolled in BSc programmes at Albaha University with clinical parts at the hospitals were invited to participate in this study at the beginning of each practical course.

Exclusion criteria: Students who received clinical training at a location other than the hospital and who had failed the clinical course and/or had previous experience of working in hospitals (bridging students) were excluded from this study.

Sampling and sample size: A simple random sampling technique was utilised to select 125 nursing students from Albaha University.

Instruments: Demographic variables, the Perceived Stress Scale (PSS), and the Coping Behavior Inventory (CBI) were used to collect the required data.

1 **The demographic information sheet** included information regarding age, gender, marital status, nationality, GPA, type of programme (BSc, bridging, MSc, PhD), previous

work experience, academic year, name of current course requiring clinical training).

2 **The PSS**, developed by Sheu,[15] is a five-point Likert scale that examines stress and stressors among nursing students. It consists of 29 items; the response to each item ranges from 'never' to 'always' as follows: (4 = very often, 3 = fairly often 2 = sometimes, 1 = almost never, and 0 = never). The 29 items cover the following factors: eight related to patient care, six related to teachers and nursing staff, five related to assignments and workload, four related to peers and daily life, three related to lack of professional knowledge and skills, and three related to the clinical environment. Both total and subtotal scores were measured, with higher scores indicating higher levels of stress. The internal validity of this scale, as depicted by Cronbach's alpha, has been reported to be 0.86–0.89.[16]

3 **The CBI**, also developed by Sheu,[16] is a five-point Likert scale used to identify nursing students' coping strategies. The scale comprises 19 items divided into four subscales: six for avoidance behaviours, six for problem-solving behaviours, four for optimistic coping behaviours, and three for transference behaviours. Responses to each item ranged from 'never' to 'always' (4 = always, 3 = frequently 2 = sometimes, 1 = infrequently, and 0 = never). Cronbach's alpha of the CBI has been reported to be 0.75–0.84.[16]

Data collection

After obtaining approval from the Deanship of Scientific Research and the Dean of the Faculty of Applied Medical Sciences, Albaha University, the link to a web-based questionnaire was provided to nursing students at the start of clinical training. Students read the consent form and the terms and conditions of our study. After providing informed consent, students filled the demographic information sheet, PSS, and CBI. The questionnaire took about 10 min to complete.

Data collection was conducted at the beginning of clinical rotation so as to minimise the effect of other factors that may affect students' stress levels, such as homework and examination pressure as the semester proceeded.

Data analysis

Data were collected from students who completed the self-administered questionnaire, and were then processed using SPSS, version 22.

Results

This study included a total of 125 participants (48% male and 52% female) from the nursing department at Albaha University. Their average age was about 21 ± 1.56 years. Most were unmarried (110; 88%), while 15 (12%) were married, and all were studying BSc Nursing. The participants were studying medical-surgical nursing (40; 32%), critical care nursing (25; 20%), psychiatric and mental health nursing (23; 18.4%), community health nursing (20; 16%), and obstetrical and gynaecological nursing (17; 13.6%). Fifty-five students (44%) reported

Table 1: Socio-demographic characteristics of nursing students (N = 125).

Variable	n (%)
Gender	
Male	60 (48%)
Female	65 (52%)
Marital status	
Single	110 (88%)
Married	15 (12%)
Separated	0
Divorced	0
Course of training	
Medical Surgical Nursing	40 (32%)
Critical Care Nursing	25 (20%)
Psychiatric Nursing	23 (18.4%)
Community Health Nursing	20 (16%)
Maternity Nursing	17 (13.6%)
Previous experience	
Yes	55 (44%)
No	70 (56%)
GPA	
3–4	70 (56%)
2-<3	37 (29.6%)
1-<2	18 (14.4%)
<1	0 (0%)
Age	
Mean	21
SD	1.56
Family size	
Mean	4
SD	1

Table 2: Nursing students' level of satisfaction regarding studying nursing (N = 125).

Variable	n (%)
A **Nursing satisfaction**	
Very satisfied	65 (52%)
Satisfied	41 (32.8%)
Neither satisfied nor dissatisfied	16 (12.8%)
Dissatisfied	3 (2.4%)
Very dissatisfied	0 (00%)

Table 3: Common external (social or environmental) stressors on nursing students at Albaha University.

Experiences with the following in a month:	Frequency (%)
Death of a close family member	2 (1.6%)
Personal illness or injury	7 (5.6%)
Marriage	0 (0%)
Pregnancy	3 (2.4%)
Divorce	0 (0%)
Buying a house	2 (1.6%)
Being laid off from a job	0 (0%)
Moving location	9 (7.2%)
Noise	20 (16%)
Bright lights	0 (0%)
Heat	0 (0%)
Confined spaces	0 (0%)
Social interaction with rude, bossy, critical, and aggressive people	7 (5.6%)
Crowding	0 (0%)
None	75 (60%)

Table 4: Perceived Stress Scale (PSS) among nursing students (N = 125).

PSS	Never	Rarely	Sometimes	frequently	Always	Mean ± SD
1 Stress from taking care of patients						1.56 ± .45
Lack of experience and ability to provide nursing care and make judgements	12	7.2	38.4	24.8	17.6	1.2 ± 1
Do not know how to help patients with physio-psycho-social problems	20	10.4	28	20.8	20.8	1.45 ± 1.17
Unable to meet one's expectations.	24.8	14.4	27.2	20	13.6	1.16 ± 1.24
Unable to provide appropriate responses to teachers' and patients' questions.	17.6	8	34.4	24	16	1.3 ± 1.1
Worried about not being trusted or accepted by patients or patients' families.	11.2	6.4	28	34.4	20	1.21 ± 1.11
Unable to provide patients with good nursing care.	9.6	8.8	29.6	28.8	23.2	1.34 ± 1.3
Do not know how to communicate with patients.	5.6	3.2	16	54.4	20.8	1.82 ± 1.3
Experience difficulties in changing from the role of a student to that of a nurse.	7.2	6.4	22.4	48	16	1.4 ± 1.1
2 Stress from assignments and workload						**1.6 ± .43**
Worry about bad grades.	12	9.6	21.6	17.6	39.2	1.56 ± 1.32
Experience pressure from the nature and quality of clinical practice.	12.8	21.6	31.2	21.6	12.8	1.09 ± 1.23
Feel that one's performance does not meet teachers' expectations.	13.6	17.6	28	32	8.8	1.34 ± 1.56
Feel that clinical practice requirements exceed one's physical and emotional endurance.	12.8	20.8	25.6	29.6	11.2	1.45 ± 1.12
Feel that dull and inflexible clinical practice affects one's family and social life.	13.6	14.4	20	43.2	8.8	1.14 ± 1.20
3 Stress from lack of professional knowledge and skills						**1.24 ± .45**
Unfamiliar with medical history and terms.	34.4	20	24	14.4	7.2	1.45 ± 1.11
Unfamiliar with professional nursing skills.	18.4	21.6	50.4	7.2	2.4	1.21 ± 1.34
Unfamiliar with patients' diagnoses and treatments.	33.6	20.8	26.4	13.6	5.6	1.45 ± 1.12
4 Stress from area of practice						**1.47 ± .49**
Feel stressed in the hospital environment where clinical practice takes place	27.2	12.8	27.2	16.8	16	1.67 ± 1.34
Unfamiliar with the ward facilities.	24	11.2	32	23.2	9.6	1.13 ± 1.23
Feel stressed from rapid changes in patients' conditions.	33.6	15.2	17.6	16	17.6	1.67 ± 1.34
5 Stress from peers and daily life						**1.89 ± .67**
Experience competition from peers in school and clinical practice.	14.4	42.4	19.2	10.4	13.6	1.56 ± 1.23
Feel pressure from teachers who evaluate students' performance by comparison.	14.4	30.4	22.4	13.6	19.2	1.65 ± 1.45
Feel that clinical practice affects involvement in extracurricular activities.	16	51.2	17.6	7.2	8	1.45 ± 1.34
Cannot get along with peers.	12	64	12.8	4	7.2	1.67 ± 1.26
6 Stress from teachers and nursing staff						**1.45 ± .79**
Experience discrepancy between theory and practice.	13.6	22.4	25.6	14.4	24	1.45 ± 1.67
Do not know how to discuss patients' illness with teachers or nursing personnel.	23.2	34.4	24.8	10.4	7.2	1.34 ± 1.11
Feel stressed because teachers' instructions differ from one's expectations.	24.8	23.2	23.2	14.4	14.4	1.28 ± 1.29
Doctors lack empathy and are unwilling to help.	18.4	26.4	29.6	15.2	10.4	1.18 ± 1.20
Feel that teachers do not evaluate students fairly.	16	53.6	14.4	5.6	10.4	1.34 ± 1.67
Lack of care and guidance from teacher.	48.8	14.4	18.4	8	10.4	1.47 ± 1.25
Total						**1.54 ± 1.34**

having previous experience, and most (107; 85.6%) had a CGPA above 2 (Table 1).

Table 2 shows the level of nursing students' satisfaction with their study of nursing; about 65 (52%) of them reported that they were very satisfied and 41 (32.8%) were satisfied. Table 3 shows that the main external influencing stressors on nursing students included noise (20; 16%), moving location (nine; 7.2%), social interaction (seven; 5.6%), and personal illness (seven; 5.6%).

The PSS, used to measure stress levels among nursing students, showed that the stress related to providing care was 1.56 ± 0.45, stress related to assignments and capacity was 1.60 ± 043, stress related to deficiency of professional knowledge and competences was 1.24 ± 0.45, stress related to the environment of practice was 1.47 ± 0.49, stress related to peers and daily life events was 1.89 ± 0.67, and stress related to instructors and nursing staff was 1.45 ± 079 (Table 4).

Table 5: Coping Behavior Inventory (CBI) among nursing students (N = 125).

CBI	Never	Rarely	Frequently	Sometimes	Always	Mean ± SD
1 Avoidance						1.23 ± .56
To avoid difficulties during clinical practice.	23.2	21.6	28.8	11.2	15.2	1.56 ± 1.34
To avoid teachers.	47.2	19.2	16.8	7.2	9.6	1.45 ± 1.13
To quarrel with others and lose temper.	55.2	16.8	11.2	7.2	9.6	1.34 ± 1.19
To expect miracles so one does not have to face difficulties.	41.6	19.2	21.6	7.2	10.4	1.48 ± 1.37
To expect others to solve the problem.	25.6	18.4	34.4	14.4	7.2	1.47 ± 1.58
To attribute to fate.	23.2	10.4	20.8	8.8	36.8	1.12 ± 1.43
2 Problem solving						**1.84 ± .67**
To adopt different strategies to solve problems.	5.6	8.8	27.2	17.6	40.8	1.56 ± 1.21
To set up objectives to solve problems.	5.6	11.2	21.6	17.6	44	1.56 ± 1.45
To make plans, list priorities, and solve stressful events.	8.8	11.2	18.4	16.8	44.8	1.34 ± 1.56
To determine the meaning of stressful incidents.	9.6	12	24	21.6	32.8	1.87 ± 1.22
To employ past experience to solve problems.	7.2	14.4	26.4	21.6	30.4	1.78 ± 1.23
To have confidence in performing as well as senior schoolmates.	6.4	7.2	24.8	20	41.6	1.89 ± 1.21
3 Staying optimistic						**1.56 ± .76**
To keep a positive attitude in dealing with life events.	5.6	5.6	16.8	15.2	56.8	1.45 ± 1.23
To see things objectively.	5.6	7.2	19.2	26.4	41.6	1.78 ± 1.21
To have confidence in overcoming difficulties.	4.8	5.6	21.6	20.8	47.2	2.00 ± 1.11
To cry, feel moody, sad, and helpless.	22.4	15.2	24.8	13.6	24	1.89 ± 1.34
4 Transference						**1.34 ± 1.20**
To feast and enjoy a long sleep.	23.2	16.8	25.6	15.2	19.2	1.45 ± 1.23
To save time for sleep and maintain good health to face stress.	11.2	11.2	25.6	15.2	36.8	1.78 ± 1.23
To relax via TV, movies, a shower, or physical exercises.	11.2	11.2	21.6	20.8	35.2	1.34 ± 1.86

Table 6: The relationship between stressors and coping behaviour of nursing students (N = 125).

Variables	Stressors related to patient care	Stressors related to assignments & patient care	Stressors related to lack of professional knowledge & skills	Stressors related to environment	Stressors related to peers & daily life	Stressors related to teachers & nursing staff
Avoidance	0.03	0.12[a]	0.02	0.03	0.15[a]	0.16[a]
Problem solving	0.04	0.21[a]	0.016	0.27[a]	0.04	0.21[a]
Staying optimistic	0.16[a]	0.26[a]	0.03	0.23[a]	0.07	0.03
Transference	0.31[a]	0.28[a]	0.06	0.19[a]	0.05	0.04[a]

[a] Significant relationship.

The CBI showed that the strategies utilised by students to minimise stress during clinical rotation included taking a problem-solving approach (1.84 ± 067), staying optimistic (1.56 ± 076), transference (1.34 ± 1.20), and avoidance behaviour (1.23 ± 056) (Table 5).

Table 6 shows the regression relationship between stressors and coping strategies used by students; there was a significant relationship in some areas such as patient care and teachers and peers. As demonstrated by Table 7, there was no significant relationship between demographic factors and stress levels among nursing students at Albaha University.

Table 7: The relationship between demographic variables and satisfaction level and stress among nursing students (N = 125).

Variable		Stress level (mean)	p-value
Gender			
Male	60 (48%)	1.46	0.14
Female	65 (52%)	1.56	
Marital status			
Single	110 (88%)	1.47	0.25
Married	15 (12%)	1.53	
Course of training			
Medical Surgical Nursing	40 (32%)	1.43	0.06
Critical Care Nursing	25 (20%)	1.69	
Psychiatric Nursing	23 (18.4%)	1.83	
Community Health Nursing	20 (16%)	1.32	
Maternity Nursing	17 (13.6%)	1.28	
Previous experience			
GPA			
3–4	70 (56%)	1.32	0.19
2–<3	37 (29.6%)	1.47	
1–<2	18 (14.4%)	1.36	
Level of satisfaction			
Very satisfied	65 (52%)	1.34	0.08
Satisfied	41 (32.8%)	1.54	
Neither satisfied nor dissatisfied	16 (12.8%)	1.48	
Dissatisfied	3 (2.4%)	1.50	

Discussion

This descriptive, cross-sectional study was conducted to assess Saudi nursing students' stress and the coping strategies they utilise during initial clinical training. The findings demonstrated that stress levels among nursing students during their clinical rotation were moderate, similar to an Iranian study conducted on midwifery students during clinical practice in the labour room[17] and to a Saudi systematic review.[14] All six elements related to PSS, nursing students have ranged between 1 and 2. Consequently, however students have not previous practices at clinical settings, they showed high confidence and capability to overcome

stressors. The overall level of stress was not very high, similar to previous reports.[18–20]

It was found that the students were satisfied with their course, which consisted of both theoretical and clinical parts; this contradicts the results of a Jordanian study demonstrating that nursing students were not happy with their study of nursing for several reasons.[20] Based on these findings, the improvement of teaching procedures and setting of comprehensive tasks, especially for practical aspects, are proposed.

Usually, students are initially intimidated by clinical practice environments,[20,21] and this was visible in this study from the stress in practice settings. Furthermore, students feel pressurised by teacher evaluations and facing unfamiliar cases. They also reported stress related to teachers and hospital staff, similar to the findings of some previous reports.[18,20,22] Students also experienced stress related to assignments and work capacity in clinical settings, particularly with regard to the quality of work they were expected to achieve and the guidelines they were required to follow, considering they were not fully familiar with hospital protocols. Bothyna and Eman (2012) revealed that the majority of students in their study experienced severe stress, compared to only 28% who had moderate stress. The three sources of stress reported included patient care, peers and daily life events, and hospital staff and instructors.[23] Furthermore, a study conducted on midwifery students demonstrated the crucial role of peers in facing stress.[9] A recent study on undergraduate midwifery students in Slovenia showed that a challenging study plan is the main motivator for students.[6]

Saudi nursing students, similar to other nursing students worldwide,[20,24] focus on grades rather than clinical performance and understanding of subjects.

The students tried to cope with stressors using single or combined strategies, which is similar to previous findings.[20,24] Further studies are recommended to determine how nursing students could be encouraged to utilise a combined coping approach to decrease stress. A quasi-experimental study showed that psycho-educational interventions enhanced strategies to overcome stress, especially by using emotional and instrumental social support.[11] A recent literature review recommended that teachers should use approved interventions in order to enhance nursing students' coping strategies.[25]

The finding of this study are similar to those of a Jordanian and an American study[20,26] in terms of coping strategies. Students significantly employed the coping strategy of avoidance to overcome stressors due to assignments and patient care, peers and daily life, and educators and clinical staff. Problem solving, as another strategy to overcome stress, was more significantly utilised by students to manage stressors due to assignments and patient care, environment, and teachers and clinical staff. The use of these strategies could be explained by the fact that they are the easiest for students and related to their personalities. It was also expressed in one integrative review that nursing students prefer taking a problem-solving approach over using emotion-focused coping strategies.[27] Another two strategies, staying optimistic and transference, were significantly utilised by students to handle stress related to assignments and patient care, their environment, friends and everyday events, and educators and clinical staff. These relationships were similar to those demonstrated in the aforementioned Jordanian study.[20] One study conducted on nursing students in three countries showed that other coping strategies could be effective in stress management and control.[28]

There were several limitations to this study. The first was the focus on students of only one KSA university. Another was the use of a self-administered questionnaire, which had several drawbacks. Thus, the findings of the current study cannot be generalised to all of KSA. Further studies with more representative samples, which could reflect the situation all over the country, are recommended. However, the findings of this study could aid clinical instructors and educators in identifying nursing students' requirements, enabling their education in the appropriate clinical environment, and initiating effective strategies to cope with stressors.

Conclusion

The findings demonstrated that nursing students at Albaha University have moderate stress levels. In order to overcome stressors, students frequently employed a problem-solving approach, followed by staying optimistic, and using transference and avoidance.

Recommendations

Nursing students should be prepared to cope with stressors during their nursing studies, especially at the start of clinical training. Moreover, nursing faculty managers must implement strategies to improve the physical health of students, which could enable them to overcome stressors.

Source of funding

This study was fully supported and funded by Albaha University, Deanship of Scientific Research (No. 1438/53).

Conflict of interests

The authors have no conflict of interest to declare.

Ethics approval

Permission was obtained from the Deanship of Scientific Research at Albaha University by sending a letter to the Dean of the Faculty of Applied Medical Sciences.

Consent

This article has not published in any journal. An oral presentation will be made at the Saudi Conference for Nursing Sciences 2019 at Hail University.

Authors' contributions

WAA planned the study and wrote the proposal, conducted field work, provided research methods and instruments, and collected and cleared data. WAA and BMA

analysed and interpreted data. BMA wrote the first draft of the article and WAA provided technical and advisory support. WAA and BMA have critically revised and agreed to the final draft of the article and are accountable for the check of similarity. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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