Perceptions of Nursing Graduates on Clinical Internship Programs: Evaluating Stress Levels, Strengths, and Coping Mechanisms

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Abstract

Background: Clinical training, spanning from the first year until graduation, often induces stress among students, affecting their performance and well-being. This study aims to assess the perceptions of nursing graduates towards their clinical internship programs, specifically focusing on their levels of stress, and identifying the strengths of these programs and using of the coping mechanisms. **Methods:** A descriptive cross-sectional study was conducted at the Faculty of Nursing, Najran University, Saudi Arabia. Systematic random sample was employed to involve 43 graduate nursing students in their clinical internship year. Data were collected using a questionnaire incorporating demographic information, strengths of the internship program, the Perceived Stress Scale (PSS), and the Coping Behavior Inventory (CBI). **Results:** The majority of nursing students (60.4%) were under 22 years old, predominantly male (81.4%), and single (79.1%). Most students (86.0%) received orientation about hospital policies, and 79.1% felt supported by nursing staff. High satisfaction levels (86.0%) and a strong academic foundation (79.1%) were reported. However, 41.9% lacked confidence in performing complex procedures. Stress levels were low for 53.5% of students, moderate for 25.6%, and severe for 20.9%. Avoidance was the most utilized coping mechanism (mean = 16, SD = ±1.3), while problem-solving strategies (mean = 14, SD = ±2.4) and staying optimistic (mean = 11, SD = ±1.7) were less common. Age showed a moderate positive correlation with stress (R = 0.42, P = 0.08), and effective coping mechanisms correlated strongly with lower stress levels (R = 0.72, P = 0.0001). Higher GPA was also associated with better stress management (R = 0.76, P = 0.0001). **Conclusion & recommendation:** The study highlights the importance of support systems and effective coping strategies in managing stress during clinical

internships. Enhancing coping mechanisms and addressing areas for improvement, such as confidence in performing complex procedures, can further improve the internship experience and professional readiness of nursing students.

Key words; Clinical training, Nursing students, Stress levels, Coping mechanisms, Internship program.

Introduction

The nursing specialty encompasses both theoretical and clinical components that synergistically support students' learning. The theoretical aspect includes classroom lectures, case studies, and interactive discussions, which are complemented by clinical training. This combination allows students to apply the knowledge, skills, attitudes, and values taught in the classroom to real-life situations. Clinical training is crucial in helping students develop their clinical skills, integrate theory into practice, and shape their expectations for their future careers (Zhang et al. 2022).

Recent advancements in technology and changes in healthcare settings have significantly enhanced clinical teaching in nursing. Innovations such as high-fidelity simulators and structured scenarios within nursing curricula provide numerous advantages in enhancing students' knowledge and skills. However, the most valuable learning experiences occur when students practice with actual patients in clinical settings (Kim, Park, and Shin 2016).

Clinical training typically begins in the first year of nursing programs and continues until graduation. As clinical training constitutes a significant portion of the nursing curriculum, it is common for nursing students to experience stress, especially during the initial stages. The impact of stress on students can have both positive and negative outcomes, depending on how they handle stressors. While some students become more motivated when faced with challenges, others may experience anxiety and depression (Ching, Cheung, Hegney, and Rees 2020).

During the initial clinical training and practice, nursing students often experience anxiety and stress. This stress can have various negative consequences, including poor academic performance, increased burnout levels, and decreased personal well-being. These outcomes hinder the ultimate goal of training, which is to prepare competent nurses. Therefore, it is crucial for

clinical teachers to be aware of the factors that contribute to increased stress levels among nursing students and the coping techniques they employ to overcome these stressors (Chaabna, Bhagat, Al-Mulla, and Zoubeidi, 2021). Research supports the idea that helping students develop positive stress coping abilities is essential for their successful adaptation to the various stressors they encounter during their education. An integrative review recently emphasized the importance of including representative samples from different institutions and specific years of study to assess the stress levels and coping strategies of nursing and midwifery students, including prior to their clinical practice (Khademian et al. 2021).

In Saudi Arabia, the majority of governmental universities offer nursing courses that aim to prepare graduates for careers as registered specialist nurses. The Bachelor of Nursing (BSc Nursing) program is designed in accordance with the rules and regulations set by the National Commission for Assessment and Accreditation. The program spans four years, followed by a one-year internship (Ahmed 2015).

Throughout the four-year program, students are assigned to various clinical sites where they can apply their theoretical knowledge and develop practical nursing skills. These clinical assignments provide hands-on experience and an opportunity to demonstrate their understanding of nursing practices. Upon successful completion of the four-year program, students are required to undertake a one-year hospital clinical training, known as the internship year (Mivšek, Äimälä, Žvanut, and Tuomi, 2018).

During the internship year, students participate in rotations across different floors and units as outlined in their training plan. This allows them to gain exposure to a wide range of clinical settings and patient populations. By rotating through various areas, students can further enhance their skills and knowledge in different specialties of nursing practice (Bradshaw, Tighe, and Doody 2018).

A recent systematic review conducted in the context of Saudi Arabia revealed that nursing students experience moderate to high levels of stress during their clinical training. The primary sources of stress identified were heavy workloads and the responsibility of providing patient care. Although the findings of the review were not specific to any particular year of study, they indicated that nursing students

experience significant stress while caring for patients, as well as when dealing with case studies and the theoretical aspects of the curriculum (Hwang and Kim 2022).

Based on these observations, the current study aims to assess the perceptions of nursing graduates towards their clinical internship programs, specifically focusing on their levels of stress, and identifying the strengths of these programs and using of the coping mechanisms. By examining these factors, the study seeks to gain insights into how students adapt to the stressors they encounter during their clinical training and how these experiences influence their professional development and readiness for their nursing careers.

3. Material and Methods

Study Design:

To achieve the objectives of the study, A Descriptive cross-sectional study survey has been used in this study.

Study Setting:

This study has been conducted in Faculty of Nursing, Najran University, Saudi Arabia.

Study population:

The study population for this research proposal consists of graduate nursing students at Najran University in Saudi Arabia. These students are enrolled in the Bachelor of Nursing (BSc Nursing) program and are currently undergoing their clinical internship year in a hospital setting. The study focused specifically on graduate nursing students who are in the clinical internship phase of their training.

Inclusion criteria:

- Graduate nursing students: The study included students who are currently enrolled in the graduate nursing program at Najran University.
- Clinical internship phase: The participants were in the clinical internship year of their nursing program at the time of data collection.
- Consent to participate: Students who voluntarily agree to participate in the study by providing informed consent will be included.

Sampling size:

The sample size (43) was estimated according to the following formula:

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

:

Sampling technique:

The sampling technique was by systematic random sample; the total numbers of internship student were 172 presented in a list, it was decided from the

formula that the sample size equal 43 students, by randomization the interval was selected every 4 student.

Data collection Tools:

To assess the perceptions of nursing graduates towards their clinical internship programs, specifically focusing on their levels of stress and identifying the strengths and weaknesses of these programs, a mixed-methods approach will be employed. The data collection methods were developed after reviewing the recent studies of **Towfik et al., 2023; Abdulrahman, 2024; Neumbe etal., 2023)**

The questionnaire covered various aspects, including:

a. Demographic information (age, gender, ……)

b. Identified strengths of the internship program.

c. The Perceived Stress Scale (PSS) that adopted from (She et al., 2021) was employed to measure the stress levels of participants. Developed by Cohen et al. in 1983, the PSS is a widely validated tool designed to assess the perception of stress over the past month. The PSS consists of 10 items, each rated on a 5-point Likert scale ranging from "0 = Never" to "4 = Very Often. Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress. Scores ranging from 0-13 would be considered low stress. Scores ranging from 14-26 would be considered moderate stress. Scores ranging from 27-40 would be considered high perceived stress

d. Coping Behavior Inventory (CBI) Among Nursing Students

It comprises various items categorized into four main factors: Avoidance, Problem Solving, Staying Optimistic, and Transference. Each item is rated on a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The mean scores for each factor reflect the overall tendency of students to use these coping strategies. Scoring System; Strongly Agree: 4 points, Agree: 3 points, Neutral: 2 points, Disagree: 1 points, Strongly Disagree: 0 point

Pilot study:

A pilot study has been carried out after formal permission had been obtained from the deans of the Faculty of Nursing.

The purposes of the pilot study it has been to find out validity, reliability and practicability of the tool and methodology. After making necessary correction in the tools, the main study has been conducted. Those who were shared in the pilot will be excluded from the main study. The findings of the pilot study sample it not included in the main study.

Ethical Considerations

Ethical approval for this study has been obtained from the research ethics committee of the Health Research and from the ethical review Board of the Najran University. Permission to conduct the study was also

obtained from the deans of the Faculty of the Nursing.

All participants have been informed that the study is completely anonymous and voluntary, and all data has been collected and was kept confidential. After that they have been asked to give verbal or written informed consent indicating their willingness to participate in the study. They were informed that they were free to withdraw from the study at any time and such withdrawal was not affect their academic performances in any way.

Data process and statistical Analysis:

Data has been collected during the period of (Feb, 2024- March, 2024). The survey was distributed electronically to internship students via email. A link to an online survey platform (e.g., SurveyMonkey, Google Forms). The questionnaires have been checked for completeness because incomplete questionnaire was not being accepted in the study. Then the data has been coded and loaded onto an excel spreadsheet for analysis, it has been processed and analyzed using appropriate statistical methods. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, has been used to summarize the data. Inferential statistics, such as chi-square tests or t-tests, were employed to examine associations between variables and demographic variables, including age, gender, marital status; course of training, statistical software, (SPSS 23.0) was used for data analysis.

Results

Table 1 shows the frequency distribution of the studied sample regarding socio-demographic data and the GPA score. The table reveals that the majority of nursing students (60.4%) are under 22 years old, indicating a younger cohort predominantly in the early stages of their academic and professional journey. Practical area distribution shows a significant concentration in the Emergency Department (39.5%) and Critical Care Units (25.6%), highlighting that many students is gaining experience in high-pressure environments. Gender distribution is skewed, with males making up 81.4% of the sample, which may reflect broader gender trends in nursing programs or specific regional demographics. Most students are single (79.1%), which might influence their ability to cope with stress differently compared to their married counterparts. The average GPA is 3.1±0.9, indicating a moderate academic performance among the students, which can be correlated with their stress and coping mechanisms.

Table 2 clarifies the strengths points regarding the clinical internal ship. There are an overwhelming majority (86.0%) of students received orientation about hospital policies and procedures, which is crucial for familiarizing them with the clinical environment and reducing initial stress. 79.1% of students felt supported by the nursing staff, indicating a positive work environment that likely enhances learning and performance. Most students (83.7%) were informed about their responsibilities and limitations, which help in setting clear expectations and reducing uncertainty. The

training environment was deemed suitable by 79.1% of students, suggesting that the clinical settings are conducive to learning and professional development. High satisfaction levels were reported by 86.0% of students, reflecting overall contentment with the internship experience. A strong academic foundation was acknowledged by 79.1% of students, indicating that their theoretical knowledge supports their practical training effectively. Hands-on experience and confidence in performing complex procedures for the first time were recognized by 58.1% of students, while 41.9% did not feel as confident, indicating an area for potential improvement in practical training.

In table 3 over half of the students (53.5%) experience low stress, suggesting that a significant portion of the students are managing their stress levels well. Moderate stress levels are reported by 25.6% of students, indicating that while some stress is present, it may not be overwhelming. Severe stress affects 20.9% of students, highlighting a critical subset that may require additional support and resources to cope effectively.

Table 4 shows the Coping Behavior as used by the studied nursing students. The table reveals that avoidance is the most utilized coping mechanism (mean = 16, SD = ±1.3), indicating that many students tend to evade stressors rather than address them directly. problem-solving strategies are moderately employed (mean = 14,

SD = ±2.4), suggesting that students attempt to deal with issues but may need more support in developing effective problem-solving skills. Staying optimistic has a lower mean score (mean = 11, SD = ±1.7), reflecting that maintaining a positive outlook is less common among the students. Transference, involving indirect methods like sleep and enjoyment to cope with stress, has the lowest mean score (mean = 7, SD = ±2.2), indicating that self-care practices may not be a priority. The total CBI score (mean = 52, SD = ±6.3) provides an overall view of coping behaviors, showing a need for enhanced coping strategies among students.

Table 5 reveals that age shows a moderate positive correlation with stress (R = 0.42), but it is not statistically significant (P = 0.08), suggesting that older students might experience slightly higher stress levels, though this is not a strong predictor. On the other hand coping mechanism scores have a strong negative correlation with stress (R = -0.72, P = 0.0001), indicating that effective coping strategies are significantly associated with lower stress levels. This underscores the importance of developing robust coping mechanisms. Additionally, GPA has a strong negative correlation with stress (R = 0.76, P = 0.0001), suggesting that higher academic performance is linked with better stress management. Students who perform well academically may have better organizational and coping skills, contributing to lower stress levels.

Table 1: Socio-demographic characteristics and GPA score of nursing students (N=43)

Variable	Category	n (%)
Age	Under 22 years old	26 (60.4)
	22-24 years old	17 (39.6)
Current Practical Area	Critical Care Units (ICU)	11 (25.6)
	Medical Surgical Department	5 (11.6)
	Pediatric & Maternity	2 (4.7)
	Emergency Department	17 (39.5)
	Psychiatric Department	3 (7.0)
	Operating theatre	5 (11.6)
Gender	Male	35 (81.4)
	Female	8 (18.6)
Marital Status	Single	34 (79.1)
	Married	9 (20.9)
GPA	3.1±0.9	

Table 2: Frequency distribution of internship nursing students according their reported strengths points (N=43).

No	Items	Yes		No	
		N	%	N	%
1	Did you receive orientation about the Hospital policies and procedures before starting the program?	37	86.0	6	14.0
2	Did you feel supported from the Nursing staff?	34	79.1	9	20.9
3	Have you been informed about your responsibilities and its limitation?	36	83.7	7	16.3
4	Did you feel the Environment is suitable for training?	34	79.1	9	20.9
5	Did you feel satisfaction?	37	86.0	6	14.0
6	Did you receive strong academic foundation	34	79.1	9	20.9
7	Did you often recognize hands-on experience and feel more confident when performing complex procedures for the first time	25	58.1	18	41.9

Table 3: Frequency distribution of internship nursing students according Perceived Stress Scale (N=43)

Items	N	%
Low	23	53.5
Moderate	11	25.6
Severe	9	20.9

Table 4: Frequency distribution of internship nursing students according their Coping Behavior (N=43)

Items	M	SD
Avoidance (6 items)	16	±1.3
Problem solving (6 items)	14	±2.4
Staying optimistic (4 items)	11	±1.7
Transference (3 items)	7	±2.2
Total score	52	±6.3

Table 5: Correlation between GPA, age, coping mechanism score and stress among nursing students (N =43).

Items	Stress score	
	R	P
Age	**0.42**	**0.08**
Coping mechanism score	**-0.72**	**0.0001**
GPA	**-0.76**	**0.0001**

Discussion

The current study aimed to assess the perceptions of nursing graduates towards their clinical internship programs, specifically focusing on their levels of stress, and identifying the strengths of these programs and using of the coping mechanisms. Our study revealed several strengths points in the clinical internship experience of nursing students. As following; receiving orientation about hospital policies and procedures, supporting nursing staff, clinical settings was conducive to learning and professional development and strong academic foundation. This aligns with studies such as Elshamy and Ibrahim (2017), which emphasized the importance of comprehensive orientations in reducing anxiety and enhancing performance among nursing students. This finding was supported by Allan et al. (2016), who noted that conducive learning environments enhance students' clinical competence and confidence. Satisfaction in clinical training was often linked to perceived preparedness and competence in clinical skills, as noted by Hickey (2010).

The current study showed that over half of the students experienced low stress, suggesting that a significant portion of the students were managing their stress levels well. This could be attributed to the strong support systems and clear role definitions observed in Table 2. Moderate stress levels were reported by one quadrant of students, indicating that while some stress was present, it might not be overwhelming. Severe stress affects about one fifth of students, highlighted a critical subset that may require additional support and resources to cope effectively. This was consistent with the findings of (Wang et al., 2021). Zheng et al. (2012) found that the stress levels in most nursing interns were at a medium level. Similarly, Sun et al. (2016) identified that nursing interns faced high work pressure during their initial internship. The complexity of the nursing environment and various challenging factors could induce significant stress for first-time nursing interns, impacting the quality of their clinical practice and nursing care. This stress can subsequently affect their confidence in their nursing skills and specialties (Liu & Yang, 2018).

Regarding the use of coping mechanisms, the present study clarified that that avoidance was the most utilized coping mechanism (mean = 16, SD = ±1.3), indicating that many students tend to evade stressors rather than address them directly. This reliance on avoidance could be problematic, as it might lead to prolonged stress and anxiety. Problem-solving strategies were moderately employed (mean = 14, SD = ±2.4), suggesting that students attempt to deal with issues but may need more support in developing effective problem-solving skills. Staying optimistic had a lower mean score (mean = 11, SD = ±1.7), reflecting that maintaining a positive outlook is less common among the students. Transference, involving indirect methods like sleep and enjoyment to cope with stress, had the lowest mean score (mean = 7, SD = ±2.2), indicating that self-care practices may not be a priority. The total CBI score (mean = 52, SD = ±6.3) provides an overall view of coping behaviors, showing a need for enhanced coping strategies among students. This aligns with study that was conducted by (Lee, 2022). On the other hand Liu et al., (2022) studied coping styles among nursing students during the initial period of the clinical practicum revealed that the nursing students often use positive coping strategies than negative coping one. The preference for these coping strategies among nursing students in the present study may be

attributed to their ease of use and alignment with their individual personalities

The current study showed that coping mechanism scores had a strong negative correlation with stress (R = -0.72, P = 0.0001), indicating that effective coping strategies were significantly associated with lower stress levels. This underscores the importance of developing robust coping mechanisms, a finding supported by Bodys-Cupaket et al., 2016; Labrague et al., 2018)

Additionally, GPA had a strong negative correlation with stress (R = -0.76, P = 0.0001), suggesting that higher academic performance is linked with better stress management. Students who perform well academically may have better organizational and coping skills, contributing to lower stress levels. This is in line with researches by (Gibbons, 2010; Yıldırım et al., 2017) who noted that academic success is often associated with effective time management and stress coping skills.

Several limitations were identified in this study. Firstly, the focus was limited to students from a single university in Saudi Arabia. Secondly, the use of a self-administered questionnaire introduced certain drawbacks. Therefore, caution must be exercised in generalizing the findings of this study to the entire Saudi Arabian nursing student population. Future research with more representative samples that encompass various regions of the country is recommended. Nonetheless, the findings of this study could inform clinical instructors and educators in identifying the specific needs of nursing students, facilitating their education in appropriate clinical environments, and implementing effective strategies to mitigate stressors.

Conclusion

The study reveals that a significant portion of nursing students at Najran University experience varying levels of stress during their clinical internships, with the majority being under 22 years old, predominantly male, and single. High levels of satisfaction with the support and orientation provided by the nursing staff and hospital policies were noted, indicating a positive training environment. However, a substantial number of students lacked confidence in performing complex procedures, highlighting an area needing improvement. The study also found that students employed avoidance as the primary coping mechanism, with problem-solving and staying optimistic being less common. The correlation between effective coping mechanisms and lower stress levels

emphasizes the need for interventions that enhance students' coping skills. Additionally, a higher GPA was associated with better stress management, suggesting that academic performance and stress-coping abilities are interconnected.

Recommendations

- Develop comprehensive orientation programs that thoroughly cover hospital policies, procedures, and expectations to better prepare students for clinical environments.
- Incorporate more hands-on practice with complex procedures under supervision to build students' confidence and competence.
- Introduce stress management workshops and training sessions focused on effective coping mechanisms, including problem-solving and maintaining optimism.
- Encourage students to participate in activities that promote well-being and resilience, such as mindfulness, meditation, and physical exercise.

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