Mapping the Stress: The Influence of Structured Learning Frequency and Clinical Support on Nursing Students' Stress Levels

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ABSTRACT

Clinical training is a fundamental component of nursing education, enabling students to develop essential skills in real healthcare settings. However, clinical experiences can be stressful, with stress levels influenced by structured learning frequency and clinical support. This study examines the relationship between these factors and nursing students' clinical stress levels. A cross-sectional study was conducted among 291 diploma nursing students, utilizing a validated 30-item clinical stress scale. The findings indicate that 74.9% of students experienced low stress, 20.3% moderate stress, and 4.8% high or very high stress. A significant association was found between clinical stress levels and structured learning frequency ($p = 0.004$) as well as clinical support ($p < 0.001$). Students who frequently participated in structured learning sessions and received strong clinical support reported lower stress levels. These findings highlight the importance of enhancing structured educational activities and strengthening clinical mentorship programs to improve nursing students' learning experiences and psychological well-being.

Keywords— Clinical stress, Nursing students, Structured learning, Clinical support, Nursing education.

INTRODUCTION

Clinical training is a critical component of nursing education, allowing students to apply theoretical knowledge in real healthcare settings. However, clinical experiences are often associated with high levels of stress, which can impact students' mental well-being and academic performance [1][2]. This stress may stem from various factors, including inconsistent learning structures and the level of support provided by lecturers and clinical nurses [3].

In the context of nursing education, structured learning frequency refers to the frequency with which students engage in structured learning sessions, such as counselling sessions, meetings with lecturers, or regular clinical mentoring. These sessions are designed to guide students in mastering clinical skills, enhancing theoretical understanding, and helping them navigate the challenges of clinical training. Research indicates that active participation in structured learning sessions can reduce anxiety and enhance self-confidence among nursing students [4], [5].

Additionally, support from lecturers and clinical nurses plays a crucial role in students' learning experiences [6]. This support includes guidance in clinical situations, clarification of treatment procedures, feedback on student performance, as well as moral and emotional encouragement. Previous studies have found that students who perceive adequate guidance from lecturers or clinical nurses experience lower stress levels and demonstrate better performance in clinical training [5], [7].

However, there remains a gap in the literature regarding the relationship between structured learning frequency, clinical support, and stress levels among nursing students. Therefore, this study aims to investigate the association between the frequency of attending structured learning sessions, students' perceptions of lecturer/clinical nurse support, and their stress levels.

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LITERATURE REVIEW

Research on clinical stress among nursing students has gained increasing attention, particularly in understanding the factors contributing to their stress during clinical training. Academic workload, interactions with patients, and preparedness for the clinical environment are among the primary sources of stress [8], [9], [10]. One emerging area of study is the frequency of attending structured learning sessions, which include academic counselling, meetings with lecturers, and regular clinical mentoring.

Structured learning plays a crucial role in helping students understand procedures, reducing anxiety, and enhancing clinical confidence and competence [11]. Studies have shown that students who consistently participate in guidance sessions experience lower stress levels compared to those who attend infrequently or never at all [7], [12]. This is because frequent guidance provides students with immediate feedback, opportunities to discuss clinical challenges, and the ability to develop coping strategies for stress [4].

Conversely, students who do not actively engage in structured learning are at a higher risk of experiencing elevated stress due to lack of confidence and uncertainty in performing clinical tasks [12]. The structured nature of these sessions allows students to gain progressive exposure to clinical environments, which is essential in reducing the fear and anxiety commonly experienced during clinical training.

In addition to structured learning frequency, support from lecturers and clinical nurses also plays a significant role in reducing students' stress levels [10]. Educators not only provide academic guidance but also contribute to emotional support and professional development. Studies have found that students who receive clear guidance and positive reinforcement from instructors exhibit greater confidence in performing clinical tasks and experience lower stress levels [7], [13].

However, insufficient support or unapproachable educators can exacerbate stress among students. A lack of mentorship often leads to anxiety over making clinical errors, uncertainty in decision-making, and decreased motivation in training [14]. The presence of clinical instructors who provide timely feedback, encouragement, and constructive criticism has been shown to improve students' overall clinical experience and reduce stress.

While many studies have emphasized the importance of structured learning and clinical support in nursing students' experiences, there remains a gap in research directly linking these two factors to students' stress levels. Most previous studies have examined clinical stress in general without assessing how the frequency of attending structured learning sessions and the level of support from lecturers and clinical nurses relate to nursing students' stress levels.

This study aims to investigate the relationship between structured learning frequency, the level of support received from educators, and stress levels among nursing students. The findings will provide a clearer understanding for nursing institutions in designing more effective academic and clinical support strategies to reduce stress and enhance student well-being.

METHODOLOGY

Study Design

This study employs a quantitative cross-sectional design to examine the relationship between structured learning frequency, clinical support, and stress levels among nursing students. The primary objective is to determine whether the frequency of engaging in structured learning activities and the level of clinical support received are significantly associated with perceived clinical stress levels. The study commenced in December 2024, with data collection conducted in February 2025.

Study Population

The study population consists of diploma nursing students from Semester 2 to Semester 6 enrolled in a nursing institution in Malaysia. A universal sampling method was adopted to include all eligible students within these

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semesters, ensuring a comprehensive representation of the target population. This method minimizes selection bias and provides a broad understanding of the relationship between structured learning frequency, clinical support, and stress levels across different academic levels.

Inclusion criteria:

- Actively enrolled in the diploma nursing program
- Currently undergoing clinical training
- Willing to provide informed consent

Exclusion criteria:

- Semester 1 students (as they have no clinical exposure)
- Students who are on leave, have withdrawn, or have declined participation

Data Collection

Data were collected over a one-month period in February 2025 using an online survey administered via Google Forms, utilizing the Nursing Students' Perceived Clinical Stress Scale (NSPCSS) developed by Rafati et al. [15] to assess clinical stress levels. This validated instrument consists of 30 items, rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with total scores ranging from 30 to 150. Structured learning frequency was measured by assessing students' participation in academic counselling, scheduled mentoring sessions, and clinical guidance activities, while clinical support was evaluated based on students' perceptions of support received from lecturers and clinical mentors. Prior approval was obtained to use the NSPCSS instrument to ensure ethical compliance, and the survey link was distributed via institutional email and student communication platforms. Participants were given one week to complete the questionnaire, with periodic reminders sent to maximize response rates.

Data Analysis

Data were analysed using SPSS Version 27, applying both descriptive and inferential statistics. Descriptive analysis summarized participants' demographic characteristics and clinical stress levels, which were categorized as:

- Low stress (30–59)
- Moderate stress (60–89)
- High stress (90–119)
- Very high stress (120–150)

The Chi-square test was used to determine the relationship between structured learning frequency, clinical support, and clinical stress levels. A p-value of <0.05 was considered statistically significant in assessing whether structured learning frequency and clinical support were significantly associated with clinical stress levels. The study achieved a 97.9% response rate, collecting 291 valid responses out of 298, ensuring a robust dataset for analysis.

Ethical Considerations

This study adhered to ethical guidelines established by the Ministry of Health Malaysia and received ethical approval from the Medical Research and Ethics Committee (MREC) under NMRR ID-24-04102-UZS.

Before participation, students were provided with a clear explanation of the study's objectives, procedures, potential risks, and benefits. Written informed consent was obtained from each participant to ensure voluntary participation. To maintain confidentiality and anonymity, all responses were de-identified, and data were used exclusively for research purposes. Participants were informed that they had the right to withdraw at any stage without any academic consequences or penalties. This study complied with the Declaration of Helsinki and adhered to national and institutional ethical guidelines to protect participants' rights and well-being.

RESULTS

Socio-Demographic Characteristics of Respondents

Table 1 presents the sociodemographic background of the study participants (n=291). The age of participants ranged from 20 to 32 years, with a mean age of 22.66 years (SD = 1.86). In terms of gender distribution, most participants were female (79.4%), while male participants accounted for 20.6% of the sample. Regarding participation in structured learning activities, such as counselling sessions, meetings, or other structured learning engagements, 26.8% of students reported never attending, whereas 14.1% attended occasionally (1–2 times per week). With respect to perceived support from lecturers and clinical instructor nurses, most students (83.8%) found the support to be very helpful, while 16.2% rated the support as helpful.

Table 1: Sociodemographic Background (n=291)

Demographic characteristics	**n**	**%**
Age (years)		
Min-max: 20-32	*22.66	**1.86
Gender		
Male	60	20.6
Female	231	79.4
Participation in Structured Learning:		
Never	78	26.8
Occasionally (1–2 times/week)	41	14.1
Frequently (daily)	172	59.1
Perceived Support from Lecturers/Clinical Instructors:		
Helpful	47	16.2
Very Helpful	244	83.8

Notes: *Mean (SD)

Level of stress clinical

Table 2 presents the distribution of clinical stress levels among the study participants (n=291). Most students (74.9%) reported experiencing low levels of clinical stress, while 20.3% had moderate stress levels. A smaller proportion of students (4.5%) experienced high clinical stress, and only 0.3% reported very high stress levels.

Table 2 Level of Stress Clinical (n=291)

Level of stress Clinical	**Frequency**	**Percent**
Low	218	74.9
Moderate	59	20.3

High	13	4.5
Very high	1	0.3

Level of stress clinical: 30–59: Low; 60–89: Moderate; 90–119: Tinggi and 120–150: Very High

Relationship Between Clinical Stress Levels, Structured Learning Frequency, and Clinical Support

Table 3 presents the relationship between clinical stress levels and sociodemographic characteristics (n=291). The findings indicate a statistically significant association between stress levels and gender ($p = 0.008$), participation in structured learning ($p = 0.004$), and perceived support from lecturers/clinical instructors ($p < 0.001$). In terms of gender, male students had a higher proportion of high stress (11.7%) compared to female students (2.6%), while female students (22.5%) reported a higher proportion of moderate stress than males (11.7%). Regarding participation in structured learning, students who never attended structured learning sessions had the highest proportion of low stress (79.5%), whereas those who attended occasionally (1–2 times per week) had a greater proportion of high stress (14.6%) compared to those who participated frequently (daily) (1.2%). For perceived support from lecturers/clinical instructors, students who found the support very helpful had significantly lower stress levels, with 81.1% reporting low stress and only 4.1% experiencing high stress. In contrast, students who rated the support as merely helpful had higher levels of moderate (48.9%) and high stress (6.4%), with one participant (2.1%) experiencing very high stress.

Table 3: Relationships Stress Level with Socio-Demographic (n=291)

Demographic characteristics	**n (%)**	**Level of stress, n (%)**				**p-value**
		Low	**Moderate**	**High**	**Very high**	
Gender						**0.008**
Male	60 (20.6)	46 (76.7)	7 (11.7)	7(11.7)	0 (0.0)	
Female	231(79.4)	172(74.5)	52 (22.5)	6 (2.6)	1 (0.4)	
Participation in Structured Learning:						**0.004**
Never	78 (26.8)	62 (79.5)	11 (14.1)	5 (6.4)	0 (0.0)	
Occasionally (1–2 times/week)	41 (14.1)	27 (65.9)	8 (19.5)	6(14.6)	0 (0.0)	
Frequently (daily)	172(59.1)	129 (75.0)	40 (23.3)	2 (1.2)	1 (0.6)	
Perceived Support from Lecturers/Clinical Instructors:						**<0.001**
Helpful	47 (16.2)	20 (42.6)	23 (48.9)	3 (6.4)	1 (2.1)	
Very Helpful	244(83.8)	198 (81.1)	36 (14.8)	10(4.1)	0 (0.0)	

DISCUSSION

This study aims to assess the impact of structured learning frequency and clinical support on clinical stress levels among diploma nursing students. The findings indicate that clinical stress levels vary significantly based on these two key factors, with higher stress levels observed among students who infrequently attended structured learning sessions and those who reported receiving inadequate clinical support. These results align with previous studies emphasizing the importance of consistent learning engagement and high-quality mentorship in reducing clinical stress among nursing students [7], [16].

Most students (74.9%) reported low stress levels, while 20.3% experienced moderate stress and 4.8% reported high or very high stress. These findings suggest a more favourable stress distribution compared to previous studies conducted in other countries. For instance, a study in Pakistan reported that 4% of students experienced

high stress, 88% had moderate stress, and only 8% reported low stress [17]. Similarly, in Ethiopia, 58% of students experienced stress, while 42% reported no stress [12]. Although the overall prevalence of stress in this study is relatively lower, a subset of students still experiences moderate to high stress levels, emphasizing the need for targeted interventions to mitigate clinical stress among nursing students.

The Impact of Structured Learning Frequency on Clinical Stress

The findings of this study indicate a significant relationship between the frequency of structured learning and clinical stress levels ($p = 0.004$). Students who frequently attended structured learning sessions reported lower stress levels compared to those who participated inconsistently or never attended. These findings align with previous studies suggesting that continuous exposure to academic and clinical mentoring sessions enhances self-confidence, reduces anxiety, and equips students with better coping strategies for clinical challenges [12][4].

Furthermore, Rafati et al. [15] identified that one of the primary factors contributing to high stress levels among nursing students is the limited clinical competence of instructors and inappropriate behaviours, which may further exacerbate students' stress. Similarly, the study by Younas et al. [18] highlighted the unique challenges faced by male nursing students, emphasizing that the lack of institutional and educator support hinders their adaptation to both academic and clinical learning environments, ultimately affecting their recruitment and retention in the nursing profession.

Additionally, students who rarely engaged in structured learning sessions reported significantly higher stress levels, likely due to the lack of immediate feedback, limited opportunities to discuss clinical challenges, and decreased confidence in clinical decision-making [19]. These findings suggest that nursing institutions should actively promote students' engagement in structured learning sessions while ensuring that these programs are systematically designed to meet the specific needs of students. By strengthening structured educational frameworks and clinical support systems, institutions can play a crucial role in mitigating clinical stress and enhancing students' learning experiences.

The Impact of Clinical Support on Clinical Stress

This study also revealed a significant relationship between the level of clinical support received from lecturers and clinical nurses and students' clinical stress levels ($p < 0.001$). Students who reported receiving highly supportive guidance experienced lower stress levels than those who perceived the support as inadequate. These findings align with previous studies indicating that high-quality mentorship, constructive feedback, and moral and emotional support from educators are crucial in reducing clinical stress among nursing students [7], [13].

Conversely, students who perceived insufficient support exhibited higher levels of clinical stress, underscoring the need to enhance educator-student interactions in clinical settings. Findings from Karaca and Beji [11] further reinforce this notion, as their study indicated that students who were consulted about their hospital placements demonstrated significantly higher satisfaction with supervisory relationships and the role of nurse educators compared to those who were not consulted ($p < 0.001$; $p = 0.017$, respectively). These results highlight the importance of students' involvement in decision-making processes regarding their clinical placements, which can directly impact their stress levels and learning experiences.

Similarly, Md. Shariff et al. [20] examined teaching and learning quality in nursing education institutions and found that while instructional quality was rated highly, the relevance of clinical learning experiences to contemporary nursing practice remained moderate. Moreover, students reported suboptimal responses from educators when they sought clarification during instructional sessions, further emphasizing the need for enhanced engagement and responsiveness from nursing educators. The study also highlighted that educators' ability to serve as role models and uphold nursing ethics is vital in fostering professionalism among student nurses. These findings reinforce the necessity of strong, ethically grounded clinical mentorship to reduce students' stress and enhance their professional development.

Furthermore, a lack of adequate guidance has been associated with increased anxiety regarding clinical errors, uncertainty in decision-making, and diminished motivation to engage in clinical practice [14]. Therefore, it is imperative to implement more effective mentoring programs and improve educators' communication skills and emotional support strategies to alleviate clinical stress among nursing students. Strengthening clinical support systems and ensuring educators adopt a more proactive, student-centred approach can significantly enhance students' overall clinical learning experience and well-being.

Implications for Nursing Education

The findings of this study have several important implications for nursing education and institutional policies in managing students' clinical stress. Given that structured learning frequency and clinical support play a significant role in students' stress levels, more effective intervention strategies must be introduced to support students during their clinical training. Nursing institutions should focus on implementing systematic mentoring sessions, providing access to academic counselling, and strengthening clinical support systems to ensure students receive adequate guidance throughout their training.

Additionally, enhancing the training of lecturers and clinical nurses in providing both academic and emotional support to students is essential. This includes mentorship programs, improving the quality of clinical feedback, and developing psychosocial support skills among educators. These measures can help reduce clinical stress among nursing students, ultimately improving their learning experiences and preparedness for entering the nursing profession.

Overall, this study provides empirical evidence that structured learning frequency and the level of clinical support received by students are significantly associated with their stress levels. Therefore, a more systematic and comprehensive approach is required in designing educational and support strategies to ensure that nursing students can manage clinical stress more effectively and achieve better learning outcomes.

CONCLUSION

This study highlights a significant relationship between structured learning frequency, clinical support, and nursing students' stress levels. Students who frequently attended structured learning sessions and received sufficient clinical support experienced lower stress levels, whereas those with minimal participation reported higher stress. Therefore, nursing institutions should strengthen academic and clinical mentoring, enhance access to psychosocial support, and implement more effective interventions to reduce student stress. Future studies should explore other psychosocial factors and assess the long-term effectiveness of interventions aimed at improving student well-being.

Conflict of Interest

The authors declare no conflict of interest related to this study.

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