

Navigating Clinical Challenges: Stress and Coping Strategies among Indian Bachelor Nursing Students

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ABSTRACT

Background of the study: The extent of stress is a negative attitude that can be affected by one's age. Parents are the first individuals with whom a child shares and develops concerns about their needs and wishes. Research on stress levels has pinpointed several factors that serve as triggers for excessive stress and coping strategies among nursing students, and consistently engaging in such behaviors becomes part of the students' identities.

Objective of the study : To Assess the Level of Stress and coping strategies perceived by the students and to Find out the Association between Level of stress Status with Selected Demographic Variables.

Materials and Methods: The descriptive survey design was used by imposing purposive and convenient sampling technique was used to select the sample. Two hundred nursing students who were in 2nd, 3rd and 4th semester completed a self-administrative survey including demographics, Perceived Stress Scale, and Coping Behaviour Inventory.

Results: revealed that students' perceptions of stress were moderate. Lack of professional knowledge and abilities was the most frequent cause of stress. Transference was the most commonly employed of the four categories of coping strategies: avoidance, issue resolution, keeping optimistic, and transference. Additionally, older students were more inclined to select problem-solving techniques if they felt that caring for patients caused them more stress.

Conclusion: The findings gave clinical educators useful information for determining the requirements of their students, supporting their learning in the clinical environment, and creating stress-reduction strategies.

Implications for Nursing & Health policy: In the clinical area, there is a lot of stress. A supportive environment is necessary to enhance students' learning. To accomplish this, clinical instructors, clinical staff, and students should collaborate.

Key words: Stress, Bachelor Nursing Students, Clinical Practice, Coping Strategies.

INTRODUCTION

Because of their varied circumstances, nursing students are particularly vulnerable to elevated levels of stress, anxiety, and depression.¹⁻³ Contributing factors include the shift from adolescence to adulthood, being away from the home support system, acclimating to a new environment, academic expectations, the need to succeed, dealing with patients and their families, future uncertainty, financial pressure, perceived low self-esteem, etc.⁴⁻¹⁰ The primary cause of anxiety and depression in nursing students is stress during the academic

years. Moderate levels of stress were found in 77% and 82% of nursing students in Delhi and Rajasthan, respectively, according to Indian studies.¹¹ Stress is the unfavorable thoughts and emotions that arise when people feel incapable of meeting the demands of their surroundings. Academic stressors, clinical stressors, and personal stressors are the three primary categories of stressors that have been identified among nursing students.¹² Testing and evaluation, training failure anxiety, workload issues, etc. are examples of academic stressors. Clinical stressors include working in a hospital, being afraid of making mistakes, reacting negatively to a patient's death or suffering, interacting with the patient's family, etc.¹³ Specific actions people take to lessen or minimize stressful situations are known as coping strategies. Two general coping strategies have been identified: emotion-focused coping strategies, which involve attempts to control the emotional effects of stressful events, and problem-solving strategies, which involve attempts to actively alleviate stressful circumstances. A few coping mechanisms used by nursing students include behavioral disengagement, positive reframing, active coping, and emotional support¹⁴⁻¹⁵ Nursing students will perform better academically and in their clinical training if they can effectively manage their stress and develop healthy coping mechanisms. Therefore the present study was undertaken to assess level of stress and coping strategies adopted by the students in the clinical area.¹⁶

The following were the study's research questions:

1. What is the level of stress experienced by bachelor nursing students during clinical rotations?
2. What kinds of stressors do students typically encounter when participating in clinical practice?
3. What coping mechanisms are commonly employed by students to reduce their stress?
4. What variables are connected to how frequently students employ coping mechanisms?

MATERIALS AND METHODS

Ethical considerations

The institutional review board gave its approval to this study (IEC) from KAHER Institute of Nursing Sciences, Belagavi on 15th March 2024 (Ref no: KAHER/INS/2023-24/D-32). The permission was obtained from Institution authority prior to the study. The students were briefed about the objectives of the study and written consent was taken from every participant. The information was gathered in April 2024. After lectures, the researcher went over to the students and gave them an explanation of the study's goal. Details on the trial were also included in an informational booklet. Anonymity and confidentiality of the information gathered were guaranteed. The study's participants had to complete the questionnaire, sign a consent document, and send it back to the researcher right away.

Research Design

The study used a cross-sectional descriptive design. All baccalaureate nursing students who had finished university-level clinical practicum courses were eligible to participate in this study.

Sample Size :

The sample size is determined by using formula $(n) = Z^2 PQ / D^2$

Where, $Z=1.96$ for 93% confidence level

P-estimated proportion from previous study

$q=1-p$

D-level of error 7%

Here the value obtained is 198.90, so total sample size taken was 200.

Out of the 248 eligible participants, the survey was completed and returned by 200 participants which is resulting in a 60% response rate and hence sample size was 200.

Research setting: Selected Nursing colleges of the University level who were in 2nd, 3rd and 4th semester nursing degree.

Participants : Nursing students of selected colleges who were able to meet the eligibility criteria and the samples were selected randomly based on availability of the students.

Inclusion criteria

Students who were studying in 2nd, 3rd and 4th semester nursing degree.

Students who were willing to participate in the study.

Exclusion criteria

- Students who were enrolled for the diploma programme.
- Students who were absent during the data collection process.

Measurements

Four components made up the self-report survey: (a) Demographic data, (b) Perceived Stress Scale (PSS) and (c) Coping Behaviour Inventory (CBI).

Students' Demographic Information.

Personal information such as age, gender, year of study, family type and the most difficult clinical area were included in the students' demographic data. These demographic details may have an impact on Stress levels and coping strategies of students during clinical rotations.

Perceived Stress Scale (PSS)

PSS was used to analyze the stress levels and stressor types of nursing students. Sheu et al. (1997) developed this instrument. Six categories comprise the 29 items on this 5-point Likert-type scale: stress related to patient care (8 items), stress related to teachers and nursing staff (6 items), stress related to assignments and workload (5 items), stress from peers and everyday life (4 items), stress from lack of professional knowledge and skills (3 items), and stress from the clinical environment (3 items). Individual subscale scores as well as overall scores are typically measured. Stress levels are higher when scores are higher.

Inventory of Coping Behavior (CBI):

This is used to ascertain nursing students' coping strategies. The 19 items are broken down into four categories: The following behaviors are included: problem-solving behaviors (attempts to manage or change the stress resulting from a stressful situation; 6 items), avoidance behaviors (attempts to avoid the stressful situation; 6 items), transference

behaviors (attempts to divert one's attention from the stressful situation; 3 items), and optimistic coping behaviors (attempts to maintain a positive attitude toward the stressful situation; 4 items). Each item's frequency and impact are scored on a 5-point Likert-type scale. Higher scores for each component indicate increased use and effectiveness of a specific coping strategy.

Since the adopted scales only had an English version and all eligible participants spoke the language fluently, an English version of the survey was used. Ten first-year nursing students participated in a pilot study to make sure the survey was legible and understandable to potential users. The experts' recommendations were followed when making the changes.

Validity and Reliability of the instruments

Validity of the instrument was ensured through the development of a draft instrument by consulting relevant literature, adopting questions from relevant questionnaires of researches related to the study and subjecting the draft instrument to independent, academic peer and expert reviews, particularly experts in public health. In addition, the instrument was pretested sharing same characteristics with the study participants. Results obtained from the pretest were used to make necessary corrections for the main study to ensure relevance, appropriateness, and adequacy of the items in the instrument. The Cronbach's alpha correlation coefficient of the Statistical Package for Social Sciences was used to analyze the pretest data and to determine the reliability. An acceptable reliability coefficient of 0.84 was obtained.

STATISTICAL ANALYSIS

For every variable, descriptive statistics were supplied. The Friedman test was used to compare the mean frequency score for each of the four coping methods and the mean score for each of the six stressors. The structured multiphase regression analysis was used to identify the factors impacting how frequently the students employ coping mechanisms. The proper level of statistical significance was defined as a P value of 0.05 or less.

RESULTS

Table 1: Demographic variables (n=200)

Variables	Category	Respondents	
		Number	Percent
Age group (years)	18	13	6.5%
	19	62	31%
	20	92	46%
	21	22	11%
	22	8	4%
	23	3	1.5%
Gender	Male	57	28.5%
	Female	143	71.5%
Academic year	2 nd .semester	115	57.5%

Type of family	3 rd .semester	1	0.5%
	4 th .semester	84	42%
	Nuclear family	171	85.5%
	Joint family	29	14.5%

Demographic information of the students is presented in **Table 1**. The majority of the nursing students belongs to 20 year (46%), 62 (31%) were belonged to age of 19-year, 22 (11%) wear belongs to 21 year, 13 (6.5%) were belongs to 18 years, 8 (4%) were belongs to 22 year and 3 (1.5%) were belongs to 23 years. The data showed that the highest number 115(57.5%) nursing student who had 2nd semester, 84(42%) were with formal education, 4th semester and lowest number 1(0.5%) nursing student of 3rd semester. Majority of the students are 200(100%) were male 57(28.5%) and 143(71.5%) were female. Majority of the students 171(85.5%) belonged to nuclear family, 29 (14.5%) of the student belong to joint family.

Table 2: Stressors Perceived by Nursing Students (n=200)

Stressors	Rank	M	SD
<i>I. Stress from Lack of Professional Knowledge and Skills.</i>	1	2.39	0.62
a. Unfamiliar with Medical History and Terms.		2.40	0.78
b. Unfamiliar with Professional Nursing Skills.		2.27	0.82
c. Unfamiliar with the diagnosis and course of treatment of the patient.		2.38	0.71
<i>II. Assignment and Workload Stress</i>	2	2.20	0.61
a. Concerned about Low Grades		2.75	0.92
b. Nature and Quality of Clinical Practice Pressure		2.35	0.81
c. Not able to meet Teacher's Expectations		2.36	0.92
d. Affect family - Social Life due to inflexible clinical hours		1.64	0.97
e. Perceptions that the demands of clinical practice outweigh one's capacity for both mental and physical stamina		1.97	0.86
<i>III. Stress from patient care</i>	3	2.21	0.54
a. Insufficient experience and aptitude in nursing care and decision-making.		2.82	0.80
b. Unable to provide patients with physio-psycho-social support.		2.24	0.73
c. Unable to reach expectations.		2.26	0.80
d. Unable to respond appropriately to inquiries from patients, teachers, and doctors.		2.36	0.75
e. Fear that patients or their families won't trust you.		1.92	0.79
f. Incapable of giving patients quality nursing care.		1.90	0.78
g. Unable to communicate with patients.		1.85	0.75
h. Transitioning from student to nurse role.*		2.17	0.90
<i>IV. Stress from Clinical Environment</i>		2.10	0.44

a. Stress in the environment.	4	1.95	0.84
b. No knowledge with ward facilities.		2.07	0.78
c. Stress from rapid changes in a patient's condition.		2.21	0.85
<i>V. Stress from Teachers and Nursing Staff</i>	5	1.92	0.57
a. Observing a gap between theory and practice		2.48	0.70
b. Improper knowledge about patient's illness and hesitation to discuss with teachers or medical and nursing personnel		1.65	0.68
c. Stress when a teacher's instruction deviates from expectations		2.08	0.78
d. Lack of compassion and willingness to assist from medical staff		1.62	0.88
e. Perception that teacher do not evaluate students fairly		1.92	0.94
f. Absence of concern and direction from educators	6	1.68	0.86
<i>VI. Stress from peers and daily life.</i>		1.82	0.58
a. Experience of peer competition in clinical settings and at school.		1.81	0.86
b. Pressure from educators who use comparison to assess students' performance.		2.27	0.94
c. Perceptions of how clinical practice influences participation in extracurricular activities		2.19	1.00
d. Lack of compatibility with peers in the group.		1.21	0.78

Table 2 lists the stress levels and stressors that nursing students perceive. During clinical practice, students generally reported feeling somewhat stressed ($M=2.27$, $SD=0.71$). Lack of professional knowledge and skills was the most often reported stressor among students ($M=2.39$, $SD=0.63$). When medical language or patient histories, diagnoses, and treatments were unknown to them, students experienced anxiety. Stress from workload and assignments ($M=2.20$, $SD=0.61$) and stress from caring for patients ($M=2.21$, $SD=0.54$) were the second and third most frequent sources of stress for students. In addition, students were concerned about getting low grades and their capacity to give nursing care and make decisions during their clinical rotations. It was discovered that there was a significant difference in the perceived stress levels caused by the six stressors ($\chi^2=165.96$, $df=5$, $P>0.01$).

Table 3: Coping Strategies used by the students (n=200)

Coping Strategies/ Items	Rank	M	SD
<i>I. Transference</i>	1	2.76	0.73
Consuming substantial meals and sleeping for a long time		2.61	0.99
Relaxing, with TV, or physical exercise		2.92	0.88
<i>II. Staying optimistic</i>	2	2.36	0.53
Possessing the courage to overcome obstacles		2.41	0.83
Weeping and feeling irritable, depressed, and powerless		1.87	1.06
<i>III. Problem solving</i>	3	2.35	0.57

Prioritizing tasks and creating plans to deal with stressful situations	4	2.36	0.94
Determining the significance of stressful events		2.41	0.87
IV. Avoidance		1.56	0.62
Preventing challenges in clinical practice		1.99	0.85
Neglecting teachers		1.38	0.93

Note: Frequency, 0 (never) to 4 (very often).

Table 3 lists coping mechanisms that nursing students frequently employ throughout their clinical rotations. Transference ($M=2.76$, $SD=0.73$) such as sleeping, watching TV or movies, taking a shower, or exercising—was the most common coping method. It was followed by avoidance ($M=1.56$, $SD=0.62$), issue solving ($M=2.35$, $SD=0.57$), and being hopeful ($M=2.36$, $SD=0.53$). Regarding the mean frequency ($\chi^2=124$, $df=8$, $P<0.01$) of the four coping techniques, significant results were also obtained.

DISCUSSION

Factors Influencing How Often Students Use Coping Mechanisms

The factors that predict how frequently students use coping mechanisms were examined using the structured multiphase regression model. The model's results for avoidance and problem-solving frequency were noteworthy. 2.8% of the variation in the frequency of problem solving was explained by the variable year of study ($F=5.46$, $df=1,186$, $P<0.05$). The findings indicated that there would be a 0.2-unit drop in the frequency of applying a problem-solving strategy for every unit rise in the stress level brought on by caring for patients. Just 6.5% of the variation in the frequency of employing the avoidance approach was explained by the two significant demographic variables (year of study and religion) ($F=6.46$, $df=2,185$, $P<0.01$). Senior students who did not practice any religion were more likely to adopt avoidance as a stress-relieving coping strategies. Students were more likely to adopt avoidance as a coping strategies if they felt that teachers and nurses were stressing them out ($\beta=0.23$, $P<0.01$).

Stress Level and Stressor Types:

Compared to nursing students in the West, the average stress score of the nursing students in this study was moderate. This conclusion, though, might have downplayed the real stress that students experience in clinical settings. Because this study was retrospective in nature and dependent on when asked to recall their prior clinical experience, participants may have overlooked, forgotten, or underreported certain urgent stressful situations.

Therefore, it's critical to take nursing students' stress levels into account. The students identified three primary sources of stress: (a) inadequate professional knowledge and skills; (b) workload and tasks; and (c) patient care. The findings for the first and third most prevalent stressors were in line with other research (Mahat, 1998; Oermann, 1998; Sheu et al., 2002). In contrast to earlier research, students identified workload and assignments as the second most frequent cause of stress in clinical practice.

One possible explanation is the demanding coursework that bachelor's degree nursing students must complete. Because there are more clinical practice hours, the nursing

curriculum is more rigorous than in other countries. Due to the reduced time for theoretical courses, students have busy schedules full of ongoing assessments throughout the years, such as assignments, case studies, quizzes, and projects.

Additionally, nursing students must work in crowded, understaffed clinical environments to gain experience. According to nursing students, their clinical responsibilities and obligations surpassed their mental and physical limitations. Given our findings, it is recommended that the burden for examinations and the methods of education and learning be reassessed. Students' knowledge, attitudes, and abilities can be assessed through assignments in courses that cover both theory and clinical practice. Nursing teachers can enhance clinical education learning and training by utilizing information technology.

Worrying about receiving poor grades, which was a combination of workload and assignment stress, was, in comparison, the second most stressful occurrence (Table 2). This result is in line with studies carried out in Taiwan (Sheu et al., 2002). Chinese students usually place a great value on grades and marks since their parents are achievement-driven and constantly focused on their academic progress (Ho, 1986). Chinese parents heavily urge their children to perform well in school and earn high grades, and this pressure persists into adulthood. As a result of cultural norms and family expectations, nursing students are concerned about receiving low grades during their clinical rotations.

Coping Mechanisms Often Employed to Reduce Clinical Stress:

Students nurses commonly used transference as a coping mechanism when they were under stress in clinical settings. That decision might have been made for this reason. Students have not been taught or made aware of helpful coping mechanisms during clinical postings.. Furthermore, transference coping mechanisms might be more accessible and simpler to use than other coping mechanisms, like the problem-solving technique. Sometimes, stress in students is seen as a transient symptom. Because they typically only engage in clinical practice one or two days a week, students' level of responsibility for patient care is reduced. They can also turn to their clinical supervisors for support when issues occur. As a result, transference techniques might be useful temporarily.

Problem-Solving Strategies:

The year of study and the strain of patient care had an impact on how frequently the problem-solving technique was used. Older students who felt less stressed from patient care were more likely to use problem-solving as a method to reduce stress. The following are some potential explanations. In a variety of university learning scenarios, senior students are probably better at handling issues than their junior counterparts. Additionally, more clinical experience and a higher level of knowledge would be possessed by advanced students. which would enable them to recognize and address issues while delivering patient care. However, students may find it difficult to use the problem-solving technique if they have never provided nursing care to patients with complicated physio-psycho-social problems.

Avoidance Coping Strategies:

Religion, the academic year, and stress from instructors and nurses all had an impact on how frequently avoidance techniques were used. An avoidance strategy was more likely to be used by senior nonreligious students who were under more stress from teachers and nursing staff. An important discovery was that older students frequently combined evasion and problem-solving strategies. This might be due to the students' capacity to oversee patient care. They opt for the problem-solving strategy when they think they can manage challenging issues.

However, they might avoid the issue or rely on their supervisor to deal with it if they lack experience making clinical decisions. Further research is required to better understand the reasons and methods behind students' use of a multimodal coping strategy to lessen stress. Why students without religious beliefs were more likely to employ avoidance strategies is unknown. Maybe some people feel more capable of conquering challenges and finding suitable ways to lessen stress when they have the support of their faith. To find out how religion influences a students' selection of coping strategies, more research is required.

Students who experienced more stress from instructors and nursing staff were more likely to use avoidance coping mechanisms. When students are struggling to provide patient care, they require help managing the situation. If students have strained relationships with clinical supervisors or nursing staff, they might be reluctant to ask their supervisors for guidance. Students may decide to take a passive stance rather than address the problem.

Implications for Nursing Management and Practice

In the clinical area, there is a lot of stress. A supportive environment is necessary to enhance students' learning. To accomplish this, clinical instructors, clinical staff, and students should collaborate.

The Findings Facilitate Educators' Clinical Teaching

Nursing instructors should aim to gain a better understanding of the stress that students experience during clinical practice and their methods for handling it. The strain of patient care and a insufficient expertise and abilities are the main causes of this stress. Because of this, it is essential to teach students how to improve their professional knowledge and abilities and to make sure they meet the requirements before starting clinical practice. For instance, students are urged to enhance their psychomotor abilities, which require laboratory testing. Students should attend an orientation program prior to starting their clinical practicum.

CONCLUSION

Investigating the stress levels and coping mechanisms preferred by Indian bachelor nursing students was the aim of this descriptive cross-sectional study. According to the findings, the stress levels of the students were moderate. Students frequently employed a transference technique to manage their stress, which they believed to be successful. The complete effects of employing transference to lessen stress are still unknown, though. The study identified and examined factors that affect the frequency of coping mechanisms. The findings gave clinical educators and staff important information for determining the needs of students, enhancing their clinical learning, and creating workable strategies to lessen their stress.

Implications for Health policy

The application can offer details about the variety of cases in the clinical field as well as the clinical setting. The guidelines that students must adhere to in order to prepare for the practicum must clearly outline the goals of the practicum, the particular clinical competencies that will be evaluated, and the theoretical knowledge required for patient assessment and care. Additionally, students should receive guidance and support throughout their clinical training because positive reinforcement may inspire them to ask questions.

Students must receive helpful criticism during post-clinical training discussions in order to facilitate future development. By maintaining a reflective journal, students can pinpoint their challenges and assess their clinical abilities. Clinical educators may find the study's conclusions helpful in identifying students who are under a lot of stress while undergoing clinical training. Consequently, it is possible to create and implement effective coping mechanisms.

Clinical educators must provide direction and assistance to students who apply the method of problem-solving to reduce stress. The effectiveness of a cooperative coping strategy could be evaluated by looking at students' stress levels and overall health. When giving medical care, having strong interpersonal and communication skills is essential to reducing stress. Proficiency in communication can boost students' confidence when providing patient care. Students may find it challenging to interact with patients from various backgrounds and medical specialties during clinical practice.

A communication skills component must be included in the program curriculum to ensure that students have acquired and applied a variety of communication skills prior to starting their clinical practicum. It is crucial that teachers and students have positive relationships. Reilly and Oermann (1992) claim that empathic comprehension is crucial to building a solid student-teacher relationship. Using a range of listening techniques could enhance the teaching-learning process, promote communication, strengthen bonds between students and teachers, and lessen students' stress, according to Edward (1991).

The study's conclusions have ramifications for clinical education in India and globally. Given the acute lack of nursing faculty, the study's conclusions can serve as evidence-based guidelines for nurses who take on new duties as clinical instructors with little prior teaching experience. Junior clinical instructors can use these findings to better understand their students' needs and engage with them in clinical learning environments.

The results raise students' awareness of typical stressors and useful coping mechanisms.

The study's findings should improve students' understanding of practical coping strategies to lessen stress and broaden their awareness of typical stressors in clinical practice. To improve their learning in such a setting, students should be more prepared for the clinical practicum. They must comprehend the significance of finding equilibrium between extracurricular activities and coursework. If they have a positive outlook, strong morals, and adequate social support, they might be better equipped to manage stress.

LIMITATIONS OF THE STUDY

It was challenging to extrapolate the study's findings to a broader Indian population because convenience sampling was employed and data collection was restricted to a single Indian university. Because the data was gathered in the lecture hall, absent students might have provided different answers on the study tool. The cross-sectional methodology used in this study yielded data on stress levels at a particular moment in time.

The degree of stress, consistency, and pattern over time were not assessed. The time difference between collecting data and being in the most demanding environment might have affected the perceived stress level. Future research should employ a longer-term strategy and a bigger, more representative sample to improve generalizability. This study made use of two tools (PSS and CBI) created by Sheu et al. (2002). These two technologies haven't been used much, though; this study was just the second instance. While the findings indicate that these tools are suitable for assessing stress and coping mechanisms to lessen stress, further research is necessary to confirm their efficacy.

Additionally, the structured survey might restrict the depth of knowledge regarding how students respond to stress and other coping strategies that aren't addressed. In the future, a qualitative component may be included in the study design.

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