



STRESS LEVELS AMONG FIRST-YEAR DIPLOMA NURSING STUDENTS IN BLORA, INDONESIA

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ABSTRACT

First-year nursing students are particularly susceptible to stress due to academic transitions and the demands of early clinical exposure. This study aimed to examine stress levels among freshman nursing students based on demographic characteristics and educational background. A descriptive cross-sectional design was employed, involving 149 respondents selected through simple random sampling. Data were collected using a validated and reliable stress questionnaire, with reliability coefficients ranging from 0.78 to 0.92.

The findings indicated that most respondents were aged 18–19 years (96%), female (90%), and had a senior high school background (69%). The majority of students reported moderate (52.3%) and high levels of stress (41.6%), with a mean score of 82.47 ± 13.7 . Only a small proportion experienced low (5.4%) and very high stress levels (0.7%).

These findings suggest that freshman nursing students experience substantial stress, particularly during the initial adaptation period. Demographic factors, including age, gender, and educational background, may contribute to variations in stress levels. Early interventions, such as structured academic orientation and stress management programs, are recommended to enhance coping capacity and mitigate potential adverse effects on mental health and academic performance.

Keywords: nursing students, stress level, freshman, demographic characteristics, academic adaptation

Introduction

Nursing students are recognized as a population vulnerable to academic stress, particularly during the early phase of education, commonly referred to as freshman nursing students. The transition from secondary to higher education requires substantial adaptation to a new learning environment, more complex academic systems, and increasing clinical competency demands. These challenges frequently

trigger stress, which may adversely affect mental health, academic performance, and students' readiness to engage in nursing education [5]

Stress among nursing students is defined as a physiological and psychological response to academic pressures and demanding learning environments. Evidence indicates that academic stress is a major determinant of student well-being. It is closely associated with workload, pressure

to achieve academic success, and difficulties in comprehending course materials. A study published in *BMC Medical Education* reported that academic stress is significantly associated with self-regulatory fatigue and social support among nursing students [1].

In addition, psychosocial factors such as social support and resilience play a crucial role in moderating the impact of stress. Social support from peers, family, and the academic environment can assist students in coping with pressure and enhancing their adaptive capacity. Research published in *BMC Psychology* demonstrated that social support is positively associated with learning flow, mediated by levels of stress and depression among students [2]. This finding suggests that students with stronger social support tend to exhibit better adaptation to academic environments.

Conversely, depression is one of the most common psychological consequences of poorly managed stress. First-year students are at a higher risk of experiencing depression compared to senior students, primarily due to academic pressure and social environmental changes. A study in *Behavioral Sciences* found that depression levels among students are correlated with academic factors and physical conditions, such as body mass index [3]. These conditions may negatively impact learning quality and academic engagement.

Furthermore, research in *Nurse Education Today* highlights that the adaptation process among first-year students represents a critical phase that determines subsequent academic success. Students who experience difficulties in adaptation tend to report higher stress levels, whereas interventions such as peer support have been shown to improve comfort and learning readiness [4].

Although numerous studies have identified factors contributing to stress among nursing students, most have focused

on partial relationships between variables and have not provided a comprehensive overview of stress conditions among early-semester nursing students. Moreover, limited research has specifically explored the stress profile of freshman nursing students as a particularly vulnerable group to academic and psychological pressures.

Therefore, this study aims to explore the stress profile among nursing students who are newly entering higher education (freshman nursing students). The findings are expected to provide an empirical basis for developing appropriate interventions to reduce stress and enhance academic readiness and psychological well-being among nursing students.

Methods

This study employed a descriptive quantitative design with a cross-sectional approach to examine the level of academic stress among first-semester nursing students (freshman nursing students).

The population comprised all first-semester nursing students enrolled in the Nursing Study Program in Blora, totaling 175 students. The sample size was determined using the Slovin formula, resulting in 122 respondents. A simple random sampling technique was applied, ensuring that each member of the population had an equal probability of being selected as a respondent.

Academic stress was measured using the Student-Life Stress Inventory (SLSI) developed by Bernadette M. Gadzella. This instrument consists of two main components: stressors (sources of stress) and reactions to stress. The SLSI employs a 5-point Likert scale and has been widely used to assess student stress levels. The instrument has been adapted for use in Indonesia among nursing students and demonstrated good validity and reliability,

with reliability coefficients ranging from 0.78 to 0.92 [6].

Data were collected through an online questionnaire distributed via Google Forms. Respondents were asked to complete the questionnaire independently based on their experiences during the academic process. Data were analyzed using univariate analysis, including mean, standard deviation, and frequency distribution based on stress level categories.

Results and Discussion

Result

Table 1. Respondent Characteristics

Characteristics	f	%
Age		
17	2	1%
18	76	51%
19	66	45%
20	5	3%
Gender		
Male	15	10%
Female	134	90%
Educational Background		
SMA	103	69%
SMK	27	18%
MA	19	13%

The distribution of respondent characteristics indicated that the majority were aged 18 years (76 respondents; 51%), followed by 19 years (66 respondents; 45%). Respondents aged 20 years accounted for 5 individuals (3%), while those aged 17 years represented the smallest group (2 respondents; 1%).

Based on gender, most respondents were female (134 respondents; 90%), whereas male respondents accounted for only 15 individuals (10%).

In terms of educational background, the majority of respondents graduated from senior high schools (SMA) (103 respondents; 69%). Meanwhile, 27 respondents (18%) had a vocational high school (SMK) background, and 19

respondents (13%) graduated from Islamic senior high schools (MA).

Table 2. Distribution of Stress Level Scores

Stress Level	f	%	Mean ±SD	Sko r Min	Sko r Ma x
Low	8	5,4			
Moderate	78	52,3	82,47	34	140
High	62	41,6	±13,7		
Very High	1	7			

The analysis of 149 first-year nursing students revealed that most respondents experienced moderate levels of stress (78 respondents; 52.3%). This was followed by high stress levels in 62 respondents (41.6%). A smaller proportion of respondents experienced low stress (8 respondents; 5.4%), while only one respondent (0.7%) reported very high stress levels.

Descriptive statistical analysis showed a mean stress score of 82.47 with a standard deviation (SD) of 13.7, indicating that overall stress levels were within the moderate category. The minimum stress score recorded was 34, while the maximum reached 140, reflecting a considerable variation in stress levels among respondents.

Discussion

Respondent Characteristics

The findings indicate that the majority of respondents were first-year nursing students aged 18–19 years, predominantly female, and primarily from a general senior high school (SMA) background. These characteristics are closely associated with key determinants of stress among first-year nursing students.

Most respondents were in late adolescence (18–19 years), a developmental stage characterized by the transition to early adulthood. During this period, individuals

experience significant psychosocial changes, including increased demands for independence and adaptation to new environments. Such conditions heighten vulnerability to stress, particularly within the context of higher education. Previous studies have shown that first-year nursing students experience higher levels of academic stress compared to senior students, largely due to ongoing adaptation to academic demands and unfamiliar learning environments [7]. Furthermore, stress among nursing students is influenced by the interaction between academic demands and individual adaptive [8]. Thus, the predominance of respondents aged 18–19 years in this study suggests that the stress experienced is strongly linked to developmental transition and early academic adaptation.

The study also found that most respondents were female (90%), which is consistent with the demographic profile of nursing education. However, prior research indicates that female students tend to report higher levels of stress and anxiety compared to male students. Recent evidence suggests that female nursing students experience greater psychological distress, particularly related to academic and clinical demands. Emotional sensitivity and responsiveness to environmental pressures may further contribute to higher perceived stress among female students. These gender differences highlight the importance of considering sex as a contributing factor in stress responses and in the design of targeted stress management interventions [9].

In terms of educational background, most respondents graduated from general senior high schools (SMA), which typically do not provide specific health-related training. This differs from vocational school (SMK) graduates who may have prior exposure to basic clinical skills. Limited

clinical experience and competency are recognized as major sources of stress among nursing students, particularly in the early stages of education. Previous studies have identified lack of competence, limited clinical skills, and insufficient practical experience as key contributors to stress. Additionally, students unfamiliar with clinical environments often experience anxiety related to making mistakes and assuming responsibility for patient care. Academic workload and clinical practice demands have also been consistently reported as primary stressors in nursing education [9].

Stress Profile of Nursing Students

The results demonstrate that the majority of freshman nursing students experienced moderate (52.3%) to high (41.6%) levels of stress, with a mean score of 82.47 ± 13.7 . From a clinical perspective, this finding indicates that most students are in a borderline adaptive–maladaptive stress phase. At moderate levels, stress may function adaptively by enhancing motivation and academic engagement. However, when stress reaches high or very high levels, it may shift toward distress, increasing the risk of anxiety, burnout, and sleep disturbances. The presence of a maximum score of 140 further suggests that a small proportion of students may be experiencing clinically significant stress, requiring targeted interventions such as psychosocial support or counseling..

These findings can be interpreted through the Stress and Coping Theory proposed by Lazarus and Folkman, which posits that stress arises from an imbalance between environmental demands and an individual's coping resources. In the context of freshman nursing students, primary appraisal is reflected in the perception of academic workload, laboratory skills

training, and adaptation to a new environment as potential threats. During secondary appraisal, many students may lack well-developed coping strategies to effectively manage these demands. This interpretation is supported by recent studies indicating that nursing students often struggle to balance academic demands with personal well-being, leading to significant stress levels [10]. Moreover, coping strategies commonly employed by students tend to be short-term and emotion-focused, which may be less effective for long-term stress management [11].

Stress among first-year nursing students in this study can also be understood as part of the academic transition process. The first year of nursing education is widely recognized as a critical and challenging period, requiring students to adapt from secondary education to a more demanding higher education system [12]. This transition involves increased academic workload, new learning methods, and greater expectations for independence. Such conditions are significant contributors to elevated stress levels.

In addition, during the early phase of clinical practice, nursing students encounter various additional stressors, such as fear of making mistakes in performing nursing procedures, limited clinical skills, and pressure from the practice environment that involves direct interaction with patients and healthcare professionals. These conditions significantly contribute to increased stress levels among freshman nursing students, as supported by recent studies indicating that early clinical experience is one of the primary sources of stress among nursing students [13].

In addition to academic demands, students also face considerable stress during early clinical exposure. At this stage, students frequently report fear of making mistakes in providing nursing care,

primarily due to limited clinical experience and skills. Low self-confidence and concerns about patient safety further exacerbate stress levels. Additionally, pressures from the clinical environment including expectations from clinical instructors, healthcare staff, and direct interactions with patients intensify psychological burden (Saptaningrum et al., 2021). Previous studies confirm that early clinical experiences represent one of the most significant sources of stress among nursing students, particularly due to limited preparedness and high professional expectations [14].

The combination of academic and clinical demands contributes to the predominance of moderate to high stress levels observed in this study. Importantly, stress experienced by nursing students is multidimensional, encompassing academic, psychological, and social aspects. If not properly managed, such stress may lead to negative outcomes, including decreased academic performance, impaired mental health, and reduced confidence in clinical practice [14].

Therefore, comprehensive and early interventions are essential. Strategies such as structured academic orientation, coping skills training, and psychosocial support systems should be implemented to facilitate student adaptation to nursing education [14]. These findings are consistent with previous studies emphasizing the importance of early intervention in preventing the adverse effects of stress among nursing students [7].

Conclusion

This study demonstrates that the majority of first-year nursing students experience moderate to high levels of stress, reflecting substantial challenges during the early phase of academic and clinical adaptation. Demographic characteristics—

particularly age, gender, and educational background—appear to influence the variability of stress levels. These findings highlight that the transition into nursing education constitutes a critical period requiring targeted institutional support.

From a practical perspective, higher education institutions should implement structured and evidence-based interventions to mitigate student stress. Early academic orientation programs, integration of stress management training into the curriculum, and the establishment of peer-support systems are essential to enhance students' coping capacity and academic adjustment. In addition, strengthening clinical preparedness through simulation-based learning and gradual exposure to clinical environments may reduce anxiety associated with early clinical practice.

From a policy standpoint, nursing education providers should incorporate student mental health promotion as a core component of academic governance. This includes developing institutional policies that mandate routine screening of student stress levels, providing accessible counselling services, and fostering a supportive learning environment. Collaboration between academic institutions and clinical practice settings is also necessary to ensure that students receive consistent guidance and supervision during clinical training.

Future research is recommended to employ longitudinal and analytical designs to further explore causal relationships and the effectiveness of intervention strategies in reducing stress among nursing students. Overall, proactive and comprehensive approaches are crucial to support students' psychological well-being, optimize academic performance, and ensure the development of competent and resilient nursing professionals.

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