

Demographical Factors Related to The Nursing Students' Stress at the University After COVID-19 Pandemic

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ABSTRACT

Article History:

Received : 31-10-2025

Revised : 02-01-2026

Accepted : 26-01-2026

Online : 31-01-2026

Keyword:

COVID-19;

Nursing Students;

Stress;

Post Pandemic;

Nursing students have affected by the COVID-19 pandemic through many changes in academic learning process. Yet, in the daily life, they also need to adjust the new life which might suppress several students. In this study, presumed that factors including gender, religion, level of semester, living status, and living arrangement would be related to the nursing student's stress. A total of 237 nursing students from Bachelor degree, which have age higher than 17, and actively registered as students, have been involved in this study. The result showed that more than 50% respondents were female and experienced moderate level of stress. The result from Chi-Square test described that only one factor, the level of semester that has been related to the stress level. Other demographical factors were not statistically significant to the stress level. In each semester, students might face different stressors and used different coping strategies to deal with. This study highlighted the urge of need for nurses who works at the university healthcare centre or community nurses in designing stress management for nursing students based on their year academic level since the stressor might be different.

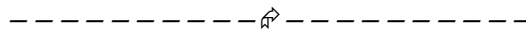


ABSTRAK

Mahasiswa Keperawatan telah terdampak oleh pandemi COVID-19 di mana terjadi beberapa perubahan selama proses pembelajaran akademik. Pada aktifitas kehidupan juga terjadi perubahan, di mana mahasiswa dituntut untuk menyesuaikan kehidupan baru yang dapat menimbulkan tekanan bagi beberapa mahasiswa. Pada penelitian ini, diasumsikan terdapat beberapa faktor yang berhubungan dengan stress pada mahasiswa terdiri dari; jenis kelamin, agama, tingkat semester, status tinggal, dan tempat tinggal. Jumlah mahasiswa yang terlibat pada penelitian ini adalah 237 orang mahasiswa keperawatan pada tingkat sarjana, berusia 17 tahun, dan terdaftar aktif sebagai mahasiswa. Hasil uji Chi-Square menunjukkan hanya satu faktor, yakni tingkat semester yang berhubungan pada tingkat stress. Pada masing-masing semester, mahasiswa menghadapi stressor yang berbeda dan menggunakan strategi koping yang berbeda untuk menghadapi stres. Penelitian ini menggaris bawahi pentingnya kebutuhan perawat yang bekerja di pusat kesehatan kampus ataupun perawat komunitas untuk merancang manajemen stres bagi mahasiswa keperawatan berdasarkan tahun akademiknya karena sumber stress yang mungkin berbeda-beda.



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A. INTRODUCTION

Nursing students had more stressors compared with students in other faculties (Singh et al., 2020). Nursing students frequently experienced burnout, and stress from their personal and academic lives was a significant predictor. Burnout was more common among students who had poor communication skills with their teachers or no social support. Additionally, there was a reported rift between the teachers and students, which made the pupils feel even more stressed and alone (Annaloro et al., 2021; Berdida & Grande, 2023; Hung et al., 2022).

COVID-19 academic stress increasing the nursing student's stress experience (Jojoa et al., 2021). Although the COVID-19 pandemic has changed to the endemic, the effect for psychological aspect for students have remained (Wang et al., 2022).

Nursing students' mental health has been severely damaged by the COVID-19 epidemic, which has caused various levels of academic stress. The transfer to new learning environments, difficulties with clinical placements, and the strain of higher healthcare needs are the main topics of recent studies on nursing students' post-pandemic stress. The stress might differ between students, according to how they react the situation (Alasagheirin et al., 2023; Chardavoyne & Olympia, 2021; Sveinsdóttir et al., 2021).

The move to online learning, the lack of in-person clinical experience, and worries about readiness for professional positions are some of the major pressures. Anxiety was also increased by hazards to one's own health and uncertainties about one's future employment prospects (Rohde et al., 2022; Sakai, 2022; Saylor, 2023). Nursing students reported heightened levels of anxiety, stress, and burnout due to the overwhelming academic demands, personal responsibilities, and uncertain future in the nursing field. Many students faced issues such as depression and psychological distress exacerbated by the pandemic's unpredictability (Castro et al., 2023; Chen et al., 2024).

The abrupt switch to online instruction presented a big obstacle. Even while there were advantages to online learning, a lot of nursing students felt that the absence of in-person interaction resulted in feelings of loneliness, lower motivation, and more challenges with time management. Compounding this unhappiness were problems like increased workload and technological difficulties (Sillero, 2023; Simionescu et al., 2021). Overall, most students are still experienced moderate level of stress post-pandemic (Farber & Amorim, 2025).

Previous study explored the sociodemographic factors including age, sex, marital status, number of children, living with whom, household strata, occupation, semester in course, scheduled academic session, and department of residence related to the stress among nursing students. Female students found have better coping mechanism. Also, communication with family members found helpful for nursing students to minimize stress (Restrepo et al., 2023). Previous study found that there was different psychological aspects between male and female (Torres & Paragas, 2019). Male and female nursing students found to be different in responding stress (Alharbi et al., 2025; Asturias et al., 2021).

Spiritual-wellbeing and resilience are important to manage nursing student's stress during pandemic (Diaz et al., 2025). Furthermore, level of year at the academic learning was also found might affect students in reacting the stressors with different burden in each level. Higher

support that own by the students especially in social support and financing will be helpful to lessen the stress (Lins et al., 2016). Loneliness made students feeling depressed in their daily life (Wang et al., 2023).

This study aims to explore demographical factors that might related to the stress among nursing students after COVID-19 pandemic. It has been assumed that gender, religion, persons who students live with, living arrangement, and also the semester level might have significant relationship with the nursing student's stress level.

B. METHODS

This study was cross sectional study which measure variables together at once time (Wang & Cheng, 2020). In this study, demographical factors (gender, religion, semester level, living status, and living arrangement) were explored related to the nursing students' stress. The total of population were 589 nursing students at bachelor level of a private university at Samarinda City, Indonesia. Sampling used stratified random sampling to choose 237 registered nursing students. The one who did not respond or being absent due to of sick or other reasons were excluded from this study. Stratified random sampling used to minimize the result bias since each academic level might have different stressors and different stress experience.

The study has been conducted about two months to be completed and passed ethical review from Universitas Mulawarman Ethical Board Review with No. 113/KEP-FK/V/2024. Before started the survey, the students have invited to participate the study through the head of class to get the 237 respondents. By the appointment schedule, the survey started to deliver in the end of the class. The study detail has been explained before the respondents signed the consent. The survey has delivered anonymously used google form. The data managed confidentially by the researchers, that only researchers could access the data.

The stress level has been measured using Perceived Stress Scale (PSS)-10 which consists of 10 questions. The dimensions included feeling of unpredictability, feeling of uncontrollability, and feeling of overloaded. The reliability and validity of the scale had been widely confirmed to be within the acceptable range, with an overall Cronbach's alpha value of 0.82, the test-retest reliability coefficient of 0.69, and an internal consistency of 0.68–0.78. The answer options were never (0), almost never (1), sometimes (2), fairly often (3), very often (4). Total score with range of 0-40 that consisted of: low Stress (0-13), moderate stress (14-26), and high stress (27-40) (Cohen et al., 1983; Harris et al., 2023).

Gender has been differentiated by male and female. Religion has been categorized for Islam and Christian (Catholic and Protestant). Semester level consists of level 2, 4, 6, and eight. Living with has been grouped through the one who live with the students either family, parents, friends, or alone. Living arrangement has been categorized as living at home and rent house or dormitory.

The data has been analyzed descriptively using frequency distribution to get more insight for each factors. Chi-square test used SPSS version 20 has been used to analyze each demographical factors to the nursing student's stress level with significant value at .05 and confidence level at .95.

C. RESULT AND DISCUSSION

1. Result

Majority of respondents were female (78.1%), were Moslems (97.8%), were at level 2 (31.2%), lived alone (40%), and lived at rent house or dormitory (54%). The results (Table 1) from the Chi-square test showed that only semester level which has been related to the nursing student's level (Sig = .001 (<.05)).

Table 1. Contributing Factors to the Nursing Student's Stress (N=237)

Description	Stress Level			Total	Sig.
	Mild (%)	Moderate (%)	Severe (%)		
Gender					.202
Male	7 (13.5)	34 (65.4)	11 (21.2)	52 (21.9)	
Female	12 (6.5)	121 (65.4)	52 (28.1)	185 (78.1)	
Religion					.678
Islam	19 (8.2)	152 (65.5)	61 (26.3)	232 (97.8)	
Christian	0 (0)	3 (60)	2 (40)	5 (2.2)	
Semester Level					.001*
Level 2	7 (9.5)	48 (64.9)	19 (25.7)	74 (31.2)	
Level 4	3 (4.2)	54 (75.0)	15 (28.0)	72 (30.3)	
Level 6	4 (7.5)	40 (75.5)	9 (17.0)	53 (22.3)	
Level 8	5 (13.2)	13 (34.2)	20 (52.6)	38 (16.2)	
Living Status					.291
Parents	4 (4.7)	57 (66.3)	25 (29.1)	86 (36.0)	
Family (Blood-Related)	1 (4.3)	15 (65.2)	7 (30.4)	23 (10.0)	
Friends	4 (12.1)	17 (51.5)	12 (36.4)	33 (14.0)	
Alone	10 (10.5)	66 (69.5)	19 (20.0)	95 (40.0)	
Living Arrangement					.169
House	5 (4.6)	72 (66.1)	32 (29.4)	109 (46.0)	
Rent House or Dormitory	14 (10.9)	83 (64.8)	31 (26.6)	128 (54.0)	

* Remark for significant value

Male students and female students were majority experienced moderate level of stress (155 (65.4%)). According to the religion, few of student experience mild stress (8.2%), and the amount of Moslem students who experienced severe stress was also still high (61 students). Students at the second, fourth, and sixth semester mostly experienced moderate level of stress. At the highest level (Semester 8), students tend to have severe stress, although few of them experienced mild stress. Regarding to the persons who live together with the students, the result showed that students who did not live together with their parent or family had higher stress level. Yet, more than 25% of them experienced severe stress overall. The number also found has similarity that students who lived at their own house had less stress compared with the one who lived out of their house.

2. Discussion

a. Gender and Stress

Respondent of this study were higher amount at the female compared to the male student, no significant relationship found between gender and stress level in this study. Similar study also found that the number of female nursing students was higher compared with the male one (Hafitriany et al., 2024). Most study found that nursing students were dominated with female (Alharbi et al., 2025; Andina-Díaz et al., 2023; Fino et al., 2019).

In responding stressor, both of male and female would response physically and verbally. They shared faired reaction between verbal aggression that would be acted as an anger or physical aggression. In contrast, higher verbal aggression will lower emotional control and lower the empathy to the both gender (Fino et al., 2019).

A supporting study also showed that gender was insignificantly related to the perceived stress among nursing students. This condition could be caused by the same stressor received by the students which most are coming for academic stressor especially in clinical practice (Onieva-Zafra et al., 2020).

b. Religion and Stress

Previous study found similar finding that religion was not significantly associated with the stress for nursing students. On the other hand, in non-nursing students, the religion has significant relation (Ha & Park, 2021). In contrary, other study mentioned that religious coping was highly correlated with an overall score of quality of life, which also included the psychological aspect (Leong Bin Abdullah et al., 2021).

When facing illness, death, or other forms of adversity, people frequently resort to prayer and other forms of religious or spiritual observance. They frequently tell of finding solace in possessions like spiritual and religious materials (Rammouz et al., 2023). The coping mechanisms more frequently was linked to enhanced social interactions as well as better environmental, psychological, and physical health (Felicilda-Reynaldo et al., 2019).

Religion, in this study found insignificantly related to the stress level. This result might be assumed that the important for student was spirituality inside each person instead the religion as identity. Also, in each religion, religion taught about the way to deal with stress. Some religious activities also enhanced the complexity between physical and psychological health that could help balancing life-stress.

c. Semester Level and Stress

In the level of semester, found that less of respondents experienced mild stress. Most of them felt that their stress was at moderate level.

This study showed high number of stress level were at moderate level. Students studying nursing are more likely to suffer from a loss in quality of life (Singh et al., 2020) (Singh et al., 2020). The level of semester has significant relation in this study to the stress level. Previous study mentioned that beginning year of nursing students were heavier compared with the remaining year. In those two beginning years, students feel more stressed (Rammouz et al., 2023).

Preclinical students frequently experience academic demands that have an impact on their quality of life, also in psychological aspects, especially in their beginning study and last years (Lins et al., 2016). Hospital closures during the pandemic decreased the amount of hands-on clinical experience available to nursing students. Their lack of real-world experience hindered their education and made them more anxious about their readiness for jobs in the workforce (Alcalá-Albert et al., 2022).

A study found that students would naturally experience increased pressure as graduation drew nearer. In addition to the pressures of finishing their school-mandated

graduation examination, they would also have to deal with the epidemic's impact on their ability to find employment and choose a career (Wang et al., 2023).

As the students grew in their academic level, the stress also might develop due to of additional task and different level of difficulties compared with previous semester.

d. Living Status and Stress

Most respondents lived alone, although some of them are staying with parents and family. Family in this study was family that had blood-related with the students since some of students originated from far away and they had family (blood-related) to stay together. Living status were not significantly related to the stress in this study. Previous study found that nursing students believe that their families are cohesive, have a propensity for connection and flexibility, communicate effectively and adequately, exhibit a tendency toward disorder, and possess adaptive coping mechanisms. For subfamily systems to thrive and remain healthy, emotional communication, family cohesion, role and responsibility flexibility, and the use of various coping mechanisms are essential (Restrepo et al., 2023).

People have employed a range of coping mechanisms to deal with pressures. The coping mechanism could include positive attitudes such as turning to friends and family for support, brooding, venting, diversion, problem-solving, humor, and religion (Rammouz et al., 2023). Nursing students use to talk with family and or friends to relieve their stress (Farber & Amorim, 2025).

Those studies mentioned that students could so many resources for coping. The sources could be from parents, family (blood-related), friends, or others. The one who lived alone also can choose another way such as social media to entertain their self.

e. Living Arrangement and Stress

Living arrangement found insignificantly related to the stress in this study. In this study, majority of students lived at the rent house or dormitory. Living at the rent house or dormitory might increase of feeling loneliness for students. A previous study mentioned that more than 10% students felt lonely. These students lost many of their initial social connections as a result of the lockdown procedures implemented during the outbreak (Wang et al., 2023).

Stress levels among students were positively correlated with anxiety, loneliness, and PTSD. Negative psychology traits like loneliness and anxiety are tightly linked to stress, and this could make teenage pupils avoid coping, which would make their psychological stress worse (Yang et al., 2022; Ye et al., 2020).

Living arrangement didn't make different result for stress among students. Both who are getting supports no matter lived at their own house or not, the stress level almost similar. Direct support or indirect support through the online communication will assist them to lessen the stress.

D. CONCLUSION AND SUGGESTIONS

In this study, majority of students experienced moderate level of stress. Meanwhile, the level of semester found that significantly related to the nursing students' stress level. The level of semester might be related due to the level of difficulty and different challenges in each semester.

We suggested for students to learn about the stressors and evaluate coping mechanism used in previous semester to prevent worse condition of stress in the future. Academic institution could do screening through the nursing at the university health centre for at least two time a year about their student stress level and provide sources to deal with their stress. Involving their peer or family might also be useful to decrease their stress. In addition, the institution could develop the policy about managing the stress at the university, especially for nursing students.

E. ACKNOWLEDGEMENT

The researchers would like to thank you for Universitas Muhammadiyah Kalimantan Timur in permitting this study.

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