Nelwati, N. et al. (2026)
Jurnal Keperawatan Soedirman – Vol 21, No 1 page 9-14
http://jos.unsoed.ac.id/index.php/jks/index

ORIGINAL ARTICLE

STRESS AND INCIVILITY AMONG INDONESIAN UNDERGRADUATE NURSING STUDENTS: A MULTIVARIATE ANALYSIS

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Article Information
Received: 19 December 2024
Revised: 8 October 2025
Accepted: 25 February 2026

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DOI
10.20884/1.jks.2026.21.1.14110

ABSTRACT

Nursing faculty and students consider incivility as moderate to serious problem in nursing education programs. The primary cause of incivility among nursing faculties is stress. Indonesian undergraduate nursing students experience moderate to severe stress throughout the program. This study aimed to examine the effect of stress on incivility among Indonesian undergraduate nursing students and to identify the most significant factors predicting incivility in nursing education. A quantitative, cross-sectional study was conducted involving 220 Indonesian undergraduate nursing students from a public university in Indonesia that selected using convenience sampling. The instruments employed were the Student Nurse Stress Index and the Incivility in Nursing Education-Revised Scale. Ethical approval was granted from the relevant faculty. Descriptive statistics were used to analyze data, and multivariate analysis employing Structural Equation Modeling-Partial Least Squares (SEM-PLS) was conducted to determine the most significant predictor of incivility. The mean stress score was 67.18, indicating moderate stress, while the mean incivility score y was 46.50, which means high incivility. Age and academic year were negatively associated with incivility in nursing education, with p-values of 0.041 and 0.004, respectively. The clinical concern domain of stress was the most significant predictor of incivility among Indonesian undergraduate nursing students (p=0.000). It is expected that Indonesian undergraduate nursing students will effectively manage stress to control that incivility behavior and prevent negative impacts on themselves and their nursing education institutions. Seeking social support and utilizing campus resources can help alleviate difficulties with class materials, reducing feelings of fear related to failing exams and courses.

Keywords: *Incivility; Indonesia; nursing education; stress; undergraduate nursing students*

ISSN : 1907-6637 **e-ISSN : 2579-9320**

BACKGROUND

Incivility in nursing education programs has been established in both academic and clinical settings (Eka et al., 2016; Kim et al., 2020). It has become a serious problem requires urgent attention. Incivility in nursing education poses physiological and psychological risks to the health of both (Clark et al., 2015; Eka & Chambers, 2019).

Incivility is characterized by the breakdown of mutual respect norms in interpersonal interactions among faculty members, administrators, students, and clinical instructors (Clark et al., 2015; Kim et al., 2020). Clark et al. (2015) suggested a continuum to describe the range of incivility, spanning from disruptive to threatening behaviors. Disruptive behaviors, or lower levels of incivility, include nonverbal behavior such as eye-rolling and sarcastic comments. In contrast, meanwhile, threatening behaviors, representing higher levels of incivility, encompass physical violence and tragic incidents (Clark et al., 2015).

Incivility can occur in various teaching and learning settings, such as classrooms, laboratories, and clinical practice. Small et al. (2024) found the common disrespectful behaviors among Canadian nursing students, including conversations that distract others (87.5%), cheating on examinations (81.3%), using mobile phones during class (79.2%), and making sarcastic gestures such as yawning and eye-rolling (75.5%). Another study reported a mean score of 27.38 for

lower-level incivility among nursing students in US, while the mean score for higher-level incivility was 13.24 (Urban et al., 2021). In Indonesia, a study conducted by Eka et al. (2016) revealed that a significant proportion academic staff (88.3%) and students (47%) considered incivility to be a serious problem in educational settings. They were prone to exhibiting uncivil behaviors in classrooms, laboratories, and clinical practice. The mean incivility score among nursing students in Indonesia was 20.93 (Purukan et al., 2022).

Academic incivility can hinder the teaching and learning activities between faculty and students. Experiences of incivility may lead to undesirable educational outcomes, potentially affecting future nursing practice and patient safety (Park & Kang, 2021; Rawlins, 2017; Wagner et al., 2019). Furthermore, the impacts of incivility experienced by nursing students include dissatisfaction, emotional and physical distress, learning process disturbances, decreased interest and confidence in teaching and learning (Eka & Chambers, 2019). The primary factor fostering incivility in nursing education is stress (Rawlins, 2017). Stress can result in ineffective coping mechanisms, emotional distress, and declined resilience (Butler & Strouse, 2022; Sauer et al., 2017; Urban et al., 2021). These conditions elevate the likelihood of uncivil behavior.

Undergraduate nursing students experienced stress throughout their educational programs, both academically and during clinical placements (Harvey et al., 2024), which could affect their incivility behaviors (Rawlins, 2017). The common sources of stress among these students include course workload and assignments, patients care responsibilities, interactions with teachers and nursing staff, peer relationships, and daily life and environmental factors (Hamadi et al., 2021). Indonesian nursing students similarly face stress during their learning process. Sarasati and Nugraha (2025) found that 68% of nursing students participating in their study reported high levels of stress. Additionally, stress during clinical practice was observed among undergraduate nursing students, with a mean score of 41.88 (Sarfika et al., 2023).

Incivility in nursing is more prevalent than in other disciplines (Wagner et al., 2019). It must be diminished because nursing emphasizes caring for and respecting humans (Park & Kang, 2021). Faculty members are responsible for teaching student's civility and demonstrating professional values and attitudes (Nelwati et al., 2019; Park & Kang, 2021). Civility is the foundation of professionalism. Therefore, it is imperative for educators to concern and address issues related to stress and incivility.

Given that stressful experiences contribute to and catalyze incivility among undergraduate nursing students (Rawlins, 2017; Rose et al., 2020), conducting this study is important. Therefore, the purpose of this study was to examine the correlation between stress and incivility among Indonesian undergraduate nursing students and to identify most significant predictor of incivility in nursing education.

METHOD

Study design

A quantitative study with a cross-sectional approach was employed in this study.

Sample

The population in this study was all undergraduate nursing students registered in a public university in Indonesia counted for 493 students. By using Slovin sample size formula, a total of 220 Indonesian undergraduate nursing students participated in this study that selected through convenience sampling. The respondents met inclusive criteria including they were active students enrolled in particular academic year and wiling to be a respondent.

Instruments

The instrument employed was the Student Nurse Stress Index (SNSI), developed by Jones and Johnston (1999). This 22-item Likert scale assess four domains: academic load, clinical concerns, personal problems, and interface worries, with responses ranging from 1 (not stressful) to 5 (extremely stressful). All factors showed good reliability, with a Cronbach's alpha of 0.7 (Jones & Johnston, 1999). The Bahasa version of this instrument has also been tested for reliability, yielding a Cronbach's alpha of 0.989 (Kadarusman, 2018).

The Instrument of Incivility in Nursing Education – Revised (INE-R), developed by Clark et al. (2015), was used to measure incivility in nursing education This 24-item Likert scale comprises two domains: lower-level of incivility (disruptive behaviors) and higher-level of incivility (threatening behaviors), with responses ranging from 1 (not uncivil) to 4 (highly uncivil). Both domains demonstrated strong reliability, with Cronbach's alpha values ≥ 0.94 (Clark et al., 2015). The instrument was translated to Indonesian and its validity and reliability were evaluated by Eka et al. (2016). They found the INE-R Bahasa Indonesia version to be valid and reliable, with convincing content validity was convincing and Cronbach's alpha value ranging from 0.830 to 0.99.

Data collection

The permission letter from the faculty and the ethical clearance were granted prior to data collection. The online questionnaires were distributed to the prospective participants only after they received an explanation of the study and then agreed to participate. Data collection was conducted in June 2024.

Data analysis

Data were analyzed and presented using descriptive statistics, including frequency distributions, percentages, means, and standard deviations, to summarize the data. Inferential statistics were conducted using a structural equation modeling (SEM) as a multivariate analysis technique to test both the outer and inner structural models of path coefficients (Hair et al., 2022). SEM was used to examine the factor that the most significant predict incivility in nursing education. The outer model assesses the validity and reliability of the observed variables, while the inner model examines the structural relationships between latent variables and tests hypotheses (Hair et al., 2022)

Ethical considerations

Ethical clearance was granted by the Faculty Ethics Board with reference number 353.layaketik/KEPKFKEPUNAND. Participants were ensured that their participation was voluntary and that they could withdraw from the study at any stage before data analysis. All personal information was kept confidential, and no coercion was involved in this study.

RESULT

A total of 220 Indonesian undergraduate nursing students participated in this study. Most respondents were female (90.5%) and aged between 19 and 23 years. The participants were nearly equally distributed across academic years.

Table 1. Demographics of participants (n=220)

Variables	Frequency	%
Age (year)		
19	3	1.4
20	82	37.3
21	78	35.5
22	48	21.8
23	9	4.1
Gender		
Male	21	9.5
Female	199	90.5
Academic year		
2020	73	33.2
2021	75	34.1
2022	72	32.7

Table 2. The total mean score of SNSI and mean score subscales of SNSI (n=220)

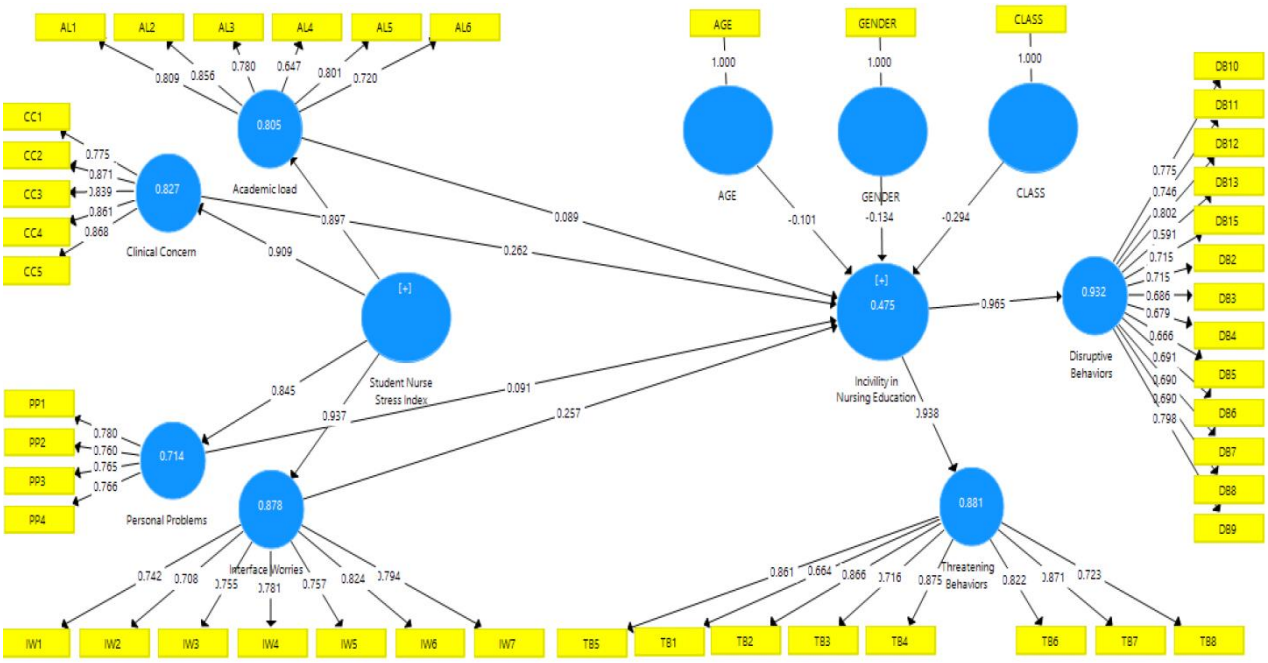
SNSI	Mean ± SD
Academic load	19.93 ± 4.15
Clinical concern	13.90 ± 3.99
Personal problems	11.90 ± 3.17
Interface worries	21.42 ± 5.29
Total	67,18 ± 14.95

Table 2 shows the total mean score of the SNSI and its four subscales. The total mean score was 67.18 ± 14.95. The highest mean subscale score was for interface worries, while the lowest was for personal problems.

Table 3. The total mean score of INE-R and mean score domains of INE-R (N=220)

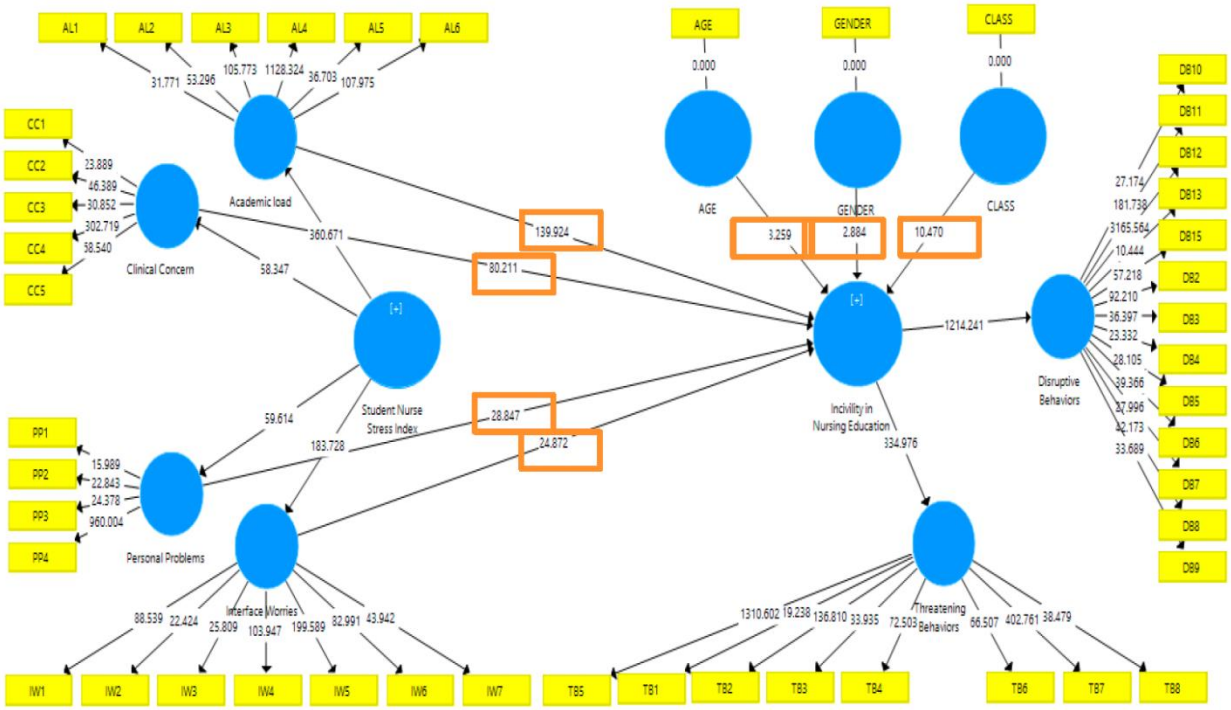
INE-R	Mean ± SD
Disruptive behaviors	32.18 ± 8.97
Threatening behaviors	13.68 ± 4.86
Total	46.50 ± 13.15

Table 3 presents the total mean score of the INE-R and its two domains. The total mean score of the INE-R was 46.50 ± 13.15. The mean score for disruptive behavior (32.18 ± 8.97) was higher than that for threatening behavior and (13.68 ± 4.86).



Picture 1. The outer structural model measurement (final)

Before testing the hypothesis, the outer structural model measurement was conducted to ensure that the measurement tool was valid and reliable. validity assessment results, with loading factors ranging from 0.535 to 1.000 has met the criteria for convergent validity. Discriminant validity was satisfactory, with average variance extracted (AVE) between 0.505 and 1.000. Composite reliability values ranged from 0.852 to 1.000 has met good reliability. These results presented that the outer structural model was feasible to hypothesis testing.



Picture 2. The inner structural model of path analysis

Table 4. Significance result of inner structural model measurement

Hypothesis	Sample Mean/M	T Statistics	*p* values
Age-INE-R	-0.057	3.259	0.041
Gender-INE-R	-0.137	2.884	0.051
Academic Year-INE-R	-0.194	10.470	0.004
Academic Load-INE-R	0.136	139.924	0.000
Clinical Concern-INE-R	**0.383**	80.211	0.000
Interface Worries-INE-R	0.101	24.872	0.001
Personal problems-INE-R	0.048	28.847	0.001

**Output Smart PLS 3*

Table 4 displays the result of the inner structural model, specifically the path coefficients. It shows that age and academic year were negatively associated with incivility in nursing education ($p < 0.005$), while gender had no significant association with incivility. The domain of clinical concern stress was the most significant predictor of incivility in nursing education ($p = 0.000$; $M = 0.383$).

Table 5. R-square value of SEM Model

Dependent variable	R Square
Incivility in nursing education	0.475

Table 5 shows the R-Squared value of the SEM Model. This model demonstrates its ability to predict the influence of demographic variables and stress domains on incivility in nursing education. The coefficient of determination, or R Square value, of 0.475 indicates that demographic variables (age, gender, and academic year) and stress domains (academic load, clinical concerns, interface worries, and personal problems) collectively explain 47.5% of the variance in factors influencing incivility in nursing education. The remaining 52.5% is attributed to other variables not included in the SEM model used in this study.

DISCUSSION

The current study demonstrated that Indonesian undergraduate nursing students experienced stress and incivility in nursing education. Age and academic year of the students were negatively associated with incivility. Clinical concerns were the most significant stress domain predicting incivility in nursing education.

Indonesian undergraduate nursing students experienced moderate stress during their learning process of professional nursing program. This finding aligns with previous studies reporting that 68% of undergraduate nursing students in Indonesia experienced moderate to high levels of academic stress (Sarasati & Nugraha, 2025). Similarly, Iranian nursing students also perceived moderate stress during their educational program (Rafati et al., 2020). In addition, nursing students in India and Saudi Arabia also experienced moderate stress and were found to be more vulnerable to stress compared to students in other disciplines (Mohamed et al., 2024; Sahu et al., 2019).

Indonesian undergraduate nursing students perceived interface worries (21.42 ± 5.29) and academic load (19.93 ± 4.15) as the major sources of stress. These findings are consistent with a previous study that found Indian nursing students perceived both domains as stressors (Nebhinani et al., 2020). The interface worries domain of stress is represented by students feeling a lack of free time and concerns about other professionals' expectations toward nursing. Additionally, the students worried about failing courses, receiving poor grades, and needing assistance with their learning courses. Hamadi et al. (2021) revealed that course load and assignments were significant sources of stress among Saudi Arabian nursing students.

This study also found that incivility among Indonesian undergraduate nursing students existed at a high level. Incivility has been reported in higher education institutions across various disciplines, with the nursing discipline was the highest incidence (Wagner et al., 2019). Faculty should consider developing strategies to reduce incivility among the students, as nursing is a profession that emphasizes the values of caring for and respecting others (Park & Kang, 2021).

Indonesian undergraduate nursing students exhibited higher scores for disruptive behaviors than for threatening behaviors, indicating a lower overall level of incivility. This finding aligns with a previous study, which found that the mean score for lower levels of incivility was higher than that for higher levels incivility (Urban et al., 2021).
In this study, age and academic year were the most significant demographic factors negatively predicting incivility in nursing education negatively. This may be because older nursing students demonstrate greater maturity and professional socialization, which can reduce disrespectful behavior. Additionally, the senior nursing students have adopted and recognized professional values and identity throughout their academic program. However, evidence supporting these findings is limited. One study conducted in Iran found a significant relationship between incivility and professional values among nursing students (Naseri et al., 2023)

Among the four domains of stress, the clinical concerns domain was the most significant predictor of incivility in nursing education. Stress originating from the clinical setting was most commonly experienced by nursing students and was perceived as the most stressful aspect of the nursing education process (Ait Ali et al., 2025). Under clinical pressure, the nursing students suffer from emotional fatigue and impaired self-regulation, which can result in uncivil behaviors. It was found that incivility was positively correlated with stress in the clinical setting (Lee et al., 2025).

The findings of this study have practical implications for nursing education. Given that the clinical concerns domain of stress is the most significant predictor of incivility in nursing education, it is necessary for professional nurse program to arrange and manage strategies to reduce stress in clinical settings. Innovative learning strategy, such as peer learning, in clinical practice could be introduced to the students. Additionally, a supportive clinical environment should be provided throughout clinical training. Age and academic year influence incivility in nursing education; therefore, it is also necessary for the nursing educational institutions to integrate civility into the curriculum and provide professional socialization starting as early as Year 1.

This study examined incivility only among nursing students and did not measure incivility among faculty members or nursing clinical instructors. The use of online questionnaires for data collection prevented respondents from asking questions when they needed help understanding the instrument.

CONCLUSION

This study addressed the most significant factors predicting incivility in nursing education, including age, academic year, and the clinical concerns domain of stress. Several strategies to reduce stress have been proposed. By implementing these innovative strategies, stress can be reduced, and incivility in nursing education can decrease.

FUNDING

This study was funded by the Faculty of Nursing, Universitas Andalas under the Publication Research Scheme in 2024.

ACKNOWLEDGEMENT

Authors thank to all the students who participated in study, we are so thankful for your participation.

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