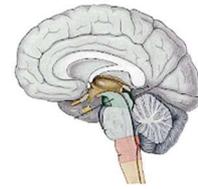


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# Association between Perceived Social Support and Psychological Distress among Generation-Z Nursing Students in Indonesia: A Multi-Center Cross-Sectional Study

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### ABSTRACT

Generation Z nursing students are increasingly exposed to psychological stress due to the integration of advanced technologies in academic and clinical learning. Social support plays a critical role in mitigating distress. This study examines the relationship between perceived social support and psychological distress among Generation Z nursing students in Indonesia. A cross-sectional survey was conducted among 734 students from seven accredited universities across Java, using convenience sampling. Participants completed the Multidimensional Scale of Perceived Social Support (MSPSS) and the Patient Health Questionnaire-9 (PHQ-9). Spearman's rank correlation was used to assess associations between social support and psychological distress. Approximately 42.6% of students experienced clinically relevant depression (PHQ-9  $\geq 10$ ). High perceived family support was associated with lower levels of psychological distress ( $\rho = -0.49$ ,  $p < 0.001$ ). No significant correlations were found between distress and support from friends or significant others. Family support significantly reduces psychological distress in Gen Z nursing students. Educational institutions should implement family-inclusive strategies to promote mental well-being amid rising technological pressures.

### INTRODUCTION

Psychological distress, encompassing symptoms of depression and anxiety, is highly prevalent among undergraduate nursing students who must simultaneously master demanding academic content and intensive clinical skills. International meta-analyses estimate that roughly one in three nursing students experience clinically significant depressive symptoms, a rate markedly higher than that observed in non-health-science peers. In Indonesia, where nursing education is rapidly expanding and student bodies are increasingly diverse, robust national data remain limited (Njim et al., 2020; Tung et al., 2018).

Generation Z—individuals born between 1997 and 2012—now dominates the Indonesian undergraduate population. While these digital natives are adept at navigating information-rich environments, their constant online exposure, coupled with socio-economic uncertainties, may amplify vulnerability to mental-health problems. Prolonged technology-driven academic demands counter-measures, including institutional digital learning environments and remote instruction, further

disrupted academic routines and social interactions, potentially exacerbating distress (Lim et al., 2018; Njim et al., 2020; Orsolini et al., 2020).

Social support, defined as the perception that one is cared for, valued, and can obtain help when needed, consistently appears as a protective factor against psychological distress. Yet empirical findings regarding the relative contributions of family, friends, and significant others are inconclusive and culturally contingent, with most evidence stemming from Western contexts (Karaca et al., 2019; Sakai et al., 2022). Studies from collectivist societies, such as Indonesia, are notably scarce.

To address this gap, the present multi-centre study examined the association between perceived social support and psychological distress among Indonesian Generation-Z nursing students during the second year of the technological advancement era. We hypothesised that higher perceived support from any source would correlate with lower depression severity.

## **METHODS**

A quantitative analytic observational study with a cross-sectional design was conducted from May to September 2024 in seven accredited nursing faculties located in four provinces on the island of Java, Indonesia. Eligible participants were bachelor-level nursing students in their first to fourth academic year who maintained active enrolment status, possessed an accessible WhatsApp account, and voluntarily consented to participate. Convenience sampling yielded 734 complete responses. Sample-size estimation with G\*Power 3.1 (two-tailed,  $\alpha = 0.05$ , power = 0.85, effect size = 0.10) indicated a minimum requirement of 716 students. Perceived social support was measured with the Indonesian version of the Multidimensional Scale of Perceived Social Support (MSPSS), comprising three seven-point Likert sub-scales (Family, Friends, Significant Others) (Kwak et al., 2022). Psychological distress was assessed with the Indonesian Patient Health Questionnaire-9 (PHQ-9). Both instruments demonstrate robust psychometric properties in Indonesian populations (Cronbach's  $\alpha \geq 0.81$ ) (Dian et al., 2022). Institutional approval was granted by the Health Research Ethics Committee of STIKES Kepanjen (approval 2024). Online informed consent preceded data collection via sequential Google Forms distributed through university WhatsApp groups and individual messages. Confidentiality and anonymity were assured. Univariate statistics summarised categorical variables using frequencies and percentages, and numerical variables using means and standard deviations. Normality was tested with the Kolmogorov–Smirnov test. Spearman's rank correlation examined associations between MSPSS sub-scale means and PHQ-9 scores, with significance set at  $p < 0.05$ . Analyses were performed in IBM SPSS v24 and GraphPad Prism 9.

## **RESULTS AND DISCUSSION**

The following is a table of research results based on the data in table 1 characteristics of respondents This study involved a total of 734 respondents consisting of 625 female and 109 male where the respondents were included in the inclusion criteria.

**Table 1. Participant Characteristics (N = 734)**

Variable	Category	n	%
Age (years), Mean ± SD	—	—	19.94 ± 1.42
Gender	Female	625	85.1
	Male	109	14.9
Academic Year	First-year	353	48.1
	Second-year and above	381	51.9
Monthly Family Income	< IDR 3 million	479	65.3
	≥ IDR 3 million	255	34.7
Technological Transformation-Related Financial Difficulties	Yes	576	78.5
	No	158	21.5

Primary data 2024

The final sample (N = 734) had a mean age of 19.94 ± 1.42 years; 85.1 % were female. Nearly half (48.1 %) were first-year students. A majority (65.3 %) reported a monthly family income below IDR 3 million and 78.5 % experienced contemporary technological transformation-related financial difficulties.

**Levels of Social Support**

Table 2. Levels of Perceived Social Support

Support Source	Support Level	%
Family	High	63.4
Friends	Moderate	56.5
Significant Others	Moderate	59.5

High perceived family support was reported by 63.4 % of students, whereas support from friends and significant others was predominantly moderate (56.5 % and 59.5 %, respectively).

**Prevalence of Psychological Distress**

Table 3. Prevalence of Psychological Distress Based on PHQ-9

PHQ-9 Category	Criteria	%
Clinically Relevant Depression	PHQ-9 ≥ 10	42.6

Based on PHQ-9 scoring, 42.6 % of participants met the threshold for clinically relevant depression (score ≥ 10).

**Association between Social Support and Psychological Distress**

Table 4. Spearman Correlation Between Social Support and Depression Severity

Support Source	Spearman ρ	p-value	Significance
Family	-0.49	< 0.001	Significant
Friends	-0.06	0.104	Not Significant
Significant Others	-0.01	0.920	Not Significant

Spearman analysis revealed a moderate inverse correlation between family support and depression severity (ρ = -0.49, p < 0.001). No statistically significant associations were observed for support from friends (ρ = -0.06, p = 0.104) or significant others (ρ = -0.01, p = 0.920).

The findings this multi-centre investigation documents a substantial burden of psychological distress among Indonesian Generation-Z nursing students. The observed 42.6 % prevalence of clinically relevant depression exceeds pre-contemporary technological transformation global estimates (~34 %) and aligns with studies conducted during technology-driven academic demands in other Asian contexts, underscoring the contemporary technological transformation's prolonged psychological toll on healthcare trainees.

Crucially, perceived family support exhibited a moderate, inverse association with depression, whereas support from friends and significant others did not (Elmer et al., 2020). This pattern resonates with collectivist cultural norms in which familism prevails and may become even more salient when public-health restrictions increase reliance on digital tools (Alsubaie et al., 2019; Samrock et al., 2021; Wang et al., 2021). During digital learning environment, most participants faced challenges in balancing online academic and clinical obligations, increasing opportunities for both practical and emotional assistance from parents and siblings while concurrently reducing in-person peer contact. Consequently, the buffering effect of the family network may have outweighed that of friendships or romantic relationships.

Universities should therefore not rely solely on peer-led initiatives but rather integrate family-centred approaches such as virtual family counselling, caregiver psycho-education, and structured communication channels that encourage supportive dialogue. Limitations include the cross-sectional design, convenience sampling, and reliance on self-report measures, which preclude causal inference and may introduce response bias. Longitudinal research is warranted to unravel temporal dynamics and evaluate the impact of targeted family-based interventions on student mental health.

## CONCLUSIONS AND RECOMMENDATIONS

This study concludes that high levels of psychological distress were detected in almost half of the surveyed Indonesian Generation-Z nursing students. Among the examined social resources, only perceived family support displayed a significant protective association. These findings advocate for the incorporation of family-engagement strategies into university mental-health services and highlight the need for culturally attuned interventions that extend beyond peer-focused programmes. Future longitudinal and experimental research is warranted to confirm causal pathways and to evaluate the effectiveness of family-centred support models in alleviating psychological distress among nursing students.

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