an idea health journal
ISSN (online): 2797-0604

Caring Personality Traits Among Indonesian Nursing Students and Clinical Nurses: A Cross-Sectional Study

Volume 6 No 2, Page 398-411
©The Author(s) 2026

OPEN ACCESS

Kuntarti Kuntarti[*1], Yeni Rustina[1], Jahja Umar[2], Dewi Irawaty[1]

[1*]Faculty of Nursing, Universitas Indonesia, Depok, Indonesia
[2] Faculty of Psychology, UIN Syarif Hidayatullah, Jakarta, Indonesia

Article Info:
Received: 10 March, 2026
Revised: 18 May, 2026
Accepted: 22 May, 2026

Correspondence Author:
Kuntarti, Faculty of Nursing, Universitas Indonesia, 16424
Email: kuntarti@ui.ac.id

How to Cite:
Kuntarti K, Rustina Y, Umar J, Irawaty D. Caring Personality Traits Among Indonesian Nursing Students and Clinical Nurses: A Cross-Sectional Study. An Idea Health Journal. 2026; 6(02): 398-411.https://doi.org/10.53690/ihj.v6i02.716.

This is Work Licensed by: https://creativecommons.org/licenses/by/4.0/

Abstract

Background: Caring is fundamental to professional nursing practice and identity. However, limited research has examined the caring personality trait among Indonesian nursing students and nurses.

Methods: This cross-sectional study examined these traits and analyzed subgroup differences among nursing professional students and clinical nurses using the Inventori Kepribadian untuk Ners–Praktis (IKUN-P). The IKUN-P demonstrated strong internal consistency (Cronbach's alpha 0.824–0.902). Data were collected from 488 participants across three Indonesian regions through convenience sampling.

Results: The majority of participants were female (72.75%) and 25 years old or younger (46.31%). Among the five traits assessed, optimism had the highest mean score (33.29 ± 4.75), reflecting a generally positive outlook. Emotional intelligence had the lowest mean score (30.48 ± 4.83), indicating a potential area for educational and professional development. Analysis identified significant regional differences in emotional intelligence ($p=0.046$), optimism ($p=0.043$), emotional stability ($p=0.007$), and personal integrity ($p=0.004$). Most traits did not differ by age, gender, education, work experience, or respondent type ($p>0.05$). Limitations of the study include its cross-sectional design, self-report measures, and convenience sampling.

Conclusion: The results indicate that programs promoting emotional intelligence and optimism could support caring behavior and professional performance among nursing students and nurses.

Keywords: Caring, Emotional Intelligence, Nurses, Nursing Students, Personality Traits.

BACKGROUND

Caring is widely regarded as the foundation of nursing and is central to professionalism. It has multiple meanings: it may be seen as a human trait, a moral imperative, an affective state, an interpersonal process, and a therapeutic intervention (1). In clinical settings, caring is expressed through nurses' behaviors and may shape patients' subjective experiences and responses to care (2-5). Ideally, caring should be a consistent part of a nurse's professional attitude and behavior (6-8).

Nursing theorists further position caring as fundamental to human existence and nursing identity (1). They view humans as inherently caring and describe caring as a basic mode of being (9) that extends beyond technical competence (10,11). This theoretical foundation underscores caring as a key motivator for nursing actions and professional responsibility (12,13). Nevertheless, theoretical perspectives on caring need to be empirically operationalized to help nursing education institutions and healthcare organizations identify developmental gaps and design targeted interventions to strengthen caring practice.

Previous empirical studies suggest that caring practice is influenced by more than knowledge and technical skill. Caring behaviors have been associated with patients' perceptions of nursing care quality and person-centeredness (2,3), while professional socialization and clinical instructor competency may shape the development of caring among students and new nurses (14). Emotional intelligence supports empathy, communication, teamwork, and stress management, all of which are relevant to caring encounters (15). Emotional stability may protect nurses from stress-related disruptions and burnout (16-18), while altruism and integrity align with the ethical and humanistic dimensions of nursing practice (19,20). Optimism, as a positive psychological resource, may help nurses sustain hope, motivation, and constructive coping under demanding clinical conditions (21,22).

Despite the strong theoretical foundations of caring, nursing education and healthcare systems increasingly require empirical indicators to guide and evaluate interventions that strengthen caring (23,24). Caring in practice is shaped by individual characteristics, professional socialization, and workplace contexts (14,25). A personality-based approach, therefore, provides a pragmatic framework for operationalizing caring as a set of measurable traits that may support caring behaviors and inform competency development (19). In the proposed conceptual pathway, caring personality traits do not automatically guarantee caring behavior; rather, they function as predisposing resources that shape caring capacity, including empathic awareness, emotional self-regulation, ethical orientation, and hopeful engagement (19,26–29). Educational contexts, mentorship, workplace culture, leadership, and workload may strengthen or weaken the translation of these traits into observable caring behaviors (26,27,30–33).

To support such measurement, the Inventori Kepribadian untuk Ners–Praktis (IKUN-P) was developed to profile caring personality traits theoretically linked to caring behaviors (34). The instrument assesses five dimensions: altruism, emotional intelligence, emotional stability, personal integrity, and optimism. To our knowledge, this is among the first large-scale empirical studies using the IKUN-P to describe caring personality trait profiles among Indonesian nursing professional students and clinical nurses. By examining exploratory, descriptive, and inferential patterns across key demographic characteristics, this study provides evidence to inform educational and organizational strategies for strengthening caring practice.

METHODS

Study Design

This study employed a primarily descriptive cross-sectional design with exploratory subgroup comparisons. This design was chosen because the study aimed to provide an empirical profile of caring personality traits among Indonesian nursing professional students and clinical nurses using the Inventori

Kepribadian untuk Ners–Praktis (IKUN-P), rather than to examine causal relationships. Exploratory inferential analyses were conducted only to identify potential subgroup differences and were interpreted cautiously because of the cross-sectional design and participant-level convenience sampling.

Sample/Participants

The study population comprised nursing professional students and registered nurses. Eligible students were actively enrolled in the professional nursing program and consented to participate. Eligible nurses were registered, had at least one year of work experience, and consented to participate; midwives or midwifery graduates were excluded.

Educational institutions were selected using multistage random sampling from the Indonesian Association of Nursing Education Institutions (AIPNI) membership list, following the province–city–institution sequence. Hospitals were selected using multistage random sampling from a national hospital directory accessed through the Indonesian Hospital Association (PERSI) website, following the province–city–hospital sequence. In total, ten institutions were selected to represent both education and clinical service settings.

Participant recruitment within the selected sites used convenience sampling. Therefore, although the sites were selected using a multistage approach, participant selection was not based on probability sampling. To avoid implying probability sampling at the participant level, site selection and participant recruitment are reported separately. Because convenience sampling was used, selection bias may have occurred, and the findings should not be interpreted as nationally representative. In addition, because the data were collected via self-report questionnaires, response and social desirability biases were possible. Of the planned sample size of 500, 488 respondents completed the survey and were included in the analysis, representing 97.6% of the planned target sample. The final sample consisted of 326 nursing students and 162 clinical nurses.

Instruments

Caring personality traits were measured using the Inventori Kepribadian untuk Ners–Praktis (IKUN-P), a nursing-specific 50-item short-form instrument developed to profile caring personality traits. The instrument assesses five dimensions: altruism, emotional intelligence, emotional stability, personal integrity, and optimism. These dimensions were derived from a concept analysis of caring personality in nursing and from a broader instrument development process.

Each dimension consists of 10 items rated on a four-point Likert scale ranging from strongly disagree (1) to strongly agree (4). Trait scores were calculated by summing responses within each dimension, with higher scores indicating stronger caring personality traits in that dimension.

In the present study, the IKUN-P demonstrated strong internal consistency, with Cronbach's alpha values of 0.882 for altruism, 0.852 for emotional intelligence, 0.876 for emotional stability, 0.824 for integrity, and 0.902 for optimism (34). The detailed development and preliminary psychometric evaluation of the IKUN-P have been previously presented as preliminary evidence in a scientific conference e-poster. The present manuscript uses the IKUN-P for descriptive profiling rather than full instrument validation; therefore, internal consistency evidence relevant to the current sample is reported, while further validation work is acknowledged as necessary.

Data Collection

The data were collected between September and December 2019 from nursing professional program institutions and regional public hospitals across three Indonesian regions: East Java (Western Indonesia), South Kalimantan (Central Indonesia), and Papua (Eastern Indonesia).

Data were collected using an online self-administered questionnaire. Before accessing the questionnaire, participants were provided with information about the study and asked to indicate their

consent electronically. Participation was voluntary, and respondents could choose not to complete the questionnaire.

Data Analysis

Categorical variables were summarized using frequencies and percentages, while caring personality trait scores were summarized using means and standard deviations. To enhance the study's analytical depth, exploratory inferential analyses were conducted. Independent-samples t-tests were used for two-group comparisons, such as gender and participant group (students vs nurses). One-way analysis of variance (ANOVA) was used for variables with more than two categories, including age group, region of origin, education level, and years of experience. These analyses were interpreted as exploratory and non-causal due to the cross-sectional design and convenience sampling at the participant level.

Ethical Considerations

This study adhered to ethical principles of respect for persons, beneficence, and justice. Ethical approvals were obtained from a university-based nursing ethics committee (No. 295/UN2.F12.D/HKP02.04/2018) and two regional public hospital ethics committees in Indonesia (No. 3502021K121152019120300001/KEP/XII/2019; No. 260/XI-Reg Riset/RSDUDU/19). Electronic informed consent was obtained from all participants before they accessed the questionnaire. Participants were informed about the study purpose, the voluntary nature of participation, confidentiality of responses, and their right to withdraw at any time before submitting the questionnaire.

RESULTS AND DISCUSSION

RESULTS

A total of 488 respondents participated in this study. Nearly half were aged ≤25 years (46.31%), the majority were female (72.75%), and more than half were from Western Indonesia (53.90%). Most participants held a bachelor's degree (55.53%), and 45.70% had less than one year of work experience. Across the five caring personality traits, optimism demonstrated the highest mean score (33.29 ± 4.75). Altruism (31.20 ± 4.60), emotional stability (31.04 ±4.60), and personal integrity (30.88 ± 4.37) showed comparable scores, suggesting a generally moderate caring personality profile across these dimensions. Emotional intelligence had the lowest mean score (30.48 ± 4.83). The overall pattern suggests that participants tended to score higher on optimism and prosocial orientation, whereas emotional intelligence appeared comparatively lower than the other caring personality traits (Table 1).

Table 1. Caring Personality Traits Profile among Indonesian Nursing Professional Students and Nurses (N=488)

Caring Personality Trait	Total Score (Mean ± SD)
Emotional Intelligence	30.48 ± 4.83
Optimism	33.29 ± 4.75
Emotional Stability	31.04 ± 4.60
Altruism	31.20 ± 4.60
Personal Integrity	30.88 ± 4.37

Inferential analysis showed that caring personality trait scores did not differ significantly across age, gender, years of experience, education level, and respondent status. Significant differences were found only by region for emotional intelligence (p=0.046), optimism (p=0.043), emotional stability (p=0.007), and personal integrity (p=0.004). Participants from Central Indonesia generally showed the highest mean scores across these traits. Altruism did not differ significantly by region (p=0.114).

Although participants with Diploma-level education tended to report lower scores across several traits, education-level differences were not statistically significant. These findings suggest that regional variation may warrant further attention when interpreting caring personality trait profiles among Indonesian nursing professional students and clinical nurses (Table 2).

DISCUSSION

This study provides an empirical profile of caring personality traits among Indonesian nursing professional students and clinical nurses using IKUN-P. The main finding was that optimism showed the highest mean score, whereas emotional intelligence showed the lowest mean score among the five caring personality traits. This pattern suggests that participants may possess strong positive psychological resources, yet still require further development in emotional awareness, emotional regulation, and relational competence (16). This discrepancy is particularly notable given that emotional intelligence is fundamentally linked to the capacity to manage interpersonal relationships and express empathy effectively (35). While personality traits reflect average behavioral tendencies, emotional intelligence represents a learnable competency that requires deliberate development, particularly in regulating responses during high-stress clinical interactions (36). Furthermore, distinguishing between inherent personality predispositions and developable emotional competencies is therefore essential, as the latter may be shaped by professional stressors, clinical socialization, and workplace environments (37).

The relatively low emotional intelligence score may also be interpreted in relation to Indonesian cultural norms. In Indonesian society, strong emphasis is often placed on social harmony, respectfulness, emotional restraint, and indirect communication (38–40). These norms may influence how nursing students and clinical nurses perceive, regulate, and express emotions in caring encounters. Consequently, lower emotional intelligence scores should not be interpreted simply as a lack of emotional capacity. Still, they may also reflect culturally specific ways of expressing empathy, managing emotions, and maintaining respectful interpersonal relationships. In hierarchical educational and clinical settings, students and junior nurses may also have limited opportunities to openly express uncertainty, discuss emotional difficulties, or receive feedback on relational aspects of care (41). These contextual factors may restrict the development and expression of emotional intelligence, even when caring values and positive professional motivation are already present.

The high optimism score may be attributed to Indonesian nursing education and professional socialization, where students and nurses are consistently exposed to normative messages about service, compassion, responsibility, and professional dedication. This finding is consistent with the global literature, which suggests that optimism and positive psychological resources can support resilience, constructive coping, and persistence in demanding clinical environments (42). Higher optimism among younger participants (≤25 years) may reflect early-career idealism and strong professional aspirations. In nursing practice, optimism may translate into hope-giving behaviors, persistence in the face of clinical adversity, and constructive coping, which can indirectly shape patients' psychological comfort and engagement with care (20,34,40,41). However, optimism does not ensure the demonstration of caring behavior. Without the ability to recognize emotions, regulate emotional responses, engage in reflective practice, and receive organizational support, optimism may not consistently translate into therapeutic communication or patient-centered interactions (43). Consequently, nursing education should direct optimism toward the development of caring resilience through reflective learning, strength-based mentoring, and the establishment of realistic goals aligned with clinical realities (44,45).

Table 2. Comparison of Caring Personality Trait Scores Across Demographic Characteristics (N=488)

Characteristics	n	%	Caring Personality Traits									
			Emotional Intelligence	p	Optimism	p	Emotional Stability	p	Altruism	p	Personal Integrity	p
Age												
- Late adulthood (>35 y.o)	104	21.31	30.50 ± 3.91	0.954	33.18 ± 4.85	0.519	31.29 ± 4.85	0.748	31.76 ± 4.70	0.324	30.82 ± 4.07	0.551
- Early adulthood (26-35 y.o)	158	32.38	30.40 ± 3.40		33.04 ± 4.06		30.85 ± 3.95		30.90 ± 4.07		30.61 ± 3.53	
- Late adolescent (≤ 25 y.o)	226	46.31	30.52 ± 4.09		33.52 ± 5.14		31.05 ± 4.87		31.14 ± 4.89		31.10 ± 5.08	
Gender												
- Female	355	72.75	30.54 ± 3.76	0.739	33.34 ± 4.64	0.733	30.89 ± 4.48	0.248	31.15 ± 4.52	0.739	30.89 ± 4.30	0.909
- Male	133	27.25	30.29 ± 4.03		33.17 ± 5.03		31.43 ± 4.85		31.31 ± 4.80		30.84 ± 4.56	
Region of origin												
- Western Indonesia	263	53.90	30.32 ± 3.93	0.046*	33.03 ± 5.02	0.043*	30.65 ± 4.64	0.007*	30.96 ± 4.72	0.114	30.54 ± 4.54	0.004*
- Central Indonesia	131	26.84	31.15 ± 3.24		34.17 ± 3.71		32.15 ± 4.11		31.95 ± 3.78		31.95 ± 3.78	
- Eastern Indonesia	94	19.26	29.98 ± 4.22		32.80 ± 5.13		30.61 ± 4.85		30.35 ± 4.46		30.35 ± 4.46	
Education												
- Diploma (D3)	144	29.51	29.88 ± 3.89	0.077	32.54 ± 4.85	0.075	30.51 ± 4.71	0.196	30.47 ± 4.55	0.068	30.00 ± 3.88	0.48
- Bachelor's degree	270	55.53	30.67 ± 3.80		33.64 ± 4.70		31.16 ± 4.53		31.44 ± 4.55		31.17 ± 4.54	
- Master's degree	74	15.16	30.91 ± 3.75		33.49 ± 4.58		31.62 ± 4.48		31.73 ± 4.74		31.54 ± 4.42	
Years of experience												
- More than 10 years	125	25.61	30.53 ± 3.84	0.813	32.79 ± 4.72	0.37	30.94 ± 4.76	0.070	31.34 ± 4.71	0.812	30.47 ± 3.89	0.48
- 1- 10 years	140	28.69	30.61 ± 3.47		33.57 ± 4.17		31.15 ± 4.02		31.29 ± 4.03		31.03 ± 3.63	
- Less than 1 year	223	45.70	30.36 ± 4.05		33.40 ± 5.07		31.05 ± 4.87		31.01 ± 4.87		31.01 ± 5.00	
Status												
- Student	326	66.80	30.58 ± 3.75	0.380	33.46 ± 4.69	0.279	30.97±4.53	0.660	31.30 ± 4.57	0.471	31.14±4.50	0.06
- Nurses	162	33.20	30.26 ± 3.99		32.96 ± 4.84		31.17±4.71		30.98 ± 4.66		30.35±4.05	

*Significant at α=0.05 in ANOVA test

Altruism and emotional stability demonstrated moderate levels, reflecting a stable prosocial orientation and emotional regulation capacity among participants. This finding aligns with nursing theories and the global literature, which position altruism, ethical commitment, and emotional stability as important foundations of professional caring (1,28). Altruism supports compassion, sensitivity to patients' needs, and equitable care provision regardless of patient familiarity or social identity, consistent with professional ethics frameworks (46,47). Emotional stability, meanwhile, enables nurses to maintain consistent emotional responses and self-regulation in high-stress, high-stakes clinical situations, which is essential for sustaining relational care, teamwork, nurse well-being, and patient safety (18,48,49).

In the Indonesian context, these traits may be reinforced by cultural and professional expectations that emphasize helping others, respect, responsibility, moral conduct, and dedication to service. However, such traits may also be challenged by clinical realities, including high emotional demands, workload intensity, time pressure, documentation demands, hierarchical communication, and complex patient needs (50–52). The slightly lower emotional stability observed in some subgroups, such as female participants and those aged 26–35 years, may reflect role strain, early-to-mid career pressure, and multiple professional or family responsibilities (53). Therefore, altruism and emotional stability should not be assumed to develop or persist automatically (53). Educational programs can strengthen these traits through service-learning, narrative pedagogy, moral reasoning exercises, and reflective clinical mentoring, while workforce interventions such as peer support, psychologically safe teams, and structured debriefing may help stabilize affective responses and prevent compassion fatigue (17,18,53,54).

Personal integrity was moderate, indicating a relatively solid ethical foundation among respondents. Integrity is a foundational nursing value that supports ethical decision-making, adherence to professional standards, accountability, and trust-building with patients and healthcare teams (34,55).In the Indonesian nursing context, integrity may be strengthened through professional codes of ethics, role modeling, clinical supervision, and cultural expectations regarding responsibility, respect, and moral conduct (55–57). However, a moderate score also suggests that integrity may not remain stable without organizational support. Clinical pressures, such as documentation burden, staffing constraints, hierarchical communication, and moral distress, may challenge nurses' ability to consistently act in accordance with ethical and professional standards (58). Therefore, healthcare organizations should sustain integrity through ethical leadership, clear reporting pathways, supportive supervision, and non-punitive learning cultures that enable nurses to uphold accountability and compassionate practice under clinical pressure (59).

The exploratory inferential analysis strengthened the descriptive findings by showing that most caring personality traits did not differ significantly by age, gender, years of experience, or respondent status. The absence of significant differences between nursing professional students and clinical nurses suggests that caring personality traits measured by the IKUN-P may reflect relatively stable caring-related dispositions rather than being shaped solely by employment status or length of clinical exposure. This pattern may also indicate that caring, as a fundamental concept and defining characteristic of nursing, has been well understood and internalized by both students and clinical nurses through nursing education. The most notable inferential finding was the significant regional difference in emotional intelligence, optimism, emotional stability, and personal integrity. Participants from Central Indonesia showed the highest mean scores across several traits. This pattern may reflect regional variation in educational environments, institutional culture, clinical learning exposure, mentorship practices, or local social values that shape caring-related dispositions. However, these findings should be interpreted cautiously, as the study used a cross-sectional design and convenience sampling at the participant level. Regional differences should not be viewed as evidence that one region is superior to another, but rather as an indication that caring personality development may be context-sensitive

and influenced by educational and organizational environments.

The significant regional variation in emotional intelligence is particularly important because emotional intelligence emerged as the lowest overall trait. This finding suggests that emotional competence may not develop uniformly across educational and clinical contexts. Differences in learning climate, opportunities for reflection, communication training, supervision style, and hierarchical relationships may influence how nursing students and nurses develop emotional awareness, emotional regulation, and relational competence (60,61). Therefore, strengthening emotional intelligence should be prioritized across regions, with attention to local educational and organizational contexts (62).

Although education level did not show statistically significant differences in most traits, the mean scores tended to be higher among participants with bachelor's or master's degrees than among those with a diploma. This pattern may suggest that longer educational exposure and more advanced academic preparation could support the development of caring-related capacities, especially emotional intelligence, altruism, and integrity (45,62). However, because these differences were not statistically significant, they should be interpreted as descriptive trends rather than confirmed educational effects.

Compared with global nursing literature, the findings are generally consistent with evidence that emotional intelligence, emotional stability, and positive psychological resources are relevant to caring, communication, burnout prevention, and safety-related outcomes (15-18,21,58). The main contribution of this study is the use of an Indonesian caring personality instrument to describe a culturally situated trait profile across both education and clinical service settings. Rather than treating caring as only a behavior observed at the bedside, the study highlights dispositional resources that may precede and support caring behavior (63).

The findings have implications for nursing education, clinical mentorship, and organizational policy. First, nursing curricula should include structured emotional intelligence training, emotion regulation exercises, communication simulation, reflective writing, and feedback-based interpersonal skill development (64–67). Second, clinical mentorship should explicitly model emotional awareness, respectful communication, and ethical decision-making during patient care (68–70). Third, healthcare organizations should protect caring practice by reducing unnecessary administrative burden, strengthening team climate, promoting psychological safety, and supporting nurses' wellbeing (60,61,71).

Thus, caring personality traits may represent both relatively stable personal tendencies and socially embedded values related to empathy, responsibility, respect, and service (72). Future longitudinal studies should examine whether these traits remain stable as students transition into professional roles and encounter the emotional demands of patient–professional interactions. Further research should also explore how institutional environments, clinical mentorship, workload, and organizational culture influence the expression of caring traits in clinical practice.

Overall, the inferential findings support the practical implication that caring personality development should not rely only on individual characteristics such as age, gender, or work experience. Instead, interventions should target educational and organizational contexts that can strengthen caring dispositions. Curriculum-based emotional intelligence training, reflective learning, clinical mentorship, supportive supervision, and psychologically safe work environments may help translate caring personality traits into observable caring behaviors across diverse Indonesian nursing settings.

Although the IKUN-P demonstrated strong internal consistency in this study, reliability alone does not establish full psychometric validity. Because this article focuses on descriptive profiling, it does not provide a comprehensive validation analysis of the instrument. Future studies should further examine the factor structure, construct validity, measurement invariance across student and nurse

groups, and criterion-related validity against observed caring behaviors, patient-reported caring experiences, nurse wellbeing, and professional performance. This study has several limitations. Participant recruitment used convenience sampling within selected sites, which may limit generalizability. The use of self-report measures may introduce social desirability and response bias, especially because caring is a valued professional attribute. The cross- sectional design does not allow for causal inference or for assessing change over time. In addition, although this study conducted exploratory subgroup comparisons, it did not perform multivariable predictive analysis or examine whether caring personality traits predict actual caring behaviors or patient-reported outcomes. Future research should use probability sampling, longitudinal designs, observed caring behaviors, patient-reported caring experiences, and multivariable analyses to examine how caring personality traits translate into clinical caring outcomes.

CONCLUSION

Indonesian nursing professional students and clinical nurses demonstrated a caring personality profile characterized by highest mean score in optimism and the lowest mean score in emotional intelligence. Altruism, emotional stability, and personal integrity showed relatively comparable mean scores. These findings suggest that positive psychological and prosocial resources are present, but emotional competence requires more deliberate educational, clinical, and organizational strengthening. Exploratory inferential analyses showed that caring personality trait scores did not differ significantly by age, gender, years of experience, education level, or respondent status. However, significant regional differences were found in emotional intelligence, optimism, emotional stability, and personal integrity. These findings indicate that caring personality development may be influenced not only by individual characteristics but also by educational, cultural, and organizational contexts.

Nursing programs should strengthen emotional intelligence through reflective learning, empathy-oriented simulation, therapeutic communication practice, emotion regulation exercises, and feedback-based interpersonal skill development. Clinical mentorship should explicitly model and reinforce relational caring, emotional awareness, ethical decision-making, and patient-centered communication. Healthcare organizations should also support caring practice through policies that promote psychologically safe teams, supportive supervision, ethical leadership, manageable workload, and non-punitive learning cultures, enabling nurses to sustain caring under workload and system pressures. Future studies should examine whether IKUN-P traits predict observed caring behaviors, patient-reported caring experiences, nurse wellbeing, and professional performance across diverse Indonesian clinical settings using longitudinal and multivariable designs.

ACKNOWLEDGEMENT

The authors express their sincere gratitude to the nursing professional students and bedside nurses who participated in this study. Appreciation is also extended to the leaders and administrative teams of the participating educational and healthcare institutions for their support in facilitating the research process.

AUTHOR'S CONTRIBUTION STATEMENT

KK: Conceptualisation, Instrument development, Data collection, Writing—original draft, review, & editing; YR: Supervision, Writing—review & editing; JU: Instrument development, Data analysis, Validation, Writing—review & editing; DI: Supervision, Writing-review & editing.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

AI-assisted technologies were used only for language refinement/translation support. All text was reviewed and edited by the authors, who remain responsible for accuracy, originality, and appropriate citation.

FUNDING

No external funding was received for this study.

REFERENCES

1. Smith M, Turkel M, Wolf Z. Caring in nursing classics: An essential resource. New York: Springer Publishing Company; 2013.
2. Alikari V, Gerogianni G, Fradelos EC, Kelesi M, Kaba E, Zyga S. Perceptions of caring behaviors among patients and nurses. Int J Environ Res Public Health. 2022; 20(1): 396. doi: 10.3390/ijerph20010396. PubMed PMID: 36612719; PubMed Central PMCID: PMC9819105.
3. Edvardsson D, Watt E, Pearce F. Patient experiences of caring and person-centredness are associated with perceived nursing care quality. J Adv Nurs. 2017; 73(1): 217–227. Epub 20160923. doi: 10.1111/jan.13105. PubMed PMID: 27532230.
4. Lee S, Palmieri P, Watson J. Global advances in human caring literacy. New York: Springer Publishing Company; 2017.
5. Pajnkihar M, McKenna HP, Štiglic G, Vrbnjak D. Fit for practice: Analysis and evaluation of Watson's theory of human caring. Nurs Sci Q. 2017; 30(3): 243–252. doi: 10.1177/0894318417708409. PubMed PMID: 28899271.
6. Kuntarti K, Yetti K, Novieastari E. The Contributing individuals in developing caring behaviors of nursing students: The focus group finding. Int J Hum Caring. 2018; 22(4):169–178. doi: 10.20467/1091-5710.22.4.169.
7. Walker J, Payne S, Jarrett N, Ley T. Psychology for nurses and the caring professions. 4th ed. New York: Open University Press; 2012.
8. Kantek F, Kaya A, Gezer N. The effects of nursing education on professional values: A longitudinal study. Nurse Educ Today. 2017; 58: 43–46. Epub 20170826. doi: 10.1016/j.nedt.2017.08.004. PubMed PMID: 28866254.
9. Roach M. Caring the human mode of being: A blueprint for the health professions. 2nd rev. ed. Ottawa: CHA Press; 2002.
10. Scarnati J. Beyond technical competence: A passion for persistence. Career Dev Int. 1998; 3(1):23–25.
11. Ortega-Galán Á M, Ruiz-Fernández MD, Carmona-Rega MI, Cabrera-Troya J, Ortíz-Amo R, Ibáñez-Masero O. Competence and Compassion: Key Elements of Professional Care at the End of Life From Caregiver's Perspective. Am J Hosp Palliat Care. 2019;36(6):485–91. Epub 20181205. doi: 10.1177/1049909118816662. PubMed PMID: 30518225.
12. Ion R, Jones A, Craven R. Raising concerns and reporting poor care in practice. Nurs Stand. 2016;31(15):55–63. doi: 10.7748/ns.2016.e10665. PubMed PMID: 27925544.
13. Drahošová L, Jarošová D. Concept Caring in Nursing. Cent Eur J Nurs Midwifery. 2016;7(2):453–460. doi: 10.15452/CEJNM.2016.07.0014.
14. Widiyaningsih T, Yetti K, Kuntarti K. The competency of clinical instructors as it relates to the caring behavior of new nurses. Enferm Clín. 2019; 29: Suppl 2:815–819. doi: 10.1016/j.enfcli.2019.04.122.

15. Aupia A, Lee TT, Liu CY, Wu SV, Mills ME. Caring behavior perceived by nurses, patients and nursing students in Indonesia. J Prof Nurs. 2018; 34(4): 314–319. Epub 20171128. doi: 10.1016/j.profnurs.2017.11.013. PubMed PMID: 30055686.
16. Pérez-Fuentes MDC, Molero Jurado MDM, Del Pino RM, Gázquez Linares JJ. Emotional intelligence, self-efficacy and empathy as predictors of overall self-esteem in nursing by years of experience. Front Psychol. 2019; 10: 2035. Epub 20190918. doi: 10.3389/fpsyg.2019.02035. PubMed PMID: 31620041; PubMed Central PMCID: PMC6759937.
17. Raghubir AE. Emotional intelligence in professional nursing practice: A concept review using Rodgers's evolutionary analysis approach. Int J Nurs Sci. 2018;5(2):126–130. Epub 20180406. doi: 10.1016/j.ijnss.2018.03.004. PubMed PMID: 31497624; PubMed Central PMCID: PMC6718873.
18. Teng CI, Chang SS, Hsu KH. Emotional stability of nurses: impact on patient safety. J Adv Nurs. 2009;65(10):2088–2096. doi: 10.1111/j.1365-2648.2009.05072.x. PubMed PMID: 19674173.
19. Alarcon G, Eschleman K, Bowling N. Relationships between personality variables and burnout: A meta-analysis. Work Stress. 2009;23(3):244–263. doi:10.1080/02678370903282600.
20. Alessandri G, Perinelli E, De Longis E, Schaufeli WB, Theodorou A, Borgogni L, et al. Job burnout: The contribution of emotional stability and emotional self-efficacy beliefs. J Occup Organ Psychol. 2018;91(4):823–851. doi:10.1111/joop.12225.
21. Kuntarti, Rustina Y, Umar J, Irawati D. Concept analysis of caring personality for nursing: A review. Pertanika J Soc Sci Humanit. 2020; 28(4):2485–2504. doi: 10.47836/pjssh.28.4.01.
22. Watson J. Caring as the essence and science of nursing and health care. O Mundo da Saúde São Paulo. 2009;33(2):143–149. doi:10.15343/0104-7809.200933.2.2.
23. Luthans F, Norman SM, Avolio BJ, Avey JB. The mediating role of psychological capital in the relationship between supportive organisational climate and employee performance. J Organ Behav. 2008;29(2):219–238. doi:10.1002/job.507.
24. Tindle HA, Duncan MS, Liu S, Kuller LH, Fugate Woods N, Rapp SR, et al. Optimism, pessimism, cynical hostility, and biomarkers of metabolic function in the Women's Health Initiative. J Diabetes. 2018; 10(6): 512–523. doi:10.1111/1753-0407.12584.
25. Gabbert WL. Beyond online: Enhancing caring and professional practice in nursing education. Int J Hum Caring. 2008;12:68–80.
26. Gillin N, Taylor R, Walker S. Exploring the concept of 'caring cultures': A critical examination of the conceptual, methodological and validity issues with the 'caring cultures' construct. J Clin Nurs. 2017; 26(23–24):5216–5223. doi:10.1111/jocn.13858.
27. Hafid MA. Hubungan kinerja perawat terhadap tingkat kepuasan pasien pengguna Yankestis dalam pelayanan keperawatan di RSUD Syech Yusuf Kab. Gowa. J Kesehat UIN Alauddin. 2014;7(2). doi:10.24252/kesehatan.v7i2.56.
28. Lin M-L. Correlations between nursing students' caring behaviour, empathy, and personality traits: A Cross-Sectional Study. Scand J Caring Sci. 2025; 39(4): e70128. doi:10.1111/scs.70128.
29. Atta MHR, Hammad HA-H, Elzohairy NW. The role of Empathy in the relationship between emotional support and caring behaviour towards patients among intern nursing students. BMC Nurs. 2024; 23(1):443. doi:10.1186/s12912-024-02074-w.
30. Hofmeyer A, Kennedy K, Taylor R. Contesting the term 'compassion fatigue': Integrating findings from social neuroscience and self-care research. Collegian. 2020;27(2):232–237. doi:10.1016/j.colegn.2019.07.001.
31. Brethel-Haurwitz KM, Stoianova M, Marsh AA. Empathic emotion regulation in prosocial behaviour and altruism. Cogn Emot. 2020. 34(8): 1532–1548. doi:10.1080/02699931.2020.1783517.

32. Bolatturk FG, Uslusoy EC. The effect of clinical mentor in developing caring behaviours of nursing students: A mixed-method study. Perspect Psychiatr Care. 2022;58(4):1786 – 1792. doi:10.1111/ppc.12989.
33. Kurniawati CN, Bunga AL. Pengaruh budaya organisasi dan beban kerja terhadap perilaku caring perawat di ruangan rawat inap keperawatan RS X: Literature review. Media Publ Promosi Kesehat Indones. 2024;7(1):27–38. doi:10.56338/mppki.v7i1.4328.
34. Kuntarti K. Pengembangan instrumen kepribadian caring: Inventori Kepribadian untuk Ners (IKUN). Depok: Universitas Indonesia; 2021.
35. Afandi AT, Ardiana A, Muhammad Nur KR, Sutawardana JH, Rasni H, Sulistyorini L, et al. Understanding nurses' caring behaviour: The impact of work environment and individual factors. J Keperawatan Soedirman; 2025; 20 (3). doi: 10.20884/1.jks.2025.20.3.13689.
36. Nwanzu CL, Babalola SS. Examining the moderating role of workload in the relationship between emotional intelligence and caring behaviour in healthcare organisations. Int J Bus Sci Appl Manag. 2020;15(1):17–29. doi:10.69864/ijbsam.15-1.136.
37. Garner D, Carvalho J de, Spears B. Emotional intelligence and academic performance among college students: A quantitative analysis. J Educ Hum Dev. 2025; 14:1-10. doi: 10.15640/jehd.v14p8.
38. Zaluchu SE, Widodo P, Kriswanto A. Conceptual reconstruction of religious moderation in the Indonesian context based on previous research: Bibliometric analysis. Soc Sci Humanit Open. 2025;11:101552. doi:10.1016/j.ssaho.2025.101552
39. Marvianto RD, Kurniawan DV, Husein MN. Unveiling the characteristics of depression symptoms in the Indonesian population: Lessons learned from the 5th wave of the Indonesian Family Life Survey (IFLS-5). Acta Psychol (Amst). 2026;262:106093. doi:10.1016/j.actpsy.2025.106093.
40. Panggabean H, Murniati J, Tjitra H. Profiling intercultural competence of Indonesians in Asian workgroups. Int J Intercult Relations. 2013;37(1):86–98. doi:10.1016/j.ijintrel.2012.04.002.
41. Lubbe L, Dungelo A, Caewood KJ, Mopumulo N, Nozakuzaku N, Yazbek T, et al. Emotional challenges faced by student nurses during clinical placement: A scoping review. Heal SA Gesondheid. 2026; 31 (a3319): 1-10. doi:10.4102/hsag.v31i0.3319.
42. Cruz JP, Cabrera DNC, Hufana OD, Alquwez N, Almazan J. Optimism, proactive coping and quality of life among nurses: A cross-sectional study. J Clin Nurs. 2018;27(9–10):2098–2108. doi:10.1111/jocn.14363.
43. Erkayiran O, Demirkiran F. The Effect of emotion regulation training on nurses: A Quasi-experimental study. Nurs Heal Sci. 2024; 26(e70017). doi:10.1111/nhs.70017.
44. Aryuwat P, Holmgren J, Asp M, Radabutr M, Lövenmark A. Clinical resilience in nursing education: Insights from Thai instructors on supporting student growth. Nurs Reports. 2025;15(5). doi: 10.3390/nursrep15050180.
45. Hughes V, Cologer S, Swoboda S, Rushton C. Strengthening internal resources to promote resilience among prelicensure nursing students. J Prof Nurs. 2021;37(4):777–83. doi: 10.1016/j.profnurs.2021.05.008.
46. Çiftçi B, Noyan EN, Yıldız GN. How important is altruism to nursing students? Perspect Psychiatr Care. 2022; 58(4): 1776–1785. doi: 10.1111/ppc.12987
47. Messineo L, Seta L, Allegra M. The relationship between empathy and altruistic motivations in nursing studies: a multi-method study. BMC Nurs. 2021;20(1). doi: 10.1186/s12912-021-00620-4.
48. Abdulah DM, Piro RS, Yaseen YA. Emotional intelligence and its impacts on the clinical performance of nurses in general public hospitals. Front Nurs. 2021;8(4):381–8. doi:10.2478/fon-2021-0038.
49. Landa JMA, López-Zafra E. The impact of emotional intelligence on nursing: An overview. Psychol. 2010. 1: 50-58. doi: 10.4236/psych.2010.11008.

50. Wati NMN, Juanamasta IG, Thongsalab J, Yunibhand J. Strategies and challenges in addressing ethical issues in the hospital context: A phenomenological study of nurse team leaders. Belitung Nurs J. 2023;9(2):139–144. doi: 10.33546/bnj.2446.
51. Wulandari TS, Ismail S. Exploring Nurses' experience of managing attention and mood in post-stroke patients: A Qualitative study. J Keperawatan Padjadjaran. 2019;7(2):112–118. doi: 10.24198/jkp.v7i2.1000.
52. Mailani F, Muthia R, Huriani E, Krisdianto BF, Oktarina E. The challenges of intensive care unit nurses caring for COVID-19 patients in Indonesia: A Qualitative study. Nurse Media J Nurs . 2022;12(2):233–48. doi: 10.14710/nmjn.v12i2.46250.
53. Avdullahi A, Yildirim O. The mediating Role of Emotional Stability between Regulation of Emotion and Overwork BT - Eurasian Business and Economics Perspectives. In: Bilgin MH, Danis H, Demir E, García-Gómez CD, editors. Cham: Springer International Publishing; 2021.p. 53–69.
54. Lee Y-H, Wu Y-L, Lien AS-Y. Exploring the professional identity process of university social responsibility courses' rural service programs on nursing students: A multi-method research. Nurse Educ Today. 2025;147:106597. doi: 10.1016/j.nedt.2025.106597.
55. Cribb A. Integrity at work: managing routine moral stress in professional roles. Nurs Philos. 2011 Apr 1;12(2):119–127. doi:10.1111/j.1466-769X.2011.00484.x.
56. Sulistiadi W, Rahayu S, Veruswati M, Asyary A. Health personnel improvement in the implementation of Shariah's ethical code of conduct in Tangerang Hospital, Indonesia. J Environ Public Health. 2022. doi: 10.1155/2022/5548840.
57. Sastrawan S, Newton JM, Malik G. Nurses' integrity and coping strategies: An integrative review. J Clin Nurs. 2019;28(5–6):733–744. doi: 10.1111/jocn.14702.
58. Berggren I, Barbosa da Silva A, Severinsson E. Core ethical issues of clinical nursing supervision. Nurs Health Sci. 2005;7(1):21–28. doi:10.1111/j.1442-2018.2005.00224.x.
59. Asmaningrum N, Tsai Y-F. Nurse perspectives of maintaining patient dignity in Indonesian clinical care settings: A multicenter qualitative study. J Nurs Scholarsh. 2018; 50(5): 482–491. doi:10.1111/jnu.12410.
60. Espinoza P, Peduzzi M, Agreli HF, Sutherland MA. Interprofessional team member's satisfaction: A mixed methods study of a Chilean hospital. Hum Resour Health. 2018; 16(1). doi: 10.1186/s12960-018-0290-z.
61. LaPlante RD, Ponte PR, Magny-Normilus C. Essential elements and outcomes of psychological safety in the healthcare practice setting: A systematic review. Appl Nurs Res. 2025; 83: 151946. doi:10.1016/j.apnr.2025.151946.
62. Wodwaski N, Webber E. Empowering future nurses: Integrating emotional intelligence into nursing education. Nurse Educ. 2026;51(1). doi: 10.1097/NNE.0000000000002020.
63. Handayani ET, Kuntarti K. Nurses' caring behavior based on personality in Indonesia : A pilot study for better-humanized healthcare services. J Public health Res. 2022;11(2741). doi: 10.4081/jphr.2021.2741.
64. Hausman M, Detroz P, Pétré B, Guillaume M, Dancot J. Feedback processing and emotion regulation in nursing students during internship. Learn Instr. 2023; 87 (101804). doi: 10.1016/j.learninstruc.2023.101804.
65. Hannans J, Nevins C. Using Mixed Reality to Practice Difficult Conversations. Clin Simul Nurs. 2024;86. doi: 10.1016/j.ecns.2023.101472.
66. Shahabi NA, Hosseininasab D, Azmoudeh M. Comparison of the effects of emotion regulation training and interpersonal skills training on the compassion and social-self adjustment of nurses in Tabriz. Med J Tabriz Univ Med Sci. 2026;47(6):647–660. doi: 10.34172/mj.026.35126.

67. Ahmadpour N, Shariati A, Moghadam MP. Effect of narrative writing based on Gibbs' reflective model on the empathy and communication skills of nursing students. BMC Med Educ. 2025; 25(10). doi: 10.1186/s12909-024-06593-7.
68. Harlan MD, Skrovanek E, Torgerson S, Perpetua Z, O'Loughlin V, Hudack C, et al. Meaningful mentorship: Evaluation of a mentorship program to reduce burnout in nursing students and graduate nurses. Nurse Educ. 2025; 50(5): 231–235. doi: 10.1097/NNE.0000000000001915.
69. Bedzow I, Wynia MK, Brendel RW. From Awareness to Action teaching ethical decision-making to health-care leaders. Perspect Biol Med. 2025; 68 (2): 297–313. doi: 10.1353/pbm.2025.a962025.
70. Jefford E, Nolan S, Munn J, Ebert L. What matters, what is valued and what is important in mentorship through the Appreciative Inquiry process of co-created knowledge. Nurse Educ Today. 2021; 99. doi: 10.1016/j.nedt.2021.104791.
71. Patole S. Psychological safety in healthcare – helping everyone to speak up. Semin Fetal Neonatal Med. 2026 Apr 17:101738. doi: 10.1016/j.siny.2026.101738. Epub ahead of print. PMID: 42014213.
72. Wang X, Shao J, Weng A, Lian J, Wen F, Fang Q, et al. Nurses' personality traits and perceived work environments during public health emergencies: Implications for nursing workforce planning. Risk Manag Healthc Policy. 2024;17:1199–210. doi: 10.2147/RMHP.S458235.