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Mediating Effect of Motivation on the Relationship Between Lecturer Experience and Learning Environment With Caring Character Among Undergraduate Nursing Student in Indonesia

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Abstract

Introduction: Caring is learned through faculty role-modeling and clinical interactions, enhancing nursing students' caring character. Relationship between caring, motivation, teacher experience, and learning environment remains uncertain.
Objective: The present study aimed to explore the relationship between their caring characters, motivation, lecturer experience, and learning environment among undergraduate nursing students in Indonesia.
Methods: A cross-sectional study was conducted between December 2022 and February 2023, recruiting 550 undergraduate nursing students from 10 universities in West Java province, Indonesia. The study included instruments such as students' perceptions of learning, academic motivation scale, service quality assessment of instructional laboratories, and caring character learning instrument. The Bootstrap analysis was used to analyze the mediating effect of study variable.
Results: The study involved participants aged 20–25 years. The mean scores for caring characters, lecturer experience, motivation, and learning environment were 2.18 ± 0.97, 3.46 ± 1.20, 4.32 ± 1.53, and 5.96 ± 2.08, respectively. The results showed significant direct effects of lecturer experience on caring character, mediating effects of learning environment, motivation, and chain mediating effects of learning environment and motivation. The direct effect accounted for 44.34% of the total effect, while the indirect effect was 35.21%.
Conclusions: The study found that learning environment and motivation mediate the relationship between lecturer experience and caring characters among undergraduate nursing students in West Java, Indonesia. Emphasizing best practices and creating a student-friendly environment is crucial for fostering guidance and support.

Keywords

motivation, lecturer experience, learning environment, caring character, nursing student

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Introduction

Caring is increasingly recognized as a crucial trait for nurses, as it involves performing acts with the intention of showing physical or emotional care or concern to make others feel more at ease (Sitzman et al., 2019; Warshawski et al., 2018). The concept of caring is rooted in cultural care and Watson's theory of human caring (McFarland & Wehbe-Alamah, 2014; Sitzman et al., 2019). Researchers have found that caring science is the foundation or "mother discipline" for clinical caring science, which emphasizes patients and their environments in healthcare (Rehnsfeldt et al., 2017). The science of caring informs and serves as a moral, philosophical, theoretical, and foundational starting point for nursing education, patient care, research, and administrative practices (Watson, 2008). Research shows that caring is a growing art in nursing, and developing

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compassionate attitudes and behaviors is a priority in nursing programs.

Leyva et al. (2015) define caring as a set of activities nurses perform during patient encounters, influenced by factors such as the nurse's personality, patient background, culture, and the nature of the nursing encounter. Studies in Greece, the Philippines, India, and Nigeria have shown good caring behaviors in physically based care interventions (Labrague et al., 2015). However, in China, baccalaureate nursing students lack the skills to provide humanistic care (Li et al., 2016). Research shows that nursing students show less caring behavior and compassion in clinical situations (Aboshaiqah & Qasim, 2018; Alabdulaziz et al., 2020; Labrague et al., 2017). Third-year nursing students are more likely to value caring behaviors than first-year students, making it essential to train nurses to be more compassionate (Mlinar, 2010). However, a study in Indonesia found that students with 8-week clinical experiences scored higher in the caring behavior domain of connectedness than students with 4-week experiences (Aupia et al., 2018), and workload was the most dominant factor that influences caring behavior in nursing students (Nursalam et al., 2015).

Students learn to care through observations and interactions with instructors in clinical and classroom setting atmosphere (Dillon & Stines, 1996; Ma et al., 2014). However, the nursing curriculum lacks a significant proportion of caring courses, with less than 5%. This is lower than countries such as the U.S., Germany, and England, where literacy in these areas is estimated between 12% and 29% (Aiken et al., 2014). This makes it challenging to incorporate care-focused courses into the formal nursing curriculum. Many Indonesian nursing schools lack a comprehensive humanities curriculum, leading to passive observation and insufficient active participation from students. Moreover, few nursing lecturers receive training specifically on caring courses. In Indonesia, the bachelor's degree education for nursing began in 1985. The curriculum design for each nursing school has not been unified and perfected, and nursing educators focus more on developing students' research ability rather than their caring characters, which are also indispensable in clinical practice. The classroom environment, including teacher-student relationships, influences students' ability to care for others, potentially jeopardizing their ability to provide competent and compassionate treatment (Labrague et al., 2015). Academic and clinical stressors also impact nursing students' educational journey (Felicilda-Reynaldo et al., 2017).

Motivation is crucial in nursing school, as it helps develop empathy for patients and their families. Self-determination theory suggests a spectrum of motivation, including extrinsic, intrinsic, and extrinsic motivations (Deci & Ryan, 2000; Ryan & Deci, 2022). Intrinsic motivation drives pursuit of activities aimed at personal satisfaction, and external factors determine the urge to complete tasks, while environmental factors influence external motivation (Fairchild et al., 2005). However, caring is a crucial personal attribute for nursing students, as it helps them develop a deep understanding of the profession and establish professional values. It also fosters a love for nursing and a sense of accomplishment through patient service. However, the relationship between caring, motivation, teacher experience, and learning environment on baccalaureate nursing students remains uncertain due to limited studies. Exploring their caring characters, motivation, teacher experience, and learning environment is essential to improve understanding and evaluate the teaching quality of the baccalaureate nursing program. The present study aimed to explore the relationship between their caring characters, motivation, lecturer experience, and learning environment among undergraduate nursing students in Indonesia.

Methods

Design

A descriptive cross-sectional study in West Java, Indonesia, aimed to test correlations between variables between December 2022 and February 2023. The study uses the STROBE methodology for cross-sectional research.

Participants and Procedure

A study recruited undergraduate nursing students in West Java province, Indonesia, from fifth grade clinical stage of bachelor programs, using a convenience sampling method. Full-time students were eligible to participate. Exclusion criteria were those who take a school leave. The sample size was calculated using the G-power software version 3.1.9.7 with F-tests assuming an effect size of 0.05 and alpha of 0.05. The estimated minimum sample size was 540 students, assuming a 15% attrition rate. Finally, 550 participants were recruited for the study (response rate = 57.9%).

The university's ethics review board approved the study (2697-KEPK), and heads of participating schools were invited via email to participate. Prospective students were sent an online survey with a participation information document outlining the study's goals and methods. The survey assured participants that their participation was voluntary, confidential, and not used. After informed consent, the study could proceed.

Instrument

The self-fill questionnaire consists of three sections: an introductory section explaining the study's purpose and anonymity and a second section collecting demographic information on age, gender, grade, residence, single-child family, student leader experience, and region. The third section comprised students' perceptions of learning from industrial experienced lecturers, academic motivation scale short, service quality

assessment of instructional laboratories, and caring character learning instrument.

The instrument used to measure caring-based character learning is the caring character learning instrument with 65 statement questions and has been declared valid and reliable (r count 0.378–0.949 > r table 0.361; alpha 0.959 > 0.700). A 4-point Likert scale (0 = never, 1 = sometimes, 2 = often, and 3 = always), with higher scores reflecting more frequent caring behaviors.

The instrument used to measure student motivation is a modification of the Academic Motivation Scale: Short Indonesian Language Version questionnaire (Natalya, 2018) with 13 statement questions and has been declared valid and reliable (r count 0.435–0.816 > r table 0.361; alpha 0.922 > 0.700). This instrument uses a Likert scale that provides six response choices, from "greatly disagree" to "greatly agree."

The instrument used to measure learning facilities is a modification of the Service Quality Assessment of Instructional Laboratories questionnaire (Cerna & Neda, 2016) and LibQUAL (Association of Research Libraries Washington, 2020) with 18 statement questions and has been declared valid and reliable (r count 0.363–0.864 > table r 0.361; alpha 0.907 > 0.700). The scores for expectation and perception items were obtained on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The instrument used to measure lecturers' experience is a modification of the Students' Perceptions of Learning from industrial experienced lecturers' questionnaire (Johan, 2015) with 12 statement questions and has been declared valid and reliable (r count 0.389–0.812 > r table 0.361; alpha 0.838 > 0.700). Survey responses were manually scored (totally disagree = 1, disagree = 2, do not care/do not know = 3, agree = 4, totally agree = 5).

Data Analysis

IBM SPSS version 20.0 was used to analyze the data. The data was analyzed using descriptive statistics (i.e., percentages, averages, and standard deviations). Descriptive statistics, namely, the independent sample t test, were used to examine the mean and standard deviation of caring character over a wide range of demographic characteristics. Pearson's correlation test was used to investigate the relationship among caring characters, caring, motivation, teacher experience, and learning environment. To assess the predictive role of perceived caring characters on professional identity, hierarchical regression analysis was conducted after adjusting for age, gender, grade, residence, single-child family, student leader experience, and region. The Bootstrap mediation effect test model analyzed the mediating effect of motivation on lecturer experience, caring characters, and learning environment, examining the relationship between these factors. A p-value $\leq .05$ was considered statistically significant.

Results

The average age of the participants was 23.56 ± 2.33 years with a range of 20–25 years. The study included 413 women participants (75.1%) and 89.1% Muslim, with 68.4% living in urban areas. One hundred and ninety eight were single-child families, and 38.4% had experience as a student leader (Table 1).

The total score of caring character has significant differences among gender and experience in being a student leader; however, there was no significance among different residences, single-child families, and religions ($p > .05$) (Table 1).

The mean scores of caring characters, lecturer experience, motivation, and learning environment were found to be 2.18 ± 0.97, 3.46 ± 1.20, 4.32 ± 1.53, and 5.96 ± 2.08, respectively. Furthermore, Table 2 shows the significant positive correlations between participants' caring characters with lecturer experience ($r = .45$, $p = .001$), caring characters with motivation ($r = .61$, $p = .001$), and caring characters with learning environment ($r = .53$, $p = .001$).

The intermediate role of motivation in the influence of lecturer experience, learning environment, and caring characters was analyzed (Table 3). This study found that motivation ($\beta = 5.637$, $p = .001$), lecturer experience ($\beta = 5.581$, $p = 0.01$), and learning environment ($\beta = 4.322$, $p = .001$) had significant positive effects on caring characters. In addition, lecturer experience and learning environment had significant positive effects on motivation ($\beta = 5.514$, $p = .001$ and $\beta = 4.781$, $p = .001$, respectively).

The significance of the intermediate effect was tested by the Bootstrap analysis, as shown in Table 4. The results showed that the direct effect of lecturer experience on caring character, the mediating effect of learning environment, the mediating effect of motivation, and the chain mediating effect of learning environment and motivation were significant. The direct effect accounts for 44.34% of the total effect, while the total indirect effect accounts for 35.21%. At the same time, the intermediary effect of learning environment accounts for 18.45% and the intermediate effect of motivation accounts for 16.23%, of which the chain intermediary effect of learning environment and motivation accounts for 11.21%.

Discussion

This study found that learning environment and motivation mediate the relationship between lecturer experience and caring characters among undergraduate nursing students in West Java, Indonesia. Conducive learning environment was cited as a facilitator to build caring characters. The results of the present study reveal that most students were highly motivated to study nursing and showed great interest in the prestige of being a nurse (Findyartini et al., 2020). Moreover, lecturer experience acts as a role-modeling, which contributes to the development of caring characters.

Table 1. The Difference Between Groups of Humanistic Care Ability ($N = 550$).

Variables		*n* (%)	Caring character score	*t*/*F*	*p*
Gender	Male	137 (24.9)	2.06 ± 0.12	2.45	.016
	Female	413 (75.1)	2.93 ± 0.15		
Residence	Urban	376 (68.4)	2.41 ± 0.11	0.35	.137
	Rural	174 (31.6)	2.38 ± 0.17		
Single-child family	Yes	198 (36)	2.11 ± 0.12	0.39	.354
	No	352 (64)	2.32 ± 0.15		
Experience in being a student leader	Yes	211 (38.4)	2.73 ± 0.18	4.27	.001
	No	339 (61.6)	2.10 ± 0.11		
Religion	Muslim	490 (89.1)	2.87 ± 0.14	0.078	.156
	Non-Muslim	60 (10.9)	2.63 ± 0.13		

Table 2. Means and Correlation Coefficients of the Variables ($N = 323$).

Variables	Mean ± SD	1	2	3	4
Caring character	2.18 ± 0.97	1			
Lecturer experience	3.46 ± 1.20	0.45*	1		
Motivation	4.32 ± 1.53	0.61*	0.41*	1	
Learning environment	5.96 ± 2.08	0.53*	0.37*	0.49*	1

SD = standard deviation.
*$p < .01$.

This study highlighted that lecturer experience through care role models is important for learning and also for visible care images, and student nurses learn caring from faculty role models as well as practicing nurses; thus, caring begets caring (Ma et al., 2014). In a nurturing, caring learning environment and lecturer experience, students can have support from team members, which can facilitate the enhancement of caring (Roberts, 2009). Thomas et al. pointed out that the value systems that students are exposed to in practice are important to nurses on a world-wide base (Thomas et al., 2012). Thus, what caring education students receive and what they learn from caring education are of concern. There is clearly still a long way to go for educators to explore in the way of effective methods to convey caring concept to students. In the present study, a consistent curricular approach combined with staff training focused on role model development seemed to support the development of caring characters among nursing students.

The association between lecturer experience and caring personalities was shown to be mediated by learning environment and motivation among undergraduate nursing students in West Java, Indonesia. Caring personalities can be fostered in a conducive learning environment. According to the findings of the current study by Findyartini et al., (2020), the majority of students were extremely motivated to study nursing and showed considerable interest in the dignity of being a nurse. Furthermore, the lecturers' experiences serve as role models, which aids in the growth of compassionate personalities. Student nurses learn caring from both faculty role models and practicing nurses; therefore, caring generates caring (Ma et al., 2014). This study highlighted the importance of lecturer experience through care role models for learning and for visible care images. Students' ability to care for others can be fostered through the help of team members in a safe, supportive classroom setting (Roberts, 2009). Thomas et al., (2012) noted the significance of students' exposure to practice-based value systems to nurses around the world. Consequently, it is important to be concerned about the outcomes of students' exposure to and acquisition of caring education.

Undergraduate nursing students' motivation is an important mediator for fostering caring characters. The self-determination hypothesis posits that if the quality of the motivation is low, then it would not matter how much of it there is. According to a research by Vansteenkiste et al. (2009), high-quality motivation is determined by autonomous or internal control, while low-quality motivation is determined by external control. However, in the contemporary situation, which reflects a collectivist and hierarchical society, an individual's inner motivation to become a nurse may be driven to satisfy external expectations by cultivating caring towards patients despite the patients' conditions. The present study highlights the significance of providing a supportive learning environment in nursing education, one that can meet students' needs for autonomy, a sense of academic efficacy, and social connection, in light of the motivational profiles of both preclinical students in the current setting (Ponnamperuma et al., 2009).

Self-motivation alone is insufficient for learning about caring characters and applying it in clinical settings; a conducive learning environment encourages growth in all areas (Doménech-Betoret et al., 2017). Watson argued that system and environment are crucial in the process of learning to care (Watson, 2008), highlighting the relevance of the group, community, and learning circle. This investigation may highlight the importance of supportive classroom environments in cultivating caring attitudes and behaviors among

Table 3. The Results From Mediation Analysis Using a Bootstrapping Method for Caring Character Among Nursing Students.

Outcome	Predictors	*R*	R^2	*F*	β	*t*	*VIF*
Caring character	Lecturer experience	0.731	0.612	135.2***	4.561	14.45	1.256
Learning environment	Lecturer experience	0.734	0.652	97.72***	6.781	8.87	2.545
Motivation	Lecturer experience	0.711	0.633	114.4***	5.514	11.21	2.324
	Learning environment				4.781	15.12	3.146
Caring character	Lecturer experience	0.821	0.876	257.2***	5.581	10.23	2.234
	Learning environment				4.322	6.75	3.115
	Motivation				5.637	7.34	3.265

**$p < .01$; ***$p < .001$.

Table 4. Indirect Effect of Lecturer Experience on Caring Character via Learning Environment and Motivation.

			95% confidence interval	
Path	Coefficient	Relative effect %	Boot LLCI	Boot ULCI
Total effect	4.43		2.48	6.11
Direct effect	3.44	44.34	1.01	5.15
Total indirect effect	2.78	35.21	1.78	5.98
Lecturer experience → learning environment → caring character	1.52	18.45	1.10	3.56
Lecturer experience → motivation → caring character	1.85	16.23	1.05	3.52
Lecturer experience → learning environment → motivation → caring character	0.57	11.21	0.09	0.98

LLCI = lower limit of confidence interval; ULCI = upper limit of confidence interval.

nursing students. Hence, earning how to care for patients in a classroom setting is essential.

The results showed that the mean score for caring characters among graduate nursing students was 2.18 out of 3. This is consistent with the earlier study by Labrague et al. (2015) and suggests that graduate nursing students believe they exhibit positive caring personalities. Consistent with previous research (Liao & Liu, 2016), the four-dimensional scores for knowledge of caring and ability of caring were higher than those for attitude of caring and perceptions of caring. A good nurse prioritizes patients' well-being and provides comprehensive care. Nursing students struggle to internalize care attitude due to lack of understanding nursing essence and focus on technical strategies, hindering their practice. Caring perception involves a steady mental state involving receiving and giving care to others (Chen et al., 2011). Rewarding kindness can inspire more acts of kindness (Labrague et al., 2015). Caring knowledge and skills can be acquired through training and daily experience. However, nursing education should focus on internalization to ensure stable caring characters. A methodical and structured approach to curriculum development is necessary in four-year university programs.

This study found that male students had lower caring characters than female students. The nursing profession has historically been predominantly associated with women, resulting in a continued majority representation of women within nursing communities. Despite the considerable improvement in the public's opinion of male nurses, it is imperative for male nurses to possess a pragmatic understanding of the nursing profession. The conventional contradiction between masculinity and the concept of caring has been observed to contribute to a disparity in the display of caring behaviors between female and male nurses (Lee et al., 2010). The study conducted by Street (2002) revealed that female nurses exhibit a greater inclination towards partnership-building, display a reduced reliance on directives, and adopt a more collaborative approach to decision-making compared to their male counterparts. Conversely, male nurses tend to have a more individualistic approach. The potential correlation could be attributed to variances in communication techniques and leadership styles based on gender (Merchant, 2012). Nevertheless, it is worth noting that the current study's sample size may not adhere to statistical norms due to the very low representation of male nursing students, accounting for only 24.9% of the total sample. Further investigation is required in order to gain a comprehensive understanding of the gender-based disparities in attitudes of caregiving within the nursing field, particularly in light of the ongoing COVID-19 pandemic and the increasing occurrence of global public health crises.

Another major finding from the study was the statistically significant difference between caring characteristics and experience as a student leader. Previous research has indicated a correlation between leadership and caring behavior among nursing students (Benson et al., 2012; Gunther et al., 2007). The study conducted by Lee & Jung (2022) underscored the significance of increased levels of caring in fostering elevated self-leadership. This is achieved through the cultivation of a heightened awareness of one's own emotions and the subsequent regulation of these emotions across various contexts. Given that the university phase serves as a crucial stage for students to equip themselves for active engagement in broader society, it becomes imperative to foster the development of their self-leadership abilities, thus facilitating a more promising trajectory towards their future endeavors. Further investigation is warranted to properly and comprehensively explore the underlying mechanism linking these factors.

Limitations

This study was conducted at a one province with low response rate, which may limit its generalizability. Analysis considered unique characteristics of students, curriculum, and learning environment at each year level, as analyses were conducted at a single level throughout clinical stages. The authors acknowledge that the self-reported questionnaires used in this study have limitations; however, they believe that students' replies were genuine because the surveys were completed anonymously, without impacting grades. This online study, conducted on a free platform, minimized missing data by preventing participants from continuing questions until mandatory fields were completed. The information was entered directly into an Excel spreadsheet, ensuring accurate transcribing and minimizing errors.

Implication

The study emphasizes the significance of teacher experience in creating a conducive learning environment and inspiring students during clinical experiences. Best practices must be emphasized, and a welcoming atmosphere must be created, if nursing students are to develop caring characters. Awareness and encouragement can be fostered through training and skill-building courses focused on caring practices. Educators in the field of nursing need to take account of their students' lives and assist them in establishing their identity in the profession at the correct time. Education programs have been demonstrated to improve nursing students' empathy and sense of professionalism. The goal of nursing education is to foster students' own growth and development while also preparing them to provide competent, caring services to patients (Begum & Slavin, 2012; Cook & Cullen, 2003; Guo et al., 2018).

Conclusion

The present study provides empirical evidence of the associations between caring characters, motivation, lecturer experience, and learning environment among baccalaureate nursing students in Indonesia. The significance of the learning environment in fostering motivation and development of caring among undergraduate nursing students may be evaluated, and future research might investigate the longitudinal association between caring characters and motivation type.

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Author Contributions

BP and AH were responsible for study supervision. BP was responsible for study concept and design and drafting of the manuscript. AB was involved in evolving the ideas and editing the manuscript. LL collected the data and data analysis. All authors have contributed to and have approved the final manuscript.

Data Availability

The raw data supporting the conclusions of this article will be made available as requested to the corresponding author.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethics Statement

The studies involving human participants were reviewed and approved by the Institutional Ethical Review Board of affiliated Airlangga University (2697-KEPK). The patients/participants provided their written informed consent to participate in this study.

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