

**Factors Associated With Caring Among Nursing Students in Rural Area, Indonesia**Prestasianita Putri<sup>1✉</sup>, Ika Adelia Susanti<sup>1</sup>, Said Mardijanto<sup>1</sup>, Madiha Mukhtar<sup>2</sup><sup>1</sup>Faculty of Health Sciences, Universitas dr. Soebandi, Jember, Indonesia<sup>2</sup>University of Lahore, Punjab, Pakistan**Article Info***Article History:*

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Caring becomes an essential concept in fundamental nursing and affects the quality of health services and nursing practice. However, factors in educational level among nursing students contribute to shaping and creating good caring behavior among nurses in clinical settings. The purpose of this study aimed to explore factors associated with caring among nursing students. This study used a survey with a cross-sectional study. It involved nursing students in a clinical phase amount of 256 respondents. The sampling technique was quota sampling. The questionnaires were used to assess caring and organizational factors. The Chi-square test and binary logistic regression were employed to explore the determinant factors of care behavior. Most nursing students' care behavior was 50% good category, mostly aged 17-25 years (49.4%) and female (51.2%). Emotional (OR=3.49; 95% CI=1.45-8.44) and quantitative workload (OR=0.29; 95% CI=0.10-0.84) were significantly related to caring behavior among nursing students. The proportion of nursing students with good and poor care behavior was equal. Moreover, significant results were also noted between emotional workload and caring behavior. Providing quality education is necessary to ensure nursing students can improve their ability to care for patients.

**Introduction**

Caring is a core value in nursing, defined as human acts in doing something with others, for people, and as people. It represents an attitude of work, responsibility, care, and affective engagement with others (Watson, 2013). In discussions of philosophies and theories developed by Watson, Swanson, Leininger, and Boykin, caring is a part of the essence of nursing and a key element in the process of nurse and patient interaction that creates effective and high-quality care (Létourneau, Cara and Goudreau, 2017). High-quality nursing care supports the quality of services in the healthcare sector because it can influence patient satisfaction (Calong and Soriano, 2018; Suprajitno, Sari and Anggraeni, 2020). Nurses are the health workers with the highest proportion in health services, and

their roles are an essential part that needs to be considered. Nurses have a professional responsibility to provide high-quality nursing care to ensure better patient outcomes. Previous study explains that rural areas have several challenges, such as increasing global mobility, demand, and decreasing the supply of nurses. These challenges are exacerbated by significant reductions in rural conditions due to the limited provision of local health services (Humphreys et al., 2017; Kyle, Beattie and Smith, 2020). All actions and interventions of the nurse are verified through caring behaviors (Suliman et al., 2009; Oluma and Abadiga, 2020).

Several studies showed that caring of nurses is still low (Kartini and Putri, 2019; Lukmanulhakim, Afriyani and Haryani, 2019; Ukum, 2021). According to a previous study in Ethiopia, as many as 48.3% of nurses had low

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caring behavior in inpatient departments in public hospitals (Kibret et al., 2022). Another study conducted in Indonesia resulted in 45% of nurses having poor caring behaviors (Kartini and Putri, 2019). The care behavior of nurses in the inpatient room is sufficient (52.1%), with an assessment for the fulfillment of basic human needs 73.2%, client beliefs and expectations 47.9%, and sensitivity to oneself and others 50% (Noprianty and Karana, 2019). Lack of caring is expressed by patients with unfriendly nurses, anger, unresponsiveness to patient complaints, and poor communication while providing care in health care. At the same time, patients in ill conditions need more attention to get services. Hopefully, nurses can listen to their complaints, feeling, and fulfill their health needs (Skar and Soderberg, 2018; Kartini and Putri, 2019). This situation is aggravated by the emergence of the Coronavirus Disease 2019 (COVID-19). Nurses have higher challenges in caring for patients, such as fatigue, discomfort, anxiety, fear of contracting, and stress (Wahyuningsih et al., 2020; Cho and Kim, 2021; Irandoost et al., 2022). This condition may affect patient satisfaction, quality of care, and the healing process (Kol et al., 2018).

Various factors are believed to be related to nurses' caring behavior, including job satisfaction, professional satisfaction, nurse management, workload, and student performance (Lee, 2014; Oluma and Abadiga, 2020; Kibret et al., 2022). These studies are students' beliefs and perceptions closely associated with caring behavior. High awareness of nursing students will improve their ability to interact and care for patients (Lee, 2014). Preliminary study showed that 30% of students never see a patient during service, 20% did not respect patient rights, and 10% did not listen to patient complaints. These results illustrate that caring behaviors in students still tend to be lacking. Based on interviews conducted with students, this happens because of fear, insecurity, lack of communication skills, and bad experiences of students.

Nursing students, as prospective nurses in the future, are expected to provide good performance. In education level, experience and support contribute to the career pathways of nurses, especially in rural areas (Kyle, Beattie

and Smith, 2020). Moreover, it needs to improve the quality of care and satisfaction of the nursing process and caring behavior in clinical and community settings. Caring behaviors can provide a sense of comfort and security, which can affect the healing process and patient satisfaction (Ariani and Aini, 2018). The development of self-confidence during nursing education, ensuring opportunities for empathy, and the development of the concept of nursing care are elements applicable to improve the care of students to create professional nurses (Konuk and Tanyer, 2019). This study aimed to analyze factors associated with caring among nursing students in rural areas in Indonesia.

### Methods

This study used a cross-sectional design using primary data through an online survey. Data were from three educational institutions in Jember Regency, East Java, Indonesia, and conducted from May to July 2022. The characteristics of rural areas in this study are sparsely populated places. Around, there are still places such as rice fields, ponds, and others. There are five-stage methods implied in this study, including problem identification, data collection, data evaluation, data analysis, and presentation of results.

The sample of this study involved students in the nursing profession degree who enrolled in 2022. This study took place in rural areas, especially in Jember Regency. Only students who meet the inclusion criteria eligible to participate. A total of 256 nursing students were in the final survey. The inclusion criteria were being registered as nursing students in Jember regional institutions, coming from rural areas, and willing to be respondents. To determine the minimum size for this study, we used G-power software. The sampling technique was quota sampling. To avoid a bias, the researcher defines a target and makes a scheduled online survey as accessible as possible by the researcher.

There were several variables, including the demographic characteristic of respondents and organizational factors (workload). The respondents' characteristics included age, gender, and marital status. While workload consists of physical, cognitive, time pressure, emotional, qualitative, and quantitative. The

workload assessment used questionnaire consists of 20 question items that each question can be assessed with 1= not being a workload, 2= light workload, 3= medium workload, and 4= heavy workload. Then the researcher categorized into three, namely high (score 76%-100%), medium (score 56%-75%), and low (score  $\leq$  55%).

Descriptive analysis was used to describe the data for each variable. A bivariate analysis using a Chi-square test was employed, followed by a binary logistic regression test with significance at p-values of  $<0.05$ . The SPSS version 25 software was used to perform the analysis. Before collecting data, we asked the respondents to fill the informed consent in the beginning before they participated in the survey. Inform consent contains information related to our research, such as explanations, objectives, participants, anonymity, and willingness to participate in this survey. We confirmed it is voluntary, and they can withdraw at any time. This study was approved by the Health Research Ethics Commission of the Faculty of Nursing, Universitas Jember, with number 049/UN25.1.14/KEPK/2022.

## Results and Discussion

Out of the 256 respondents, some of them had good caring (50%). Almost all respondents aged 17-25 years were 249 (97.3%), 80.1% female, and 93.4 % single. Most workload factors were in the low category, such as physical (84.4%), cognitive (56.6%), time pressure (61.4%), and qualitative factors (49.2%). Meanwhile, the majority of emotional factor was in the medium category amounting to 48.4% (Table 1).

Bivariate analysis in Table 2 showed that the only significant factor related to caring was an emotional factor, with a significance value of 0.001. Table 2 also contains results of binary logistic regressions to determinant factors associated with caring. Two factors, including the emotional and quantitative factors, associated with caring among nursing students. Respondents with low emotional factors were 3.5 times more likely to have good

caring behavior compared with high emotional (OR=3.49; 95% CI=1.45-8.44). Although, students who have low quantitative factors were 0.3 less likely to have good caring than high quantitative factors (OR=0.29; 95% CI=0.10-0.84).

According to this study, the nursing students with a high level of caring behavior was 50%. This finding indicates that the proportion of students with good caring and low caring is the same results. It is in line with a study conducted in Indonesia that only 55.3% of clinical nursing students have highly caring behavior (Sukartini, Asmoro and Pradana, 2019). Skill and intelligence are factors related to care behavior among nursing students. Students with good skills and intelligence during education result in adequate behavior and performance (Gibson et al., 2012). We argued that most of the nursing students in this survey were young adults (17-25 years), and the level of caring was still in the low category. Age has a vital personal factor for the formation of maturity in nurses and more stable patterns in their life. Increasing age will increase the level of responsibility for work and caring for a patient (Prompahakul and Nilmanat, 2011).

An emotional factor was associated with caring behavior among nursing students. This result aligned by previous studies that emotion is significantly associated with the frequency of care behavior (Papathanasiou et al., 2021). Higher emotional intelligence directly has a high sense of the nurse's ability to empathize with clients, be responsive to patient needs, and improve caring behavior (Oyur Celik, 2017; Herlina, Harmuni and Hikmah, 2020). Emotional intelligence is the capability of nurses to control their reflections and emotions toward others. The concept includes four basic abilities. Such as emotional expression and perception, way of thinking, emotion management, and understanding (Nightingale et al., 2018). Furthermore, it is essential to provide the understanding and emotional abilities to nursing students at the educational level that can impact caring behavior in clinical and community settings.

Table 1. Sociodemographic Characteristics of Respondents

Variables	N	%
Age (Years)		
17-25	249	97.3
26-35	6	2.3
36-45	1	0.4
Gender		
Male	51	19.9
Female	205	80.1
Marital Status		
Married	17	6.6
Single	239	93.4
Physical Factors		
Low	216	84.4
Medium	39	15.2
High	1	0.4
Cognitive Factors		
Low	145	56.6
Medium	82	32.0
High	29	11.4
Time Pressure Factors		
Low	157	61.4
Medium	82	32.0
High	17	6.6
Emotional Factors		
Low	72	28.2
Medium	124	48.4
High	60	23.4
Qualitative Factors		
Low	126	49.2
Medium	87	34.0
High	43	16.8
Quantitative Factors		
Low	118	46.1
Medium	114	44.5
High	24	9.4
Caring		
Good	128	50.0
Poor	128	50.0

Source:

Table 2. Multivariate Analysis of Factors Associated with Caring among Nursing Students

Variables	Caring				X <sup>2</sup>	OR	Sig.	95% CI	
	Poor Caring		Good Caring					Lower	Upper
	n	%	n	%					
Age (Years)									
17-25	126	50.6	123	49.4	0.427	0.00	1.000	0.00	0.00
26-35	2	33.3	4	66.7		0.00	1.000	0.00	0.00
36-45	0	0.0	1	100		Ref			
Gender									
Male	28	54.9	23	45.1	0.434	0.631	0.203	0.311	1.282
Female	100	48.8	105	51.2		Ref			
Marital Status									
Married	9	52.9	8	47.1	0.802	0.330	0.106	0.086	1.267
Single	119	49.8	120	50.2		Ref			
Physical Factors									
Low	105	48.6	111	51.4	0.405	0.00	1.000	0.00	0.00
Medium	22	56.4	17	43.6		0.00	1.000	0.00	0.00
High	1	100	0	0		Ref			
Cognitive Factors									
Low	64	44.1	81	55.9	0.100	1.38	0.528	0.52	3.71
Medium	47	57.3	35	42.7		1.17	0.760	0.43	3.15
High	17	58.6	12	41.4		Ref			
Time Pressure Factors									
Low	71	45.2	86	54.8	0.144	0.92	0.885	0.30	2.84
Medium	48	58.5	34	41.5		0.67	0.501	0.22	2.12
High	9	52.9	8	47.1		Ref			
Emotional Factors									
Low	23	31.9	49	68.1	0.001***	3.49	0.005**	1.45	8.44
Medium	70	56.5	54	43.5		1.12	0.755	0.56	2.21
High	35	58.3	25	41.7		Ref			
Qualitative Factors									
Low	58	46.0	68	54.0	0.332	0.80	0.578	0.36	1.76
Medium	49	56.3	38	43.7		0.81	0.606	0.37	1.77
High	21	48.8	22	51.2		Ref			
Quantitative Factors									
Low	56	47.5	62	52.5	0.096	0.29	0.023*	0.10	0.84
Medium	64	56.1	50	43.9		0.37	0.056	0.13	1.03
High	8	33.3	16	66.7		Ref			

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001

Source:

Moreover, nursing students with a low emotional workload were 3.5 times higher to have good caring behavior than those with a high emotional workload factor. This finding is similar to an earlier study in Ethiopia mentioned those with lower workloads were more likely to have good caring behavior (Kibret et al., 2022). It showed that extremely imposed time pressure, mental, and emotional effort in nurses harmed patient outcomes and the healing process (Koinis et al., 2015; Dall'Ora et al., 2020; Kibret et al., 2022). Emotional exhaustion

is a manifestation of an emotional workload characterized by poor mental health and psychological conditions (Maslach and Leiter, 2016; Baeriswyl et al., 2017; Edu-Valsania, Laguia and Moriano, 2022). Good performance of nursing students will not be generated if they experience emotional exhaustion and are unable to fulfill responsibilities in their work that affect their caring behavior.

The quantitative workload was also associated with caring behavior among nursing students. Students with a low quantitative

workload were less likely to care compared with a high quantitative workload. The quantitative workload is the number of tasks that nurses do during work. It is contradicted by a previous study that nurses with lower workloads have good caring behavior (Kibret et al., 2022). The workload can be defined as a process of a determinant number of people's hours of work to complete their job within a certain period. Workload influences employee occurring burnout (Talachi and Gorji, 2013; Selvarajan, Singh and Cloninger, 2016). It could be assumed that our study showed different findings because of respondents of this study were students, and it is different from the previous studies using clinical nurses. Furthermore, only a few nursing students rated themselves as having a high quantitative workload compared to a low and medium quantitative workload.

There are several limitations to this study. First, this study only used a cross-sectional design, and the causality cannot be confirmed and generated in a global population of nursing students. Secondly, the research took place in one regency. We believed it should be extended to a wider area to get more complete information about this topic. Additional study is needed to explore other factors related to caring among clinical nursing students. Despite these limitations, these findings contribute to sharing advanced information to capture caring behavior among clinical nursing students. These results can be the basis for educational institutions to develop curricula to create orientation programs and continuous professional education programs for clinical faculty especially. The adoption of mentoring programs and the value of caring can be implemented to ensure the quality of teaching education.

### Conclusion

In conclusion, the factors related to caring among nursing students were emotional and quantitative workload. The nursing student's characteristics, such as age, gender, and marital status did not associate with caring behavior. Caring among nursing students can improve and stimulate them by building psychological health and readiness to work in clinical settings. A direction nursing policy

in educational institutions concerning care behavior is needed to ensure capability among students and produce graduates who can improve patient health outcomes.

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