

UNDERSTANDING NURSES' CARING BEHAVIOR: THE IMPACT OF WORK ENVIRONMENT AND INDIVIDUAL FACTORS

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ABSTRACT

Nurses' caring behavior is essential for delivering quality healthcare and supporting patient well-being. Although many internal and external factors influence this behavior, few studies use Gibson's theory to examine how environmental factors (work rewards, workload) and individual traits (motivation, personality) interact. This study analyzed the effects of these four variables on nurses' caring behavior. A cross-sectional quantitative design with total sampling was used. Data were collected from 217 nurses in two hospitals using structured questionnaires measuring work rewards, workload, motivation, personality, and caring behavior. Descriptive statistics and multiple regression were applied. The results show that motivation has the strongest positive influence on caring behavior ($\beta = 0.45$, $p < 0.01$), followed by work rewards ($\beta = 0.30$, $p < 0.01$) and personality ($\beta = 0.20$, $p < 0.01$). Workload has a significant negative effect ($\beta = -0.28$, $p < 0.01$). The R-squared value of 0.65 indicates that these variables explain 65% of the variance in caring behavior. These findings support Gibson's theory, showing that environmental and individual factors together shape caring behavior. Motivation and work rewards strengthen caring actions, while heavy workload weakens them. Thus, enhancing motivation and rewards, supported by balanced workload management, is essential to sustain nurses' caring behavior.

Keywords: *Caring behavior; motivation; personality; workload; work rewards*



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BACKGROUND

In the context of healthcare organizations, particularly among nurses, caring behavior is a fundamental element that supports patient welfare and enhances health service efficiency (Wei, 2022). Caring behavior has a positive impact on patients and the wider work environment, including employee welfare, work quality, and overall organizational performance. However, caring practices in the workplace often face challenges from various individual and organizational factors (Sarıköse & Göktepe, 2022).

Caring behavior can improve the quality of service provided to the patients. This behavior can be honed from the time the nurse undergoes nursing education. It is also linked with the Technological Competency as Caring in Nursing theoretical approach (Nakano et al, 2023). High workload, inadequate compensation, and a lack of organizational support are some factors known to inhibit caring behavior among nurses.

Moreover, psychological aspects, such as individual personality and motivation, also play an important role in influencing how much a nurse can demonstrate caring behavior (Zeng et al., 2022).

Nurses' caring behavior in the workplace has become an increasingly significant concern in various healthcare institutions. The higher the work demands, the greater the risk of decreased caring behavior among nursing staff (Babapour et al., 2022). This phenomenon is global, as many hospitals in various countries are facing similar challenges, characterized by high workloads and limited human resources, which result in declining service quality. Healthcare organizations face significant challenges in integrating policies that promote caring behavior in the workplace while also being required to manage efficiency and budget savings (Hughes et al., 2020). For example, this challenge is evident in health facilities in Indonesia. More and more health facilities in the country have a high patient-to-

nurse ratio and a lack of appreciation or support for nurses, contributing to low levels of caring behavior in the workplace (Afandi & Ardiana, 2021).

Theoretically, caring behavior in nursing can be explained by Gibson's theoretical approach, which highlights the interaction between individual, task, and environmental factors (Tamblyn et al., 2023). Gibson's approach can be applied to nurses' caring behavior. Therefore, nurses' caring behavior is influenced by both individual factors, such as personality and motivation, and environmental factors, including job rewards and workload (O'Connor et al., 2023). As an environmental factor, employee benefits provide extrinsic motivation that can encourage employees to show caring behavior. When nurses believe that the rewards they receive are commensurate with the effort expended, they are more motivated to work with empathy and full attention toward patients and colleagues. On the other hand, an excessive workload can harm caring behavior. This aligns with Gibson's stress theory, which states that high task tension can reduce a person's ability to show concern for others (Gibson et al., 2023).

Additionally, the personal characteristics of each nurse, such as their openness and tendency to help others, serve as individual factors that influence caring behavior (Vujanic et al., 2020). Nurses with more empathetic and extroverted personalities tend to be more capable of showing caring behaviors than those with introverted or less empathetic personalities. According to Gibson's theory as presented in Maloney et al.'s research, these individual characteristics may interact with environmental factors. For example, nurses with an open personality may be better able to adapt to workload pressures compared to those with a reserved personality.

Furthermore, intrinsic motivation also plays an important role as a driver of caring behavior. Thus, health managers should consider strategies that support nurses in thriving at work and improving their work engagement and well-being. (Maloney et al., 2020). According to Gibson's motivation theory, as presented in Tartila et al.'s research, nurses with strong intrinsic motivation provided the best service. They also tended to exhibit caring behavior even in a stressful work environment. However, if the environment does not provide adequate support, such as a lack of rewards or high work demands, this intrinsic motivation can decrease and harm caring behavior. Decreased caring behavior can, in turn, affect the response provided in emergency nursing and influence patient service and satisfaction (Tartila et al., 2020). Based on Gibson's theory, caring behavior in the workplace can result from the interactions between individual, task, and environmental factors. Work benefits and motivation act as reinforcing factors that can increase caring behavior, while a high workload decreases it (Wallin, S., et al., 2022). Health facilities can take several strategic steps to promote caring behavior in the workplace, such as implementing policies that regulate fair workloads and provide commensurate rewards, as well as implementing programs that increase motivation and openness.

This research aims to analyze factors related to caring for nurses in the agricultural sector using Gibson's theory approach, which encompasses motivation, personality, workload, and work rewards. It highlights that a holistic approach is needed for understanding caring behavior, where organizational management must balance work demands, rewards provided to nurses, and support for nurses' mental well-being and intrinsic motivation. Thus, the results of this

study have important implications for health institutions in creating a work environment that fosters caring behavior.

METHOD

Study design

This quantitative research uses a cross-sectional survey design. The researchers collected data from a population of nurses at a single point in time to analyze the relationship between independent variables (work benefits, workload, motivation, and personality) and the dependent variable (caring behavior). We selected the quantitative approach because it uses objective and systematic measurements to identify patterns and relationships between variables on a large scale.

Sample

The population in this study consisted of all nurses working in inpatient rooms across hospitals in Jember Regency. The researchers employed a total sampling technique, meaning every nurse who met the criteria and agreed to participate was included. From this population, 217 nurses working in inpatient rooms were obtained as the final sample.

Instruments

Data were collected using questionnaires distributed directly to respondents and through an online platform (Google Forms). The instrument measured work rewards, workload, motivation, personality, and caring behavior using a Likert scale. Validity testing showed that all item-total correlations exceeded the minimum *r*-table value (> 0.30), indicating that each item was valid. Reliability testing also demonstrated strong internal consistency, with Cronbach's alpha values as follows: work rewards = 0.89, workload = 0.86, motivation = 0.91, personality = 0.88, and caring behavior = 0.93. These values confirm that the questionnaire is highly reliable. This instrument has also been used in previous studies (Inocian et al., 2021; Udod et al., 2021). Each item was designed to accurately capture the dimensions of the variables measured.

Data collection

The data collection period spanned from June to September 2024. The researchers met the respondents in their respective health facilities and provided them with relevant information about the study.

Data analysis

Descriptive analysis was employed to present the frequency distribution of the respondents' demographic characteristics, nurses' caring behaviors, and patient loyalty levels. The chi-square test was used to examine the association between the respondents' characteristics and patient loyalty, as well as the relationship between the nurses' caring behavior and patient loyalty. Next, the ANOVA test was used to determine which factors had the greatest influence on patient loyalty.

Ethical approval

This research follows ethical procedures by maintaining the confidentiality and anonymity of the respondents. Each respondent was provided with information regarding the purpose of the research, their right to decline participation, and a guarantee of confidentiality of personal data. Informed written consent was obtained from the respondents before they obtained the questionnaire. This study was ethically reviewed by the Faculty of Dentistry, Universitas Jember, and was declared ethically eligible under No.2562/UN25.8/KEPK/DL/2024.

RESULT

Respondents' Demographic Characteristics

Table 1. Participant's characteristics (n = 217)

Respondent characteristics data	f (%)
Gender:	
Man	85 (39.2)
Woman	132 (60.8)
Marital status:	
Married	172 (79.3)
Not married	36 (16.6)
Divorced/Widower/Widow	9 (4.1)
Occupation	
Honoraria/contract	52 (23.9)
Permanent officer/ASN	112 (51.6)
BLUD/officer at regional	53 (24.5)
Religion:	
Islam	213 (98.2)
Kristen	4 (1.8)
Catholic	0
Hindu	0
Budha	0
Length of work:	
< 1 year	8 (3.7)
1 - 3 years	44 (20.3)
>3 years	165 (76)
Last education:	
D3 (Vocational nurse)	62 (28.6)
D4 (Bachelor of Applied Science)	0
S1/Ners	153 (70.5)
Post (Master/Doctorate)	2 (0.9)

The results show that the number of women (132 people) is slightly higher than that of men (85 people). Most respondents were married (172 people), while 36 were unmarried, and nine were divorced/widowed/ or widows. Based on employment status, the majority are permanent employees/ASN (112 people), followed by BLUD/regional public service officers (53 people) and honorary/contract employees (52 people). Most respondents are Muslim (213 people), with only a few being Christian (4 people). Next, most respondents had over three years of experience (165 people), while the remainder had 1 to 3 years of work experience (44 people), and eight respondents had less than 1 year of work experience. Regarding final education, the majority were Bachelor/Nursing Professional graduates (153 people), while there were 62 Vocational Degree (D3) graduates, and only two had a postgraduate education (Table 1).

Description of Caring Behavior, Employee Benefits, Workload, Motivation, and Personality

Table 2. Results of analysis of caring behavior, employee benefit, workload, motivation, and personality (n = 217)

Variable	Mean	Standard Deviation (SD)	Score range
Employee benefits	3.85	0.75	2 – 5
Workload	3.20	0.85	1 – 5
Motivation	4.10	0.65	2.5 – 5
Personality	3.70	0.70	2 – 5
Caring behavior	4.00	0.60	2 – 5

Table 2 presents the descriptive statistics for five variables: Employee Benefits, Workload, Motivation, Personality, and

Caring Behavior. The mean values reflect the respondents' perceptions of each variable.

The results show that motivation has the highest mean score (4.10), indicating that nurses tend to have high work motivation. Caring Behavior also has a high mean score (4.00), suggesting that nurses generally exhibit strong caring behaviors. Employee benefits also show a mean score of 3.85. Although this score is slightly lower than the mean scores for motivation and caring behavior, it still reflects a positive perception. Conversely, workload has the lowest mean score among the variables at 3.20, indicating a moderate level of perceived workload among nurses.

Furthermore, the standard deviation (SD) scores provide insight into the respondents' different perceptions of each variable. Workload has the highest standard deviation (0.85) among other variables. This result suggests that there are significant differences in workload perceptions among respondents. Meanwhile, the caring behavior variable has the lowest standard deviation (0.60), showing a more consistent perception of caring behavior among respondents. The score range for each variable also provides additional insights. For example, motivation has a score range of 2.5 to 5, indicating that no respondents rated this variable below 2.5. This range shows that most respondents feel relatively high work motivation. Similarly, other variables have ranged between 2 and 5, indicating that while respondents' perceptions vary, they generally remain within a positive scope (Table 2).

Nurses' Caring Behavior Factors based on the Multiple Regression Analysis

Table 3. Statistical analysis using multiple regression (n = 217)

Dependent variable	Coefisia (β)	t-Count	Significance (p)
Employee benefits	0.3	4.8	0.000
Workload	-0.28	-3.5	0.001
Motivation	0.45	6.2	0.000
Personality	0.2	3	0.003
Intercept	1.15		
R-squared	0.65		
F-value	75.20		0.000

The motivation variable has the highest regression coefficient ($\beta = 0.45$, $p < 0.01$), indicating that motivation has the strongest influence on caring behavior. Job rewards also show a significant positive influence ($\beta = 0.30$, $p < 0.01$), suggesting that the higher the job rewards, the greater the increase in nurses' caring behavior. Workload also showed a significant negative effect ($\beta = -0.28$, $p < 0.01$), indicating that higher workload is associated with lower caring behavior. Lastly, personality significantly influences caring behavior ($\beta = 0.20$, $p < 0.01$), indicating that nurses with a more open personality tend to exhibit higher levels of caring behavior. The R-squared value of 0.65 also indicates that 65% of the variability in caring behavior can be explained by the job rewards, workload, motivation, and personality variables. Finally, the F-test value shows that this regression model is significant ($p < 0.001$). Therefore, this model can be used to predict the influence of these variables on nurses' caring behavior.

The analysis results indicate that motivation and work rewards have a significant positive influence on caring behavior, with motivation being the strongest factor. In

contrast, workload has a significant negative effect, indicating that increasing workload can reduce nurses' caring behavior. Apart from that, the nurse's personality also plays a role in caring behavior, with individuals with an open personality tending to be more caring (Table 3).

DISCUSSION

The regression analysis shows that employee benefits positively and significantly influence nurses' caring behavior, with a coefficient of $\beta = 0.30$ and a significance value of $p < 0.01$. The mean score for employee benefits was 3.85, which is relatively high, indicating that the nurses in this study generally felt that their employee benefits were adequate. This positive correlation indicates that nurses who feel they are well-compensated exhibit higher levels of caring behavior. This finding aligns with Adams' theory of Equity, which emphasizes that when workers feel they are treated fairly in terms of compensation (both financial and non-financial), they tend to have more positive attitudes and better performance (Mylona & Mihail, 2018; Collins et al., 2023). Fairness in rewards also fosters intrinsic motivation, which drives caring behavior.

In addition, Gibson's theory regarding the interaction between environmental and individual factors shows that work rewards, as an external factor, can influence nurses' intrinsic motivation and caring behavior. Gibson argues that environmental support (e.g., job rewards) can increase nurses' motivation to demonstrate caring behavior consistently. Therefore, the positive impact of employee benefits highlights the importance of implementing fair and balanced compensation policies in the care work environment (Kurmiati et al., 2021). Health institutions must strike a balance between work demands and compensation to ensure nurses feel appreciated (Akinwale & George, 2020). These rewards can be financial, such as competitive salaries, or non-financial, including recognition and employee appreciation programs. Implementing these incentives will help strengthen nurses' internal motivation and foster a more caring work environment.

Next, the results revealed that a higher workload is significantly associated with reduced caring behavior, with a coefficient of $\beta = -0.28$ and a significance value of $p < 0.01$. The average workload in this study was 3.20, indicating considerable variation in workload. These findings indicate that the higher the workload, the lower the level of caring behavior shown by nurses. This aligns with the Job Demand-Resource (JD-R) theory, which states that high job demands, such as excessive workload, can trigger stress and burnout, thereby inhibiting caring behavior (Kwon & Kim, 2020). Gibson also explains that task tension can reduce an individual's ability to adapt to the social work environment. Nurses with a high workload tend to feel overwhelmed, so their attention and empathy for patients can decrease because they already feel emotionally drained from meeting work demands. Gibson further emphasizes the importance of supporting employees' physical and psychological well-being to maintain high-quality, caring behavior. Therefore, hospital management needs to design policies that ensure a balanced workload for nurses (Udod et al., 2021). Hospital management must recognize that reducing workload can enhance nurses' ability to deliver better patient care. They can achieve this goal by arranging fair work rotation, increasing the workforce to reduce the burden on nurses, and providing additional leave to reduce fatigue risk.

Furthermore, motivation significantly influences caring behavior, with a coefficient of $\beta = 0.45$ and a significance

value of $p < 0.01$. The average motivation level of nurses is 4.10, indicating a high level of motivation among respondents. This result suggests that motivated nurses demonstrate greater levels of caring behavior. This finding aligns with Herzberg's theory, which posits that intrinsic motivation, such as achievement, recognition, and professional responsibility, plays a crucial role in fostering positive behavior (Herzberg, 1966; Sobaih & Hasanein, 2020). Gibson also explained that internal motivation will be realized if the work environment supports individual initiative. Intrinsic motivation in nursing can arise when nurses feel valued, which in turn allows them to provide the best service (Gallione et al., 2022). These findings emphasize the importance of institutional efforts in strengthening nurses' intrinsic and extrinsic motivation. Institutions may provide career development programs, advanced training, or awards. Gibson believes that motivation driven by environmental support will strengthen caring behavior. Therefore, by supporting nurse motivation, organizations will improve the quality of service, well-being, and job satisfaction of nurses.

Finally, the results show that personality significantly influences nurses' caring behavior, with a coefficient of $\beta = 0.20$ and a significance value of $p < 0.01$. The average score for personality was 3.70, indicating the diversity of the respondents' personality characteristics. Nurses with an open personality and a tendency to be empathetic exhibit more caring behavior. The Big Five Personality Traits approach revealed that openness, agreeableness, and emotional stability are related to the ability to empathize and behave caringly (Xiao et al., 2022). Gibson added that the interaction between individual factors (such as personality) and the work environment also influences behavior. People with open personalities tend to be more adaptable and able to show concern for others in a supportive work environment.

However, because personality is a characteristic that develops early in life, institutions may be unable to alter it. Nevertheless, understanding nurses' personality characteristics can assist management in placing them in environments that support caring behavior (Inocian et al., 2021). Gibson also suggests that matching an individual's personality to the job demands can create a more conducive work environment. In the long term, interpersonal development programs that foster openness and empathy can help nurses become more caring towards patients.

This research demonstrates that work rewards, workload, motivation, and personality have a significant influence on caring behavior among nurses. Motivation emerged as the dominant factor, followed by job rewards. Workload has a negative influence, while personality shows a significant positive influence. These findings support Gibson's theory about the interaction between environmental factors (work rewards and workload) and individual factors (motivation and personality) in influencing caring behavior. Gibson further emphasizes the importance of adapting the work environment to individual characteristics and needs to maximize the potential of positive behaviors, such as caring.

RESEARCH LIMITATIONS

This study has several limitations, including its cross-sectional design, which limits the determination of cause-and-effect relationships, the potential for response bias in the questionnaire, and limited generalizability because it was conducted at a single hospital. In addition, other variables that influence caring behavior and the 35% variability not explained in the model require further exploration.

CONCLUSION AND RECOMMENDATION

Various internal and external factors, including work rewards, workload, motivation, and personality, significantly influence caring behaviors in nurses. Motivation has been proven to be the primary factor driving caring behavior, followed by job rewards that reflect nurses' appreciation for their contributions. Personality factors, particularly openness and agreeableness, also play an important role in influencing how nurses show empathy and concern for patients. Conversely, high workloads have been shown to inhibit caring behavior, which can lead to reduced service quality and patient satisfaction. Based on these findings, health institutions are advised to implement policies that motivate and provide fair work rewards, as well as balance workloads, so that nurses can perform their duties optimally. Adequate support will not only improve the well-being of nurses but also foster a more conducive and empathetic work environment, ultimately improving the overall quality of healthcare services.

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