Article

Nurses' caring behavior based on personality in Indonesia: A pilot study for better-humanized healthcare services

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Abstract

Background: Caring behavior is influenced by psychological factors, including the characteristics of personality. However, psychological test results for nurses' recruitment are not optimal for nursing resource development. This study aimed to determine the relationship between personality characteristics and nurses' caring behavior in hospitals.

Design and methods: A cross-sectional design was adopted involving 153 nurses of a private hospital in Jakarta selected by convenience sampling technique. Data were also collected from the Caring Behavior Inventory (CBI-24) and Myers-Briggs Type Indicators (MBTI) test results. Statistical analysis using the one-way ANOVA to identify differences in nurses' CBI scores based on MBTI personality.

Results: The results study indicate that most of the nurses were traditionalists (75.16%), and the average CBI score (85.43±5.94) was equivalent to 85%, which means that nurses' caring behavior was good. There were differences in the scores of caring behaviors among personality characteristics; however, these differences were not statistically significant (p=0.320; α=0.05). Furthermore, the post hoc test analysis showed that the conceptualizer nurses had the highest caring behavior score, while the experiencers had the lowest.

Conclusions: Personality characteristics, as measured by MBTI, are not related to the caring behavior of nurses. One possible reason for this result is that the MBTI does not specifically measure caring personality. Psychological tests on personality characteristics are used in career development and nurse placement. This study recommends that human resource management in healthcare use more specific tools to measure caring personality and psychological tests in healthcare staff recruitment for better-humanized healthcare services.

Introduction

In many situations, nurses interact with patients more often than other health professionals, so patient satisfaction with nursing services is used as an indicator to assess the quality of health services. Nurses interact with patients 24 hours a day.[1] Several studies report that patient satisfaction with nursing services in Indonesia is still low.[2–5] Patient satisfaction with nursing services is closely related to behaviors that are displayed by nurses while providing care.[6]

Several factors can influence a nurse's caring behavior. Internal factors influencing nurses include personality,[7] emotional intelligence,[7,8] and motivation.[9] According to research by Enns and Sawatzky, among the external factors that influence care behavior is the nursing work environment, which includes the following: (1) workload, (2) lack of time, (3) lack of human resources, (4) lack of management support, (5) shift of working hours and (6) lack of self-care.[10] Widyaningsih, Yetti, and Kuntarti found that the characteristics of clinical instructors who guided new nurses in the hospital were related to the new nurses' caring behavior.[4]

Personal characteristics or personality are internal factors that play a role in shaping a nurse's caring behavior. Sinurat found that with nursing students in clinical practice, extraversion, agreeableness, and conscientiousness personality traits positively correlated with caring behavior, while neuroticism negatively correlated with caring behavior.[11] Additionally, the personality trait of openness to experience had no relationship with caring behavior. Personality also has a significant influence on one's performance.[12] From the results of these studies, it appears that a person's behavior in various situations can be related to personality.[13]

Many organizations use psychological tests to assess a prospective employee's personality during recruitment and assess-

Significance for public health

Nurses interact with patients 24 hours a day and more often than other health workers, so patient satisfaction with nursing services is used as an indicator to assess the quality of health services. However, patient satisfaction with nursing services in Indonesia is still low. Patient satisfaction with nursing services is closely related to the behavior displayed by nurses when providing care. Internal factors that influence nurses include personality, emotional intelligence, and motivation. Personal characteristics or personality is an internal factor that plays a role in shaping the caring behavior of nurses. Caring behavior is influenced by psychological factors, including personality characteristics that are measured using psychological tests in some hospitals. However, the psychological test results of nurse recruitment have not been optimal for the development of nursing resources. This study shows that the personality characteristics as measured by Myers-Briggs Type Indicators, are not related to the caring behavior of nurses. This study can provide new insights for human resource management in healthcare to use more specific tools to measure caring personality, in addition to psychological tests, in healthcare staff recruitment for better-humanized healthcare services.

ment for promotion. Various personality tests can be used in these assessments, such as the Myers-Briggs Type Indicator (MBTI). The MBTI test has been used extensively in research related to organizational behavior, especially leadership and managerial behavior.[14] In nursing, the personality typing system in MBTI can help nurses improve communication skills with colleagues and patients, enhance teamwork and leadership, develop a therapeutic relationship with patients, and reduce conflict in the workplace.[15] Meeusen et al, found that MBTI personality dimensions were only minimally relevant in predicting job satisfaction among Dutch nurse anesthetists and recommended knowing which combination traits were likely to create a highly cohesive workgroup. The MBTI is also the most frequently used questionnaire for measuring personality for career counseling and management education and as a predictor of job performance.[16,17]

The MBTI was first developed in 1958 based on Carl Jung's theory of psychological types. Jung divided personality types based on two basic attitudes (extrovert and introvert) into four functions (thinking/T, feeling/F, sensing/S, and intuiting/N). The MBTI adds two functions, judging/J and perceiving/P, resulting in 16 possible personality types.[14] From 16 personality types, David Keirsey, a California psychologist, grouped them into four personalities: traditionalists (SJ), experiencers (SP), idealists (NF), and conceptualizers (NT),[18] in other references, these groups are four basic temperaments.[19] Terry stated that the MBTI assessment does not identify the best personality type suited to nursing.[15] However, there is some evidence to suggest that certain professions attract similar personality types. Waite and McKinney's study found that the predominant personality type of undergraduate healthcare students was ENFP (extrovert, intuitive, feeling, and perceiving), an idealist (NF).[20] Mallari and Pelayo found that the most common personality type of nursing students was ISFJ (introvert, sensing, feeling, and judging) or traditionalist (SJ). [21]

Psychological test results have many benefits in human resource management. Terry stated that psychological test results could identify a person's 'hidden agenda' and how this could affect healthcare professionals' communication.[15] Psychological tests can be sources of information about the employee's personality to predict employees' performance, plan placement, solve conflict management, and reduce turnover rates. In addition, employees participating in a psychological test benefit from knowing their potential, helping in self-development.[22] Health care institutions recruit nurses, and human resource management could use psychological test results to aid in hiring, assign employees according to their preferences, or determine their career development. This study aimed to determine the relationship between personality characteristics and nurses' caring behavior in hospitals.

Design and Methods

Design, setting, and population

This study was a quantitative study using a cross-sectional research design. The population sample of this research was all nurses who served in a private hospital in West Java, Indonesia. Sampling was performed using the total population because this study is preliminary. The total sample involved in this study was 153 nurses based on the following inclusion criteria: (1) graduated from the nursing diploma or bachelor, (2) have MBTI result test, and (3) willing to participate by signing informed consent.

Variables and data collection

Data collection was accomplished using a Google Form, which contained demographic data (age, gender, education level, and length of work), and the Caring Behavior Inventory (CBI-24) instrument to measure caring behavior. The Indonesian version of the CBI-24 was used and had 24 statement items with a scale of four responses: 1 = never, 2 = seldom, 3 = almost always, and 4 = always for positive statements and vice versa for negative statements.[4] The results of the research sample's validity and reliability before data analysis showed that the instrument was valid (r=0.238 -0.628) and reliable (Cronbach's alpha = 0.799). Secondary data on personality variables were obtained from the hospital's Human Resource psychological test results using the MBTI instrument. The nurse belongs to the personality group of traditionalists, if the result tests ESTJ, ISTJ, ESFJ, and ISFJ; experiencers (ESTP, ISTP, ESFP, and ISFP), idealists (ENFJ, INFJ, ENFP dan INFP), and conceptualizers (ENTJ, INTJ, ENTP, and INTP).[19]

Statistical analysis

Data were analyzed using statistical software univariate analysis in proportional distribution on categorical variables and central tendency on numerical variables. The analysis to determine the relationship between nurses' characteristics and personality and caring behavior was a bivariate analysis. The hypothesis test for the relationship between age and length of work with caring behavior used the Pearson correlation test. The relationship between gender and caring behavior; between education level and caring behavior used the independent t-test. Hypothesis testing of the relationship between personality characteristics used one-way post hoc Bonferroni continued ANOVA to evaluate the differences in the mean between two personality characteristics. This research was reviewed by the Ethics Committee's Faculty of Nursing and received permission from the hospital.

Results

Description of respondent characteristics, personality, and caring behavior

The majority of the nurses involved in this study were female (89.5%). The average respondent's age was 32±5 years, and the mean length of work was 8±4 years. The majority of nurses were graduates of Diploma III (83%). The results of the analysis of the MBTI test results showed that the majority of nurses had traditionalist personality characteristics (75.16%), followed by experiencers (11.76%), idealists (10.46%), and conceptualizers (2.61%) (Table 1).

Table 1. Distribution of nurses according to Myers-Briggs Type Indicators (MBTI) personality characteristics in one private hospital in West Java (N=153).

MBTI personality	N.	%
Traditionalists	115	75.16
Experiencers	18	11.76
Idealists	16	10.46
Conceptualizers	4	2.61

In this study, caring behavior was assessed based on the CBI-24 total score. Table 2 shows that the mean total score of CBI-24 respondents was 85.43±5.94 (95% CI 84.48; 86.38). Based on the score range, this score is equivalent to 85%, which means that nurses' caring behavior was good. The variables with the highest percentage were positive connectedness (87%), knowledge and professional skills (87%), and acknowledge human existence (86%). The dimension of response with respect had a percentage of 85%, and finally, the dimension of attentiveness to others experienced was determined to be 73%. From these results, it appears that although nurses' overall caring behavior was good, the dimension of attentiveness to others' experiences still needs to be improved.

Relationship between characteristics of demography, personality characteristics, and nurses' caring behavior

The analysis of the relationship between nurse characteristics and caring behavior can be seen in Table 3. The Pearson correlation test results showed no correlation between age and caring behavior (r=0.03; p=0.71) nor with years of service (r=-.0041; p=0.61). Although not significantly related, the analysis results show that caring behavior increases with age and decreases with the work's length. Based on gender, the difference in mean CBI-24 score was only 0.57 points higher for male nurses, indicating this difference was not significant (p=0.73). Likewise, based on education level, the average CBI-24 score for nurse graduates was only 0.69 points higher than that of diploma nursing graduates, so this difference was not significant (p=0.48). Thus, this study concluded that there was no relationship between nurse characteristics and caring behavior.

The ANOVA test results also showed no relationship between nurses' personality characteristics and caring behavior. Table 3 shows that the mean difference of the CBI-24 score among the four personality characteristics was minimal according to the MBTI test results. The average CBI-24 score from highest to lowest was the conceptualizer, idealist, traditionalist, and experiencer group. These results indicate that nurses' caring behavior with conceptualized personalities was the best compared to groups with other personalities. However, this difference was not statistically significant (p=0.32).

Although the differences in nurse caring behavior based on personality types are not statistically significant, the description of these differences can be considered by management in certain assignments. Table 4 shows that nurses have the largest mean difference (5.78) between conceptualizers and traditionalist nurses (5.24). The smallest difference in the CBI-24 score was seen between traditionalist and experiencer nurses (.54). These results indicate differences in caring behavior among personality characteristics, but the differences are not statistically significant.

Table 2. Nurses' caring behavior based on Caring Behavior Inventory (CBI-24) total score (N=153).

Nurse caring behavior	Mean	Standard deviation	95% Confidence interval	% *
Total score (24-96)	85.43	5.94	84.48; 86.38	85
Acknowledge human existence (9-36)	32.17	2.63	31.70; 32.59	86
Respond with respect (6-24)	21.24	1.87	20.94; 21.54	85
Positive connectedness (6-24)	21.68	1.82	21.39; 21.97	87
Knowledge and professional skills (2-8)	7.14	0.86	7.01; 7.28	87
Attentiveness to others experience (1-4)	3.20	0.78	3.07; 3.32	73

*Obtained from [(mean-minimum score of scale) / (range of scale)] ×100.

Table 3. The relationship between characteristics of demography, characteristic personality, and nurses' caring behavior in one private hospital in West Java (N=153).

Respondent characteristics	Caring behavior (CBI-24)			
	N.	Mean	Deviation standard	P value
Age				
Length of work	153	153	r=0.03	0.71
			r=- 0.04	0.61
Gender				0.73
Male	16	85.94	5.96	
Female	137	85.37	5.94	
Level of education				0.48
Diploma	127	85.31	6.05	
Nurse graduate	26	86.00	5.43	
Personality characteristics				0.32
Traditionalists	115	85.26	.54	
Experiencers	18	84.72	1.61	
Idealists	16	86.19	1.53	
Conceptualizers	4	90.50	2.33	

*Obtained from [(mean-minimum score of scale) / (range of scale)] ×100.

Discussion

Respondent personality characteristics

The majority (75%) of the nurses involved in this study had a traditionalist personality type. Culp and Smith, explains that traditionalists are primarily extroverted, energized around other people rather than alone.[19] According to Didong, Juwaini, and Ramly, extroverts easily build relationships with others and generally embrace change. Adapting to new people and environments is a characteristic needed by nurses as they are always meeting new people and encountering new situations. A nurse must be ready to be placed in any treatment room and work with various patients, fellow nurses, and other healthcare workers. These all require the nurse's ability to adapt quickly, and extroverted people generally have this characteristic.

The experiencer and idealist personalities were each found in approximately 10% of the sample population in this study. Experiencers are passionate about learning new things, especially competencies and real-world applications. Good competence is needed in nursing services in nursing actions because this competence is related to a nurse's performance.[23] Additionally, people with idealistic personalities have good communication skills necessary for nurses, especially therapeutic communication.[15] This finding aligns with Dora, Ayuni, and Asmalinda's study which found that clear nursing communication can increase patient satisfaction. Therefore, an idealist is likely to provide therapeutic communication to patients.

We found only a small percentage of nurses that had a conceptualizer personality in this study. Conceptualizers are highly skilled in strategic analysis and comprise only 3% of the general population.[24] A nurse with a conceptualizer personality would be advantageous in nursing services, especially in carrying out an advocacy function. Conceptualizers with an ENTJ (extrovert, intuitive, thinking, and judging) type readily take on leadership roles, are intellectually curious and prepared to develop in-depth knowledge, take a long view of situations, and are strategic in designing solutions and achieving their goals.[19] However, they do not appreciate inefficiency or illogical natures, whether in people, procedures, or policies.[15] Nurses must have substantial knowledge and intelligence as a basis for protecting patients. For example, the nurse must provide logical reasons to protect the patient for collaborative actions that are likely to harm or worsen the patient's condition. This finding is reinforced by Telaumbanua's research, which states that a nurse's role as an advocate for patients and families is a form of nurse integrity in providing quality service.[25]

Nurse caring behavior

Assessment of nurses' caring behavior using the CBI-24 obtained a mean total score of 85.43 from a score range of 24-96.

Table 4. *Post-hoc* analysis of the mean difference of CBI-24 scores on two characteristic personality types (n=153).

	Mean difference	P-value
Traditionalists vs experiencers	0.54	1.00
Idealists vs traditionalists	0.93	1.00
Idealists vs experiencers	1.47	1.00
Conceptualizers vs traditionalists	5.24	0.506
Conceptualizers vs experiencers	5.78	0.480
Conceptualizers vs idealists	4.31	1.00

Based on the instrument's scale range, nurses' caring behavior was good (85.32%). This result is slightly higher than Widiyaningsih *et al.* obtained in one of Jakarta's government-owned hospitals (mean total score of 82.11±9.18).[4] This variability may be due to differences in workloads between government-owned and private hospitals. Some of the factors that affect a person's caring behavior are workload, lack of time, lack of energy, lack of management support, working hours, and lack of self-care.[10]

Previous research measuring nurses' caring behavior using the CBI-24 instrument from the perspective of medical-surgical patients in Ghana found that most patients (56.7%) reported a positive experience in terms of nurses' caring behavior, with a score of 89.5%.[26] On the other hand, Ramadan *et al.* reported that 71.43% of 42 nurses in their study displayed negative behavior, which was associated with a high workload. The higher the workload is, the lower the caring behavior score.[27]

Relationship between respondent characteristics and nurses' caring behavior

The results obtained from 153 respondents showed no relationship between personality characteristics and nurses' caring behavior, and there was no statistically significant difference in the average score of caring behavior. However, there was a difference in CBI-24 scores among the respondents' personality types. The caring behavior score range using the CBI-24 instrument was 24-96, and the average score of caring behavior for all respondents was 85.43. This study's results may be due to the trend of caring behavior becoming an accepted part of work culture. Nurses may have received appropriate incentives, as research conducted by Wahyudi *et al.* found that stimuli directly correlated with nurses' caring behavior.[28] However, nurses who have a caring personality will not be affected by the size of the incentives they getbecause nurses work according to the heart's call to serve patients as well as possible. Simone Roach states it as conscience as one of the 6 C's of caring dimension.[23,29]

These results may also be due to the psychological tool used, the MBTI, which is less sensitive to caring behavior and more designed as a general personality test. The concept of the MBTI personality type is the work of psychologist Carl Gustav Jung. Jung said that this type of personality rating system is based on four basic aspects of human personality: how we interact with the world in which we direct our energies, the types of information we naturally notice, how we make decisions, and whether we prefer to live in a more structured way (making decisions) or in a more spontaneous way (receiving information).[18,19,24]

Differences in nurses' caring behavior between traditionalists and experiencers

The results showed that nurses with traditionalist traits had a higher caring behavior score of 0.54 than nurses with experiential personalities. This analysis aligns with Haqqiasmi's work and Culp and Smith's study, in which he explained that a person with a traditionalist personality type focuses on sensory and judging, highly appreciates procedures, and is responsible. On the other hand, experiencers focus more on sensory and perception and are free, flexible, and spontaneous.[19] When associated with caring behavior, there is no significant difference overall. However, traditionalists work best by following accepted norms. As a nurse who must engage in caring behavior, traditionalists will try to carry it out in a standard, accepted fashion. Additionally, spontaneous experiencers will only respond to the current conditions and are less concerned about rules or norms.

Differences in nurses' caring behavior between idealists and experiencers

The mean difference in nurses' caring behavior between idealists and experiencers in this study was 1.46. Idealists with excellent communication skills allow them to have higher caring behaviors than experiencers.[19] This finding is likely because one experiencer characteristic is practicality, in which they prefer to focus on action over communication.

However, regarding a nurse's work, experiencers thrive if placed in a prehospital or emergency room. The work environment in that area facilitates flexible experiences that demand rapid responses and require competent emergency nurses. The trait of emergency nurses that most influence their performance is providing therapeutic interventions and the work environment.[30]

Differences in nurses' caring behavior between conceptualizers and traditionalists

In this study, the conceptualizer group obtained a higher mean score of caring behavior by 5.24 points than traditionalists. A traditionalist has the main trait of obeying the prevailing rules and norms. Additionally, a conceptualizer is a perfectionist with a competitive personality that makes them strive to be the best.[19]

In nursing care, the conceptualizer and the traditionalist can be strengths as they complement each other. Visionary conceptualizers can create certain strategies or ideas because they are thinkers who generally have superior intelligence. Additionally, traditionalists adhere to rules and norms to be able to follow up a job appropriately. Nursing service is a team performance, which means a cooperative process for each team member to develop effective reciprocal relationships to achieve team objectives.[31]

Differences in nurses' caring behavior between conceptualizers and experiencers

Although there was no significant difference in each personality type, the highest mean score difference was between the conceptualizers and experiencers (5.78). This result was likely due to the two personality types having nearly opposite characteristics. A conceptualizer is a structured and competitive perfectionist, while an experiencer is more relaxed, spontaneous, and not concerned with rules or norms.[19,24] Nurses who have conceptualizer personalities will feel driven to provide the best nursing care services regarding caring behavior. Additionally, the experiencers provide nursing care by focusing more on experiences or crises.

Conceptualizers naturally have intellectual ability and high competitiveness. They are visionary thinkers and are capable of solving complex problems as well as making long-term strategies. These are characteristics that a leader must possess. Leaders can be divided into formal and normal leaders, but they have superior qualities to influence others psychologically and behaviorally.[32] In this regard, conceptualizers are viewed as potential leaders when motivated to improve nurses' caring behavior.

Differences in nurses' caring behavior between conceptualizers and idealists

An idealist has excellent communication skills. Conceptualizers will compete and try to do their best in every action or when making decisions.[19,24] These characteristics also cause them to be perfectionists who will strive to provide complete service to patients. Patients' perceptions of nurse caring behavior significantly affect patient satisfaction.[26]

Although there was no significant difference in nurse caring behavior among the four groups of nurses based on personality characteristics, efforts to improve caring behavior can be made based on nurses' personality characteristics. Haqqiasmi describes how to communicate and develop potential based on these personality characteristics.[24] As with Gintings' research on students of the Faculty of Language and Arts at the University of Medan using the MBTI measurement tool, the conclusion was that the introvert and extrovert personalities have a natural difference.[33] However, the quality of work can be improved by practicing and with teacher guidance. A leader has an important role in nurse performance.[34] By knowing each nurse's personality traits, a nurse leader can use this knowledge as a guide for carrying out their leadership function in achieving organizational goals.

Future directions

This study recommends that hospital management formulate nursing values related to caring and instill them in the nursing work culture. It is also necessary to conduct periodic evaluations of nurses' caring behavior, considering that nursing services are key performance indicators that must be improved. Assessment of nurse caring behavior can also be carried out from the patient's perspective as patient satisfaction is one indicator of assessing nursing services' quality.

Increasing the level of nursing education is another effort that can help improve the quality of nursing services. With increasing knowledge and level of education, nurses are expected to provide better quality nursing care. Thus, the patient and family feel satisfied.

Nursing management also needs to study nurses' diverse personality characteristics through the data obtained. Psychological tests on nurses' personality characteristics can be used in nurses' career development and placement. The MBTI psychological test may be insensitive and nonspecific to nurses' caring behavior. Therefore, management should consider using other psychological testing tools that are more sensitive. A more specific measuring instrument measuring the personality aspect of caring is needed to select and measure nurses' caring behavior.

Nursing educational institutions need to assess students' caring behavior to evaluate the effectiveness of the learning process. Educational institutions can also change learning methods according to their students' personalities to produce nurses who are more qualified, professional, and have positive caring behavior.

Limitations

The limitation of this research was only conducted at one hospital in West Java. The results can be used as a reference for further research conducted in other hospitals as a comparison. Future studies can take advantage of this study's results and develop further to see the relationship between personality characteristics and caring behavior and the placement of the nurse's room. Using observational methods to assess nurses' caring behavior is also expected to provide more objective results. Research can also be conducted on nurses' caring behavior as seen from the patient perspective.

Conclusions

Personality characteristics, according to the MBTI, are not related to nurses' caring behavior. In this study, we found that the majority of nurses belong to the traditionalist personality group. The proportion of professional experiencers and idealists was balanced, and only a few were conceptualizers. All personality types have characteristics that nurses must possess. Nurses of all personality types showed good caring behavior with a total CBI-24 score

that was not significantly different. One possible reason for this result is that the MBTI does not specifically measure caring personality.

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