Frontiers of Nursing • 12(3) • 2025
DOI: 10.2478/FON-2025-0043

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Frontiers of **Nursing**

Relationship between nurses' personality traits and esthetics of nursing care: a descriptive-correlational study

Original article

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Received: 11 August 2024; Accepted: 6 September 2024; Published: 20 September 2025

Abstract: **Objective:** The combination of science and art in nursing is essential for providing effective care. Since art is inherent and a part of human personality traits, it is believed that nurses' personality traits are important to achieve this cohesive combination in nursing. Accordingly, this study was conducted to determine the relationship between nurses' personality traits and the esthetics of nursing care.
Methods: A cross-sectional descriptive design was employed. Study participants that consisted of 95 nurses and 285 patients from health centers in Iran were selected by convenience sampling method. Measures included the five-factor personality questionnaires (NEO-FFI) scale and Esthetics of Nursing Care Scale (ENCS).
Results: The findings indicated a significant relationship between neuroticism ($r = -0.149$, $P = 0.028$) and extraversion traits ($r = 0.136$, $P = 0.045$) of nurses in esthetics nursing care. In this study, no significant relationship was found between the personality traits and esthetics of nursing care using nurses' demographic information.
Conclusions: The esthetics of nursing care depends on nurse personality traits. Since the art of nursing complements the expected care, it is suggested that nursing managers pay attention to the personality traits of nurses in planning to provide effective care.

Keywords: *art • esthetics • nursing • care • personality traits*

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1. Introduction

Nurses are the largest group of human resources in the healthcare system and play a significant role in promoting public health.[1,2] Rogers presents nursing as an art and a creative profession for serving the public.[3] In nursing care, art and esthetics are combined with science. Characteristics such as creativity and purposefulness, skills, relationships, totalitarianism, personalization of care, and application of empirical knowledge and values with an emphasis on ethical principles are essential for nurses.[4,5] The art of nursing, which includes recognizing the needs and preferences of the patient, is essential in effective planning to provide care.[6]

How to cite this article: Fesharaki NM, Shahraki SK, Radmehr M. Relationship between nurses' personality traits and esthetics of nursing care: a descriptive-correlational study. *Front Nurs*. 2025;3:393–400.

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A review of patients' experiences with nursing care shows a beautiful perspective on the art of nursing. Reflection on these results can reveal the need for more serious attention to ethical, human, and artistic issues in patient care, which underlies the fundamental changes in nursing education.[7]

The art and esthetics of human behavior are a part of personality. The five main aspects of personality, including neuroticism, extroversion, openness, consent, and conscientiousness, play a central role in people's behavior and experience of how they perform in different situations.[1,8] Professional values are affected by personality traits. Professional values are considered as a basis in developing professional identity and are among the factors that determine the professional performance of nurses.[9] Personality traits play a role in the selection of job for each individual.[10] In other words, those who prefer to work in a certain work field attempt to meet their personality traits.

Esthetic-based care has emerged as a critical issue in recent years, especially in the face of increasing technological advancements and machine-driven nursing care. Esthetics and arts represent qualities in care that cannot be replicated by machines. Consequently, identifying constructs and variables that can facilitate the enhancement of arts- and esthetic-based care in various ways is of paramount importance.[11]

Few studies have been conducted on the personality traits of nurses in the field of their performance and expertise. Retaining professional nurses in different specialized areas has desirable consequences. There is evidence that shows a relationship between personality traits by selecting an activity in a specific area in nursing, job burnout, job satisfaction of nurses, and finally the quality of their care.[12] Nurses pay more attention to the nursing values that are directly related to their jobs. Thus, understanding the importance of certain aspects or professional-ethical values being related to the tasks of nurses requires more consideration.[13] Poorchangizi et al.[14] believed that according to the new emerging ethical challenges, developing educational plans for promoting the awareness of nurses and understanding the comprehensive importance of professional values is necessary. Due to the increase in healthcare service costs, the continuous promotion of nursing services quality is essential and also controlling the quality of care by nurses is critical for increasing patient satisfaction.[15] Nursing is a job that presents valuable services to society under difficult conditions of disease. Thus, it induces a sense of service and ethical commitment with a combination of art and esthetics. During the past few decades, the healthcare sector has paid special attention to the necessity of developing ethical standards and value statements for nursing, having proper recruitment among qualified volunteers to enter nursing jobs, and evaluating the performance and quality of care in nursing.[16] For providing the constructs and variables that can prepare the context for strengthening the care based on art, esthetics is necessary. It is believed that personality traits are among the variables that have an inclusive effectiveness on the behavior of individuals. As the first study of its kind, our findings can contribute to the evaluation of applicants at the outset of their careers, enabling the prediction of their success in providing such care. Additionally, these results can inform the selection and placement of individuals in various departments within healthcare and educational institutions, taking into account their interpersonal demands. The obtained findings of this study can encourage nurses and officials in this profession to engage more in the process of knowledge expansion and increase of care quality in healthcare environments. Owing to the lack of relevant research in Iran, this investigation targeted at the relationship between personality traits with the esthetics of nursing care.

2. Methods

2.1. Study design, setting, participants, and intervention

The present study is of the descriptive-correlational type and the statistical population included nurses working in the healthcare centers of Isfahan University of Medical Sciences. The samples were selected from nurses and patients by convenience sampling method from four hospitals of Amin, Khorshid, Chamran, and Al-Zahra. The number of nurses was at $\alpha = 0.05$, test power at 80% ($\beta = 0.2$), and minimum correlation coefficient for the significance of the relationship was 0.3 in testing the hypothesis $P = 0$ versus $r = P \neq 0$, which was calculated as 85. Then a sample of 95 nurses was selected by considering 10% as sample loss. A sample size of 285 patients were selected for evaluating the quality of care by considering that each nurse has to be evaluated by at least three patients. Inclusion criteria were all of the nurses working in the hospital who were willing to attend the study. In addition, patients with full consciousness, the ability to communicate, and being hospitalized for at least 3 days could attend this study. Those patients on the verge of discharge were preferred to enter the study, so that the assessment scale that they completed did not affect the process of their care. The lack of willingness to continue and incomplete questionnaires by participants such as patients with mental disorders were among the exclusion criteria of this study.

2.2. Instrument

Data were collected using three tools.

2.2.1. Socio-demographic characteristics scale

In this study, a researcher-made questionnaire was used which included the demographic information of nurses and patients.

2.2.2. NEO-five factor inventory scale

The NEO-five factor inventory (NEO-FFI) was used for evaluating 5 main factors of personality.[17] This questionnaire is used when the time for completing it is very limited and only general information on the personality is enough. This questionnaire can be applied to normal individuals and includes 60 questions. In addition, it is set based on the Likert scale (totally disagree, disagree, indifferent, agree, and totally agree). The higher scores in each dimension show the higher frequency of that trait. Meanwhile, the NEO-FFI has global use and has been translated into different languages for research. The NEO-FFI was first performed by McCrae and Costa on 208 American students within 3 months and its validity coefficients were obtained at 0.75–0.83. In the standardization of the NEO-FFI test, which was conducted by Gerusi on 2000 students from Tabriz and Shiraz universities, the correlation coefficient of the main five aspects was 0.56–0.87. Cronbach's alpha coefficient in each aspect of neuroticism, extraversion, openness, agreeableness, and consciousness was 0.86, 0.73, 0.56, 0.68, and 0.87, respectively.[18]

2.2.3. Development and psychometric evaluation of the esthetics of nursing care scale

The Esthetics of Nursing Care Scale (ENCS) was used to evaluate esthetic care. This scale was designed by Radmehr and Ashktorab[19] by explaining the aspects of this type of care behaviors based on lived experiences. The primary terms of this scale were developed based on the definition of the concept of the esthetics of nursing care and the themes obtained from an interpretive phenomenological study through deep interviews with hospitalized patients and nurses working in the hospital, as well as from review studies on 20 valid tools in the field of the quality of nursing care. The ENCS with 37 items has 4 subscales: paying attention to humanitarian behaviors; satisfaction, and relaxation of patient; admirable commitment and competence; and stress-free care. The intra-class correlation coefficient and Pearson coefficient of this scale in convergent construct validity were 0.85 and 0.84, respectively ($P < 0.001$). Cronbach's alpha coefficient of the tool was 0.96 and the intraclass correlation coefficient was calculated as 0.93 in determining the tool stability. This scale has sufficient validity and reliability and is an appropriate tool for evaluating nursing care esthetics due to the simple statistical analysis in evaluating the results and short accountability time as well as ease of use. The answer sheet of this questionnaire was set based on a 6-point Likert scale (never, barely, sometimes, usually, mostly, always) with a maximum of 185 scores; the higher scores show the better quality of this type of care.

2.3. Data analysis

Descriptive analysis was level, mean, standard deviation, and frequency distribution tables; statistical diagrams were used while at the inferential level, Pearson correlation coefficients, and Spearman, multivariate regression model, and chi-square were used for answering the research goals. The analyses were conducted at a 5% error level using data exported from Qualtrics to SPSS ver.[22] software (IBM Corporation, Armonk, New York, United States).

3. Results

3.1. Demographic information

Demographic information showed that 16 nurses were male while 79 nurses were female, with mean age and standard deviation of 30.41 ± 4.59. The highest frequency distribution in the age groups (57.9%) was related to the age group <30 years. In terms of education, the highest frequency (97.8%) was related to nurses with a bachelor's degree. In addition, the mean and standard deviation of the nurses' work experience was 6.43 ± 4.11, who were working in general and specialized departments. Of 285 patients in this study, 145 were male and 140 were female. The mean age and standard deviation of the patients were 52.29 ± 16.12. The highest frequency distribution in the age groups (42.8%) was related to the age group of 41–60 years. In addition, 83.9% of the patients were married, 44.6% were homemakers, and the education level in 81.8% of them was diploma or less. The duration of hospitalization for 80% of the patients was from 3 days to 1 week. All of the patients were hospitalized in general and specialized departments. Using the Kolmogorov–Smirnov test, the hypothesis of normalization in all of the quantitative data was confirmed.

3.2. Dimensions of esthetics of nursing care

In this study, the patients reported the esthetics of nursing care with a mean of 135.74 ± 26.58 in all dimensions at a desirable level (Table 1).

3.3. Personality traits and esthetics of nursing care

Based on the results, the scores of personality trait in terms of nurses' consciousness was at a high level and the other dimensions were at the average level. The nurses had the highest scores in traits of consciousness with mean and standard deviation 33.31 ± 6.36, agreeableness with mean and standard deviation 29.19 ± 4.65, extraversion with mean and standard deviation 28.74 ± 5.99, openness with mean and standard deviation 24.94 ± 4.06, and neuroticism with mean and standard deviation 22.17 ± 6.27. There was a significant relationship between esthetics of nursing care with nurses' neuroticism ($P = 0.028$, $r = -0.14$) and extraversion traits ($P = 0.045$, $r = 0.136$). The relationship between nurses' openness trait was only significant with the dimensions of humanistic attention to the patient ($P = 0.036$, $r = -0.132$) and stress-free care ($P = 0.032$, $r = 0.133$). However, no significant relationship was found between nurses' agreeableness trait with care based on art and esthetics with all of its dimensions. In addition, a significant relationship was found between nurses' consciousness traits and the subscale of stress-free care ($P = 0.050$, $r = 0.119$) (Table 2).

In this study, the relationship between the quality care based on esthetics and demographic variables including age, gender, work experience, and type of department was not significant.

4. Discussion

This study aimed to investigate the relationship between personality traits with the esthetics of nursing care. In this study, the patients reported care based on esthetics as desirable in all of its dimensions. The study demonstrated that nurses possessing extroverted personalities and a propensity for experiential learning were more successful in delivering this specific type of care. Moreover, a significant and positive correlation was found between the personality trait of conscientiousness in nurses and the subscale of "stress-free care," which is of certain importance.

The judgment of patients about nurses is important and care based on art is at a high place of patient satisfaction.[20] In this study, the maximum score of personality traits in nurses was reported at consciousness, agreeableness, extraversion, and neuroticism, respectively. However, it was at a high level in terms of consciousness and average at other dimensions. Nurses in their careers play an important role in helping patients by their specific individual traits. In addition, they can cause behavioral and cognitive consequences in their value and professional performances.[21] The results of this study showed nurses with fewer neuroticism traits provide better quality of care based on esthetics. In a study by Teng et al.,[22] neuroticism traits in nurses had

Dimensions of esthetics of nursing care	Range of score	Mean	Standard deviation
Humanistic attention to patient	0–40	33.45	5.76
Patient satisfaction and comfort	0–40	32.72	6.34
Admirable and compassionate commitment and competence	0–90	74.60	13.48
Stress-free care	0–15	12.96	2.15

Table 1. Scores of esthetics of nursing care.

Variables	Personality traits									
	Conscientiousness		Openness		Agreeableness		Extraversion		Neuroticism	
	P	*r*	*P*	*r*	*P*	*r*	*P*	*r*	*P*	*r*
Esthetics of nursing care	0.603	0.035	0.131	0.102	0.437	0.053	0.045	0.136	0.028	−0.149
Humanistic attention to patient	0.313	0.064	0.036	0.132	0.365	0.058	0.15	0.092	0.217	−0.079
Patient satisfaction and comfort	0.195	0.0282	0.090	0.105	0.585	0,035	0.63	0.117	0.129	−0.096
Admirable and compassionate commitment and competence	0.768	0.019	0.260	0.072	0.599	0.034	0.96	0.107	0.011	−0.164
Stress-free care	0.050	0.119	0.032	0.133	0.363	0.058	0.06	0.171	0.285	−0.067

Table 2. Relationship between nurses' personality traits and esthetics of nursing care.

a negative relationship with accountability, trust, and empathy on the quality of care. The results of the study by Khanjani et al.[23] showed that the highest correlation coefficient of job satisfaction was among nurses with neuroticism traits. They found a significant negative relationship between job satisfaction with this trait. Neuroticism is associated with negative affection, that is, sadness, anger, and sorrow, and people with this trait are more vulnerable to stress. Thus, they cannot show much resilience while dealing with stressful issues and their mental health reduces. Since nurses have high job stress, those who gain high neuroticism scores make too many mistakes, have low control on their job, and have a low quality of service due to negative and irrational thoughts, anxiety, depression, low self-esteem, and shyness.[24] In this study, a significant positive relationship was found between care based on esthetics with extraversion traits among nurses. Allahyari Bayatiani et al.[21] indicated a significant positive relationship between extraversion and some professional values of nurses. Job satisfaction is one of the factors providing high-quality services. Lounsbury et al.[25] reported an increase in job satisfaction among individuals with the extraversion trait. Extroverts are active people who are very easygoing. They are warm, active, emotional, and have positive feelings.8 In general, extraversion means being social and active.[26] On the contrary, introverts have no energy, happiness, or level of activity like extroverts. They like to be quiet and conservative and are interested in getting away from the social world.[27] The traits of introverts are not in line with the care based on esthetics. Jasemi et al.[28] found a significant relationship between the type of being social among nursing students with all dimensions of commitment to professional values and care. In a meta-analysis study, only 2 traits of neuroticism and extraversion were the generalizable predictors in all studies for job satisfaction of individuals.[29] In this study, the results showed that as the nurses had higher openness, their quality of care in dimensions of humanistic attention to patient and stress-free care was better, according to the patients. As is certain, values such as honesty, altruism, loyalty, and respecting human dignity were recognized as part of the professional values in nursing.[30] In a study by Teng et al.,[22] openness in nurses had a significant positive relationship with patient's understanding in terms of the accountability of the quality of care. Bagherinia et al.[24] reported the relationship between openness trait and nurses' mental health significant. However, Allahyari Bayatiani et al.[21] showed no significant relationship between the openness trait and any variable of professional values. In one of the meta-analysis studies, 24 studies showed a positive relationship between this trait and job satisfaction, while 26 studies showed a negative relationship between these 2 variables as the factors affecting the service. There was a small and very variable correlation between openness trait and job satisfaction.[29] Nevertheless, openness is associated with a sense of esthetics, wisdom, high intelligence, considering inner feelings, variety-seeking, and mental curiosity, all of which correspond to the dimensions of care based on art. In this study, the results indicated a significant and direct relationship between nurses' consciousness trait and the subscale of stress-free care, and this personality trait had the highest score for nurses. The relationship between consciousness trait and job satisfaction in the study by Khanjani et al.[23] showed that consciousness had a significant positive relationship with nurses' job satisfaction. In some other studies, there was a positive relationship between this trait and job satisfaction.[31] Some traits related to consciousness include responsibility, accountability, discipline, continence, the effort for success, and being conservative in decision-making.[17] Conscious individuals are targeted, intended, hardworking, and serious and have the required competency and will while facing problems. In this study, the agreeableness trait showed no significant relationship with care based on esthetics among nurses. In a meta-analysis study by Judge et al.,[29] a relatively poor correlation was reported between agreeableness and job satisfaction compared with other personality traits. However, other studies showed a significant relationship between this trait and the professional values of nurses.[21,22] This finding requires more investigation because, in this study, nurses had high scores in agreeableness. Agreeable people have altruism for others and feel empathy for others. In addition, they are willing to help others and believe that others are helpful too. On the contrary, the dissatisfied individual is arrogant, self-centered, competitive, and dubious to others.[27] The results of this study showed that nurses with any demographic information such as age, gender, work experience, and the department working in can provide care based on esthetics with equal quality and it seems that providing this type of care is more related to the personality and ethical traits of nurses. The results of this study indicated that nurses, regardless of their demographic characteristics such as age, gender, years of experience, or their affiliated ward, were equally capable of providing arts- and esthetics-based care. This suggests that the delivery of such care is more closely tied to the personal and moral attributes of nurses than to their demographic background. Consequently, greater emphasis should be placed on these personal qualities when recruiting nursing students and staff, particularly for specialized units caring for specific patient populations. In the study by Teng et al.[22] demographic information did not affect patients' understanding of the quality of care except for

the nurses who had children. Dehghani et al.[32] reported a significant relationship only between the demographic variable of gender with the quality of nurses' professional-ethical performance so that the female nurses in their study showed better care than male nurses.

5. Conclusions

In this study, a significant relationship was found between neuroticism and extraversion traits among nurses with the esthetics of nursing care. Although in terms of other personality traits, there was a significant relationship with some dimensions of this type of care. Considering each personality trait can respond to the type of behaviors and performance of nurses in stressful conditions and high workloads in the hospital. The results of this study indicated that nurses with different demographic traits could provide care based on esthetics with equal quality, and this care seems to be more related to the personality traits of nurses. Thus, it is recommended that nursing managers pay attention to the personality traits of nurses for selecting human resources and planning to provide effective care.

Limitations

Nurses' concern with being assessed individually and the probable awareness of others on the results were among the probable limitations of this study, which reduced their tendency for attending the study. Thus, nurses with specific traits might have attended this study, although the researcher attempted to control this concern by ensuring to the nurses about the confidentiality of data. Also, due to the small number of samples, it was not possible to process the model for the data. Based on the findings of the present study, the nursing officials in education and clinics should pay more attention when volunteers enter a nursing career and also their personality traits for providing a better quality of care based on esthetics. In the future, identifying the personality traits of nurses for providing care in the departments, especially with patients in more pain, as well as holding some courses on consultation for nurses by psychologists are suggested.

Acknowledgment

The authors thank the officials of the Isfahan (Khurasgan) Islamic Azad University, as well as the managers and nurses of educational hospitals in Isfahan, who cooperated with the present study.

Authors' contributions

MR, NMF, and SKH contributed to conceiving and designing the research. The data were collected, analyzed, and interpreted by MR, NMF, and SKH. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Ethical approval

This study was approved by the specialized committee of ethics in biomedical research at Islamic Azad University, Isfahan branch (Khurasgan; ID: IR.IAU.KHUISF.REC.1398.089). Informed consent was taken from the patients and nurses participating in this study.

Conflicts of interest

All contributing authors declare no conflicts of interest.

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