

Investigating the Relationship Between Nurses' Humanistic Practice Abilities and Caring Behaviors: A Correlational Descriptive Study*

Hemşirelerin Hümanistik Uygulama Yeteneği ile Bakım Davranışları Arasındaki İlişkinin İncelenmesi: Korelasyonel Tanımlayıcı Araştırma

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ABSTRACT

Objective: The study aims to explore the relationship between humanistic practice skills and care behaviors of nurses working in a hospital in Turkey.

Methods: This descriptive and correlational study was performed between September 2022 and November 2022 with 162 participants. In the research individual identification form, the Humanistic Practice Ability of Nursing Scale and Caring Behaviors Inventory-24 were used. Descriptive statistics, T-test, Mann Whitney U test, one-way analysis of variance, and Pearson correlation were preferred for the analysis of the data.

Results: Participants' mean age was 31.30 ± 7.05 years, and the mean professional experience was 9.88 ± 6.75 years. In the study, the total mean score from the Humanistic Practice Ability of Nursing Scale was found to be 122.88 ± 17.28 , while in the Caring Behaviors Inventory-24, the total mean score was 5.35 ± 0.68 . A moderately positive correlation ($r=0.63$, $p<0.001$) was found between the Humanistic Practice Ability of Nursing Scale and the Caring Behaviors Inventory.

Conclusion: In the study, it was determined that care behaviours were related to humanistic practice ability. In order to improve the quality of care in nursing, it is recommended to improve the humanistic practice skills of nurses.

Keywords: caring, nurse, humanistic practice, humanistic ability

Öz

Amaç: Araştırmada Türkiye'de bir hastanede çalışan hemşirelerin hümanistik uygulama yeteneği ile bakım davranışları arasındaki ilişkinin belirlenmesi amaçlanmıştır.

Yöntemler: Tanımlayıcı ve korelasyonel tipte olan araştırma, Eylül 2022 ve Kasım 2022 tarihleri arasında 162 katılımcı ile yürütülmüştür. Araştırmada birey tanım formu, Hemşirelik Uygulamalarında Hümanist Davranma Becerisi Ölçeği ve Bakım Davranışları Ölçeği-24 kullanıldı. Araştırma verilerinin analizinde tanımlayıcı istatistikler, Mann Whitney-U test, t-testi, tek yönlü Anova testi ve Pearson korelasyon analizi kullanıldı.

Bulgular: Araştırmaya katılanların yaş ortalaması 31.30 ± 7.05 , mesleki deneyim ortalaması 9.88 ± 6.75 yıl idi. Araştırmada Hemşirelik Uygulamalarında Hümanist Davranma Becerisi Ölçeği toplam puan ortalaması 122.88 ± 17.28 , Bakım Davranışları Ölçeği-24 toplam puan ortalaması 5.35 ± 0.68 olarak bulunmuştur. Hümanistik uygulama yeteneği ölçeği ile bakım davranışları ölçeği arasında pozitif, orta düzey ($r=0.63$, $p<0.001$) korelasyon bulunmuştur.

Sonuç: Araştırmada bakım davranışlarının hümanistik uygulama yeteneği ile ilişkili olduğu belirlenmiştir. Hemşirelikte bakım kalitesinin artırılması için hemşirelerin hümanistik uygulama yeteneklerinin geliştirilmesi önerilir.

Anahtar kelimeler: bakım, hemşire, hümanistik uygulama, hümanistik yetenek

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GİRİŞ

In holistic health practices, health professionals are expected not only to treat the disease but also to give patient-oriented care that enables the patient to seek life values and realize himself/herself⁽¹⁾. Thanks to empathy and commitment, humanization helps to comprehend the distinctive characteristics of human nature⁽²⁾. Nursing humanistic caring ability is the implementation of caring practice, which develops with knowledge and experience⁽³⁾. It is known that nurses with strong humanistic care skills increase the pleasure levels of patients as they help to improve the care standards⁽⁴⁾.

Individuals need the care of others in certain periods of life from birth to death. The basis of health care, even nursing service, is based on the improvement of the patient. Providing analytical, moral, and humane care contributes greatly to the general condition of patients⁽⁵⁾. Humanism is inevitable in nursing where human relations are important. According to the humanistic approach, human, as a unique being, needs help in sickness and health. Nursing is very important in terms of providing aid. In humanism, there is a relationship between purposeful call and response. As an individualistic approach caring about people, humanism includes features such as humanity, existence, recognition, understanding, and empathy. Nurses are expected to have these characteristics as the focus of the nursing profession is caring. Moreover, humanistic virtues are expected for nurses to know their patients and determine their care needs. The humanistic practice ability provides human-centered care that promotes patient health, reduces costs, and increases patient satisfaction⁽⁶⁾. Reasons such as developments in health-related information and technology, changing expectations and views of individuals regarding health care, becoming more active in their care, and increasing cost and competition have necessitated more qualified health care. Nursing care quality is a significant element that has an influence on patient satisfaction. However, it will be insufficient to take only the views of patients or nurses in the evaluation of nursing care. For this reason, measuring, improving, and developing the quality of care makes

it necessary to evaluate and consider the views of nurses and patients, permanent and temporary elements of healthcare institutions, regarding care. Determining the opinion of patients and nurses regarding care with valid and reliable measurement tools on a regular basis will enable the appraisal of the quality of care and the necessary adjustments in nursing practices, thus increasing the quality of nursing services^(7,8). Nurses who possess good humanistic care skills can use clinical practices more effectively and give more efficient care, resulting in higher patient satisfaction and less work pressure⁽⁹⁾.

When the literature is examined, there are studies made with humanistic application ability. Of these; Lina et al. reported that nursing students' emotional intelligence and empathy were related to humanistic practice ability, Ma et al., hospital staff found a positive relationship between humanistic practice ability and emotional intelligence, Wang et al. found that midwifery students' ability to practice humanistic was affected by empathy, resilience, and professional identity⁽¹⁰⁻¹²⁾. Shougen et al. found that relationship was found between professional identity and humanistic care skill⁽¹³⁾.

In Turkey, there is no study examining the humanistic practice ability of nurses. For this reason, the research was implemented to determine the humanistic practice ability of nurses who work in Turkey and its relationship with the perception of care behaviors.

MATERIAL AND METHODS

Design, setting, and study participants

The study is descriptive and correlational. The research was done a Health Practice and Research Hospital in Turkey. The number of nurses working in this hospital is 280. After the ethics committee approval, a questionnaire was applied to the nurses working at the hospital where the research would be conducted, who were not on leave and volunteered to participate in the study between September 2022 and December 2022. At this stage, the research was completed with 162 nurses, since some of the nurses refused to participate and the others filled out the questionnaire incompletely.

Data collection tools

The research data were gathered Individual Identification Form, the Humanistic Practice Ability of Nursing Scale (HPANS), and the Caring Behaviors Inventory-24.

Individual identification form: The form was shaped by the researchers via reviewing the studies including sociodemographic factors, work experience, and workplace in the literature ^(8-12,14).

Humanistic Practice Ability of Nursing Scale (HPANS): The Turkish validity and reliability study of this scale developed by Zhang et al. (2021) ⁽¹⁵⁾ was done by Yanmış et al. (2022) ⁽⁶⁾. The scale has 29 items with a five-point Likert-type scale ranging from 1 to 5 (5: strongly agree, 4: agree, 3: undecided, 2: disagree, and 1: strongly disagree). The sub-dimensions of the scale are nursing communication ability (Items 1-7), psychological adjustment ability (Items 8-11), ethics and legal application ability (Items 12-18), nursing esthetic ability (items 19-21), and caring practical ability (items 22-29). The scale total score is calculated by summing the scores obtained from the items. There is no reverse coded item in the scale. The lowest score to be taken from the scale is 29, and the highest score is 145. Sub-dimension scores are also calculated similarly. While Cronbach's alpha value of the scale was 0.93, the sub-dimension Cronbach's alpha values ranged between 0.71-0.89.

Caring Behaviors Inventory-24 (CBI-24): Caring Behaviors Inventory was developed by Wolf et al. (1994) ⁽¹⁶⁾. CBI-24 is the short form of the 42-item in the "Caring Behaviors Inventory", restructured by Wu et al. (2006) ⁽¹⁷⁾. The inventory is useful to diagnose the bidirectional relationship between patients and nurses. The Turkish validity and reliability of the inventory were performed by Kurşun and Kanan (2012). CBI-24 includes 4 sub-dimensions and 24 items as assurance (16-18,20-24), knowledge-skills (9-11,12,15), respectful (1,3,5,6,13,19), and connectedness (2,4,7,8,14). The inventory consists of a 6-point Likert-type scale (1=never, 2=hardly, 3=sometimes, 4=usually, 5=often, 6=always). The total scale score is reached by dividing the sum of

the scores by 24. Higher total and sub-dimension scale scores of participants demonstrate a higher perception of the caring behavior of patients or nurses. The Cronbach's alpha of the scale was 0.94, and the sub-dimensions were 0.81-0.94.7

Data collection

The data were gathered face-to-face in a way that would not disrupt the functioning of the hospital. The questionnaires were distributed by giving information and collected a few days later.

Ethical considerations

Approved by the relevant ethics committee (23.08.2022/ E-11811414-050.03-169395) and written informed consent was obtained from the participants.

Statistical analysis

The resulting findings were entered into the Statistical Package for Social Sciences (SPSS) 22 program, and number, percentage, and mean values were taken from the descriptive statistics. In the comparison of two independent groups, the Mann Whitney U test (because the number of people in one of the groups was less than 30) and t test was used. In the comparison of more than one independent variable, the one-way analysis of variance was used since the data were normally distributed. In addition, Pearson correlation analysis was performed to identify the relationship between scale scores.

RESULTS

The mean age of the participants was 31.30±7.05 and professional experience was 9.88±6.75 years. 84% of the participants were females, 67.3% were university graduates, 67.3% had income less than expenses. 56.8% of participants were married, and 56.8% had no children (Table 1).

When the mean scores obtained from the scales were viewed, it was found that the mean score of the Humanistic Practice Ability of Nursing Scale was 122.88±17.28, while the total Caring Behaviors Inventory-24 was 5.35±0.68 (Table 2).

Table 1. Distribution of Demographic Characteristics of the Participants (n=162)

Variables	n	%
Mean ± SD (Min-Max)		
Age: 31.30±7.05(23-48)		
Work experience: 9.88±6.75 years (1-30)		
Variables	n	%
Gender		
Female	136	84.0
Male	26	16.0
Education		
High school	53	32.7
University	109	67.3
Income status		
Income less than expenses	53	67.3
Income equal to expenses - Income more than expenses	109	32.7
Marital Status		
Married	92	56.8
Single	70	43.2
Number of Children		
No	92	56.8
1	32	19.8
2 or more	38	23.5

When sociodemographic data and total mean scores were compared, there was no significant difference between gender, education, income, and marital status with mean scores. On the other hand, the total mean scores of HPANS ($P=.000$) and CBI-24 were found to be higher than those who had one or more children ($p=.03$) (Table 3).

When the relationship between HPANS and CBI-24 was analyzed by Pearson correlation analysis, a moderately positive correlation ($r=0.63$, $p=0.000$) was found (Table 4).

DISCUSSION

In the study, nurses' humanistic practice abilities and perceptions of caring behaviors were examined by comparing them with sociodemographic data. Accordingly, the total mean score of HPANS was 122.88 ± 17.28 , above the mean value. In the study

Table 2. Scale mean scores

	Mean ± SD (Min-Max)
Humanistic Practice Ability of Nursing Scale	12288±17.28 (71-194)
Nursing communication ability	29.14±4.32 (19-35)
Psychological adjustment ability	16.25±4.32 (9-20)
Ethics and legal application ability	31.06±4.82 (16-52)
Nursing esthetic ability	12.09±2.33 (5-15)
Caring practical ability	34.33±7.04 (15-90)
Caring Behaviors Inventory-24	5.35±0.58 (3-6)
Assurance	5.41±0.68 (4-6)
Knowledge-skills	5.58±0.58 (4-6)
Respectful	5.35±0.68 (3-6)
Connectedness	4.29±0.66 (3-6)

conducted with midwifery students in China, the mean humanistic practice ability was found to be 184.62 ± 19.88 , close to the mean value of the relevant scale. In another study conducted with nursing students in China, this rate was found to be 179.60 ± 21.08 , similar to the study conducted with midwifery students in China. This difference suggests that social and cultural characteristics may affect humanistic practice. It may also be caused by the differences in nurse education^(10,12).

There was no significant difference between gender, education, income, and marital status with humanistic practice ability when humanistic practice ability was compared with sociodemographic data. Similarly, no significant difference was also found between humanistic practice ability with gender, training status, and marital status in another study performed in China⁽¹⁰⁾. However, there have been some studies including significant differences between gender, educational status, and marital status with humanistic practice ability^(11,12,18).

The mean humanistic practice ability of the nurses without children was found to be high in the study. In the literature, Liu et al. found no significant difference in terms of humanistic practice ability between those with/without a child⁽¹⁸⁾.

The mean CBI-24 score was identified as 5.35 ± 0.58 . Accordingly, it is possible to say that the perceptions of the nurses about the quality of care are mostly positive. Similarly, Erenoğlu et al. found the mean

Table 3. Comparison of sociodemographic data and total mean scores of Humanistic Practice Ability of Nursing Scale and Caring Behaviors Inventory-24

	Humanistic Practice Ability of Nursing Scale		Caring Behaviors Inventory-24	
	Mean±SD	Median	Mean±SD	Median
Gender				
Female	123.20±17.16	125.50 (80.00-194.00)	5.37±0.67	5.00(3.00-6.00)
Male	121.23±18.13	120.50 (71.00-145.00)	5.23±0.71	5.00(4.00-6.00)
Z	-0.40	-1,01		
MW-U/p	1679.00/0.68		1567.00/0.31	
Education				
High school	124.86±15.03		5.34±0.63	
University	121.92±18.26		5.31±0.70	
t test/p	1.01/0.31		1.69/0.28	
Income status				
Income less than expenses	126.54±17.35		5.49±0.63	
Income equal to expenses / Income more than expenses	121.11±17.04		5.28±0.69	
t test/p	1.89/0.06		1.81/0.07	
Marital Status				
Married	121.64±18.85		5.31±0.69	
Single	124.52±14.94		5.40±0.66	
t test/p	-1.05/0.29		-0.78/0.43	
Number of children				
no	126.88±15.75		5.43±0.65	
1	122.15±16.75		5.40±0.71	
2 or more	113.84±18.16		5.10±0.68	
F/p	8,39/ 0.000		3,35/ 0.03	

t=t test, MW-U= Mann Whitney U-test, F= One-way analysis of variance

Table 4. Correlation between mean scores of scales

	Humanistic Practice Ability of Nursing Scale	Caring Behaviors Inventory-24
Humanistic Practice Ability of Nursing Scale	1	
Caring Behaviors Inventory-24	0.63**	1

**p = .000, Pearson correlation analysis

Caring Behavior Inventory score as 5.38±0.50, Çelik and Kardaş Kin as 4.8±0.9, and He et al. as 4.96±0.56 (14,19,20). In a study in Ethiopia, 51.67% of nurses were found to have high care behaviors (21). It was thought that this difference may be due to different

working conditions. The care behavior of nurses is affected by many variables (22). One of these is the variables related to working conditions (21). Since the relationship between humanistic practice ability and care behaviors was examined in this study, factors affecting care behaviors such as working conditions, job satisfaction, and the number of patients per nurse were not examined. Therefore, it is recommended to conduct multicenter studies including these variables.

When CBI-24 total scores and sociodemographic data were compared, it appeared that there was no significant difference between gender, education, income, and marital status with caring behaviors. In Eroğlu's study, there was also no significant difference

between gender, marital status, and training level with caring behaviors⁽²³⁾. Similarly, Kibret et al. for study it was found that age, gender, marital status, education level and care behaviors were not affected⁽²¹⁾.

In the study, the total mean Caring Behaviors Inventory-24 score of the nurses without children was found to be high compared to nurses with children. In their study of Gül and Dinç, no significant difference was found between having a child and the perception of caring behaviors⁽²⁴⁾. According to these findings, it can be said that there is a need for further studies in different groups since the relationship between the variables is not clear in the comparison of sociodemographic characteristics with the humanistic practice ability and with perception of caring behaviors.

It is among the professional responsibilities of nurses to provide high quality nursing care, all nursing activities are based on care behaviors and care behaviors affect the quality of care⁽²⁵⁾. In the study, there was a positive correlation between the humanistic practice ability and the perception of caring behaviors. With this result, we can say that another way has been found to optimise the perception of nursing care.

Strengths and limitations

The study may have presented the first concrete data from Turkey regarding the humanistic practice in nursing. This aspect is also important. In this respect, we think that it will shed light on other studies. We recognize this as the strength of the study. The scantness of the study is that the research was performed in a single hospital in the country, it is recommended to develop multicenter studies and to add the factors affecting the humanistic practice ability to these studies. Research data is based on self-report. This was accepted as another weakness of the study.

CONCLUSION

In this study, no significant relationship was found between sociodemographic characteristics with humanistic practice skill and with the perception of caring behaviors of nurses except for the number of children. For this reason, it is recommended to conduct in different centers and more comprehensive studies.

In addition, it was determined that the humanistic practice skill affects the perception of nursing care at a moderately positive level. Raising nurses' humanistic practice abilities (communication, ethic behavior, nursing esthetic practice, caring practice) during their education and then increasing these skills through in-service training will advance the quality and power of nursing care.

Author contribution

Study conception and design: ÖY, DY; data collection: ÖY, DY; analysis and interpretation of results: ÖY; draft manuscript preparation: ÖY, DY. All authors reviewed the results and approved the final version of the manuscript.

Ethical approval

The study was approved by the Balıkesir University Health Sciences Non-Interventional Research Ethics Committee (Protocol no. E-11811414-050.03-169395/23.08.2022).

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Conflict of interest

The authors declare that there is no conflict of interest.

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REFERENCES

1. Watson J. Love and caring. Ethics of face and hand-an invitation to return to the heart and soul of nursing and our deep humanity. *Nurs Adm Q.* 2003; 27(3): 197-202. [\[Crossref\]](#)
2. Mohamadi Asl S, Khademi M, Mohammadi E. The influential factors in humanistic critical care nursing. *Nurs Ethics.* 2022; 29(3): 608-20. [\[Crossref\]](#)
3. Wang L, Liu W. Research progress of humanistic care nursing. *Open Journal of Nursing.* 2022; 12: 633-41. [\[Crossref\]](#)
4. Li Q, Wang Y, Hong F, et al. Psychosomatic medicine research. 2022; 4(2): 10. [\[Crossref\]](#)
5. Toru F. 2020. Key point of nursing practices: Individualized care. *Journal of Adnan Menderes University Health Sciences Faculty.* 2020; 4(1): 46-59.
6. Yanmış S, Bahçecioglu Turan G, Özer Z. Turkish validity and reliability study of humanistic practice ability of nursing scale. *Int J Clin Pract.* 2022; 2022: 8435530. [\[Crossref\]](#)
7. Kurşun Ş, Kanan N. Validity and Reliability study of the turkish version of caring behaviors inventory-24. *Journal of Anatolia Nursing and Health Sciences.* 2012; 15(4): 229-35.
8. Uzelli-Yılmaz D, Akın-Korhan E, Khorshid LE. Evaluation of nursing care quality in a palliative care clinic. *Journal of Human Sciences.* 2017; 14(3): 2968-80. [\[Crossref\]](#)
9. Raja S, Hasnain M, Vadakumchery T, Hamad J, Shah R, Hoersch M. Identifying elements of patient-centered care in underserved populations: a qualitative study of patient perspectives. *PLoS One.* 2015; 10(5): e0126708. [\[Crossref\]](#)
10. Lina M, Qin G, Yang L. Mediating effects of emotional intelligence on the relationship between empathy and humanistic care ability in nursing students: A cross-sectional descriptive study. *Medicine (Baltimore).* 2022; 101(46): e31673. [\[Crossref\]](#)
11. Ma J, Peng W, Pan J. Investigation into the correlation between humanistic care ability and emotional intelligence of hospital staff. *BMC Health Serv Res.* 2022; 22(1): 839. [\[Crossref\]](#)
12. Wang Y, Zhang X, Xie Q, Zhou H, Cheng L. Humanistic caring ability of midwifery students in China and its associated factors: A multi-centre cross-sectional study. *Nurse Educ Today.* 2022; 111: 105276. [\[Crossref\]](#)
13. Shougen L, Lin L, Haina L, Feiyan L. Association between professional identity and humanistic caring ability in Chinese nursing students: a cross-sectional study in Changsha, Hunan, China. *Cogent Education.* 2023; 10(1): 2205341. [\[Crossref\]](#)
14. Erenoğlu R, Can R, Tambağ H. Nursing Care behaviors and factors related to care behaviors; Maternity hospital. *Health and Society.* 2019; 29(1): 79-88.
15. Zhang J, Zhou X, Wang H, Luo Y, Li W. Development and validation of the humanistic practice ability of nursing scale. *Asian Nurs Res (Korean Soc Nurs Sci).* 2021; 15(2): 105-112. [\[Crossref\]](#)
16. Wolf ZR, Giardino ER, Osborne PA, Ambrose MS. Dimensions of nurse caring. *Image J Nurs Sch.* 1994; 26(2): 107-11. [\[Crossref\]](#)
17. Wu Y, Larrabee JH, Putman HP. Caring behaviors inventory: A reduction of the 42-item instrument. *Nurs Res.* 2006; 55(1): 18-25. [\[Crossref\]](#)
18. Liu X, Li C, Yan X, Shi B. Psychological capital has a positive correlation with humanistic care ability among nurses. *Front Psychol.* 2022; 13: 955627. [\[Crossref\]](#)
19. Çelik A, Kardaş-Kin Ö. Presenteeism: A factor affecting nursing care behaviors. *İzmir Katip Çelebi University Faculty of Health Science Journal.* 2022; 7(3): 463-9.
20. He T, Du Y, Wang L, Zhong ZF, Ye XC, Liu XH. Perceptions of caring in China: patient and nurse questionnaire survey. *Int Nurs Rev.* 2013; 60(4): 487-93. [\[Crossref\]](#)
21. Kibret H, Tadesse B, Debella A, Degefa M, Regassa LD. Level and predictors of nurse caring behaviors among nurses serving in inpatient departments in public hospitals in Harari region, eastern Ethiopia. *BMC Nurs.* 2022; 21(1): 76. [\[Crossref\]](#)
22. Salimi S, Azimpour A, Fesharaki M, Mohammadzadeh SH. Nurses' perception of importance of caring behaviors and its determinant factors. *J Urmia Nurs Midwifery Fac.* 2012; 10(1).
23. Eroğlu N. The evaluation of patient care behaviors of nurses by patients who apply to emergency. *Journal of Research and Development Nursing.* 2018; 20(2): 13-21.
24. Gül Ş, Dinç L. Investigation of nurses' and patients' perceptions regarding nursing care. *Journal of Hacettepe University Faculty of Nursing.* 2018; 5(3): 192-208. [\[Crossref\]](#)
25. Oluma A, Abadiga M. Caring behavior and associated factors among nurses working in Jimma University specialized hospital, Oromia, Southwest Ethiopia, 2019. *BMC Nurs.* 2020; 19: 19. [\[Crossref\]](#)