

## **PERCEPTION OF CARE BEHAVIORS BY NURSES AND ELDERLY PATIENTS RECEIVING PALLIATIVE CARE: A MULTICENTER STUDY**

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### **Abstract**

The aim of this study is to compare the perception of the elderly patient receiving palliative care and of the nurses related to their care behaviors. Descriptive and cross-sectional type of research was carried out between October 2018 and July 2019 in the palliative care clinics of 4 different hospitals located in 3 different provinces in the southeastern region of Turkey. Total 29 nurses and 653 patients participated in the study. The data were collected through “Nurse and Patient Introduction Form”, “Caring Behavior Inventory-24” and “Palliative Performance Scale”. For the analysis of the data, Mann Whitney U, Kruskal Wallis test and Spearman correlation coefficients were used. The average palliative performance scale of the patients was  $52.77 \pm 13.10$ , and the average age of them was  $68.77 \pm 12.69$ . The total point averages in the nurses’ and patients’ Caring Behavior Inventory-24 were determined as  $5.34 \pm 0.65$  and  $4.88 \pm 0.70$  respectively. The subscale with the highest point average for both patients and nurses was ‘being respectful’. The average of nurses was significantly higher than the average of patients in total Caring Behavior Inventory-24 and all subscales ( $p < 0.005$ ). The results show significant differences between perception of the elderly receiving palliative care and of the nurses related to their care behaviors. Therefore, the needs and expectations of the elderly regarding palliative care should be met effectively, the quality of nursing care should be increased and its effectiveness should be evaluated.

**Keywords:** Palliative Care, Elderly, Nurse, Perception of Caring Behavior

## **PALYATİF BAKIM ALAN YAŞLI HASTALAR VE HEMŞİRELER TARAFINDAN BAKIM DAVRANIŞLARININ ALGILANMASI: ÇOK MERKEZLİ BİR ÇALIŞMA**

### **Özet**

Bu çalışmanın amacı, palyatif bakım alan yaşlı hastaların ve hemşirelerin bakım davranışlarına ilişkin algılarını karşılaştırmaktır. Tanımlayıcı ve kesitsel tipte olan bu araştırma Ekim 2018-Temmuz 2019 tarihleri arasında Türkiye’nin güneydoğu bölgesinde 3 farklı ilde bulunan 4 farklı hastanenin palyatif bakım kliniğinde yapılmıştır. Çalışmaya toplam 29 hemşire ve 653 hasta katılmıştır. Veriler “Hemşire ve Hasta Tanıtım Formu”, “Bakım Davranışları Envanteri-24” ve “Palyatif Performans Skalası” kullanılarak toplanmıştır. Verilerin anal Mann Whitney U, Kruskal Wallis Testi ve Spearman korelasyon katsayıları kullanılmıştır. Hastaların Palyatif Performans Skalası ortalaması  $52.77 \pm 13.10$ , yaş ortalaması  $68.77 \pm 12.69$  olarak bulunmuştur. Hemşirelerin ve hastaların Bakım Davranışları Envanteri-24 toplam puan ortalamaları sırasıyla  $5,34 \pm 0,65$  ve  $4,88 \pm 0,70$  olarak belirlenmiştir. Hem hastalar hem de hemşireler için en yüksek puan ortalamasına sahip ölçek alt boyutu ‘saygılı olma’ olarak belirlenmiştir. Bakım Davranışları Envanteri-24 toplam ve tüm alt boyutlarında hemşirelerin ortalamaları hastalara göre anlamlı olarak daha yüksek bulunmuştur ( $p < 0.005$ ). Sonuçlar, palyatif bakım alan yaşlı hastalar ve hemşirelerin bakım davranışlarına ilişkin algıları arasında anlamlı farklılıklar olduğunu göstermektedir. Bu nedenle, yaşlıların palyatif bakımla ilgili ihtiyaç ve beklentileri etkin bir şekilde karşılanmalı, hemşirelik bakımının kalitesi artırılmalı ve etkinliği değerlendirilmelidir.

**Anahtar kelimeler:** Palyatif Bakım, Yaşlı, Hemşire, Bakım Davranışları Algısı

## 1. INTRODUCTION

Advances in technology and healthcare systems have increased average life expectancy. And with the increase in average life expectancy, the increase in the number of elderly adults living with multiple chronic diseases has led to the need for geriatric palliative care (1-3). While the target group palliative care was only cancer patients, in recent years geriatric patients other than cancer patients have reached the same rate with them (2, 3). Palliative care not only covers patients who are in the last period of their life but also focuses on preventing and relieving symptoms for all individuals living with incurable diseases without trying to affect their treatment (1, 2). The special conditions and needs of the elderly patients receiving palliative care such as having multiple chronic comorbidities, experiencing exacerbations changing their quality of life, increasing addiction levels and receiving a care involving “medically and ethically complex treatment decisions”. Therefore, palliative care nurses should evaluate the patients psychosocially and spiritually with a holistic approach and should provide patient-oriented care (3, 4).

Care, which is the focus of holistic nursing processes, is one of the independent and most important functions of nurses and is the main factor distinguishing nurses from other health professionals (1, 5-7). Care has two dimensions as expressive behaviors and instrumental activities (8, 9). However, physical health and psychosocial health are interdependent. The positive care relationship between patient and nurse creates positive results both physically and psychologically for patients and nurses. Positive care behaviors increase self-confidence and awareness in patients while reducing anxiety. It provides sense of efficiency, ability to manage complexity and uncertainty, efficiency in making decisions and extensive understanding of the patients' experiences for the nurses (10). The main purpose of the caring behavior is to reduce the pain and distress of the patients and to meet the patient needs and expectations during all care and treatment processes and to increase the satisfaction (1, 3, 6, 7). Therefore, patient satisfaction is evaluated as a result of high-quality care (1). Nursing care is also one of the important quality indicators in health services since it constitutes a large part of the service provided to the patients within health facilities (1, 4, 5). Nurses are expected to provide professional services based on their competence in providing high-quality care, patient safety and satisfaction (11). Accordingly, meeting these expectations reduces the total health costs by reducing the duration of hospitalization and the use of health services (1, 3, 4, 6).

Patients with different levels of pain in palliative care may need different types of care behaviors (4, 12). In addition, people from different cultures are able to define care in different ways, or their perception of care varies in terms of their expectations (13, 14). Besides, patients' perceptions of nursing care are affected by many factors such as social status, age, education, ethnicity, the support they receive from nurses, care, advanced technology, and professionalism (6, 10, 15). Those factors should be considered to improve the perception and quality of nursing care (1, 6, 11). The compatible care perception of patients and nurses is important for benefiting from the nursing services after being discharged from hospital and adapting to the treatment (6). However; it is noted that there are differences in perception between patients and nurses about which behaviors are considered as care and about the perception of the intended care by the patients generally (9, 15). In the literature it is generally stated that the perceptions of nurses and patients regarding their care behavior are different (2, 6, 9, 11, 14, 15). In some of those studies, it has been determined that the nurses perceive quality of the care they provide higher than the patients (1, 6, 11, 13, 14).

When nurses are aware of the perceptions of patients related to their care services, they will be more sensitive and provide more patient-oriented care for them (4, 6). Besides; measuring the nursing care perceptions of the ones receiving them and the ones providing them is crucial for monitoring and improving the quality of care services and evaluating the efficiency of nursing (13, 15). The majority of previous studies on the perception of caring behaviors were conducted with

surgical (5, 6, 10, 14) and oncology (11, 12, 15, 16) patients. There was only one study on intensive care (17) and palliative care (2) patients. However, there was no study for elderly patients receiving palliative care. Therefore, this study was conducted with the aim to compare the perceptions of the patients receiving care services and the nurses working in the palliative clinics and to research the factors affecting them.

## **2. MATERIAL and METHODS**

### **2.1. Study Design**

In this study, a descriptive and cross-sectional research design was applied.

### **2.2. Setting and Sample**

The research was conducted between October 2018 and July 2019 at the palliative care clinics of 4 different hospitals located in 3 different provinces in the southeastern region of Turkey: 1 Hospital in Diyarbakir, 1 Hospital in Batman and 2 hospitals in Mardin. There was no selection of samples in the study. All nurses (n=29) working in the palliative care clinic and all elderly patients (n=653) who agreed to participate in the research were contacted during the data collection period.

As inclusion criteria for the patients; staying in hospital for at least a week, being older than 60, having an open mind and being hemodynamically stable, accepting to participate in the research, not having mental and psychological and communication problems were taken into consideration. As inclusion criteria for the nurses; working in a palliative clinic for at least 2 months and accepting to participate in the research were taken into consideration.

### **2.3. Instruments**

The research data were collected through “Nurse and Patient Introduction Form”, “Caring Behavior Inventory-24 (CBI-24)” and “Palliative Performance Scale (PPS)”.

Nurse and Patient Introduction Form are prepared by the researcher and has two sections. The first section includes questions about the socio-demographic characteristics of nurses (age, gender, educational status, placement year, etc.). The second section includes questions about the socio-demographic characteristics of the patients; such as age, gender, marital and educational status (2, 6, 9, 11, 13, 15).

Caring Behavior Inventory (CBI-24) was first developed as 75 articles by Wolf et al. and finally, it was rearranged in the form of 24 articles by Wu et al. (8, 18). CBI-24 is used to compare nurses' assessments of themselves and patient perceptions. Turkish validity and reliability study was conducted by Kurşun and Kanan (19). CBI-24 consists of 4 sub-dimensions, including assurance (16,17,18,20,21,22,23,24), knowledge and skill (9,10,11,12,15), respectability (1,3,5,6,13,19) and commitment (2,4,7,8,14); and 6-point Likert type scale (1= never to 6=always) is used for answers. The total scale score is evaluated by dividing it into 24 after the scores of 24 articles are collected. As the total scale score and the sub-scale score increase, the quality of care perceived by patients or nurses increases. For the sum of the scale, the Cronbach Alpha reliability coefficient was determined to be 0.97 for the patients and 0.96 for the nurses (20).

Palliative Performance Scale (PPS) was developed by Anderson et al. (20). It consists of mobility, activity/disease finding, self-care, diet, consciousness level sub-classes and is used to define the potential care needs of the patients. Palliative Performance Scale scores are defined as the % PPS score by reading the horizontal plane at each level and determining the line that best fits the patient (20).

### **2.4. Data Collection**

The surveys were distributed and collected by researchers assigned to each hospital. Each assigned researcher verbally invited patients who met the criteria for inclusion to participate in the

study. Before the surveys were distributed, the purpose of the study was explained to the patients by the researchers and their written and oral permissions were obtained. The surveys were filled out by patients in the patient care unit where they felt comfortable. Surveys of patients with visual impairment or who did not want to read them by themselves were filled out by the researcher based on the responses of the patients.

The researchers assigned to each hospital informed the nurses working in the palliative care clinic about the purpose of the study and emphasized that participation in the study is voluntary. All nurses agreed to participate in the study. Surveys were provided to nurses and collected from them the next day.

## 2.5. Ethical Considerations

The Ethical Committee of Mardin Artuklu University has obtained an ethical permit to conduct the research (No: 206–11/2017). Following the approval, institution permission was obtained from the hospitals where the research was conducted. The purpose of the study was explained to all participants before the data collection forms were distributed, the basis of volunteering for participation in the study was emphasized that the data would be kept confidential, and written and oral consent was obtained. All patients and nurses participating in the study provided informed consent according to the Helsinki Declaration.

## 2.6. Data Analysis

Data were analyzed using the Statistical Package for Social Science 22.0 (SPSS, IBM Corp., Armonk, NY, USA). Numbers, percentages, means, and standard deviations were used to evaluate descriptive characteristics. The compatibility of the data to normal distribution was analyzed through Kolmogorov–Smirnov test. In order to define the descriptive characteristics of the patients and nurses (such as age, gender or education etc.) and to analyze the difference between the total and sub-dimension scores of CBI-24, Mann Whitney U Test and Kruskal Wallis Test were used. total and sub-dimension scores of CBI-24 of nurses and patients were compared with Mann Whitney U test. Spearman correlation coefficients were used to analyze the relationship between descriptive characteristics and maintenance behavior scores. Statistical significance was accepted as  $p < 0.05$  in all tests.

## 3. RESULTS

### 3.1. Descriptive Characteristics of Nurses and Patients

The average Palliative Performance Scale of the patients surveyed was 52.77 ( $\pm 13.10$ ) and the average age was 68.7 ( $\pm 12.69$ ). 56.2% of the patients were male, nearly all of them (99.7%) were married, 21.1% were illiterate, 30.6% were literate, and approximately half of them (48.3%) received primary and higher education. The majority of patients (70.6%) had previously been admitted to the palliative care service, and about half of them (43.3%) had an additional chronic disease. The majority of them (90.4%) have been staying in hospital less than 3 months. 31.4% of the patients have cancer, 19.6% have respiratory diseases, and 16.4% have a nervous system-related diagnosis (Table 1). Furthermore, the majority of the patients (62.2%) stated that they found nursing care adequate.

Of the palliative care nurses included in the study, 58.6% were female, the majority of them (62.1%) were married and the age average was 31.82 ( $\pm 8.33$ ). The majority (62.1%) of nurses had total work experiences over 1 year and total work experiences in the palliative care clinic, in particular, were less than 1 year (62.1%). The majority (55.2%) had a 4-year university degree in nursing, while a small percentage (13.8%) had a master's degree (Table 1).

**Table 1. Socio-demographic characteristics of patients and nurses**

Socio-demographic factors	Mean±SD	N (%)
Nurses		
Age (Mean±SD)	31.82± 8.33	
Range	21-52 years	
Weekly working hours (Mean±SD)	42.75± 7.71	
Gender		
Male		12 (41.4%)
Female		17 (58.6%)
Marital status		
Married		18 (62.1%)
Single		11 (37.9%)
Highest diploma degree		
Health vocational high school		9 (31.0%)
Bachelor's degree		16 (55.2%)
Master's degree		4 (13.8%)
Working experiences		
<1 years		11 (37.9%)
1-5 years		7 (24.1%)
≥5 years		11 (37.9%)
Taking palliative care course		
Yes		8 (27.6%)
No		21 (72.4%)
Working experience in a palliative care clinic (In years)		
<1 years		18 (62.1%)
1-5 years		11 (37.9%)
Patients		
Age (M±SD)	68,77± 12,69	
Range	17-95 years	
Gender		
Male		367 (56.2%)
Famele		286 (43,8%)
Education		
Illiterate		138 (21.1%)
Literate		200 (30.6%)
Primary school		227 (34.8%)
High school/university		88 (13.5%)
Marital status		
Married		651 (99.7%)
Single		2 (0.3%)
Original clinical diagnosis		
Cancer		205 (31.4%)
Respiratory system diseases		128(19.6%)
Nervous system diseases		107 (16.4%)
Cardiovascular system diseases		103 (15.8%)
Others*		110(16.8%)
Previous palliative care clinic experience		
Yes		461 (70.6%)
No		192 (29.4%)
Addition Chronic disease		
Yes		283 (43.3%)
No		370 (56.7%)
Length of hospital stay (In months)		
1-2 months		590 (90.4%)
≥ 3 months		63 (9.6)
Palliative Performance Scale	52.77±13.10	

\*(Chronic renal failure, Diabetes, Liver failure, etc.)

### 3.2. Comparison of The CBI-24 Total and Sub-scales Scores of Patients and Nurses

The total score average of patients and nurses for CBI-24 was 4.88 ( $\pm 0.70$ ) and 5.34 ( $\pm 0.65$ ), respectively. The sub-dimension with the highest score average for both patients and nurses was found to be "being respectful" (4.96 $\pm 0.72$  and 5.41 $\pm 0.59$ , respectively). The second-highest score for nurses was lower size assurance (5.34 $\pm 0.71$ ) while for patients it was commitment (4.90 $\pm 0.79$ ). Nurses received the lowest score from the lower dimensions of knowledge and skill (5.31 $\pm 0.73$ ) and commitment (5.31 $\pm 0.68$ ), while patients received the lower dimensions of assurance (4.84 $\pm 0.68$ ) and knowledge and skill (4.83 $\pm 0.86$ ). The average of nurses in the CBI-24 total and all sub-dimensions was significantly higher than patients (Table 2).

**Table 2. Comparison of the CBI-24 total and sub-scales scores of patients and nurses**

CBI-24	Patients		Nurses		z*	pValue
	Mean $\pm$ SD	Median(Min-Max)	Mean $\pm$ SD	Median(Min-Max)		
Assurance	4.84 $\pm 0.68$	5.00(1.75-6.00)	5.34 $\pm 0.71$	5.50(3.00-6.00)	-4.426	< 0.001
Knowledge-Skill	4.83 $\pm 0.86$	4.80(1.00-14.60)	5.31 $\pm 0.73$	5.20(3.00-6.00)	-4.186	<0.001
Respectful	4.96 $\pm 0.72$	5.00(1.00-6.00)	5.41 $\pm 0.59$	5.50(3.50-6.00)	-3.706	<0.001
Connectedness	4.90 $\pm 0.79$	5.00(1.00-6.00)	5.31 $\pm 0.68$	5.20(3.00-6.00)	-3.135	0.002
Total	4.88 $\pm 0.70$	4.95(1.19-7.35)	5.34 $\pm 0.65$	5.35(3.13-6.00)	-4.095	<0.001

\* z: Mann-Whitney U test

### 3.3. Distribution of CBI-24 Article Averages of Patients and Nurses

When the CBI-24 subscale articles were examined, it can be observed that the patients received the highest scores from "meeting the requirements which the patients did or did not express", "keeping the information of the patient confidential", and "allowing the patient to explain their feelings". Nurses received the highest scores for "speaking with the patients", "allowing the patients to explain their feelings" and "treating the patient as an individual". Patients received the lowest scores from the "using the equipment properly", and "visiting the patients gladly" articles, while nurses received the lowest scores from the "educating or informing the patients" and "reassuring the patient" articles (Table 3).

**Table 3. Distribution of CBI-24 item averages of patients and nurses**

Caring Behaviours Inventory		Patients		Nurses	
		Mean $\pm$ SD	Min-Max	Mean $\pm$ SD	Min-Max
Assurance	16. Returning to the patient voluntarily	4.48 $\pm 0.83$	2.00-6.00	5.31 $\pm 0.76$	3.00-6.00
	17. Talking with the patient	4.80 $\pm 0.87$	1.00-6.00	5.48 $\pm 0.78$	3.00-6.00
	18. Encouraging the patient to call if there are problems	5.08 $\pm 0.90$	1.00-6.00	5.34 $\pm 0.76$	3.00-6.00
	20. Responding quickly to the patient's call	4.64 $\pm 0.88$	2.00-6.00	5.37 $\pm 0.82$	3.00-6.00
	21. Helping to reduce the patient's pain	5.08 $\pm 0.91$	1.00-6.00	5.27 $\pm 0.79$	3.00-6.00
	22. Showing concern for the patient	4.49 $\pm 0.87$	2.00-6.00	5.34 $\pm 0.81$	3.00-6.00
	23. Giving the patient's treatments and medications on time	5.04 $\pm 0.88$	1.00-6.00	5.31 $\pm 0.76$	3.00-6.00
	24. Relieving the patient's symptoms	5.13 $\pm 0.98$	1.00-6.00	5.34 $\pm 0.81$	3.00-6.00

<b>Knowledge -Skill</b>	9. Knowing how to give shots,. Ivs, etc.	4.67±0.90	1.00-6.00	5.31±0.76	3.00-6.00
	10. Being confident with the patient	4.98±0.87	1.00-6.00	5.20±0.77	3.00-6.00
	11. Demonstrating professional knowledge and skill	5.08±0.87	1.00-6.00	5.34±0.76	3.00-6.00
	12. Managing equipment skilfully	4.26±0.80	1.00-6.00	5.31±0.76	3.00-6.00
	15. Treating patient information confidentially	5.18±2.16	1.00-55.0	5.37±0.77	3.00-6.00
<b>Respectful</b>	1. Attentively listening to the patient	4.66±0.95	1.00-6.00	5.44±0.78	4.00-6.00
	3. Treating the patient as an individual	5.11±0.91	1.00-6.00	5.48±0.68	3.00-6.00
	5. Supporting the patient	4.53±0.92	1.00-6.00	5.41±0.73	3.00-6.00
	6. Being empathetic or identifying with the patient	5.07±0.94	1.00-6.00	5.24±0.83	3.00-6.00
	13 Allowing the patient to express feelings about his or her disease and treatment	5.16±0.94	1.00-6.00	5.48±0.78	3.00-6.00
	19. Meeting the patient's stated and unstated needs	5.21±0.96	1.00-6.00	5.41±0.82	3.00-6.00
<b>Connectedness</b>	2. Giving instructions or teaching the patient	4.73±1.07	1.00-6.00	5.17±0.96	3.00-6.00
	4. Spending time with the patient	4.55±0.98	1.00-6.00	5.41±0.73	3.00-6.00
	7. Helping the patient grow	5.11±0.95	1.00-6.00	5.31±0.80	3.00-6.00
	8. Being patient or tireless with the patient	5.06±0.92	1.00-6.00	5.31±0.76	3.00-6.00
	14. Including the patient in planning his or her car	5.07±0.97	1.00-6.00	5.34±0.85	3.00-6.00

### 3.4. Factors Affecting the Perception of Care Behaviors of Patients and Nurses

When the socio-demographic characteristics of the nurses participating in the study were compared with the CBI-24 total and scale sub-dimensions, no significant difference was determined ( $p>0.05$ ).

There was no significant difference between the duration of the study, clinical diagnosis and palliative care service of elderly patients receiving palliative care and the CBI-24 total and sub-scales ( $p>0.05$ ). Male patients received a higher "assurance" score than female patients ( $p=0.033$ ). Patients who had no previous experience of hospitalization at a palliative care clinic scored higher than the "commitment" sub-scale ( $p=0.035$ ). Elderly who do not have an additional chronic disease scored higher than those with the lower dimensions of "being respectful" and "commitment" sub-scales ( $p=0.040$  and  $p=0.036$ , respectively) (Table 4).

There was no significant association between patients' age and palliative performance scores and CBI-24 subscale scores ( $p>0.05$ ). A poor positive relationship was determined between the age of the nurses and the scores of the "knowledge and skill" sub-scale ( $\rho=0.38$ ,  $p=0.037$ ) and the "commitment" sub-scale ( $\rho=0.37$ ,  $p=0.043$ ).

Table 4. Comparisons of patients' socio-demographic characteristics and CBI-24 total and sub-scales

Patients socio-demographic characteristics	Assurance			Knowledge and Skill			Respectful			Connectedness		
	Mean ± SD	Median (Min-Max)	P Mann-Whitney /KW	Mean ± SD	Median (Min-Max)	P Mann-Whitney /KW	Mean ± SD	Median (Min-Max)	P Mann-Whitney /KW	Mean ± SD	Median (Min-Max)	P Mann-Whitney /KW
Gender			<b>0.033</b>			0.146			0.166			0.139
Male	4.8±0.6	5.0(1.7-6.0)		4.8±0.7	4.8(1.0-6.0)		4.9±0.7	5.0(1.0-6.0)		4.9±0.7	5.0(1.0-6.0)	
Female	4.7±0.6	4.8(2.6-5.8)		4.8±0.8	4.8(1.8-14.6)		4.9±0.7	5.0(1.5-6.0)		4.8±0.7	5.0(1.6-6.0)	
Education			0.422			0.382			0.060			0.108
Illiterate	4.8±0.7	5.0(2.1-6.0)		4.7±0.8	4.8(1.8-6.0)		5.0±0.7	5.1(1.5-6.0)		4.9±0.8	5.0(1.6-6.0)	
Literate	4.8±0.6	5.0(1.7-5.7)		4.8±0.7	4.8(1.0-6.0)		4.9±0.7	5.0(1.0-6.0)		4.8±0.8	5.0(1.0-6.0)	
Primary school	4.8±0.6	4.8(2.0-5.8)		4.8±0.9	4.8(2.0-14.6)		4.9±0.6	5.0(2.0-6.0)		4.8±0.7	5.0(2.0-6.0)	
High school/university	4.9±0.6	5.0(3.1-6.0)		4.9±0.7	5.0(3.0-6.0)		5.0±0.6	5.1(3.0-6.0)		5.0±0.7	5.1(2.6-6.0)	
Original clinical diagnosis			0.533			0.870			0.658			0.783
Cancer	4.8±0.6	5.0(2.2-5.8)		4.8±0.7	4.8(1.8-6.0)		4.9±0.7	5.0(1.5-6.0)		4.8±0.8	5.0(1.2-6.0)	
Respiratory diseases	4.9±0.6	5.0(1.7-6.0)		4.9±1.1	4.8(1.0-14.6)		4.9±0.7	5.1(1.0-6.0)		4.9±0.8	5.0(1.0-6.0)	
Nervous diseases	4.8±0.6	4.8(2.2-5.7)		4.8±0.6	4.8(3.0-6.0)		4.9±0.5	5.0(3.0-6.0)		4.9±0.6	5.0(2.8-6.0)	
Cardiovascular diseases	4.7±0.8	5.0(2.0-5.8)		4.8±0.8	5.0(1.2-6.0)		4.9±0.8	5.1(1.0-6.0)		4.8±0.8	5.0(1.2-6.0)	
Others*	4.7±0.7	4.8(2.6-6.0)		4.8±0.7	4.8(2.2-6.0)		4.9±0.7	5.0(2.0-6.0)		4.9±0.8	5.0(2.0-6.0)	
Previous experience in palliative care			0.648			0.435			0.201			<b>0.035</b>
Yes	4.8±0.6	5.0(2.0-6.0)		4.8±0.9	4.8(1.2-14.6)		4.9±0.7	5.0(1.0-6.0)		4.8±0.8	5.0(1.2-6.0)	
No	4.8±0.6	5.0(1.7-6.0)		4.8±0.7	4.8(1.0-6.0)		5.0±0.6	5.1(1.0-6.0)		5.0±0.7	5.0(1.0-6.0)	
Addition Chronic disease			0.923			0.612			<b>0.040</b>			<b>0.036</b>
Yes	4.8±0.7	5.0(1.7-6.0)		4.8±0.6	4.8(1.0-6.0)		4.9±0.7	5.0(1.0-6.0)		4.8±0.8	5.0(1.0-6.0)	
No	4.8±0.6	5.0(2.0-5.8)		4.8±0.9	4.8(2.0-14.6)		5.0±0.6	5.1(1.8-6.0)		4.9±0.7	5.0(2.0-6.0)	
Length of hospital stay			0.145			0.389			0.263			0.672
1-2 months	4.8±0.6	5.0(1.7-6.0)		4.8±0.8	4.8(1.0-14.6)		4.9±0.7	5.0(1.0-6.0)		4.9±0.7	5.0(1.0-6.0)	
≥ 3 months	4.7±0.6	4.8(2.2-5.5)		4.7±0.7	4.8(2.2-6.0)		4.9±0.6	4.8(2.0-6.0)		4.9±0.7	5.0(2.0-6.0)	

KW: Kruskal Wallis test

#### 4. DISCUSSION

In palliative care, nurses are advised to ensure and monitor the quality and continuity of care by focusing on personalized care (21). The high perception of nurse care behavior by both patients and nurses shows that the quality of care is high (8, 18, 19). The importance of this study is that there are a limited number of studies in palliative care clinics investigating the perceptions of care of elderly patients and working nurses simultaneously (15). It is stated that determining the views and expectations of patients and nurses regarding their care behavior is very important in individualizing care (8).

Since there is no study in the literature on the perceptions of care of elderly patients and working nurses in palliative care clinic, our study results will be discussed with research conducted in different patient groups. Our results show that elderly patients receiving palliative care had significantly lower CBI-24 total and all subscale scores compared to nurses and their perceptions of care. The literature also states that overall perceptions of nurses and patients regarding their care behavior are different (2, 6, 9, 11, 15,16). Similar to our study results; in the study of Papastrovu et al. on patients and nurses in surgical clinics in 6 different European countries, it was determined that nurses in other countries except for Finland (Greece, Italy, Czech Republic, Cyprus, and Hungary) had higher perceptions of care than patients (14). Similar results were also determined in the studies conducted in Turkey, China, and Indonesia (2, 11, 13). Different from our results, the study of Karlou et al. on perceptions of care were similar in Greece and the study of Zamanzadeh et al. with cancer patients and nurses in Iran (15, 16). Those results are considered to be due to different health systems of the countries, religious beliefs, socio-cultural and educational factors (2, 6, 11, 13, 14, 16).

In our study, the highest average subscale of CBI-24 for both patients ( $4.9\pm0.7$ ) and nurses ( $5.4\pm0.5$ ) was observed in “being respectful”. This finding is completely different from the results of the previous study (2, 6, 11, 13, 14, 16). Therefore, our study results show that supportive care behaviors are perceived as high by palliative care patients and nurses. In palliative care clinics, it is thought that it is important for elderly patients and nurses to perceive supportive nursing care behaviors as high in terms of meeting the needs of this particular group efficiently. This difference is thought to be due to the fact that our study was conducted with geriatric palliative care patients and nurses, which is a sensitive population. In addition, both “being respectful” and “commitment” are considered in part to be psychosocial care behaviors (13). In our study, both patients and nurses ranked the psycho-social dimension of care higher and preferred than the amount of knowledge and skills. This result is an important finding of our study and is different from the study results in the literature (2, 6, 11, 13, 14).

Nurses received the lowest score from the “knowledge and skill” ( $5.3\pm0.7$ ) and “commitment” ( $5.3\pm0.6$ ) subscales, while patients received the “assurance” ( $4.8\pm0.6$ ) and “knowledge-skill” ( $4.8\pm0.8$ ) subscales. Patients rated low on substances such as willing to go to the patient on the “assurance” sub-scale, showing interest and responding immediately to their call. These factors associated with the “assurance of human existence” give the impression that certain values in care are not adequately communicated to care recipients (14, 18). This result shows that the trust relationship between patients and nurses who spend the most of their time with patients among health professionals, have frequent and regular contact, and meet care requirements is not sufficiently developed (21). The fact that the relationship of trust is not perceived as high by patients as nurses suggests that nurses should be more sensitive for understanding and responding to the real and perceived needs and expectations of the patients. Palliative care nurses are not able to provide enough time to the patients due to job density, excessive working hours, and this is thought to negatively affect the relationship of trust (3).

In our study, both nurses and patients scored low on the “knowledge and skill” sub-scale. Different from our study, the highest score was given to the “knowledge and skill” sub-scale by patients and nurses in most previous studies (2, 11, 13, 14, 16). However, those studies conducted by Aupia et al. and He et al. are lower than the average value in our study, despite the highest score being given to the “knowledge and skill” sub-scale by both patients and nurses (11, 13). The literature states that patients’ and nurses’ perceptions of care are based more on the disease-focused nursing care model, and that nursing knowledge and skills are more appreciated by participants (11, 13). In this respect, this finding differs from previous studies by showing that patients judge nurses on the technical aspects of care and professional knowledge (2, 6, 11, 13-16). It is thought that this is due to the fact that the majority of patients receiving palliative care compared to other patient groups are in advanced stages, and because of the difficulties caused by the disease, symptom control as well as a model of care (22) in which the patients and their relatives are supported psychosocial and spiritual because patients and nurses understand each other better.

When the CBI-24 subscale articles were examined, patients received the highest scores from “meeting the requirements that the patient expressed or did not”, “keeping the information of the patient hidden”, and “allowing the patient to explain their feelings”. Nurses received the highest scores for “speaking to the patient”, “allowing the patient explain their feelings” and “treating the patient as an individual”. The points ranking of the articles differed within both groups. The articles which patients express include “being respectful” and “knowledge and skill” subscales, while the articles that nurses express include “being respectful” and “assurance” subscales. Similarly, in the study of Kılıç and Öztunç, the ranking of the highest-rated articles by nurses and patients differs (6). Different from our study, the study of Karlou et al. showed that both patients and nurses scored high on articles such as “knowing how to administer injections, intravenous initiatives” and “applying the patient's treatments and medications on time”, indicating that their perceptions of care were similar and compatible (16). Those different results support the belief that care behaviors and functions are different between cultures (9, 11, 13-16).

There was no significant difference between the duration of the training, clinical diagnosis and palliative care service of elderly patients receiving palliative care and the CBI-24 total and subscales ( $p>0.05$ ). However, it was determined that male patients scored higher than female on the “assurance” subscale, those who did not previously experience hospitalization at the palliative care clinic scored higher on the “commitment” subscale, those who did not have additional chronic disease scored higher on the “being respectful” and “commitment” subscales ( $p<0.005$ ). Patients’ perceptions of nursing care are also affected by many factors such as social status, age, education, ethnicity, etc. (6, 10, 15). The study conducted by Karlou et al. determined that the level of education, marital status, prior hospitalization experiences affected patients’ perceptions of certain caring behaviors (16).

There was no significant association between patients’ age and palliative performance scores and CBI-24 subscale scores ( $p>0.05$ ). Different from our study, the study conducted by Aupia et al. (11) found a significant relationship between age and “being respectful” and “commitment” subscales, and between age and “assurance” and “commitment” subscales by Karlou et al. (16). Having multiple chronic diseases and decreasing physiological and functional capacities, the elderly patients receiving palliative care are more addictive for their daily life activities. This increases the advanced health care needs of older individuals and leads to higher health care service expectations (1, 3). The lack of a significant relationship in our study, it is thought that the average age of the patients is high, and this process is considered as an expected result of old age and they find nursing care adequate.

When the socio-demographic characteristics and CBI-24 total and scale sub-dimensions are compared, a positive relation between the age and “knowledge and skill” and “commitment” sub-scale scores. ( $p>0.05$ ). Unlike the study of Karlou et al. a significant difference was identified only between marital status and the “knowledge and skill”, “assurance” and “commitment” subscales

(16). In the study of Aupia et al., no significant difference was determined between the socio-demographic characteristics of the nurses and the CBI-24 total and subscales (11).

### Limitations

This study has some limitations. First, the study was conducted in 4 different hospitals in 3 cities located in a specific geographical region (Southeast) in Turkey. It limits the generalizability of the results. Secondly, different perceptions of caring behavior between nurses and patients involved in the study from different cities and different hospitals were not compared.

### 5. CONCLUSIONS

In this study, the mean score of the nurses in the CBI-24 total and all sub-dimensions were higher than the patients'. In addition, the highest score was provided to the "being respectful" subscale by both patients and nurses. The subscale with the second-highest score for nurses was "assurance" while for patients it was "commitment". Nurses received the lowest score from the "knowledge and skill" and "commitment" subscales while patients received the "assurance" and "knowledge and skill" subscales. In our study, both patients and nurses perceived the psychological size of care in part to be higher than the size of knowledge and skills.

Our study results show that responses between patients and nurses are not very compatible; therefore, nurses need to improve their perceptions of patients' expectations and priorities in care. Therefore, the expectations of elderly patients receiving palliative care should be evaluated at regular intervals with feedback systems. In this respect, it is very important to ensure that the needs and expectations of elderly patients regarding palliative care are met effectively, to improve the quality of nursing care and to evaluate its effectiveness.

### Acknowledgements

The authors thank the patients and nurses who participated in this study.

### Funding

There is no kind of financial support for the study.

### Conflict of interest

The authors declare that they have no conflicts of interest

### Author contributions

Planning: BVD, HU; Data collection: BVD, HU; Data analysis: BVD; Manuscript preparation: BVD, HU; Manuscript review: BVD, HU.

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