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Nurses' Caring Behaviors Toward Patients Undergoing Chemotherapy in Greece

A Mixed-Methods Study

KEY WORDS
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Background: Nurses' caring behaviors are central in the quality of care of patients undergoing sophisticated chemotherapy protocols. However, there is a scarcity of research regarding these behaviors in non–Anglo-Saxon countries. **Objective:** The aim of this study was to explore caring behaviors that nurses perceive as important in caring for patients in Greece receiving chemotherapy. **Methods:** We used a mixed-methods design, including a survey in 7 oncology wards in 3 cancer hospitals in Attica, Greece, and a subsequent qualitative focus group investigation. Caring behaviors were explored through the Caring Behavior Inventory 24 and content analysis of 3 focus group interviews. **Results:** A sample of 72 nurses (response rate, 68.5%) were surveyed, and 18 nurses participated in the focus groups. ''Knowledge/skills'' (5 [SD, 0.7]) was the most important caring behaviors. No significant associations with nurses' characteristics were noted, except for higher scores in caring behaviors in participants who were married ($P<.02$). Six caring-related categories emerged from the qualitative analysis: ''the concept of care,'' ''respect,'' ''nurse-patients' connection,'' ''empathy,'' ''fear of cancer,'' and ''nurses' professional role.'' Moreover, they stressed barriers they faced in each category. **Conclusions:** Integrated quantitative and qualitative data concur that operational tasks are central in Greek nurses' caring behaviors. In addition, qualitative findings highlighted those skills equipping nurses to provide holistic

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individualized care in a hectic care environment. **Implications for Practice:** Supporting nurses in attaining excellence in technical skills and in meaningfully engaging with patients receiving chemotherapy is essential in the realization of their caring role. These should be priorities for continuing education and practice improvement initiatives.

Nurses' caring behaviors have been acknowledged as a core element in providing quality care.[1–3] Historically, oncology nurses have played a pivotal role in providing care to cancer patients. In oncology nursing literature, dignity, love, presence, respect, and sensitivity have been identified as the key caring behaviors.[4,5] Patients with cancer experience the multifaceted impact of the diagnosis and chemotherapy treatment, affecting physical, psychological, spiritual, and social domains in their everyday life.[6] Nurses have a core role within the multidisciplinary team to provide optimal care tailored to patients' needs and priorities.[7]

■ Review of Literature

Within cancer nursing, "caring" has been described as a multifaceted phenomenon composed of specific caring behaviors, including existential aspects and nursing actions.[5] Starting from the early study of Larson,[4] a series of studies suggest that oncology nurses perceived having a trusting professional relationship between nurse and patient as the most important caring behavior.[6,8] Strong, supportive relationships foster patients' views of a courageous and stoic cancer experience.[9] Studies conducted in diverse cultural backgrounds and countries suggest that providing emotional, informational, and practical support is central to the provision of quality care.[8,10] Chemotherapy can signify a particularly vulnerable phase in an individual's cancer trajectory. The onset of distressful symptoms, functional changes, and fatigue may make it difficult for patients to transcend the situation and embrace hope.[7,10,11] Skillful and compassionate nursing care at this phase is essential in ensuring optimal patient outcomes.[10]

Oncology nurses' approaches to caring may be influenced by different factors, such as their personality, own philosophy of life, culture, social reality, professional identity, and the philosophy of their work environment.[5,12,13] Moreover, in acute cancer treatment settings, nurses may perceive aspects such as professional knowledge and care surveillance or practical behaviors to be essential and more "important" than psychosocial skills.[13] In a concept analysis on caring by Brilowski and Wendler,[14] researchers pointed out that nursing care consists of actions and interactions that come from the nurses' perceptions of patient's needs. Physical care, touch, presence, and competence were included as important attributes of what nurses believe and describe as "care."

■ Conceptual Framework

Theories about caring vary from philosophies to grand theories to middle-range theories.[15] Watson's Grand Theory of Human Caring[16] has been widely used in nursing.[16] The key concept of this theory is the interpersonal nurse-patient relationship and nurse's ability to create and sustain a healing environment. Watson has described caring through a clinical "caritas" process.[1] Her theory provides the structure and the language needed to support and guide nursing practice in different contexts and healthcare systems.[16,17] Smith's[2,16] reviews on research related to Watson's theory indicate that nurses seemed to take competence and technical activities for granted, whereas interpersonal activities were perceived as the most important caring behaviors, particularly for patients with a life-threatening illness.

Identifying nurses' perceptions on adopting certain caring behaviors in an acute cancer treatment environment offers the potential to better understand the ways caring is offered and the factors that affect it, as well as nurses' own awareness of caring. Currently, there is a lack of evidence on oncology nurses' perceptions of caring behaviors within a Greek context.

■ Study Purpose

The aim of the present study was to determine the caring behaviors that oncology nurses perceived to be most important in making patients undergoing chemotherapy feel cared for. The research questions were as follows: (*a*) What caring behaviors do nurses consider important? (*b*) What demographic and other personal characteristics, such as gender, age, marital status, educational background, work position, total work experience, and experience in oncology, are associated with nurses' perceptions of caring?

■ Methods

Design

Qualitative research is recognized as the most suitable to investigate philosophical ideas such as "caring"[18] and is often used to illustrate the meaning of caring from nurses' perspectives.[19] Quantitative designs are used to develop instruments to measure aspects of caring and caring behaviors. More recently, the combination of quantitative and qualitative methods has been demonstrated.[2,3] We used a mixed-methods design, which integrated data from an exploratory, cross-sectional survey, and a subsequent qualitative investigation based on focus group interviews with oncology nurses to explore their perceptions of caring behaviors for patients undergoing chemotherapy.

Setting and Sample

Nurses from 7 medical oncology wards in 3 metropolitan cancer hospitals in the Attica, Greece, area were recruited from January

2011 to December 2011. In a previous international study with a large sample (n>1100 nurses), small effect sizes of the association between nurses' background characteristics and responses to the Caring Behavior Inventory 24 (CBI-24) have been reported (r=0.07–0.11).[20] Pooling data from different countries may have confounded actual effect sizes because of potential differences in the size and direction of associations among different countries. Acknowledging this limitation and the fact that the aforementioned weak associations may not be clinically significant, the quantitative investigation of this study was powered to detect a medium correlation coefficient ($r \geq 3$; power=0.80, α=.05), which would explain a clinically relevant proportion (approximately 1%) of the variation in CBI scores. Based on these power calculations, a sample size of at least 85 nurses was needed.[21]

In the qualitative part of the study, 3 focus groups were conducted. Nurses with similar sociodemographic characteristics to those participating in the quantitative study were purposefully selected. The composition of each group was homogeneous (age, gender, family characteristics, education, and work experience), but adequate variation among participants (maximum variation sampling) was sought after to encourage a greater degree of spontaneity and to present a wide range of views.

To be eligible for this study, participants had to (1) be registered nurses according to the European Directives for registration, (2) have at least 1 year working experience, (3) have worked at least 1 year in an acute oncology setting, (4) be able to speak and understand Greek, and (5) be willing to participate in the study.

Measurement

In the survey phase of the study, data were collected through the use of the Greek version of the CBI-24[22] and a demographic form developed by the researchers that included gender, age, family status, education background, and years of experience in nursing and in oncology. Those factors, decided upon by a panel of experts, were informed by a previous international study reporting correlates of caring behaviors in surgical nursing.[20]

CARING BEHAVIOR INVENTORY

The CBI-24 is the latest revised version of a self-report questionnaire about caring.[23] The CBI-24 has been used by more than 132 investigators in several countries and was accepted as a simple, short, and easy to complete instrument.[3] The Greek version of the CBI-24[22] consists of 24 items using a 6-point Likert scale (from 1=never to 6=always). Total scores ranged from 24 to 144. The higher scores indicated the frequency of caring behaviors practiced by nurses. The CBI-24 consists of 4 subscales: "assurance of human presence," "knowledge and skill," "respectful deference to others," and "positive connectedness." Internal consistency estimates of the Greek version of the CBI-24 include an overall Cronbach's α coefficient of .92, and .72 to .87 for the 4 subscales. The test-retest coefficient was 0.83; confirmatory factor analysis confirmed the 4 subscales.[22]

FOCUS GROUPS

In the qualitative phase of the study, a focus group discussion guide was formulated, and a similar demographic form to the one used in the survey phase of the study was completed.

The focus group discussion guide consisted of 6 open-ended questions based on the CBI-24 subscales and the overall research aim (Table 1). Face validity of the questions was established by a panel of experts (2 professors of nursing with extensive experience in qualitative research methodology and 2 clinical oncology care experts).

Data Collection Procedures

Questionnaires were distributed by the primary investigator. Nurses meeting the inclusion criteria were verbally invited to participate in the study. Questionnaires with a cover letter explaining the aim and the voluntary nature of the study and guaranteeing anonymity and confidentiality were distributed. A sealed envelope and instructions were also provided. All nurses' questionnaires were returned to a box located at the ward manager's office in the sealed envelope. To increase nurses' response rate, reminders within the following fortnight were sent.

Focus groups were organized in a neutral, easily accessible, comfortable, quiet venue familiar to all nurses in a private room within the university's nursing department. Discussions lasted between 90 and 120 minutes and were audio recorded. A professor in nursing facilitated the focus group. A nurse specialist with advanced training and experience in focus group methods was the first observer. The primary investigator served as the second observer and took written notes focusing on both verbal cues and nonverbal communication. Six nurses participated in each focus group, totaling 18 participants across groups. In the beginning of each group, the facilitator introduced the aim and the process of the focus group and highlighted the overall aim of the study.

Ethical Considerations

This study was conducted according to general ethical standards.[24] The Board of Directors, the Scientific Board, and the Nursing Directors of involved hospitals approved the implementation of the study. Participants in both phases of the study received written and verbal information on the purpose of the study, including its voluntary nature, the right to withdraw without any consequences, and anonymity and confidentiality of the data.

All focus group participants gave permission to audiotape discussion sessions. Confidentiality was maintained by assigning

Table 1 • Focus Group Question Guide

1. What does caring for patients receiving chemotherapy mean to you? Describe your experiences.
2. What is the most important caring behavior for you personally?
3. Based on your experiences, what do you think make patients feel that nurses guarantee their safety?
4. How do you show your respect to your patient?
5. Do you create close relationships with your patients? Please give an example from everyday work practice?
6. Is there anything else that you would like to share with the group about nurses' caring behaviors?

numbers to participants, and each recording and transcription also had numerical codes. All data were secured in a locked cabinet, and only researchers who performed the content analysis had access to the data.

Data Analysis

Survey data analysis was performed using the Statistical Package for Social Sciences version 17.0 for Windows (SPSS Inc, Chicago, Illinois). Data were checked for normality and were transformed as appropriate. Nonparametric statistics were used where appropriate for ordinal-level data or when normality criteria were not met. Comparisons between groups of nurses were carried out using the Mann-Whitney U test and were confirmed by t test for ease of interpretation of mean scores. Descriptive statistics were reported.

Correlation analysis was used to test the association between nurses' demographic and personal characteristics with CBI-24 scores (total score and subscales scores). Spearman ρ correlation coefficients were calculated to obtain an initial understanding of potential correlations among variables. Subsequently, multiple linear regression analysis with stepwise procedure was used to identify variables most strongly associated with scores in each subscale of the CBI. Bonferroni adjustment was used in case of multiple simultaneous comparisons. All P values reported are 2-tailed. The significance level was set at $\alpha < .05$.

Content analysis is considered the most suitable method to analyze multifaceted and sensitive nursing phenomena such as care.[25] More specifically, the technique of deductive content analysis was used following the phases of analysis, preparation, organization, and reporting.[25,26] Three independent experienced researchers analyzed the data derived from field notes and verbatim transcriptions line by line. Repeated reading, reflecting, and searching for emerging patterns and meanings followed, and codes and categories were structured according to the CBI subscales. Furthermore, based on the purpose of the study to investigate the perceptions of nurses, an attempt was made to identify and classify all the characteristics of care. Researchers met regularly to check interpretations, validation of categories, and conclusions.[25]

To establish trustworthiness (credibility, dependability, and applicability) of the analyzed data, collection and analysis processes were documented in detail. Research processes were based on methodological guidelines[27]; the facilitator and observers were experienced researchers both in the subject under discussion and in focus group research.[28] Interview transcriptions were independently analyzed by 3 investigators, who later met to discuss and reach consensus. Analyses were validated by 2 independent researchers, a psychologist and a specialist nurse, with extensive experience in qualitative research and the analysis process.[25,27] One hundred percent agreement was achieved in the coding scheme between researchers.[28] Quotations excerpted from transcriptions were used to enhance transferability. The most representative meaningful quotations from focus group discussions were used to further describe the identified categories.[27,28]

Results

For the survey phase, a total of 105 nurses were approached, and 72 nurses (response rate, 68.5%) consented to participate in the study. A purposeful sample of 18 nurses (in total) who had similar sociodemographic characteristics were invited and participated in 3 focus groups (participation rate, 100%) (Table 2).

The CBI-24 had strong internal consistency with Cronbach's α of .90 for the total scale and α values of .84 to .86 for the subscales.

Table 2 • Nurses' Demographic and Personal Characteristics

		Survey		3 Focus Groups	
		n	%	n	%
Gender	Men	9	12.5	1	5.6
	Women	63	87.5	17	94.4
Age		34 (8.1)			34.8 (6.5)
Marital status	Single[a]	40	55.6	14	77.8
	Married	30	41.7	4	22.2
	Divorced	2	2.8	—	—
Kids	No	37	53.6	14	77.8
	Yes	32	46.4	4	22.2
Educational background	Bachelor's degree	4	5.6	8	44.4
	Diploma	67	93	10	55.6
	MSc	5	7.6	9	50
	PhD	2	1.5	1	5.6
	Clinical specialty[b]	15	20.8	2	11.1
Work position	Staff nurse	60	83.3	17	94.4
	Head nurse	11	15.3	1	5.6
Total work experience, mean (SD), y		10.6 (8.6)		10.2 (6.3)	
Work experience in oncology, mean (SD), y		7.7 (8.5)		9.1 (6.9)	

[a]Single includes single, divorced, and widowed nurses.
[b]Clinical specialty includes medical or surgical nursing specialty.

In the quantitative phase of the study (survey), the sample was predominantly female (87.5%), with a mean age of 34 (SD, 8.1) years. The mean total work experience was 10.6 (SD, 8.6) years and specifically in oncology 7.7 (SD, 8.5) years (Table 2). In the qualitative phase of the study (focus groups), the sample was also predominantly female (94.4%), with a mean age of 34 (SD, 6.5) years. The mean total work experience was 10.2 (SD, 6.3) years, and it was 9.1 (SD, 6.9) years in oncology (Table 2).

The top 3 CBI-24 caring behaviors were "knowing how to give shots, IVs, etc" (5.3 [SD, 0.8]), "giving the patients' treatments and medications on time" (5.3 [SD, 0.7]), and "helping to reduce the patient's pain" (5.1 [SD, 0.8]) (Table 3). Top-rated CBI-24 subscales were "knowledge and skills" (5 [SD, 0.7]) and "assurance of the human presence" (4.8 [SD, 0.7]).

No significant associations were found between CBI-24 total scores, CBI subscales, and the tested variables (age, gender, professional experience) (Table 4). Marital status was the only variable to correlate with higher CBI ratings (total and subscales). Participants who were married had higher CBI-24 ratings across all subscales compared with single/divorced/widowed participants (Table 5). Multiple linear regression analyses confirmed the association between marital status and CBI scores, but indicated no other significant associations among nurses' demographic and personal characteristics and the CBI-24 ratings. However, the models exhibited unacceptably poor fit with β's ranging from $\beta = .43$ ($P < .01$) to $\beta = .57$ ($P < .00$).

In the focus groups, nurses' competencies and technical skills, professional knowledge, and their perceptions of their role as health professionals were found to be the most significant caring behaviors for patients undergoing chemotherapy. Analysis of interview data revealed 6 main themes central to nurses' caring behaviors (Table 6), the "concept of care," "respect of the human being," "nurse-patient connection," "empathy," "nurses' personal view about the illness—fear of cancer," and "nurses' personal perception about their role as professionals."

The Concept of Care

Nurses described caring as a human trait and the action of providing physical and individualized care. Nurses referred to physical care as a fundamental nursing intervention and their main obligation. They recognized the importance of meeting patients' needs in providing total care and viewed the concept of care as a professional responsibility.

> Care does not only mean scientific knowledge… It is something more humane, more meaningful… We identify their personal needs… [The patient] is basically our guide on how to provide their care… We personalize our interventions… (N17)
>
> …It is important… maybe a bit… the body part at first, not to underestimate the psychological [needs]… but at first is perhaps more important to relieve the physical symptoms more. (N1)

Table 3 • Caring Behaviors Inventory (Caring Behavior Inventory 24) Subscales and Cronbach's α

Caring Behaviors	Subscales	Mean (SD)	Cronbach's α
	Knowledge and Skills	**5 (0.7)**	**.84**
Q9	Knowing how to give shots, intravenous lines, etc	5.3 (0.8)	
Q10	Being confident with the patient	4.8 (0.9)	
Q11	Demonstrating professional knowledge and skill	4.9 (1)	
Q12	Managing equipment skillfully	4.8 (0.9)	
Q15	Treating patient information confidentially	5 (1)	
	Assurance of Human Presence	**4.8 (0.7)**	**.86**
Q16	Returning to the patient voluntarily	3.8 (1.1)	
Q17	Talking with the patient	4.3 (1.2)	
Q18	Encouraging the patient to call if there are problems	5 (1)	
Q20	Responding quickly to the patient's calls	4.9 (1)	
Q21	Helping to reduce the patient's pain	5.1 (0.8)	
Q22	Showing concern for the patient	4.9 (1)	
Q23	Giving the patient's treatments and medications on time	5.3 (0.7)	
Q24	Relieving the patient's symptoms	4.9 (0.8)	
	Respectful Deference of Others	**4.5 (0.8)**	**.86**
Q1	Attentively listening to the patient	4.6 (1.1)	
Q3	Treating the patient as an individual	4.9 (1.1)	
Q5	Supporting the patient	4.4 (1.1)	
Q6	Being empathetic or identifying with the patient	4.5 (1.1)	
Q13	Allowing the patient to express feelings about his/her disease and treatment	4.4 (1)	
Q19	Meeting the patient's stated and unstated needs	4.4 (0.9)	
	Positive Connectedness	**4.3 (0.9)**	**.84**
Q2	Giving instructions or teaching the patient	4.6 (1.1)	
Q4	Spending time with the patient	4.1 (1.2)	
Q7	Helping the patient grow	4.3 (1.3)	
Q8	Being patient or tireless with the patient	4.6 (1)	
Q14	Including the patient in planning his/her care	3.8 (1.2)	

Table 4 • Associations Between Nurses' Characteristics and Caring Behavior (Caring Behavior Inventory 24 [CBI-24]) Subscales

	Caring Behavior (CBI-24) Subscales			
	Assurance of Human Presence	Knowledge and Skill	Respectful Deference to Others	Positive Connectedness
	ρ (*P*)	ρ (*P*)	ρ (*P*)	ρ (*P*)
Nurses' characteristics				
Age	0.15 (.231)	0.06 (.643)	0.09 (.454)	0.04 (.770)
No. of children	0.22 (.074)	0.18 (.155)	0.20 (.116)	0.07 (.574)
Length of nursing professional experience	0.16 (.206)	0.02 (.846)	0.20 (.108)	0.12 (.327)
Length of oncology nursing experience	0.12 (.364)	0.08 (.526)	0.11 (.416)	0.08 (.545)

Spearman ρ correlation coefficients are reported.

Nurses' professional identity was highlighted as an essential part of the caring process, including their specialized knowledge of providing quality nursing care based on holism:

> …To do our job as best as we can in all levels, that is, when we know why… when we have some criteria in our job to be fulfilled and which we believe to be the right ones, such as giving the right medication to the right patients, or to take care of their body properly, trying to meet their emotional needs; this is the way to provide holistic care. (N12)
> …the care provided to the patients, is by professionals… (N7)

Respect: Respect of the Human Being

Nurses connected caring with respect of patients' personal values, beliefs, and preferences; establishing trust and confidence; and avoiding discrimination. Nurses' skills on vein cannulation appeared to be a contributing factor in showing respect:

> …No matter who you have [lying] in the bed, you have to respect the human being… and do the best possible for him/her as he/she is the most saint-like [person] in the world, …and give your best possible… treating people without discrimination. I think this is respect… (N3)
> … the way we handle their body, the way that we face them, our calm voice and discussion—all of these indicate respect to the patient… (N14)
> Respect for the patient is when we become magicians to find the right vein for cannulation. This is what it is!!! That's what it is!!! Here is my respect, when we find a solution… (N1)

Nurse-Patient Connection

Nurse-patient interactions through a trusting relationship were reported by all participants to be a central part of care. This category included aspects such as a unique and dynamic bonding with patients. Nurses argued that personal chemistry was essential for a close relationship.

> …Some patients entering the day care unit for chemotherapy, have already chosen their nurse, that is what we call rapport… We can't separate a patient from the nurse since they (patients) made their choice, one should respect patients' decision, since it is with them (nurse) they feel secure…. (N3)
> … I am a very important, very vital part of their lives, I mean that we are part of their social circle… we have a unique opportunity to stand by them in very difficult moments of their lives, and this forms our unique relationship… is not easy … because they are between life and death. (N18)

In the day-care chemotherapy unit, the priority of care emphasized caring as "doing" because of staff shortage and lack of time. This included completing tasks, rather than effectively communicating and establishing a meaningful caring relationship. Their interpersonal relationships depended on the response in the different situations that could obstruct the formation of a more meaningful caring relationship.

Table 5 • Differences in Score of Caring Behavior Inventory 24 (CBI-24) Subscales According to Nurses' Marital Status Groups

		Assurance of the Human Presence	Knowledge and Skills	Respectful Deference of Others	Positive Connectedness
CBI-24/Subscales		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Marital status	Married	5.1 (0.6)	5.2 (0.6)	4.9 (0.6)	4.6 (0.8)
	Single[a]	4.6 (0.7)	4.8 (0.7)	4.3 (0.8)	4.1 (0.9)
	P	.007	.012	.001	.026

Results were confirmed by Mann-Whitney *U* analysis; *t* test results are reported to highlight differences in mean scores.
[a]Single includes single, divorced, and widowed nurses.

Table 6 • Focus Groups Content Analysis Provided the Following Categories

1. The concept of care as
   - Human trait
   - Patients' physical care
   - Individualized care
   - Professional responsibility
2. Respect: respect of the human being
3. Nurse-patient connection
   - Unique relationship and very dynamic human connection; different aspects influence nurse-patient interactions
   - Nurses' personal thoughts and experience that affect their expression of connectedness with a patients
   - Nurses' ability and tension to delimit their connection with patients
   - The establishment of connectedness as a result of cancer chronicity
   - The importance of nurse's constant presence
   - Professional development as a result of the relationship with the patient
   - Nurse-patient relationship becomes transpersonal and influence nurses' psychological and spiritual balance
   - The lived experience of death and dying because of the closeness with the patient
   - Nurse job satisfaction as a result of the close relationship with the patient
4. Empathy
5. Nurse's personal view about the illness—fear of cancer
6. Nurses' personal perception of their role as professionals
   - Nursing actions—responsibilities and clinical competence
   - Nurse as patient advocate—and their ability for interdisciplinary cooperation
   - Nurses were required to be well educated and specialized in cancer care and attend continuing education courses
   - Nurse as role model

> It is such the speed that one is required to do everything in a very short, accurate time considering the shortage of staff; thus, it is necessary to have a balance in your relationships with every patient. You have to act as a professional. (N10)

Nurses expressed their difficulty to set the boundaries in the therapeutic relationship with the patients. While they pointed out the importance of nurses' constant presence at patients' bedside, they recognized a need to adopt strategies to maintain their own mental and psychological well-being.

> But I think we should put limits as nurses, and I have experienced this kind of challenge before. When I haven't done it, I was less experienced; I gave a big piece of myself and it cost me… we should put in limits because there is only so much we can take in…. (N15)

Nurses also identified dealing with death and dying, as a pivotal part of caring that affected their desire to be in close contact with the patients

> …When this man died, he affected me so much as I was affected from my father's death… always when I feel that this is going to happen again… I tried to stop it and tried to stay away from a close relationship, because you will end up with the same wounds and all the related feelings…. (N9)

Moreover, nurses stated that a trusting relationship with cancer patients gave them a sense of job satisfaction, which maintained their caring efforts

> …is the greatest benefit we get from this job, I mean that we bond with certain people …and fortunately this interpersonal contact is what feeds us. (N12)

Empathy

Nurses stated that "being with" patients in the most vulnerable time of their lives was the core component of care. Nurses' cannulation skill has been identified as a key task that involved emotion and was considered as a mode of empathy. A profound bonding connection was created between the nurse and the patient.

> The oncology patient is a special patient… We should many times try to be in his/her position… We should tell him/her that "We will stand by you through chemotherapy, you, we are here for you." …I think those behaviors are very important…. (N15)
> …I did nothing else. I just sat beside her and grabbed her hand, and I did this with calmness. (N18)
> When we see a patient with a great problem with his/her veins and he/she complains… and he/she could not withstand anymore! … I have to… we have to find a solution!!! (N4)

Nurses' Personal View About the Illness—Fear of Cancer

Nurses expressed their psychological distress facing the effect of a life-threatening disease in people's lives. They expressed feelings of vulnerability and frustration.

> …Cancer is cancer. (N1)
> …I'm afraid… I am defensive because it scares me; it scares me so much this illness (cancer)…. (N7)
> …Perhaps because the older I become, the most afraid I feel for this disease; above all, you are scared of cancer. (N15)

Nurses' Personal Perceptions of Their Role as Professionals

Nurses felt that their personal characteristics and beliefs about their role also affected their perceptions of care in a chemotherapy ward environment.

> It is all about patients' care how we see, how each one of us understand it… I believe that those of us who are working, at least we try to do our best with all our mental power reserves… because neither we are gods, nor we always do everything perfect…. (N6)

Nurses mentioned that they acted as patients' advocates within the health professional teams and highlighted the importance of a highly skilled practice and of a knowledgeable, competent nurse.

…Nurse's role within a team is to take care of the patient and make him not feel alone. (N1)
…But when we talk about a super nurse … when we use such an expression, we mean the nurse who covers all aspects of patients' care… from the provision of information to communication and practical issues. (N10)
When I know not only how… but why. (N1)

Continuing education and specialized knowledge were valued as very important to their identity as nurses. Moreover, nurses' ability in venipuncture is essential element in their personal understanding of professionalism.

…Nowadays most hospitalized people know many things… If you do not know very well your subject, it is obvious immediately, how to find the right vein for cannulation; you should gain the trust from the beginning, especially in scientific issues… We live in times that things have changed, and the patients' demands are greater. (N17)

■ Discussion

To our knowledge, this is the first study to investigate perceptions of caring behaviors of oncology nurses in Greece. Findings showed that clinical competence and skills were considered the most important caring behaviors. Moreover, the qualitative exploration confirmed that the most valued caring behaviors are related to nurses' professional knowledge, technical tasks, and procedures.

Oncology nurses in acute care settings are expected to be equipped with knowledge and skills to be able to gain insight into each cancer patient's experience.[6,29,30] Nurses administering and monitoring advanced, complex treatments require technical expertise and a high-level skill set in order to gain patients' trust and minimize their possible sense of vulnerability.[29–31] Studies in Greek surgical hospitals have similarly identified technical aspects as the most important care behaviors.[32]

From the quantitative findings, behaviors related to establishing a close relationship between patients and nurses received the lowest priority. This was in contrast to the qualitative findings, where nurses highlighted the significance of nurse-patient connectedness only when specific barriers could be overcome such as staff shortage and time restrictions. Affective nursing behaviors were judged to be most important in making patients feel cared for.[5,33]

Notably, nurses in our study emphasized the barriers that prohibited them from providing their preferred standard of care. One of the most frequently mentioned barriers was the lack of time. Time pressures were further demonstrated in our survey results, ranking the behavior "spending time with the patient" in the 22nd position. This finding is supported by other studies that emphasize that nurses need time to be able to care[34,35] particularly in a busy oncology day-care ward.[13,30,36] Furthermore, "getting the work done" remains a powerful underpinning of the work culture in most work settings.[13,35,37]

In the present study, nurses felt that their venipuncture skills were the key to total care and to a close relationship with their patients as well. This finding is supported by previous research regarding how highly technical nursing interventions can transmit a special feeling of compassion and self-giving to the patient.[6,8,35,36,38] Studies in acute oncology settings provide evidence that this type of highly technical, specialized care is perceived to play a pivotal role in the overall provision of nursing care. Nurses who want to prioritize patients' emotional needs often fail to elicit patients' concerns within their routine practice assessments. To this end, it is clear that technical skills are necessary for nurses to help them successfully meet different job requirements and guarantee effective performance.[5,39,40]

Interestingly, less frequent caring behaviors in our survey, such as "including the patient in the planning of his/her care," "attentively listening to the patient," and "talking with the patient," were shown to be major concerns for nurses during the focus groups. Arguably, acute cancer treatment settings are often very busy, with nurses feeling under constant pressure, performing multiple and complex administrative tasks, providing basic care, and being left with limited time to deal with patients' emotional needs and concerns.[13] This further stresses the competing demands of the working environment, while research evidence supports that "being with" patients and families, providing personalized, holistic care, should be the ultimate goal of quality care.[41,42]

Studies have emphasized the difficulties faced by nurses in maintaining a balance between person-centered, holistic care and task-oriented care in a chemotherapy administration environment.[5,10,13,35,37,42] In our study, nurses perceived their care to include careful listening and the acknowledgment of patients' values and perceptions. They further stressed their unique contribution as professionals and the importance of being knowledgeable, skillful, and committed to the provision of individualized care and to act as role models. This practical approach to caring and "being there" meets patients' expectations of nurses.[13,32]

Of note, there are a limited number of studies examining the association between nurses' personal characteristics and caring behaviors, and these tend to have divergent findings.[21,33,43] In our study, only marital status was correlated with nurses' perception of care. Married nurses rated higher all care behaviors compared with others (single, divorced, widowed). This finding contradicts results from a study where marital status was correlated negatively to nurses' perceptions of care[44] and from an international study involving surgical care settings, including Greek nurses,[21] where no associations were found between personal nurse characteristics and caring behaviors. A possible interpretation for this can be the special feeling of "motherhood" that nurses can have for patients experiencing a life-threatening illness, such as cancer, as previously reported.[45,46] Nevertheless, more research is needed in a larger and more representative sample to further explore and explain the existence and nature, if any, of the relationship between nurses' personal characteristics and their caring behaviors.

Limitations

The main limitation is the relatively small convenience sample that was obtained from 1 geographical area (Attica) that is not

representative of Greek nurses as a whole. Moreover, despite our efforts to increase recruitment, the sample was 13 participants of the predetermined survey sample size. This may have introduced a type II error by failing to detect important associations between nurses' characteristics and caring behaviors. Furthermore, given the staff shortage in cancer metropolitan hospitals[47] in Greece, the demanding nursing workloads, and the moderate response rate (68.5%) in the survey phase of the study, the internal and external validity of the study may be affected. In the qualitative phase of the study, issues such as group consensus, dynamics, and homogeneity may have influenced the study's findings. However, only 1 person seemed to participate in a limited way.[48] Despite the issue of limited generalization, focus groups' findings added depth, clarity, and better understanding of the survey findings.

Notably, the current challenging socioeconomic circumstances in Greece and the shortage of nurses can potentially affect the perception and expression of caring behaviors. However, this study is a first attempt to investigate perceptions of caring behaviors in the field of oncology nursing in Greece.

Implications for Practice

Caring theory has the potential to guide nurses, particularly those in complex clinical settings. Furthermore, study findings may be useful to others in finding new ways to develop a quality practice environment. Healthcare policy makers need to address the shortage of staffing for nurses to have the potential and the time to enter into a caring relationship with their patients. Nurse educators' active and continuous clinical support may be a potent tool for nurturing and fostering staff nurses to provide a work environment in which care can be practiced in a caring manner. Nurse managers should restructure work conditions, advocate, supervise, and support nurses to create an environment that nurtures care as a valuable resource.

■ Conclusion

This study's findings suggest that nurses' perceptions of caring behaviors can be focused on skills and knowledge in order to meet patients' needs in an acute cancer treatment environment. Effective performance, professional responsibility, the provision of individualized care, and a close relationship with the patients were key concepts identified. Furthermore, all important aspects in a caring environment were affected by lack of time and staff shortage. Despite the fact that it may not always be possible for nurses to provide their perceived level of care because of these factors, this study has identified a clear need for development of services that are tailored to socioeconomic, organizational, and political conditions.

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