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Experiences of Nurses in Providing Care for Patients on the Cancer Journey: A Cross-Sectional Survey

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ABSTRACT

Background: The interaction between nursing care and cancer patients is beneficial for patients' health outcomes, as they successfully manage and live with cancer. This study was conducted to assess the quality-of-care interaction between nurses and patients in oncology hospitals. **Methods:** A cross-sectional survey was conducted among 113 cancer patients in oncology teaching hospitals in Baghdad, Iraq, from August 14th, 2023, to January 30th, 2024. The Caring Nurse-Patients Interaction-23 Scale was utilized to examine the nurse-related orientation of caring interaction between nurse and patient. It is assessed on a 5-point Likert scale and contains 23 questions pertaining to four primary domains: "humanistic care, relational care, clinical care, and comforting care." Data were analyzed by descriptive and inferential data analysis. **Results:** The findings showed that most of the study sample were female (72.6%), unemployed (75.2%), and patients were not smokers (88.5%). Most of the patients had breast cancer (44.2%); and more than half of them were treated with chemotherapy (68.1%). The mean patients' interaction with caring provided by oncology nurses was moderate in most domains, and the humanistic and comforting interactions were more impacted. There was a significant relationship between patients' employment status, cancer type and type of treatment that they received (*p* value = 0.001), and their caring interaction with oncology nurses. **Conclusion:** The study concluded that the majority of the cancer patients felt a moderately caring interaction with oncology nurses. Nurses must focus on humanistic and comforting interactions with patients to build a positive caring relationship and improve patients' health outcomes.

Keywords: Cancer; Oncology Nurses; Patients; Quality-of-Care Interaction

INTRODUCTION

Cancer is the leading cause of death worldwide, with an estimated 19,000,000 cases and 10,000,000 related deaths in 2020 (Xia *et al*., 2022). Long-term patterns in cancer rates and burden are a reflection of both shifts in medical practice, such as the adoption of cancer screening tests, and patterns in behaviors linked to cancer risk. Other countries may be able to learn from the comparatively successful advancements in cancer research, prevention, and treatment (Schilsky *et al*., 2020). Patients must not only deal with the physical agony of their condition but also intense psychological strain. The elderly have a high incidence of most cancer types, accounting for 50% of all cancer cases (He *et al.*, 2023).

Cancer and its treatments have a significant effect on the quality of life of patients with cancer. Nursing care and patients' interactions might be beneficial for patients' health outcomes as they successfully managed and lived with cancer (Bahrami, Parnian, & Samimi, 2012). Applied caring behaviors during interaction between nurses and patients create a productive working environment and the best healthcare quality (Villacarlos & Daño, 2020; Vujanić, Prlić, & Lovrić, 2020). Patients should expect and experience comprehensive care to ensure their satisfaction with their nursing services. Patients and nurses could achieve a higher level of satisfaction and a healthy working environment by adopting specific nurse-patient interactions (Fortuno, Oco, & Clores, 2017).

Nurses and other medical professionals are mainly in the first line of providing cancer patients with expert medical treatment as well as regular psychological counseling (Karlou *et al*., 2018). Thus, service attitudes are

important since nurses who provide medical services directly and have the most direct interaction with patients (Lake, Germack, & Viscardi, 2016) and the medical skills of nurses (Gebhardt, Wolak, & Huber, 2013) greatly affect patient satisfaction. Factors that influence the perception of nurses' caring behaviors range from their level of knowledge and formal education to the length of time they have spent working with cancer patients. It is crucial for nurses to possess a certain level of caring behavior as part of their formal education, in order to effectively contribute to care attribution during their oncology nursing journey (Labrague *et al.*, 2015). Research has shown a deficiency in comprehending the caring behaviors that occur during interactions between a nurse and a patient with cancer. The paucity of research in this field hinders the global comprehension of the significance of caring and its behaviors, thereby hindering criticism and self-evaluation, which are crucial for the development of personal and professional skills, as well as the overall workplace environment (Mulyadi & Katuuk, 2017). Consequently, the study was undertaken to assess nursing care through "nurse-patient interactions" and to explore the correlation between sociodemographic and clinical profiles of oncology patients and the compassionate actions exhibited by nurses in oncology units.

METHODOLOGY

Study Design

A cross-sectional survey was conducted to evaluate the quality of interactions between nurses and patients at two oncology teaching hospitals in Baghdad, Iraq, from August 14th, 2023, to January 30th, 2024.

Sample and Sampling

A non-probability (purposive) sample of 113 patients with cancer recruited from oncology wards at Baghdad Teaching Hospital and AL-Amal National Hospital for Tumor, both sexes (males and females), was selected. These included patients aged 18 and over who were diagnosed with cancer by their physicians, as well as those who consented to participate in the study.

Data Collection and the Study Instrument

Data was collected using a structured paper-based self-report questionnaire administered via interviewing techniques by the researchers and interviewers. All survey questionnaires were completed through face-to-face interviews and took approximately 10–15 minutes with each patient. The study used "the Caring Nurse-Patient Interaction Scale (CNPI-23P)" (Sharour, 2021) to assess the caring interaction between nurses and patients in oncology hospitals. A generic scale, "CNPI-23P," is used to assess how a nurse and patient interact from a caring standpoint. It consists of 23 questions and represents 4 primary domains: "humanistic care (4 items), relational care (7 items), clinical care (9 items), and comforting care (3 items)." A 5-point Likert scale, ranging from 1 = not at all to 5 = highly, measures the items. The range of scores for the CNPI-23P is 23 to 115. Participants age, sex, marital status, level of education, disease duration, type of cancer, and type of treatment were also collected.

Validity and Reliability of the Questionnaire

To verify the validity and reliability of the scale, factor analysis and internal consistency were assessed by a previous Arabic study (Sharour, 2021). The α coefficients for the four domains were 0.61 to 0.76, 0.90 to 0.92, 0.80 to 0.94, and 0.63 to 0.74, respectively, indicating that the instrument was valid and dependable. A panel of experts determines the content validity of the instrument format. They are professors at the University of Baghdad's College of Nursing. These experts have more than 10 years of experience in their field. The experts' review of the questionnaire revealed that all of them agreed that the items were clear and adequate for measurement in the study. Minor changes were performed on a few Arabic items. Such changes were made according to the expert proposal.

Data collection was started after getting approval from the University of Baghdad, the College of Nursing authority, and official approval. Prior to data collection, participants in both hospitals were asked to sign an informed consent form indicating that they had been informed about the study, its objectives, and their rights to refuse or accept participation. Confidentiality of the participants' information was respected, and only the researchers and the ethics committees have the right to access the data. The questionnaire was anonymous, and the data was analyzed group-wise, so there was no link between the results of this study and any of the individual participants. The privacy of the respondents was maintained by preparing and setting a place and time for data collection.

Ethical Consideration

The study received the Ethical Permission from the College of Nursing, University of Baghdad, Iraq for approval of the study through the College of Nursing to the Ministry of Health (Ethics committee) with the Reference No.2087 on 8th August 2023.

Data Analysis

The statistical package of social sciences (SPSS), version 26.0, is used to analyze data. Sociodemographic data were analyzed descriptively, and continuous data were presented as means and standard deviation. The comparison of CNPI-23P scores in relation to different sociodemographic and clinical variables was carried out using Chi-Square. All the tests were carried out at a 5% level of significance. The value of $p<0.05$ was considered statistically significant.

RESULTS

Table 1: Socio-Demographical and Clinical Characteristics of Patients with Cancer

Patients Characteristics	Frequency	Percentage
Gender		
Female	82	72.6%
Male	31	27.4%
Employment Status		
Employee	16	14.2%
Unemployed	85	75.2%
Retired	12	10.0%
Marital Status		
Married	84	74.3%
Single	12	10.6%
Divorced/widowed	16	14.2%
Separated	1	0.9%
Accommodation		
Live alone	1	0.9%
With wife/husband	82	72.6%
With others	30	26.5%
Level of Education		
Illiterate	15	13.3%
Read & write	12	17.7%
Primary School	21	18.6%
Tertiary School	23	20.4%
High School	13	11.5%
College/ Institute	17	15%
Postgraduate	4	3.5%
Smoking		
Yes	13	11.5%
No	100	88.5%
Type of Cancer		
Leukemia	1	0.9%
Stomach	3	2.7%
Colon	5	4.4%
Pancreas	3	2.7%
Breast	50	44.2%
Other types	50	44.2%
Type of Treatment		
Chemotherapy	77	68.1%
Radiation therapy	34	30.1%
Usual treatment	2	1.8%
	Mean	**Standard Deviation**
Age (years)	50.87	14.758
Disease Duration (years)	2.81	3.044

Table 1 shows that most cancer patients within a mean age of M (SD) = 50.87 (14.76). The majority of patients were female (72.6%), unemployed (75.2%), living with a wife or husband (72.6%), and been married (74.3%). The vast majority of patients were not smokers within (88.5%). Most of the patients had breast cancer (44.2%) and other types of cancer (44.2%); more than half of them were treated with chemotherapy (68.1%); and they had a mean cancer duration of Mean= 2.81 (3.044).

Table 2: Mean of Score of Caring Nurse-Patient's Interaction in the Oncology Ward

No.	Items	M	SD	Scores
Clinical Care Interaction				
1.	Know how to give the treatments (e.g., intravenous injections, bandages etc.)	3.3274	0.79555	Moderate
2.	Know how to operate specialized equipment (e.g. pumps, monitors, etc.)	3.3628	0.73268	Moderate
3.	Check if their medications soothe their symptoms (e.g. nausea, pain, constipation, anxiety, etc.)	3.4690	0.85639	Moderate
4.	Give them indications and means to treat or prevent certain side-effects of their medications or treatments	3.5044	0.81420	Moderate
5.	Know what to do in situations where one must act quickly	3.6283	0.79277	Moderate
6.	"Help them with the care they cannot administer themselves"	2.7434	0.84281	Moderate
7.	Show ability and skill in my way of intervening with them	3.3451	0.83206	Moderate
8.	Closely monitor their health condition	3.9115	0.72651	High
9.	Provide them with the opportunity to practice self-administered care	3.0354	0.78977	Moderate
	Total Clinical Care	30.33	2.980	Moderate
Relational Care Interaction				
10	Help them to look for a certain equilibrium/balance in their lives	3.1327	0.92103	Moderate
11.	Help them to explore what is important in their lives	2.7965	1.14299	Moderate
12.	Help them to clarify which things they would like significant persons to bring them	3.2389	0.93803	Moderate
13.	Help them to explore the meaning that they give to their health condition	2.6903	1.11066	Moderate
14.	Help them to recognize the means to efficiently resolve their problems	2.6549	1.01568	Moderate
15.	Help them to see things from a different point of view	2.6372	0.82443	Moderate
16.	Try to identify with them the consequences of their behaviors	3.3097	0.89721	Moderate
	Total Relational Care	20.46	4.559	
Humanistic Care Interaction				
17.	"Consider them as complete individuals, show that I am interested in more than their health problem"	3.6372	0.68220	Moderate
18.	Encourage them to be hopeful, when it is appropriate	3.5575	0.78987	Moderate
19.	Emphasize their efforts	3.2478	0.81865	Moderate
20.	Do not have an attitude of disapproval	3.8407	0.82987	High
	Total Humanistic Care	14.28	2.210	
Comforting Care Interaction				
21.	Respect their privacy (e.g. do not expose them needlessly)	2.3894	1.59482	Moderate
22.	Take their basic needs into account (e.g. sleeping, hygiene, etc.)	3.0531	0.97138	Moderate
23.	Do treatments or give medications at the scheduled time	4.4690	0.66910	High
	Total Comforting Care	9.91	2.579	

M.S. = mean of score (1-2.33 = poor, 2.34–3.66 = moderate, 3.67–5 = high), SD = standard deviation.

Table 2 shows that the mean patients' interaction with caring provided by oncology nurses was moderate in the most domains, with a total mean score of Clinical Care = 30.33 (2.98); Relational Care = 20.46 (4.55); Humanistic Care = 14.28 (2.21); and Comforting Care = 9.91 (2.57).

Table 3: Association Between Participants Socio-Demographic and Health Characteristics and their Total Caring Interaction with Oncology Nurses:

Patients Characteristics	N	%	Value	df	P Value
Gender			37.742	33	0.261
Female	82	72.6%			
Male	31	27.4%			
Employment Status			96.686	66	0.008*
Employee	16	14.2%			
Unemployed	85	75.2%			
Retired	12	10%			
Accommodation			49.353	66	0.937
Live alone	1	0.9%			
With wife/husband	82	72.6%			
With others	30	26.5%			
Marital Status			81.305	99	0.902
Married	84	74.3%			
Single	12	10.6%			
Divorced/widowed	16	14.2%			
Separated	1	0.9%			
Level of Education			213.196	198	0.218
Illiterate	15	13.3%			
Read & write	12	17.7%			
Primary school	21	18.6%			
Tertiary School	23	20.4%			
High School	13	11.5%			
College/ institute	17	15%			
Postgraduate	4	3.5%			
Smoking			32.212	33	0.506
Yes	13	11.5%			
No	100	88.5%			
Type of Cancer			265.631	198	0.001*
Leukemia	1	0.9%			
Stomach	3	2.7%			
Colon	5	4.4%			
Pancreas	3	2.7%			
Breast	50	44.2%			
Other types	50	44.2%			
Type of Treatment			108.690	66	0.001*
Chemotherapy	77	68.1%			
Radiation therapy	34	30.1%			
Usual treatment	2	1.8%			
Age (years)	50.87	14.758	1569.716	1551	0.364
Disease Duration (years)	2.81	3.044	301.478	330	0.868

(N = number, % = percentage, df = differential of freedom, significant P value = ≤ 0.05, level of interaction = (1-2.33 = poor, 2.34–3.66 = moderate, 3.67–5 = high)

Table 3 shows that there is a significant relationship between patients' employment status (p value = 0.008), cancer type (p value = 0.001), and type of treatment that they were treated with (p value = 0.001) and their caring interaction with oncology nurses.

DISCUSSION

The present study revealed that the majority of cancer patients were female, with an average age of 50 years. These findings, supported by a previous cross-sectional study to assess the quality of oncology nurse-patient care, revealed that female patients were represented 52.8% of the study sample, and their mean age was 57.1 (Gomes *et al*., 2024). Also, this finding, agreed upon by He *et al*., (2023) stated that 99% of participants were females, and they were in the range of 35 years old. The current study also shows that three-quarters of patients were unemployed, and this result aligns with a recent mixed-methods study conducted on older patients with

cancer that found that they were unemployed (50.8%, n = 248) (Cecon-Stabel *et al*., 2023). The majority of the patients in the study were married and lived with their partners. This is a mirror of a previous cross-sectional survey in Saudi Arabia to examine the quality of nurse-patient care and patient satisfaction, which found that 54.8% of the cancer patients were married (Alhussin *et al*., 2024). Surprisingly, the study highlighted that the vast majority of oncology patients were not smokers. A recent pooled cross-sectional study argued that 71% were previous former smokers who quit smoking prior to being diagnosed with cancer (Upadhyay & Jones, 2024). The results are also supported by Lai *et al*. (2022), who noticed that 90.6% of breast cancer patients were not smokers. They also discovered that 73.5% of the patients received chemotherapy treatment. Clinical data revealed that nearly half of the study's patients received a breast cancer diagnosis. Sharour *et al.* (2022) conducted a cross-sectional study in three Arab countries, which revealed a dominant presence of breast cancer patients among the study sample.

Twenty-three questions concern the nurses' quality-of-care interaction with cancer patients. Overall, the mean interaction between patients and oncology nurses was moderate in most domains. In the "humanistic care interaction," the item "the nurses do not have an attitude of disapproval" has a high mean of 3.84 (0.82987). In the "comforting care interaction," the item "the nurses perform treatments or administer medications at the scheduled time" has a high mean of 4.46 (0.669). The study by Vujanić, Prlić, and Lovrić, (2020), which found that nurses deemed both the clinical and humanistic aspects of care equally significant, is similar to these findings. Caring perceptions were expressed highly by oncology nurses. However, patients gave high ratings to items about clinical aspects of their care. This means that various forms of touch—consoling, orienting, working, connecting, and social touch—are examples of nursing behaviors in various care contexts (Sandnes & Uhrenfeldt, 2022). Oncology hospitals should intensify a specific program aimed at raising nurses' awareness of the benefits of the therapeutic relationship between them and oncology patients in order to improve their health outcomes (Qassim, Sadeq, & PourGhaznein, 2023). Increasing patients' health awareness is crucial for understanding their cancer disease, self-care, and coping strategies during the long-term journey of the disease, which can be facilitated through in-hospital rehabilitation programs (Ahmed & Hassan, 2022). Conversely, factors such as nurses' workload, role conflict, psychological strain, resource scarcity, and a growing sense of responsibility may influence the therapeutic relationship between nurses and patients (Lilu & Al-Jubouri, 2023). Hospital policies should encourage nurses to bridge the gap between socially marginalized patients and healthcare services (Antonsen *et al*., 2024).

The relationship between socio-demographic and clinical and quality of care interaction score was explored as a significant relationship between patients' employment status (*p* value = 0.008), cancer type (*p* value = 0.001), and type of treatment that they were treated with (*p* value = 0.001) and their caring interaction with oncology nurses. A study by Donmez *et al*. (2022) supports this, reporting a low level of interaction between unemployed and low-income patients and nurses (*t* = -2.739, *p* = 0.006). Furthermore, the nurse-patients care interaction was affected in patients with different types of cancer with stage 4 metastatic (*F* = 9.017; *p* < 0.001) (Donmez *et al*., 2022). Another study (Ntarangwi, Mutunga-Mwenda, & Nkoroi, 2019) agreed with this study's findings that chemotherapy has a significant impact on the nurse-patient caregiver interaction. The socio-demographic characteristics such as age, sex, marital status, level of education, and occupation had no significant relationship with the overall nurse-patient caring interaction. The study recommends that nurse managers take into account the impact of nurses' socio-demographic characteristics on patient outcomes, which in turn influences the degree of care dependency (İspir Demir, Yilmaz, & Sönmez, 2024). Therefore, nurse managers should eliminate miscommunication due to nurse-related individual factors and focus on strategies that resolve nurses' socio-demographic dilemmas.

Limitations

This study implied that using a globally validated and translated self-reported questionnaire as a standard instrument would certify the rateability of the study results and their interpretation. The study has some limitations. This includes the study location (oncology settings), which is known as a busy clinical area, making oncology patients less focused on answering and finishing the questionnaire. This causes patients to feel fatigued, potentially affecting the accuracy of their responses to the questionnaire. This, in turn, could affect the evaluation of the nurse-patient care relationship and potentially lead to inaccurate rates. Also, because cancer patients are often busy and under time pressure, recruiting in an oncology unit can be particularly difficult. Even

with a sufficient sample size, must carefully compared to the results for various cancer patient groups in future.

CONCLUSION

Overall, this cross-sectional survey demonstrated that the most there is a moderate effect of clinical interaction, humanistic interaction, and comforting interaction with care provided by oncology nurses at oncology wards. It was found that unemployment, type of cancer (breast cancer), and type of treatment have a significant effect on nurse-patients interaction. Thus, the study implies that enhancing humanistic and comforting interactions in nursing care can significantly improve the health outcomes and overall experience of cancer patients in oncology hospitals. More studies are needed regarding assessment of caring nurse-patient's interaction in the oncology hospitals with more sample size from different hospital locations.

Conflict of Interest

The authors declare that they have no competing interests.

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