

Perceived Quality of Nursing Care Among Cancer Patients Attending Machakos Level Five Hospital, Machakos County, Kenya

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Abstract

This study sought to determine the perceived quality of nursing care among cancer patients at Machakos Level 5 Hospital in Machakos County, Kenya. This was an analytical cross-sectional inquiry conducted among adult patients with cancer at Machakos Level 5 Hospital. A total of 161 patients receiving treatment for varied forms of cancer in the hospital's oncology unit were targeted. The respondents were selected using a simple random sampling approach. They filled out a questionnaire that included the QONCS scale. It was pre-tested among 16 adult patients with cancer at the Makueni County Referral Hospital. The QONCS is a validated tool and was therefore not part of the pretested study tool. The data were scrutinized using various explanatory metrics, including proportions, occurrence rates/numbers, averages, and measures of normal variation. Further, the variables under scrutiny were linked to patients' assessments of the quality of oncology nursing care at Machakos Level 5 Hospital, using Fisher's exact test at a 95% confidence level. SPSS version 25.0 was applied in the analysis. From the findings, the majority (96.6%, n = 143) rated the quality of nursing care at Machakos Level 5 Hospital as good, as indicated by total QONCS scores ranging from 129 to 170. The characteristics of acceptable oncology care by the nurses, as per the respondents, were feeling affirmed and validated (mean = 4.62, SD = 0.376); feeling valued (mean = 4.62, SD = 0.452); being cared for spiritually (mean = 3.40, SD = 0.759); sense of belonging (mean = 4.58, SD = 0.488) and respectful interactions (mean = 4.68, SD = 0.379). When supported and confirmed, the participants agreed that the nurses were emotionally supportive (97.3%) and responded promptly to their questions and concerns (98.6%). Regarding being valued, they agreed they were adequately cared for by the nurses (98%) and that the nurses were caring and understanding (98%). On a sense of belonging, they concurred that nurses acknowledged the importance of their family's presence (95.9%). The study concluded that the nurses' care was satisfactory, as they felt affirmed, validated, well-integrated, cherished, and respected, though divine care needed improvement. The study recommends ongoing efforts by healthcare workers and hospital management to maintain the reported high level of oncology therapy provided by nurses at the hospital.

Keywords: *Social demographic characteristics, clinical characteristics, quality of nursing care, cancer patients*

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1. Introduction

Cancer is a leading cause of mortality worldwide; hence, it is a significant public health challenge (Hanahan, 2022). The World Health Organization (WHO) approximates that 18.1 million persons were diagnosed with cancer, and close to 10 million persons died of the ailment (nearly one for every six deaths) in 2020, making cancer rank second in terms of causing fatalities globally, only behind heart-related diseases (WHO, 2022). As reported by the International Agency for Research on Cancer (IARC, 2022), on aggregate, tumour occurrence rates and fatalities are highest within Asia at 52% and 58.4% respectively, followed by Europe (incidence - 22.3%; mortality - 19.6%) and then North America (incidence - 10.9%; mortality - 7%). Lower incidence and mortality rates are observed in Latin America and the Caribbean (incidence: 7.7%; mortality: 7.1%) and in Africa (incidence: 6%; mortality: 7.1%). It is, however, noted that mortality from cancer is disproportionately greater within low- and middle-income countries (LMICs) at 72-75% compared to about 46% in high-income countries [HICs] (Young et al., 2020), with cancer deaths projected to continue rising by approximately 70 - 100% over the next two decades (Globocan, 2020). Latest data from Globocan indicate that Africa recorded 1.1 million new cancer cases, with 711,429 dying in 2020, with tumors of the breast, colon & rectum, cervix, lungs, and prostate as the principal reported categories (Globocan, 2020). In Kenya, cancer ranks number three on the fatality cause list, behind communicable and heart-related ailments, with 42,000 new reported cases of malignant tumors alongside cancer fatalities exceeding 27,000 yearly (MoH, 2022).

Similarly, Fitch et al. (2020) explored the views of persons with tumours regarding how they experienced nursing services offered and identified clear communication, being treated respectfully and in a dignified way, being provided with appropriate information on time, as well as personalized nursing services as important features which marked quality oncology nursing care. Studies by Ntarangwi (2019), Zarei et al. (2020) and Sharour et al. (2022) also recognized well-coordinated nursing services, ongoing positive interactions with healthcare providers (HCPs), timely and accurate communication, due consideration of patient needs, being valued and respected, as well as care that is safe, consistent, reliable and responsive as denoting the good quality of oncology nursing care.

Despite an existing widespread focus on cancer care, cancer patients' experiences highlight that gaps exist in the excellence of nursing care within areas where they are treated. For instance, Deribe et al. (2021) noted that only a handful of cancer clients in Ethiopia had all domains of quality nursing care met, with most feeling that their needs were inadequately addressed. Similarly, low patient satisfaction with the desirability of nursing services received in meeting the patient's physical and psychosocial needs was reported by Ntarangwi (2019). Mazhari and Khoshnood (2021) averred that low cancer patients' views regarding excellence of care offered by nurses in centres for treating such patients could be attributable to healthcare providers' excessive focus on disease management while neglecting other domains of patient care, such as paying inadequate attention to these patients' diverse needs (Mazhari & Khoshnood, 2021). The major deficiency in most of the studies probing the standards of care

as provided by oncology care nurses is that quality of services offered by said nurses is mainly evaluated using quantitative indicators such as mortality rates, duration of hospital stay, and complication rates, with little focus on patients' own perception of care offered. Hence, in most cases, cancer patients' voices are rarely heard, yet, as recipients of oncology nursing care, they should be the ones to determine its quality (Young et al., 2020; Yusefi et al., 2022).

Frequent interactions occurring amongst nurses and patients and/or their kin are common in conventional cancer wards. Quality nursing care is thus central to oncology care, as the acceptability and effectiveness of cancer treatments are largely influenced by these interactions. The offered treatment must be safe, appropriate, well understood, and delivered in ways that resonate with the patient's treatment goals and priorities to be considered good treatment (Sharour et al., 2022). The focus should therefore be on evaluating the quality of nursing services in cancer care contexts, as experienced by their recipients, to improve outcomes in oncology settings (Fitch, 2020; Collet et al., 2022). Locally, there was a dearth of empirical literature regarding how persons with cancer rated the excellence of care offered by nurses working in oncology care settings. Consequently, this study offers insight into the excellence of the services provided by nurses, as evaluated by these care recipients.

1.1 Problem Statement

Machakos Level 5 Hospital is a leading county-level cancer care center in the country with a highly skilled and dedicated oncology care team. The hospital's Oncology Unit, on average, cares for 441 cancer patients on an inpatient basis and 1,236 cancer patients on an outpatient basis every year, most of whom (60-70%) present with advanced disease (Oncology Unit, Machakos, 2022). Quality oncology nursing care in the hospital's oncology unit is of interest because achieving desired patient treatment outcomes requires careful consideration of patients' needs, values, and preferences. Indeed, quality oncology nursing care is integral to various patient care domains, including treatment outcomes, patient care experience, satisfaction with nursing services, and one's standard of living; hence, it deserves great attention (Sharour et al., 2022). There was, however, no data from the hospital regarding the quality of cancer-related care provided to oncology therapy recipients, as assessed by patients themselves. It was difficult to perceive how the hospital would enhance its nurses-linked care excellence without reference to data on the oncology patient's own assessment of the care's acceptability or appropriateness to them.

Evidence from several empirical studies conducted in various oncology care settings in sub-Saharan Africa indicates that the perceived quality of nursing services, as evaluated by persons being treated for malignant tumors, is low/sub-optimal. For instance, in studies by Ntarangwi (2019) and Deribe et al. (2021), conducted in Kenya and Ethiopia, respectively, over half of cancer patients reported dissatisfaction with the level of psychosocial care they received from the oncology care team. They also rated the quality of care provided by the oncology nurses as suboptimal because some of their needs were not met. Studies by Gatoya and Kitula (2017) in Rwanda, Babatola et al. (2022) in Nigeria, and Kidayi et al. (2023) in Tanzania also noted gaps in patients' perception of excellence of services offered by nurses reported by persons being treated for tumors, with the care offered sometimes reported as lacking in key features of quality health care such as accessibility, timeliness, efficiency, equity, safety, and being

integrated. This indicated gaps in patients' own ratings of the excellence of services provided by oncology nurses in oncology care contexts in the SSA region.

An inquiry to evaluate the quality of cancer-linked nursing services in tumor care settings in Kenya was imperative, given that information on patients' views regarding the appropriateness of care provided by oncology nurses in Kenyan healthcare facilities was largely lacking. Furthermore, the voices, opinions, and experiences of cancer patients, as recipients of oncology nursing care services, are crucial for guiding policies and interventions aimed at enhancing cancer care services in the country.

1.2 Research Objectives

- i. To determine the socio-demographic and clinical characteristics of the cancer patients attending Machakos Level 5 Hospital.
- ii. To establish the perceived quality of nursing care at Machakos Level 5 Hospital as assessed by oncology patients.
- iii. To identify the perceived characteristics of quality nursing care as assessed by cancer patients attending Machakos Level 5 Hospital.
- iv. To examine the association between the oncology patients' socio-demographic and clinical characteristics and their rating of the perceived quality of nursing care at Machakos Level 5 Hospital.

2. Literature Review

2.1 Empirical Review

In Iran, an empirical inquiry was conducted to explore the nature of excellence in the services provided by nurses in tertiary care health facilities, as viewed by patients. An analytical strategy was utilized. An aggregate of 1067 patients were enrolled as study participants. Facets of excellent nursing service evaluated included physical, psychosocial, and communication. Surveyed patients rated the excellence of care offered by the nurses as moderate. Their perception of exceptionality of services offered by the nurses was associated with their place of residence and gender. It was therefore suggested that actions were needed to promote and reinforce the excellence of the services nurses provided (Yusefi et al., 2022).

An empirical investigation undertaken in Ethiopia assessed the suitability/excellence of care provided by nurses, as reported by oncology care recipients treated at a local medical facility. A total of 415 clients with cancer were recruited to participate in the inquiry. Results indicated that 60% of participants rated the excellence of care provided by the nurses as appropriate, while 40% rated it as suboptimal or poor. The spheres of nurses' care/services rated highest comprised being respected and valued, and a sense of belonging, while spiritual care and affirmation were rated the lowest. The study called for greater attention to the excellence of services offered by nurses within tumour care settings (Deribe et al., 2021).

Matiba (2020) performed a qualitative empirical investigation that examined how good cancer services offered by nurses were as experienced by persons being treated for tumours at Kenya's largest public referral hospital. Nineteen patients were interviewed using interview schedules. Reported findings highlighted that the exceptionality of services offered by nurses in the oncology wards at Kenyatta National Hospital (KNH) was sub-optimal. Major themes regarding the quality of services that nurses offered included responsiveness, with regard for

patients' needs, preferences, and values; communication; family participation; and all-inclusive care, with family involvement scoring the lowest. The study concluded that to bolster the excellence of services offered to persons being treated for tumours, involvement of all stakeholders was paramount.

A cross-sectional empirical inquiry examined the perceived value of services provided by nurses, as observed by oncology care recipients in Oman, Jordan, and Egypt. In sum, 517 recipients of oncology therapy were conveniently enrolled as study participants. According to the results, the excellence of the services offered by nurses, as perceived by respondents, was moderate. Differences in participants' perceptions of the excellence of the services provided by nurses were observed across nationality, marital status, and treatment duration. There was consensus among the study participants that quality nursing care in oncology care settings ought to be responsive, efficient, timely, safe, personalized, and well-coordinated (Sharour et al., 2022).

In an exploratory inquiry, perceptions of the traits of excellent service provided by nurses were examined. In total, 22 patients receiving cancer treatment at an urban tertiary care facility were purposively selected as respondents. From the findings, exceptional quality of oncology nursing care was marked by 8 characteristics. These were attentiveness, rapport, professional knowledge, individualization, coordination, continuity, partnership, and caring. The study concluded that for cancer patients to have positive care experiences, the quality of nursing care in oncology treatment settings should be enhanced (Radwin, 2020).

A single-point explanatory empirical investigation was undertaken to review perspectives on excellence of services offered by nurses among the sick in Turkey. A total of 448 patients admitted to a research and teaching tertiary healthcare facility in the country's central Anatolia region took part. From the findings, the aftermath of excellent services offered by nurses, as reported by the surveyed participants, included positive patient treatment outcomes, a lower incidence of ailment-related complications, shorter hospital stays, patients being content with the services provided, and improved patients' quality of life. Close collaboration between nurses and patients was found to favourably influence patients' perception of care quality (Erzincanli & Yuksel, 2021).

Arumugam (2018) conducted a study to ascertain perceptions of the outcomes of exceptional services provided by nurses to the sick in India. The investigation was cross-sectional and descriptive. A total of 250 patients cared for in a unit at a selected care facility in the country's Noida region were purposively selected to participate as respondents. From the findings, while the cared-for persons assessed the distinction of the services offered by the nurses as suitable, they noted a need for improvement in the provision of information, as well as in the competency and skill of the nursing staff. The two most important perceived results of exceptional nursing care were positive patient treatment outcomes and positive patient care experiences. The study concluded that ongoing efforts on enhancing the excellence of nursing care in the hospital should be supported and sustained.

Similarly, an empirical investigation was carried out to assess perspectives on excellence of services offered by nurses among treatment recipients in Turkey. The study adopted a descriptive, cross-sectional approach. A total of 448 patients from selected research and teaching tertiary care facilities in the country's central Anatolia region were recruited as study

participants. The quality of nursing care domains highlighted as requiring improvements included proficiency in care delivery, empathy and respectful treatment of patients, connectedness with patients as well as timeliness and responsiveness of care (Erzincanli & Yuksel, 2021).

Gishu, Weldetsadik, and Tekleab (2019) conducted an empirical investigation to assess patients' views on the suitability of care delivered by nurses at a local care facility in Ethiopia. A total of 340 patients were enrolled as respondents in the study. Based on the results, the overall suitability of the care provided by nurses, as evaluated by the surveyed participants, was neither satisfactory nor unsatisfactory. The domains of quality of care highlighted as needing improvement included patients' physical and emotional care, patients' education and readiness for home care, and the provision of information to patients. The study called for action by health care practitioners and other stakeholders to improve the quality of care provided by nurses, particularly in line with care recipients' desires.

3. Methodology

The study employed an analytical cross-sectional investigative approach. This is because this approach allows investigators to critically and in depth examine the phenomenon under study by obtaining data from targeted respondents at a given time. The study design was deemed appropriate, as it effectively generated valuable insights into the quality of therapy provided to those receiving cancer care in the study setting. The target population for this study comprised all adult patients in four cancer categories, namely cervical and breast cancers for women and prostate and esophageal cancers for men, as these four categories of cancers constituted the bulk of cases mostly managed in Machakos Level 5 Hospital.

Simple random sampling was used in the study to sample all adult patients diagnosed with cervical and breast (for women) and prostate and esophageal cancer (for men) who were receiving treatment in the hospital. This was achieved by clearly defining the sampling frame, assigning each member of the sampling frame an individual identifier, and then applying a system that randomly selected unique identifiers/numbers for persons to take part from the sampling frame. The simple random sampling technique was deemed appropriate, as it afforded the targeted respondents an equal chance of inclusion in the final sample and ensured no bias in selecting the study sample. 161 patients with malignant tumors were selected to participate in this empirical investigation. The aggregate proportion of targeted participants was computed for each of the 4 cancer categories relative to the study population.

Collected data were acquired via a structured questionnaire based on the study objectives, which also included the Quality of Oncology Nursing Care Scale (QONCS). Derived data were probed with various descriptive measures in the form of proportions and percentages as well as averages and standard deviation. The study data were analyzed with SPSS v.25.

4. Results

4.1 Socio-Demographic Characteristics of the Cancer Patients

The majority (56.8%, n = 84) of the patients with cancer were female. Among the patients, 81(54.7%) were aged 50 years and above while 43(29.1%) were aged 40 - 49 years. Most had a basic education background, with 46 (31.1%) having Secondary education and 39 (26.4%) having primary education. Additionally, 52 (35.1%) were in business, 36 (24.3%) were unemployed, and most were also married (57.4%, n = 85). Two-thirds (66.9%, n = 99) of the patients indicated that their monthly household income was below Kshs. 20,000. Hence, the participants were patients who had cancer, most of whom were married, had a basic education background, and came from low-income households. The results are shown in Table 1.

Table 1: Socio-demographic characteristics of the cancer patients (n = 148)

Socio-demographic characteristics		Frequency (n)	Percentage (%)
Gender	Male	64	43.2
	Female	84	56.8
Age	20 - 29 years	7	4.7
	30 - 39 years	17	11.5
	40 - 49 years	43	29.1
	50 years & above	81	54.7
Education level	Primary	39	26.4
	Secondary	46	31.1
	College	24	16.2
	University	21	14.2
	No formal education	18	12.2
Marital status	Single	17	11.5
	Married	85	57.4
	Separated/divorced	17	11.5
	Widowed	29	19.6
Occupation	Employed	35	23.6
	In business	52	35.1
	Unemployed	36	24.3
	Others	25	16.9
Household income level (in a month)	Below Kshs. 20,000	99	66.9
	Kshs. 20,000 - Kshs. 50,000	41	27.7
	Above Kshs. 50,000	8	5.4

4.2 Clinical Characteristics of the Cancer Patients

Among the patients, 44(29.7%) were cervical cancer cases, 40(27%) were breast cancer cases while 41(27.7%) were prostate cancer cases. Most of the patients had either stage 2 cancer (27%, n = 40) or stage 3 cancer (33.8%, n = 50). Further, 69(46.6%) were diagnosed with cancer within the last 12 months. Additionally, the patients were on diverse treatment modes. Results are outlined in Table 2.

Table 2: Clinical characteristics of the cancer patients (n = 148)

Clinical Characteristics		Frequency (n)	Percentage (%)
Cancer type	Breast	40	27.0
	Cervical	44	29.7
	Prostate	41	27.7
	Esophagus	23	15.5
Cancer stage	Stage 1	14	9.5
	Stage 2	40	27.0
	Stage 3	50	33.8
	Stage 4	22	14.9
	Not informed	22	14.9
Duration since the cancer diagnosis	12 months or less	69	46.6
	13 - 24 months	37	25.0
	Over 24 months	42	28.4
Treatment mode	Chemotherapy only	57	38.5
	Chemotherapy & Radiotherapy	31	20.9
	Surgery & Chemotherapy	25	16.9
	Chemotherapy, Radiotherapy & Surgery	19	12.8
	Surgery only	6	4.1
	Palliative care	10	6.8

Findings show patients faced diverse side effects from cancer treatment, including fatigue, pain, weight and hair loss, as well as sleep, nerve, and sexual health problems. Of these, 61 patients (41.2%) reported a heavy burden of side effects, as summarized in Table 3.

Table 3: Adverse side effects of cancer treatment experienced by the patients (n = 148)

	Symptoms experienced	Frequency	Percent
a	Pain	120	81.1
b	Fatigue	123	83.1
c	Anemia	49	33.1
d	Nausea & vomiting	62	41.9
e	Weight loss	103	69.6
f	Hair loss	80	54.1
g	Fever	25	16.9
h	Blood clots	4	2.7
i	Bleeding & bruising	11	7.4
j	Loss of or reduced appetite	75	50.7
k	Dry mouth	64	43.2
l	Sleep problems	94	63.5
m	Delirium	6	4.1
n	Memory/concentration problems	41	27.7
o	Nerve problems	74	50.0
p	Constipation	29	19.6
q	Diarrhea	12	8.1
r	Edema	10	6.8
s	Skin and nail changes	65	43.9
t	Sexual health problems	84	56.8
u	Urinary & bladder problems	30	20.3
v	Infections	18	12.2
	Agg. side effects burden	Low	87
		High	61
			58.8
			41.2

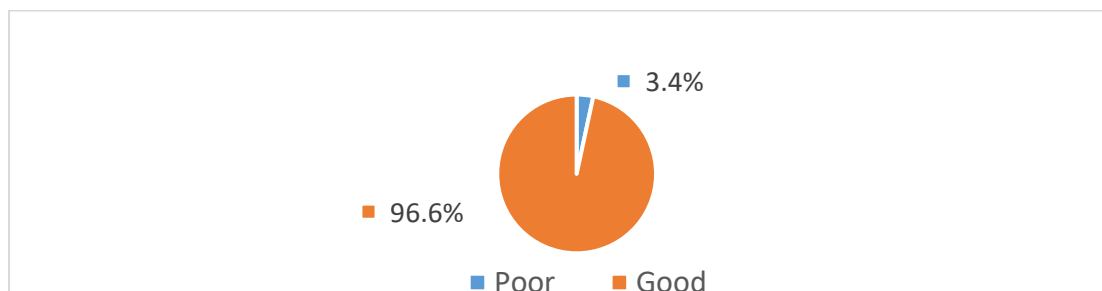


Figure 1: Rating of the quality of oncology nursing care by the cancer patients

4.3 Patients' Assessment of the Characteristics of Quality Oncology Nursing Care

The study examined how oncology patients at Machakos Level 5 Hospital assessed the quality of nursing care, using the components of the Quality of Oncology Nursing Care Scale.

After being supported and confirmed, the participants agreed that the nurses were emotionally supportive; responded promptly to their questions and concerns; respected their needs and provided information accordingly; expressed genuine interest in them; and acknowledged their caring needs. An aggregate mean of 4.62 (SD = 0.376) indicated that patients perceived being supported and confirmed as important characteristics of quality oncology nursing care. Results are summarized in Table 4.

Table 4: Patients' assessment of the characteristics of quality oncology nursing care

Being supported and confirmed	Disagree		Neutral		Agree	
	Freq.	%	Freq.	%	Freq.	%
The nurse builds clear communication with you.	0	0.0	1	0.7	147	99.3
You can rely on the nurse.	0	0.0	7	4.7	141	95.3
Communication during care is effective.	0	0.0	2	1.4	146	98.6
The nurse offers emotional support.	3	2.0	1	0.7	144	97.3
The nurse shows genuine interest in you.	2	1.4	6	4.1	140	94.6
Questions and concerns are addressed promptly.	0	0.0	2	1.4	146	98.6
The nurse demonstrates knowledge of your condition.	0	0.0	2	1.4	146	98.6
Information is provided thoroughly and clearly.	1	0.7	3	2.0	144	97.3
Trust is earned through the nurse's actions.	1	0.7	7	4.7	140	94.6
You feel you are in safe hands.	2	1.4	8	5.4	138	93.2
Answers are given honestly.	2	1.4	4	2.7	142	95.9
Your needs are respected, and information tailored accordingly."	2	1.4	2	1.4	144	97.3
The nurse is competent with equipment and technology.	2	1.4	4	2.7	142	95.9
Your caring needs are acknowledged.	0	0.0	4	2.7	144	97.3
You receive care aligned with your preferences.	3	2.0	3	2.0	142	95.9
You feel free to ask the nurse anything	5	3.4	8	5.4	135	91.2
Aggregate mean = 4.62; Aggregate standard deviation (SD) = 0.376						

Participants felt valued and agreed that nurses provided adequate, compassionate, and understanding care. An aggregate mean of 4.62 (SD = 0.452) indicated that the patients perceived feeling valued as being an important characteristic of quality oncology nursing care.

On spiritual care, patients neither agreed nor disagreed that nurses raised faith issues, clarified religious preferences, or supported rituals. An aggregate mean of 3.40 (SD = 0.759) indicated that the nurses' spiritual caring for patients was suboptimal, despite being an important characteristic of quality oncology nursing care. On belonging, patients agreed nurses welcomed family presence, valued it, and involved relatives in care delivery. An aggregate mean of 4.58 (SD = 0.488) indicated that the patients perceived a sense of belonging as being an important characteristic of quality oncology nursing care. In this respect, patients agreed that nurses treated them respectfully, offered choices in care decisions, and provided enough information to participate. An aggregate mean of 4.68 (SD = 0.379) indicated that patients considered being respected an important characteristic of quality oncology nursing care. Results are outlined in Table 5 and Table 6.

Table 4: Patients' assessment of the characteristics of quality oncology nursing care

	Disagree		Neutral		Agree	
	Freq.	%	Freq.	%	Freq.	%
Being valued						
You receive care suited to your condition	2	1.4	4	2.7	142	95.9
Nurses provide adequate support	0	0.0	3	2.0	145	98.0
The nurse is caring in a compassionate way	2	1.4	5	3.4	141	95.2
The nurse is caring and understanding	0	0.0	3	2.0	145	98.0
Aggregate mean = 4.62; Aggregate standard deviation (SD) = 0.452						
Spiritual caring						
Nurse explored your views on life and death.	24	16.2	52	35.1	72	48.7
Nurse initiated faith discussions.	19	12.8	67	45.3	62	41.9
Nurse clarified religious preferences.	20	13.5	77	52.0	51	34.5
Nurse encouraged spiritual talks.	20	13.5	66	44.6	62	41.9
Nurse respected your beliefs.	21	14.2	52	35.1	75	50.7
Nurse supported rituals during care.	23	15.5	61	41.2	64	43.3
Aggregate mean = 3.40; Aggregate standard deviation (SD) = 0.759						

Table 5: Patients' assessment of the characteristics of quality oncology nursing care

	Disagree		Neutral		Agree	
	Freq.	%	Freq.	%	Freq.	%
Sense of belonging						
Nurse asked if you wanted family present.	2	1.4	5	3.4	141	95.2
Nurse encouraged family presence during care.	3	2.0	5	3.4	140	94.6
Nurse valued family involvement.	2	1.4	4	2.7	142	95.9
Nurse invited family in tough decisions.	5	3.4	6	4.1	137	92.5
Nurse included family in care delivery	2	1.4	7	4.7	139	93.9
Aggregate mean = 4.58; Aggregate standard deviation (SD) = 0.488						
Being respected						
Nurse treated you with respect.	0	0.0	2	1.4	146	98.6
Nurse offered choice in care decisions.	0	0.0	3	2.0	145	98.0
Nurse gave enough information for decision-making	0	0.0	4	2.7	144	97.3
Aggregate mean = 4.68; Aggregate standard deviation (SD) = 0.379						

4.4 Association of the Patients' Socio-Demographic Characteristics with their Assessment of the Quality of Oncology Nursing Care

From the findings, more female patients assessed the quality of oncology nursing care as good than male patients (57.3% vs 42.7%), and vice versa for the quality of oncology nursing care rated as poor (60% vs 40%). With reference to patients' age, the proportion of patients who assessed the quality of oncology nursing care as being good was higher among those aged 50 years and above than those aged below 50 years (53.8% vs 46.2%), and the same was the case with reference to the quality of oncology nursing care rated as being poor (80% vs 20%). More patients with Secondary education or lower rated the quality of oncology nursing care as good than those with tertiary education (69.2% vs 30.8%), and the same was the case with reference to rating the quality of oncology nursing care as being poor (80% vs 20%). Regarding marital status, more married patients rated the quality of oncology nursing care as good than single patients (58% vs 42%), and vice versa for rating it as poor (60% vs 40%). On occupation, a more favourable rating of the quality of oncology nursing care was higher among those who worked (75.5%) compared to those not working (24.5%), though when it came to household income level, the rating of the quality of oncology nursing care as being good was more among those with incomes of less than Kshs. 20,000 (67.1%) compared to those with incomes of Kshs. 20,000 or more (32.9%). Overall, none of the socio-demographic characteristics of the patients showed a statistically significant association with their assessment of the quality of oncology nursing care offered at the Machakos Level 5 Hospital, as all Fisher's exact p-values were greater than 0.05. Table 7 contains the findings.

Table 6: Cross tabulation and Fisher's exact results between patients' socio-demographic characteristics and their assessment of the quality of oncology nursing care

Socio-demographic characteristics		Quality of oncology nursing care		Total (n = 148)	Fisher's exact test
		Poor (n = 5)	Good (n = 143)		p-value
Gender	Male	3 4.7% 60.0%	61 95.3% 42.7%	64 100.0% 43.2%	0.6524
	Female	2 2.4% 40.0%	82 97.6% 57.3%	84 100.0% 56.8%	
Age	< 50 years	1 1.5% 20.0%	66 98.5% 46.2%	67 100.0% 45.3%	0.3779
	50 years & above	4 4.9% 80.0%	77 95.1% 53.8%	81 100.0% 54.7%	
Education level	College or higher	1 2.2% 20.0%	44 97.8% 30.8%	45 100.0% 30.4%	1.0000
	Secondary or lower	4 3.9% 80.0%	99 96.1% 69.2%	103 100.0% 69.6%	
Marital status	Married	2 2.4%	83 97.6%	85 100.0%	0.6510

Occupation	Not married	40.0%	58.0%	57.4%	1.0000
		3	60	63	
		4.8%	95.2%	100.0%	
	Working	60.0%	42.0%	42.6%	
		4	108	112	
		3.6%	96.4%	100.0%	
Household income level	Not working	80.0%	75.5%	75.7%	1.0000
		1	35	36	
		2.8%	97.2%	100.0%	
	< Kshs. 20,000	20.0%	24.5%	24.3%	
		3	96	99	
		3.0%	97.0%	100.0%	
	≥ Kshs. 20,000	60.0%	67.1%	66.9%	1.0000
		2	47	49	
		4.1%	95.9%	100.0%	
		40.0%	32.9%	33.1%	

* Statistically significant at 0.05 significance level

4.5 Association of the Patients' Clinical Characteristics with their Assessment of the Quality of Oncology Nursing Care

On cancer type, more patients with female cancers rated the quality of oncology nursing care as being good than those with male cancers (56.6% vs 43.4%), and the same was the case in reference to their rating of the quality of oncology nursing care as poor (60% vs 40%). By cancer stage, more patients with advanced disease rated the quality of oncology nursing care as good than those at an early stage (62.9% vs 37.1%), and the same applied to rating the quality of oncology nursing care as poor (80% vs 20%). On duration with cancer, more patients who had had the cancer for over 24 months rated the quality of oncology nursing care as being poor compared to those who had had the cancer for 24 months or less (60% vs 40%), and vice versa in reference to rating the quality of oncology nursing care as being good (27.3% vs 72.7%). In treatment mode, more patients on multimodal therapies rated the quality of oncology nursing care as poor than those on non-multimodal therapies (80% vs 20%), though the proportions rating it as good were similar (49.7% vs 50.3%). On side effects burden, more patients with a high burden of treatment side effects rated the quality of oncology nursing care as being poor compared to those with a low burden (80% vs 20%), while in reference to rating the quality of oncology nursing care as being good, those with a low burden of side effects were more (60.1% vs 39.9%). Overall, none of the patients' clinical characteristics were found to be statistically significantly associated with their assessment of the quality of oncology nursing care, as all yielded chi-square p-values greater than 0.05. The results indicated that patients' ratings of the appropriateness of care provided by oncology nurses in the hospital were not influenced by their clinical characteristics. Results are shown in Table 8.

Table 7: Cross tabulation and Fisher's exact results between patients' clinical characteristics and their assessment of the quality of oncology nursing care

Clinical characteristics		Quality of oncology nursing care		Total (n = 148)	Fisher's exact test
		Poor (n = 5)	Good (n = 143)		p-value
Cancer type	Female cancers	3	81	84	1.0000
		3.6%	96.4%	100.0%	
		60.0%	56.6%	56.8%	
	Male cancers	2	62	64	
		3.1%	96.9%	100.0%	
		40.0%	43.4%	43.2%	
Stage of the cancer	Early stage	1	53	54	0.3909
		1.9%	98.1%	100.0%	
		20.0%	37.1%	36.5%	
	Advanced stage	4	68	72	
		5.6%	94.4%	100.0%	
		80.0%	62.9%	63.5%	
Duration with cancer	≤ 24 months	2	104	106	0.1386
		1.9%	98.1%	100.0%	
		40.0%	72.7%	71.6%	
	Over 24 months	3	39	42	
		7.1%	92.9%	100.0%	
		60.0%	27.3%	28.4%	
Treatment mode	Non-multimodal	1	72	73	0.3666
		1.4%	98.6%	100.0%	
		20.0%	50.3%	49.3%	
	Multimodal	4	71	75	
		5.3%	94.7%	100.0%	
		80.0%	49.7%	50.7%	
Side effects burden	Low	1	86	87	0.1598
		1.1%	98.9%	100.0%	
		20.0%	60.1%	58.8%	
	High	4	57	61	
		6.6%	93.4%	100.0%	
		80.0%	39.9%	41.2%	

* Statistically significant at 0.05 significance level

5. Conclusion

Demographically, the participants were adult male and female patients with cancer, with most being married, with a basic education background, in diverse occupations, and from low household income levels. Clinically, the patients had different forms of cancer, with chemotherapy, radiotherapy, and surgery or a combination of these as the prominent treatment modes received, and most had been diagnosed with cancer within the last 12 months.

The perceived quality of nursing care at Machakos Level 5 Hospital was reported as good by a majority of patients receiving oncology care. The patients identified being supported and confirmed, being cared for spiritually, a sense of belonging, being valued, and being respected as constituting the perceived characteristics of quality nursing care. The patients' assessment

of the quality of nursing care at Machakos Level 5 Hospital was not influenced by their socio-demographic and clinical characteristics.

6. Recommendations

To policymakers in the health care sector, ongoing efforts to improve the quality of oncology nursing care for patients diagnosed with cancer should be supported by enhancing the existing oncology nursing care policy, strategies, and interventions, as well as improving the existing oncology care infrastructure.

To maintain the prevailing high level of quality oncology nursing care at Machakos Level 5 Hospital, the hospital's management should institute robust care-related quality-control mechanisms to help ensure that high-quality care standards are maintained in its oncology unit.

Nurses caring for patients with cancer at Machakos Level 5 Hospital are advised not to neglect patients' spiritual care, an important component of quality oncology nursing care. Their care for these patients should also remain compassionate, supportive, candid, understanding, and respectful.

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