

Quality Of Nursing Care And Its Relationship With Cancer Survivors Satisfaction: A Cross-Sectional Study In Oncology Health Center

Dalal Yehia¹, Ja'far M. Alkhaldeh¹, Al-Mu'taz Bellah Abu Fares³, Ola A. Kutah⁴, Noha M Al-Shdayfat⁵, Alaa Hassan⁶, Raya Alhusban⁷, Hala Habashneh⁸

¹Assistant professor, Faculty of Nursing, Al-Zytoonah University of Jordan (ZUJ).Email: bashir_dalal@yahoo.com.
<https://orcid.org/0000-0001-6607-9573>

¹Assistant professor; Faculty of Nursing; Advanced Nursing Department; Isra University; PO Box 33 and 22 Isra University Office 11622; Amman; Jordan E-mail: kawaldehyafar@yahoo.com ; E-mail: khawaldeh.j@iu.edu.jo ; <https://orcid.org/0000-0001-9419-072X>

³RN; MQM; Risk Management Coordinator/ Al Essra Hospital; Amman; Jordan.Email: m3tz_rn@hotmail.com

⁴Ph.D.; MSc; R.N.; Assistant Professor; Faculty of Nursing; Isra University; P.O. Box 33 and 22 Isra University Office 11622; Amman-Jordan; e-mail: ola.kutah@iu.edu.jo

⁵Associate professor. Faculty of Nursing, Community and Mental Health Department, Al Albayt University, Al Mafraq- Jordan. Email: dr.nuhash@aabu.edu.jo, <https://orcid.org/0000-0003-4254-1852>

⁶Psychiatric Nurse, King Abdulaziz Hospital-NGHA-ALAhsa-Saudi Arabia .Email: alaa.fathi55@yahoo.com

⁷Assistant professor, Faculty of Nursing, Zarqa University, Zarqa city. Email: ralusban@zu.edu.com. <https://orcid.org/0000-0002-8498-7265>

⁸Lecturer; Faculty of Nursing; Advanced Nursing Department; Isra University; PO Box 33 and 22 Isra University Office 11622; Amman; Jordan; E-mail: hala.alhabashneh@iu.edu.jo

*Corresponding Author: Ja'far M. Alkhaldeh

¹Assistant professor; Faculty of Nursing; Advanced Nursing Department; Isra University; PO Box 33 and 22 Isra University Office 11622; Amman; Jordan (**Corresponding author**) E-mail: kawaldehyafar@yahoo.com ; E-mail: khawaldeh.j@iu.edu.jo ;

<https://orcid.org/0000-0001-9419-072X>

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Abstract

Background: Quality of nursing care is one of the successful factors in health care services and is considered a major contributor to enhance excellent quality of hospitals.

Purpose: The aim of this study is to explore the effect quality of nursing care on patient satisfaction in cancer center.

Methods: A cross-sectional design was carried out for this study in the largest cancer center. 196 oncology nurses and 120 cancer patients were selected randomly and data were collected by using two self-reported questionnaires. Both descriptive and inferential statistics were used to answer the research questions for this study.

Results: The study results showed that there is a positive relationship between quality of nursing care and patient satisfaction.

Conclusions: All nursing staff have to participate in the monthly meeting that coordinated by a quality membership in the unit, to discuss and share their opinion about new issues related to quality of care.

Implications for practice: Nursing administration should try to ensure adequate staffing level and that nurses have a sufficient time to participant in quality program in the hospital.

Keywords : Patient satisfaction; Quality of nursing care, Nurses and Oncology center

1 STUDY BACKGROUND

Quality of care is becoming a public health concern^{1, 2}. In addition to social, medical and economic consequences of the quality of health care insure considerable direct and indirect cost of each year^{3, 4}. However, good care quality is considered to be the right for all patients, and the responsibility of the hospital staff is particularly the nursing⁵. Many studies and research have been conducted on services quality over past two decades^{6, 7, 8}, and several attempts have been made to comprehend its meaning and assessment. Moreover, the traditional approach has been adopted for assessing health care quality from the point of view health care providers, care takers and government⁹.

The quality of nursing care is concerned with the need of patients for provision of excellent care as well as comfortable and competent treatment^{10, 11}. Moreover, nurse-physician and nurse manager relationship affect and contribute to nursing care in hospitals¹². Patient satisfaction is the most important indicator for measuring quality of nursing care^{13, 14, 15}. Good relationship between nurse and patient, as well as the care directly provided to patients may be reflected primarily on patient's expectation about quality of nursing in hospitals¹⁶. Patient satisfaction is created by combination of responses

to patient's views and needs, as well as to continuous improvement of patient and nurse relationship¹⁷. A growing number of studies have examined the relationship between patient's satisfaction and quality of nursing care^{18, 19}. Furthermore, AL-Awamreh and his colleagues¹⁹ proposed the increase in focus on the quality of nursing care and its contribution to the improvement of the level of patient's satisfaction and quality of nursing care, but what was carried out Jordan is scarce.

At King Hussein Cancer Center (KHCC) the primary goal is to ensure excellence in clinical care by treating the patient as a whole, focusing on his/her individual physical, emotional, social and environmental needs. KHCC approach is based on a team methodology. KHCC aims to become a nucleus for clinical research in the region. KHCC will achieve this by implementing the latest treatment protocols available to employees and by developing partnership with leading academic institution, government, scientists and pharmaceutical companies both locally and abroad.

This study analyzes the affected quality of nursing care to the patient's satisfaction in the KHCC. As far as the country of this study is concerned in Jordan, there few researches has been conducted in this area which shows the relationship between nurse and patient, and affected nursing care to the patient's satisfaction in KHCC. This study concentrates on the impact of quality of nursing care on the patient's satisfaction, which has been considered as one of the critical nursing care outcome indicators⁵. To achieve that goal (patient's satisfaction) there is need to show good relationship between nurse and patient. Such relationship of understanding and trust is very important since it creates better quality of nursing care. This enables the patient to develop his perception about nursing care in KHCC.

Accordingly, this study tries to answer the following questions:

1. What is the level of patient's satisfaction towards quality of care provided by nurses in KHCC?
2. What is the relationship between quality of nursing care and patient's satisfaction in KHCC?

1.1 Research Significance

The idea of constitution the KHCC as a leading institution dates back to mid 1980's. Cancer care in Jordan back then was disorganized and sporadically between individuals. Most wealthy patients would travel abroad to receive treatment, while those with financial hardship were locally treated with scattered resources and poor outcomes. Many people scare the disease and would refer to cancer as "THAT" disease, as the fear of mentioning the word "cancer" prevented them from uttering it.

It is important to mention that the patient's satisfaction is much affected by quality of nursing care which is an indicator of the hospital success in Jordan generally and KHCC specially. Nowadays, nursing care is one of the successful factors in health care services and is considered a major contributor to enhance excellent quality of hospitals. Moreover, it is concerned with continual improvement such as joint commission international accreditation (JCIA), Magnet Hospitals, ISO 9000, and other accreditation awards. In order to achieve better quality of nursing care we should measure patient's satisfaction and opinion about the quality of this care, and should conduct a survey to evaluate patient's satisfaction within specific period to insure continual improvement for the quality of the care, and to avoid any inaccuracy which may occur in the future. Nursing care is a key factor in the outcomes of inpatient and outpatient clients. The successful treatment plans required awareness of the factors affecting patient's expectation about nursing care which is provided in KHCC, this is the best way to improve quality of nursing care which has a positive effect on patient's outcomes in KHCC.

2 Methodology

2.1 Research Design

This study is a quantitative in which using cross-sectional design to collect data that related to patient satisfaction. Data was collected through using two self-administrating questionnaires. The first questionnaire was for those patients who were treated in KHCC and another from nurse's who were working in KHCC.

2.2 Sampling and Setting

The population of this study is all those patients who are diagnosed with cancer disease in KHCC. A convenient sample was obtained according to the following eligibility criteria:

- 1) At age of 18 years or above for patients.
- 2) A patient was admitted in the hospital and finished from his treatment or plan for discharge, and data was collected within one month.
- 3) This study make in a five floors with (120) beds capacity, and the sample was taken according the number of the beds at five floors.
- 4) Cancer diagnosis.

For nurses was obtained randomly by simple random sampling, required that the participant have a bachelor (RN) degree or an diploma (LPN) degree and have worked in the KHCC for at least six months. The count of nurse in the KHCC is (400) nurses at the last statistical for KHCC, the sample taken for the research study is (196). The place of the study was only KHCC in Jordan. In hospital there will be a study in the floors unit (medical, surgical, leukemia, VIP, and bone marrow transplantation (BMT) ward) for patient sample, and nurses from all units (inpatient, critical care unit and outpatient).

2.3 The Data Collection Tools

Based on an interview with the patients and nurses in KHCC, the number of sample for nurses is (196) and for patient is (120). Hence, a random sample for nurse was selected from this population with the experience of more than six month

to reach 178 filled out of 196 (18 not filled copies), and a conviction sample for patients was selected to reach 89 filled out of 120 (31 not filled copies), questionnaires that have been distributed and collected during February 2019 to March 2019.

Nursing questionnaires were submitted to those who provide the nurses working in King Hussein Cancer Center. The questionnaire consists of (21) questions, the first section in questionnaire present the demographical data and information regarding to the participant (gender, age, marital status, educational level, monthly income level, experience year in the KHCC and employee unit). The second section includes questions to measure the independent variables (nurse participation in hospital affairs, nursing foundation of quality of care, nurse manager ability leadership and support nurses, staffing and resource adequacy, and nurse-physician relationship). The questionnaires were distributed in English language, in addition quick interviews were conducted with a contact nurse to explain for you about background of the study.

Patient questionnaires were submitted to those who provide the patient treating in King Hussein Cancer Center. The questionnaire consists of (37) questions, the first section in questionnaire present the demographical data and information regarding to the participant (gender, age, educational level, marital status and place of the admission patient). The second section includes questions to measure the dependent variables (accessibility explains and facilitate, comforting, anticipating, trusting relationships, monitors and follows through). The questionnaires were distributed in Arabic language personally; in addition of quick interviews were conducted with a contact patient to explain for you about background of the study.

Gliem and Gliem provided values of alpha (α) that reflect different levels of reliability as $\alpha \geq 0.9$ represent excellent reliability, $0.8 \leq \alpha < 0.9$ represent good reliability, $0.7 \leq \alpha < 0.8$ acceptance²⁰. As it can be seen in this study that all the values were grater enough and the least was (0.823) for nursing foundation for the quality of nursing care. The reliability for the staffing and resources adequacy items was high (0.900) reflecting high reliability. The overall questionnaire reliability was (0.921) and it is considered to be excellent reliability. Regarding the accessibility, all the values were grater enough as the least value was (0.732). The reliability for the anticipating items was high (0.940) reflecting high reliability. The overall questionnaire reliability was (0.927) and is considered to be excellent reliability. Therefore, the tool was reliable to use in among Jordanian nurses.

2.4 Data Analysis

The researcher used SPSS program to conduct the statistical analysis in order to answer the research questions. The analysis started by Cronbach's alpha test to check the reliability and the internal consistency between the questionnaires elements. Then, the researcher analyzed the study sample. using descriptive analysis for each variable (frequencies, mean, and standard deviation).The last step is hypothesis testing to show if they have relationships between dependent and independent variables. The main statistical measure was used to test this relationship was the multiple linear regressions.

3 RESULTS

3.1 Research Sample Analysis

The below Table (1) and (2) represent a description of the demographical data of the dependent and independent variable that provide a general background about the representation and explanation for the results. In regard to the gender, the majority of the samples were males (53.4%) and females represent (46.6%) of the sample. Most age of nurses whose worked in KHCC between 25 and less than 32 and represent (61.2%), then 18 and less than 25 represent (28.7%), with a few percentage for nurses age between 32 and less than 40 represent (6.7%), and age above 40 represent (3.4%).

For the educational level the majority of nurses has a bachelor degree represent (77.5%), with small percentage for diploma level represent (12.9%) and graduate studies represent (9.6%) for master degree without participant for PhD degree. Monthly income level for the majority of sample was between 300JD and less than 700 JD and represent (46.6%), then level of the income between 300 JD and less than 500 JD represent (36.0%), and the samples has a 700 JD or above represent (16.3%), and have a two missing data represent in two nurses refuse to answer this question.

Quality of nursing care depends on the experience of their nurses in KHCC. As shown in table (3) (42.7%) of the nurses have an experience the three years and less than six years while (26.4%) have a one year to less than three years, (15.7%) have a six month and less than one year, and finally (15.2%) have above the six years. Finally about the employee area all result was approximately most equal, the inpatients represent (34.3%), then critical care unit such as Emergency Department and Intensive Care Unit represent (33.1%), and finally the outpatient clinics represent (32.6%).

As regards to gender, the male percentage was (49.4%) and female percentage (50.6%). Also as regards to age all sample taken above 18 year and most result approximately equal, the age above 50 was represent the greater percentage(31.5%), then age between 18 and less than 28 was represent (24.7%), and age between 38 and less than 50 (22.5%) and finally (21.3%) have 28 and less than 38. The majority of educational level representation was a secondary school or less than (37.1%), while (33.7) have a bachelor degree, then (16.9%) have a diploma degree and only a few percentage (12.4) have a graduate studies. About marital status was represent (60.7%) reflecting high percentage, while (25.8%) have a single and a few percentage (11.2%) for widowed and (2.2%) for divorced.

Setting of study in KHCC for five floors surgical, medical, leukemia BMT and VIP floor with 120 beds capacity. The highly percentage shown (25.8%) for the surgical floor and (24.7%) for the medical floor, while (18.0%) for the BMT floor and (16.9%) for the leukemia floor, and finally (14.6%) for the VIP floor.

Table (1) Demographical Data for Independent Variable of the Nurses

Variable	Category	Frequency	%
Gender	Males	95	53.4
	Females	83	46.6
	Total	178	100
Age	18-less than 25	51	28.7
	25-less than 32	109	61.2
	32-less than 40	12	6.7
	Above 40	6	3.4
	Total	178	100
Marital status	Single	105	59.0
	Married	73	41.0
	Divorced	0	0
	Widowed	0	0
	Total	178	100
Educational level	Diploma	23	12.9
	Bachelor	138	77.5
	Master	17	9.6
	PhD	0	0
	Total	178	100
Monthly income level	300-less than 500 JD	64	36.0
	500-less than 700 JD	83	46.6
	Above 700 JD	29	16.3
	Total	176	98.9
Experience year in the KHCC	Six month-less than one year	28	15.7
	One year-less than three years	47	26.4
	Three year-less than 6 years	76	42.7
	Above 6 years	27	15.2
	Total	178	100
Employee unit	Outpatient clinic	58	32.6
	Inpatient	61	34.3
	Critical care area (ER and ICU)	59	33.1
	Total	178	100

Table (2) Demographical Data For Independent Variable Of The Patients

Variable	Category	Frequency	%
Gender	Male	44	49.4
	Female	45	50.6
	Total	89	100
Age	18-less than 28	22	24.7
	28-less than 38	19	21.3
	38-less than 50	20	22.5
	Above 50 years	28	31.5
	Total	89	100
Educational level	Secondary school and less than	33	37.1
	Diploma	15	16.9
	Bachelor	30	33.7
	Graduate studies	11	12.4
	Total	89	100
Marital status	Married	54	60.7
	Single	23	25.8
	Divorced	2	2.2
	Widowed	10	11.2
	Total	89	100
Floor admission	Third floor (Surgical)	23	25.8
	Forth floor (Leukemia)	15	16.9
	Forth floor (BMT)	16	18.0
	Forth floor (Medical)	22	24.7
	Fifth floor (VIP)	13	14.6
	Total	89	100

3.3 Descriptive Analysis For The Independent And Dependent Variables

Table (3) shows a descriptive analysis for the independent variable (quality of nursing care) and dependent variable (patient satisfaction) by representing their means, standard deviation (SD), the level of this item based on its mean the level of each item was determined by the following (highest point in likert scale – lowest point in likert scale) / the number of the levels used = the interval between each level and the another =1.33, where 1-2.33 reflected by "low",

2.34-3.67 reflected by "moderate" and 3.68-5 reflected by "high"²⁰. Then the items were becoming ordered based on their means.

Table (3) reports the mean values of each quality of nursing care items which represent the average of respondents' answers. Obviously nursing foundation for the quality of care has ranked the first order by a mean (3.95) while staffing and resources adequacy the last order by a mean of (2.85). And the main quality of nursing care mean (total of quality of nursing care items) was (3.42). Table (3) reports the mean values of each patient satisfaction items which represent the average of respondent answers. Obviously comforting has ranked the first order by a mean (4.32), while explaining and facilitating the last order by a mean of (3.93), and the main patient satisfaction mean (total of patient satisfaction items) was (4.16).

Table (3) Mean and Standard Deviation for Independent and dependent Variables

Quality of Nursing Care	Mean	SD	Level	Order
Nurse participation in hospital affairs	3.35	0.89	Moderate	3
Nursing foundation for quality of care	3.95	0.86	High	1
Nurse manager ability, leadership and support nurses	3.17	0.93	Moderate	4
Staffing and resources adequacy	2.85	0.95	Moderate	5
Nurse-physician relationships	3.80	0.72	High	2
Quality of Nursing Care	3.42	0.87	Moderate	
Patient Satisfaction	Mean	SD	Level	Order
Accessibility	4.18	0.66	High	3
Explains and facilitates	3.93	0.68	High	6
Comforting	4.32	1.32	High	1
Anticipating	4.18	0.68	High	4
Trusting relationships	4.20	0.72	High	2
Monitors and follows through	4.17	0.63	High	5
Patient Satisfaction	4.16	0.78	High	

3.4 Relationship between quality of nursing care and patient's satisfaction

To test Main hypotheses, the researcher use Multiple Regression, to explore the relationship between quality of nursing care (nurse participation in hospital affairs, nursing foundation of quality of care, nurse manager ability leadership and support nurses, staffing and resource adequacy, and nurse-physician relationship) and patient satisfaction , and table (4) shows that: It is clear from table (4) there is a relationship between quality of nursing care and patient satisfaction reaching values (t) calculated (1.090, 0.907, 1.021 , .874 , 0.854) respectively, which values a significant at the level of significance ($\alpha \leq 0.05$). This indicates the rejected null Hypothesis.

Table (4) Multiple Regression Test to Identify the Relationship between quality of nursing care and patient satisfaction in KHCC.

Quality of Nursing Care	B	Std. Error	Beta	T Calculated	Sig
Nursing participation	0.826	.334	.182	1.090	.010
Nursing foundation	.151	.166	.122	.907	.036
Nurse Manager Ability	.646	.106	.064	1.021	.027
Resource adequacy	.550	.116	.076	.874	.031
Nurse – physician relationship	.911	.107	.106	.854	.039

4 DISCUSSION OF THE STUDY FINDINGS

The importance level of Quality of Nursing Care in KHCC in Amman was moderate Level. KHCC seeks to continue to be a leader in the field of cancer research and therefore, actively invests in its staffs' continued education. KHCC recruits the most skilled and highly educated health professionals to join the team. KHCC is dedicated to maintain the highest standards by sponsoring and participating in conferences, continuing education programs, and providing opportunities for research. KHCC appreciate our personnel and believe they deserve recognition for a well done job! Employees who stand out in their excellence are awarded titles such as "employee of the month" or "employee of the year".

Starting with quality of care variables, our results showed that these variables (nurse participation in hospital affairs, nursing foundation of quality of care, nurse manager ability leadership and support nurses, staffing and resource

adequacy, and nurse-physician relationship) have a significant relationship. This study is consistent with Abualrub and Alhusabn²¹, who reported in their study that there was a positive relationship between quality of nursing care and patient satisfaction, the result finding shows a moderate level of patient satisfaction about quality of nursing care in private and semi-private hospitals in Jordan. Another study conducted in China revealed that patients' satisfaction is linked largely by quality of nursing care²².

KHCC was ranked the first has a national and international quality accreditation awards received more than any other hospitals in the Jordan. Quality projects coordinating and leading by nursing units, there is only one nurse to three nurses from each unit are responsible for quality program to improve the quality of care are provided in the hospital. Large percentage of nurses don't participate in quality program, and they don't know the principle and the main concept in quality of care, all these factors contribute to the lack of awareness in quality of care by nurses. This puts the nursing participation in hospital affairs in the third ranked with a moderate order. This has also been supported by Aiken and others²³ who found that the hospital care quality in all countries and the most hospitals in the world, and primary of quality care starting depend on the nurses, so the nurses participation in the quality programs and coordination for quality hospital affairs contribute to improve nurses awareness about quality of care and patient needs in the hospitals.

Additionally, an increasing number of patients from foreign countries who come to Jordan to seek treatment at KHCC due to its medical excellence, low costs, and cultural and language similarities. KHCC also accepts many underprivileged patients from conflict countries such as Palestine, Iraq, Syria, Yemen and Sudan who would not otherwise be able to receive the life-saving cancer treatment they need. Accepting large number of patients by KHCC increase the workload on all medical and non-medical personnel working in the hospital. Senarath and others²⁴ found that the adequacy of organizations' environment and decrease workload lead to a higher job satisfaction between nurses which also improve the patient expectation about quality of nursing care provided in the hospitals. The importance level of Patient's Satisfaction in KHCC in Amman was in a High Level. From previous result showed all patient satisfaction variables were a high order and do not need for nursing interaction to improve patient satisfaction.

From another different perspective, this study results is inconsistent with Mrayyan²⁵, who showed that the quality of nursing care is the first indicator for patient satisfaction improvement, and there is no significant relationship between quality of nursing care and patient satisfaction in Jordan hospitals. However, nurses who work in the worse area and unsafe environment reported a slightly lower job satisfaction which reflects patients' disappointment toward quality of nursing care.

In conclusion, based on the study findings, this study contributed to providing evidence-based that the patients' satisfaction is depend mainly on the level of quality of care that provided for them by nurses. This study had some limitations including, this study was conducted only on oncology nurses working in KHCC that make it challenging to generalised for the whole population. Another limitation is the small sample size, which make it difficult to generalize results of the study beyond our population. Future research is recommended to further investigate this issue in depth by qualitative design and in other settings.

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5 CONCLUSION

It is recommended that all nursing staff to participate in the monthly meeting that coordinated by a quality membership in the unit, to discuss and share their opinion about new issues related to quality of care. Moreover, nursing administration should try to ensure adequate staffing level and that nurses have a sufficient time to participate in quality program in the hospital. The limitation of the study included the relatively small sample size for group of nurses and group of patients, and the fact that only one hospital was included. This may limit the generalizability of the study results.

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