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Association between cancer patients' satisfaction with health care services provided by professionals of national cancer teaching hospital

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Abstract

Background: Cancer is a group of diseases characterized by uncontrolled growth and spread characterized by uncontrolled growth and spread of abnormal cells.

Method: The study was conducted by selecting A non-probability sampling technique (purposive sample) of 250 patients were selected who attended the National Cancer Teaching Hospital based on criteria for treatment, follow-up, or both.

Results: The study's results showed that significant partial satisfaction with care among patients is consistent with our hypothesis about hospital healthcare services.

Conclusion: Women are more likely to get cancer, and Breast cancer is the most common type. The age group ranges between (53-60) are the most sensitive group to this disease, and therefore cancer must be investigated early before reaching this age.

Keywords: cancer, patient satisfaction, health care services

Introduction

Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020, or nearly one in six deaths. The most common cancers are breast, lung, colon, rectum, and prostate. Around one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity (Agencies, 2020) [1]. According to the World Health Organization (WHO), the world expects 27 million accidents and about 17 million deaths from cancer in 2030. In 2012, the organization showed, according to statistics, 14.1 million new cases of cancer were diagnosed, and 8.2 million people died of cancer (Bohnert et al., 2018) [4].Cancer is the name specified to a group of related diseases. In all typesof cancer, some of the body's cells begin to divide without stopping and spread into surrounding tissues (Oweed, 2017) [7].

The American Cancer Society (ACS) provides an annual report for healthcare professionals and the public that summarizes the current ACS cancer screening guidelines including current recommendations, updates, and guidance related to early cancer detection when a direct recommendation for screening cannot be made. This annual report also includes the most recent data on cancer screening rates and a discussion of timely issues related to early cancer detection (Smith et al., 2019) [8]. According to the World Health Organization (WHO), worldwide, 56.2 million people die every year. Of these,7.6 million people die from cancer. In Europe, 3.2 million people die each year, and 1.7 million deaths are caused by cancer (Laurs, 2021).

Patient satisfaction is an important measure of the quality of healthcare services provided by hospitals. In the case of the National Cancer Teaching Hospital, it is important to assess the level of satisfaction among patients who have received treatment at the hospital in order to identify areas for improvement and to ensure that the hospital is meeting the needs and expectations of its patients. One potential issue that may arise in evaluating patient satisfaction at the National Cancer Teaching Hospital is the diversity of the patient population. Cancer patients may have a wide range of needs and expectations, and it may be difficult to develop a single measure of satisfaction that is applicable to all patients (Ferreira et al., 2023) [5].

Objective of the study

To find out the association between the level of Patients' satisfaction and their sociodemographic data and health history.

Method

a) Ethical considerations and administrative agreements

All official permission has been obtained, the approval of the Nursing College of the University of Kufa, and the Ethics Committee of the Faculty of Nursing to conduct the study. The approved and authorized official authorities for the commencement of the study. These permissions are the most basic requirements to be adhered to, while the consent for collecting the patient's data was conducted with full privacy and respect for the participant's values and dignity. Furthermore, formal approval from the Ministry of Planning and the Central Council for Statistics is required to approve the study questionnaire and protect the researcher's and participants' rights. Al-Najaf Al-Ashraf Health Directorate and National Cancer Teaching Hospital also consented to conduct interviews with each subject of the study. Finally, the researchers got subject permission from the patients after explaining the study's aim and obtaining informed consent.

Participants' confidentiality is preserved, and the patients are informed that their participation is entirely voluntary, and they are not compelled to take the survey or answer the interview questionnaire topics.

b) Design of the study

A descriptive design survey study was conducted at the National Cancer Teaching Hospital and was conducted on groups of patients in the National Teaching Cancer Hospital. Face-to-face patient interviewing techniques are used in the current work to fill out questionnaires.

c) Sample of the study

A non-probability sampling technique (purposive sample) of 250 patients were selected who attended the National Cancer Teaching Hospital based on criteria for treatment, follow-up, or both.

d) Including criteria

The study sample was selected using the following criteria for specifying the study subjects included in the study.

- All participants are diagnosed with different stages of cancer disease undergoing different treatment stages, such as chemotherapy, radiation, and other types of treatments, with no associated chronic diseases except cancer, and are participating in the study voluntarily.
- All definitive participation diagnoses of cancer are based on the information contained in the medical records, having been diagnosed with cancer for six months or more.
- All participants are over the age of 18 years, and because the study focuses on adult healthcare services' satisfaction and because the investigation needs subjective measures, patients must be alert and free of any changes in consciousness.
- The patient or their family disclosed no history of psychological problems.

e) Data collection methods

The data has been collected through the utilization of the adapted and developed questionnaire after the validity and reliability are estimated. The data was gathered using two techniques structured questionnaire and an interview with the subjects who were individually interviewed at the National Teaching Hospital of Cancer and obtained their verbal agreement to participate in the study with the right to refuse or withdraw participation and confidentiality of the information. Arabic version of the questionnaire is used. All subjects included in the study sample are interviewed in the same way. The data collection process has been performed from December 7th to March 4th, 2023. The interview with each patient takes (20-25) minutes to complete the interview.

f) Statistical analysis

The present study's data were analyzed using the Statistical Package of Social Sciences (SPSS) version (26). The following statistical data analysis approaches are used in order to analyze and evaluate the results of the study:

➤ **Descriptive statistical means**

This includes measurement of the following:

- Frequency (F)
- **Percentage:** The formula used to compute the percentage is: $\% = (\frac{frequency}{sample\ size}) \times 100\%$

- **The Mean:** Is the arithmetic average of the distribution. The formula used to compute the Mean is: (Plichta & Kelvin, 2013).

$$\bar{x} = \frac{\sum x_i}{n}$$

- **Standard deviation (Sd.)**

It was used to compare between the study group with control group before applying for the interventional program and the study group with the control group after applying the educational program. It also compared pre with post of the program for the study and control groups. The basic formula for the sample standard deviation is: (Rentala, 2019).

$$s = \sqrt{\frac{\Sigma f(x - \bar{x})^2}{n-1}}$$

➤ **Inferential analysis**

The purpose of using this type of statistical data analysis was to determine the level of acceptance or rejection of the research hypothesis, and it includes the following:

- **One-way analysis of variance (ANOVA):** is a statistical method used to test the equality of three or more group means. It is used when you have a single categorical independent variable (also known as a factor) and a continuous dependent variable. The null hypothesis for one-way ANOVA is that there is no significant difference between the means of the groups. The alternative hypothesis is that at least one group's mean differs from the others. The formula for one-way ANOVA is:

F = (SSbetween / (k - 1)) / (SSwithin / (n - k))

Rating and scoring

The researcher uses the following manner for rating and scoring the study instrument scales:

To assign scores of patient satisfaction, the researcher used a point system, such as:

Strongly Disagree = 1
Disagree = 2
Uncertain = 3
Agree = 4
Strongly agree =5

The patient satisfaction overall assessment categorized by used three level responses:

Unsatisfied = 1-2.32.
Partially Satisfy = 2.33-3.66.
Satisfy = 3.67-5

Result

Table 1: Distribution of demographical characteristics for study sample

Variables	Responses	Frequency	Percent
Age Group	<= 20	9	3.6
	21 – 28	32	12.8
	29 – 36	30	12
	37 – 44	38	15.2
	45 – 52	52	20.8
	53 – 60	55	22
	61+	34	13.6
	Total	250	100.0
Mean + SD		45.44±13.91	
Gender	Male	107	42.8
	Female	143	57.2
	Total	250	100.0
Residency	Rural	63	25.2
	Urban	187	74.8
	Total	250	100.0
Marital Status	Single	31	12.4
	Married	175	70.0
	Divorced	5	2.0
	Widowed	29	11.6
	Separated	10	4.0
	Total	250	100.0
Level of Education	Unable to read and write	21	8.4
	Read and Write	12	4.8
	Primary School	50	20.0
	Secondary School	38	15.2
	Intermediate School	38	15.2
	Institute	38	15.2
	Collage and Above	53	21.2
	Total	250	100.0
Occupation	Employed	69	27.6
	Free Job	67	26.8
	House Wife	101	40.4
	Retied	13	5.2
	Total	250	100.0
Family Monthly Income	Less than 300000	94	37.6
	301000 – 600000	79	31.6
	601000 – 900000	34	13.6
	901000 – 1200000	13	5.2
	1201000 – 1500000	28	11.2
	1501000 and more	2	0.8
	Total	250	100.0

Table 2: Distribution of clinical characteristics for study sample

Variables	Responses	Frequency	Percent
Family History	Yes	104	41.6
	No	146	58.4
	Total	250	100.0
Type of Treatment	Chemotherapy	234	93.6
	Radiation	16	6.4
	Total	250	100.0
Site of Cancer	Lung	33	13.2
	Breast	85	34.0
	Prostate	19	7.6
	Bowel	17	6.8
	Other Type	96	38.4
	Total	250	100.0
Stage of Tumor	Progressive	31	12.4
	Non-Progressive	219	87.6
	Total	250	100.0
Type of Hospital Room	General Room	125	50.0
	Private Room	125	50.0

	Total	250	100.0
Frequency of Hospitalization	Several Admission	249	99.6
	First time	1	0.4
	Total	250	100.0
Duration of Admission	<= 3	218	87.2
	4 – 6	26	10.4
	7 – 9	6	2.4
Mean + SD		2.41±1.42	

Table 3: Final Assessment Level of Patients' satisfaction to Services

Item		Frequency	Percent	MS	SD	Assess.
Public Services Assessment	Unsatisfied	12	4.8	3.20	0.52	Partially Satisfy
	Partially satisfied	192	76.8			
	Satisfied	46	18.4			
	Total	250	100.0			
Medical Services Assessment	Unsatisfied	1	0.4	3.80	0.46	Satisfy
	Partially satisfied	82	32.8			
	Satisfied	167	66.8			
	Total	250	100.0			
Nursing Services Assessment	Partially satisfied	52	20.8	3.85	0.42	Satisfy
	Satisfied	198	79.2			
	Total	250	100.0			
Pharmacy Services Assessment	Partially satisfied	105	42.0	3.64	0.48	Partially Satisfy
	Satisfied	145	58.0			
	Total	250	100.0			
Laboratory Services Assessment	Unsatisfied	22	8.8	2.89	0.50	Partially Satisfy
	Partially satisfied	206	82.4			
	Satisfied	22	8.8			
	Total	250	100.0			

Discussion

Discussion of demographic data of patients sample (Table 1)

The results of the demographic characteristics of the study sample of 250 subjects.

The present result shows that most participants were in age groups ranging (53-60) years, constituting (22%) of the sample. According to epidemiological studies, cancer can interpret this result as common in this age group due to many factors, such as low immunity and chronic diseases that participate in the development of cancer. This result agrees with a study conducted by (Manzoor et al., 2019) entitled Patient Satisfaction with Health Care Services; An Application of Physician's Behavior as a Moderator; they show age mean (22.4%) and age associated with satisfaction.

With regard to gender, the result of the current study shows that more than half (57.2%) of the patients were female. The interpretation of this result is that breast cancer is the most common cancer in women due to hormonal and environmental reasons. Cancer This result is consistent with the study conducted by (Djordjevic & Vasiljevic, 2019).

With regard to residence, the current study shows that the majority of the sample lives in urban areas (74.8%), and This result is due to the presence of the cancer hospital in the center of the city, and it is natural that it is more visited by urban residents, or perhaps city residents are more susceptible to cancer because of the pollution experienced by cities. This result are consistent with a study conducted by (Muaf et al., 2016) [6] which showed the urban average (68 %) and accommodation is related to satisfaction.

With regard to the educational level and marital status, occupation and family monthly income this result showed that about (21.2%) were university graduates and above, and the

majority of the sample (70.0%) are married and indicates that more than one-third of the studied sample is most likely housewives (40.4%). Further, over two-thirds (37.6%) have an income associated with a monthly salary (less than 300 thousand). This result matches to Characteristic of the majority of our community. This finding is consistent with agreement (Al-Tawil et al., 2016; Djordjevic & Vasiljevic, 2019) [2].

Discussion distribution of clinical characteristics for study sample (Table 2)

Presents data that provides insight into the medical characteristics of the participants in the study.

Regarding family history, the study results show that more than half had no family history study subjects (58.4%). The reason is that most of the patients were unaware of their sick history before they were diagnosed with cancer. Even some of them did not visit the doctor periodically. This indicates that there is no sick history for them. These results agree with the Satisfaction of Breast Cancer Patients with Nursing Care at Rizgari Teaching Hospital in Erbil City (Muaf et al., 2016) [6] whose results indicated that the majority of the study subjects (68%).

Regarding Type of treatment, Type of Hospital Room, Frequency of hospitalization, and duration of admission, the results show that type of treatment chemotherapy (93.6%) is the highest among cancer patients, The reason is that the tissues that make up the breast are more likely to turn into cancerous cells, and breast cancer is the most common type of cancer due to hormonal and environmental reasons the results show that type of hospital Room General Room and Private Room (50.0%) The proportions were equal, and the results show that the frequency of hospitalization Several Admission (99.6%) and the percentage of the length of stay in the hospital was

more than three days is the highest percentage (87.2%) This result agrees with (Muaf *et al*., 2016) [6].

In terms of site of cancer type and stage of tumor non-progressiveness, the study participants have their cancer progressed to a high level. This uses the study sample comprising patients who developed cancer for 6 months or a year. It shows that sample two -third (38.4%) is breast cancer, and the second third (34.4%) is another type and the stage of non-progressiveness of the tumor (87.6%). These results agree with earlier published results (Alosaimi *et al*., 2022) [3].

Results discussion of the health care services quality based on the five domains (Table 3)

This section discusses the patients' satisfaction with the health care services. The interaction between patients and healthcare providers is evaluated based on Public Services, Medical Services, Nursing Services, Pharmacy Services, and Laboratory Services. Each Service contains several questions (items) to test the patient's satisfaction.

In general, the evaluation of comprehensive health services in this study showed that some patients are partially satisfied with the public, pharmacy, and laboratory services provided to them. This result can be explained by the fact that this suffering is the most prominent thing the patient faces during his treatment routine. A system that did not rise to a good standard for recording the patients' review history for treatment, the lack of appropriate medicines and easy access to them by specialized pharmacists, and the lack of some laboratory analyses for them. The results of the current study are in agreement (Manzoor *et al*., 2019; Asamrew *et al*., 2020). Among the five service categories used to assess the net overall satisfaction rate of patients, the majority of the patients were satisfied with the services under patient assess the net overall satisfaction rate of patients, the majority of the patients were satisfied with the services under patient and health care provider interaction, and facility-related patients were satisfied. This study finding showed that almost half of the study participants and health care provider interaction and facility-related information.

Conclusion

The patients' satisfaction with the National Cancer Teaching Hospital. A survey has been distributed to 250 patients, and the data is collected and analyzed. The main highlights of this study can be summarized in the followings:

1. Women are more likely to get cancer, and Breast cancer is the most common type.
2. The age group ranges between (53-60) which are the most sensitive group to this disease, and therefore cancer must be investigated early before reaching this age.

Recommendations

1. Provide early detection and surveillance system for all women aged 40 and more such as a PET scan to detect breast cancer in its early stages to ensure a greater chance of living for them.
2. Due to the large number of factors that have helped to develop this disease in our society recently, surveillance systems must be available for all before reaching this sensitive age stage.

3. Conducting another nationwide study with a large sample size.

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