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Perception of Oncology Patients toward the Quality of Life and Rehabilitation

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ABSTRACT

Cancer is a worldwide pandemic disease 1 in 8 deaths is due to cancer globally. The major parameter used for the evaluation of cancer treatment is quality of life. **Objective:** To find out the perception of oncology patients towards the quality of life and rehabilitation. **Methods:** This study was a cross-sectional survey conducted in two tertiary care hospitals and one medical center in Karachi. Non-probability purposive sampling technique was used for sampling. Ethical approval was prior obtained from Parent Institute. Data were analyzed by SPSS version-23.0. **Result:** A total of 255 survey forms were filled out by oncology patients. Mostly 158 (62.0%) patients lie between the ages of 20-49 years. There were 117 (45.9%) males and 138 (54.1%) females. Change in quality of life with time related to post-diagnosis. Those who were diagnosed <5 years rated mean overall physical health as 5.46 ± 1.7 , >10 years rated 4.39 ± 1.8 , and 5-10 years rated 4.22 ± 1.5 . Satisfaction of patients regarding physical therapy sessions <5 years of post-diagnosed responded mean satisfaction level was 7.33 ± 2.494 , 5.00 ± 1.633 of >10 years patients, and 6.08 ± 1.714 of 5 to 10 years post diagnosed patients. Improvement in QOL after physical therapy sessions <5 years diagnosed patients responded mean QOL as 7.39 ± 2.367 , >10 years of patients responded 5.70 ± 2.032 , and 5 to 10 years patients responded 6.45 ± 1.670 . **Conclusions:** This study concluded that the perception of oncology patients regarding rehabilitation to maintain their quality of life is significant.

INTRODUCTION

Quality of life is defined by WHO as: with reference to the culture's personal beliefs, perceptions, knowledge, goals, standards, and comforts. It is a major parameter used for the evaluation of different procedures of treatment in many types of research [1]. Cancer is a worldwide pandemic disease 1 in 8 deaths are due to cancer globally [2]. Nowadays in Pakistan rate of cancer is increasing by 150,000 cases per year [3]. All over the country cancer is a chronic disease and it is the 2nd major reason for death and the most prominent type of cancer noticed by breast, cervical, oral cavity, and colorectal [4]. At any level, the condition of a specified cancer patient was linked to the

quality of life [5]. To measure the health position of all kinds of cancer patients used different tools to assess the patient's Quality of life, although hand cancer had a particular tool to measure their well-being status of life [6]. Cancer patients face many issues which are related to community-based and psychological support [7]. Lifestyle modifications are the main concern point for cancer patients like smoking, alteration in nutrition, reducing alcohol consumption, and promoting their physical activity [8]. Previous studies showed that cancer patients perform physical activity decreases the recurrence of cancer, improves their lives, decreases the complications of

cardiovascular, and improve their quality of life [9]. In multiple studies factors affecting the physical activity among cancer survivors like adult age, males, the higher combined status of social and economic, need more social assistance, with decreasing the symptoms of the disease and improving their perception of physical activity [10]. With reference to the safe mode for cancer patient's physical activity can be performed in the acute as well as chronic phases of treatment [11]. According to the American Cancer Society and American College of Sports Medicine standard guidelines for physical activity during the treatment period is 150 minutes (moderate to vigorous) per week [12]. Furthermore, physical activity can be performed for a whole week in accordance with the activity of daily living of a patient. According to the Institute of Medicine, quality defines the levels of health services for the population enhancing the health outcomes of care of patients with current professional knowledge [13]. There are three major aspects of quality the structure of a strategy, processing, and outcome of the strategy. The coordination between patient and attendant which has the ability to change the input of structure into the outcome is known as the Quality process. According to the research attention to the good quality of treatment can relate to better health outcomes [14]. However, cancer patients have different characteristics and they require more high-quality health care as compared to other patients. A study reported that cancer adversely affects the physical, mental, social, psychological, and financial status of patients which in turn affects their quality of life [15]. According to the framework of the Health Belief model cancer survivors can modify their sedentary lifestyle if they receive enough support from family and friends and they have a strong belief regarding the benefits of a healthy lifestyle and knowledge of prevention and cure related to the disease [16]. By the application of the health belief model the motivation level of patients can be targeted by the physician to improve the level of physical activity in cancer survivors. But the accurate amount of patients' beliefs related to physical activity is still under study. In our study, we addressed the perception of cancer survivors regarding the quality of life and the role of rehabilitation to improve their health status.

METHODS

This study was a cross-sectional survey conducted from Sep 2022 to Jan 2023 in two tertiary care hospitals and a private clinical center and institute located in Karachi Pakistan. The sample size was 255 patients calculated through Open Epi software. After receiving ethical approval from the competent authority, research participants were recruited through non-probability purposive sampling technique data were collected from patients directly by the

use of validated questionnaires at OPD and Oncology wards. In this study, there were two questionnaires used: A questionnaire of Life-related to oncology was used. This instrument is commonly used in research to measure the quality of life of Cancer Patients/ Cancer Survivors [17]. And another self-administered questionnaire used to measure the perception of cancer patients regarding physical therapy was previously used in the study of the Netherlands [18]. In inclusion criteria, we used two age categories in our questionnaire in which 20 to 49 years and greater than 50 years of both genders were included with diagnosed patients with any type of cancer and who had undergone treatment. In exclusion criteria, cancer survivors with mental impairment, and communication barriers that can affect the level of coordination and communication were excluded from this study. The time period of the treatment was not included as the selection criteria because our aim is to check the perception of patients regarding their quality of life after having cancer and rehabilitation treatment which can be measured at any level of disease. SPSS version 23.0 was used to analyze the data. Frequencies and percentages used to show descriptive statistics. One-way ANOVA and Chi-square test was used to know the statistical significance between the variables at $p\text{-value} \leq 0.05$.

RESULTS

A total of 255 survey forms were filled out by oncology patients. Mostly 158 (62.0%) patients lie between the ages of 20-49 years. There were 117 (45.9%) males and 138 (54.1%) females. The Marital status was classified as 187 (73.3%) married and 68 (26.7%) were single (Table 1).

Table 1: Demographic Characteristics of Respondents

Variable	Frequency (%)
Age	
>50	97(38)
20-49 years	158(62)
Gender	
Female	138(54.1)
Male	117(45.9)
Marital Status	
Married	187(73.3)
Single	68(26.7)

Change in quality of life with time-related to post who were diagnosed < 5 years rated mean overall physical health as 5.46 ± 1.7 , > 10 years rated 4.39 ± 1.8 , and 5-10 years rated 4.22 ± 1.5 . Oncology patients coping and dealing with disease and related treatment post-diagnosed < 5 years rated a mean treatment score of 5.62 ± 1.295 , >10 years rated 6.43 mean ± 1.500 , and 5-10 years rated as 6.22 ± 1.569 . In response to the question related to the quality of

life(QOL) of patients, they respond mean QOL value of 5.37 ± 1.421 of <5 years post-diagnosed patients, >10 years post-diagnosed responded 4.04 ± 1.659 , and 5-10 years post-diagnosed responded 4.14 ± 1.087 . Questions related to depression answered mean value of depression 7.24 ± 1.471 of <5 years post-diagnosed patients, 7.54 ± 2.073 of >10 years post-diagnosed patients, and 7.70 ± 1.138 of 5 to 10 years post-diagnosed patients. Regarding the fear of cancer spreading participants of the research responded mean related to fear of cancer was 7.51 ± 1.740 of <5 years post-diagnosed patients, 8.80 ± 1.147 of >10 years of post-diagnosed patients, and 7.98 ± 1.308 of 5 to 10 years post-diagnosed patients. The reaction of the family regarding the disease question, answered by participants mean behavior change was 6.90 ± 1.721 of <5 years of diagnosed patients, 6.91 ± 1.953 responded by >10 years of diagnosed patients, and 7.392 replied by 5 to 10 years of diagnosed patients. Questions related to the employment status after the disease disclosure of <5 years mean effect on employment was 5.07 ± 2.739 , >10 years replied mean of 4.54 ± 2.794 , and 5 to 10 years post diagnosed patient responded mean of 6.48 ± 2.450 . The financial burden of patients after the disclosure of disease to <5 years of patients reported a mean financial burden of 6.24 ± 2.375 of mean and SD, >10 years bear the burden of mean 8.22 ± 1.474 , and 5 to 10 years bear 6.82 ± 1.859 . Response of patients related to the uncertainty of the future was replied as a predictive mean of long-term ideas as 7.60 ± 0.971 of <5 years of patients, 7.46 ± 1.785 of >10 years of patients, and 8.30 ± 1.066 of 5 to 10 years of patients. Questions related to the satisfaction of patients regarding physical therapy sessions <5 years of post-diagnosed responded mean satisfaction level as 7.33 ± 2.494 , 5.00 ± 1.633 of >10 years patients, and 6.08 ± 1.714 of 5 to 10 years post diagnosed patients. Regarding the question related to the improvement in QOL after physical therapy sessions <5 years diagnosed patients responded mean QOL as 7.39 ± 2.367 , >10 years of patients responded 5.70 ± 2.032 , and 5 to 10 years patients responded 6.45 ± 1.670 (Table 2).

Table 2: Change in Quality of Life of Oncology Patients

Variable	Time Post Diagnosis (years)	Mean ± SD	p-value
Rate your overall physical health	< 5	5.46±1.746	0.000
	>10	4.39±1.844	
	5-10	4.22±1.502	
How difficult is it for you to cope today as a result of your disease and treatment?	< 5	5.62±1.295	0.001
	>10	6.43±1.500	
	5-10	6.22±1.569	
How good is your quality of life?	< 5	5.37±1.421	0.000
	>10	4.04±1.659	
	5-10	4.14±1.087	

How much depression do you have?	< 5	7.24±1.471	0.088
	>10	7.54±2.073	
	5-10	7.70±1.138	
Spreading (metastasis) of your cancer	< 5	7.51±1.740	0.000
	>10	8.80±1.147	
	5-10	7.98±1.308	
How distressing has illness been for your family?	< 5	6.90±1.721	0.095
	>10	6.91±1.953	
	5-10	7.34±1.192	
To what degree has your illness and treatment interfered with your employment?	< 5	5.07±2.739	0.000
	>10	4.54±2.794	
	5-10	6.48±2.450	
How much financial burden have you incurred as a result of your illness and treatment?	< 5	6.24±2.375	0.000
	>10	8.22±1.474	
	5-10	6.82±1.859	
How much uncertainty do you feel about your future?	< 5	7.60±0.971	0.000
	>10	7.46±1.785	
	5-10	8.30±1.066	
How much satisfied with your physical therapy session?	< 5	7.33±2.494	0.000
	>10	5.00±1.633	
	5-10	6.08±1.714	
How much do physical therapy sessions improve your quality of life?	< 5	7.39±2.367	0.000
	>10	5.70±2.032	
	5-10	6.45±1.670	

Responses of post-diagnosed <5 years patients related to the perception of physical therapy in cancer rehabilitation was 5.8% for counseling, 94.2% for exercise, 0% for the home program, >10 years of post-diagnosed patients responded for counseling 15.2%, for exercise 43.5%, for home program 41.3% and the response of 5 to 10 years patients 13.3% for counseling, 40% for exercise and 46.7% for a home program with significant p-value of < 0.0001 (Table 3).

Table 3: Perception of Physical therapy among Oncology patients

In your perception the role of physical therapy in cancer habilitation?	Time post-diagnosis (years)			p-value
	< 5	>10	5-10	
Counseling	6	7	14	0.000
	5.8%	15.2%	13.3%	
Exercise	98	20	42	
	94.2%	43.5%	40.0%	
Homecare program	0	19	49	
	0.0%	41.3%	46.7%	
Total	104	46	105	
	100.0%	100.0%	100.0%	

DISCUSSION

World widely there are a few components used to evaluate the health status of the individual as well-being: physical, psychological, and social is known as Quality of life. From

the previous study, it was revealed that many measurement tools were used to analyze the quality of life of a person [19]. Present study evaluates the perception of oncology patients along with the quality of life who have undergone oncological treatment. It is reported in many studies that oncological treatment affects the quality of life of an individual during and after treatment. In our study majority of patients perceive the role of physical therapy in exercise more as compared to counseling and home program. As reported in the study: there is a possibility of improvement in quality of life and reduction of mortality rate among oncology patients if they indulge in physical activity in daily life [20, 21]. There are some physical and pathological fences to the participation of the oncological patient in physical activity like tiredness, body pains, sleep changes, low willpower, decrease or loss of appetite, and time, etc. Another Pichardo *et al.*, study suggested that counseling sessions are needed for oncology patients to increase the awareness and importance of physical activity and proper exercise routines on a daily basis [22]. In our research overall health status of participants was more affected in the first five years of post-diagnosed cancer. But the perception of research participants regarding the counseling by the physical therapist was more in 5 to 10 years of post-diagnosed patients. According to some studies quality of life of oncological patients was associated with some factors that indirectly change the level of health status and physical activity between them like the type of cancer, diagnosis, type of treatment, prognosis, and time [23, 24]. In comparison to previous studies our study is not only evaluating the quality of life of oncology patients but also checks the perception of patients regarding the role of physical therapy rehabilitation. As the study reported, there is a need for training programs that should explain the importance of physical activity in oncology patients to reduce the associated factors of disease like joint pain, loss of bone, fatigue, etc. [25]. Although the Physical therapy profession has a specialization field related to oncological rehabilitation. Their duty is to propose a rehabilitation program that can facilitate the patient to restore and retain physical, and psychological well-being and also help them to quickly recover from oncological treatment. Another study reported, there are several side effects of cancer treatment that can impact the level of physical activity in oncology patients like deep vein thrombosis, neutropenia, edema, fatigue, and shortage of specialized rehabilitation teams that can specifically treat the issues of oncology patients in an effective manner [26]. McDonough *et al.*, study revealed, cancer survivors who perceived the benefits of rehabilitation and physical activity were more likely to improve their quality of life during and after the

treatment period [27]. The perception of patients can vary by the counseling and rehabilitation sessions. Our data showed 94.2% of > 5 years old post-diagnosed oncology patients have been aware of the role of exercise in cancer treatment.

CONCLUSIONS

The very important health issue that influenced the quality of life of people is cancer. Physical therapy proposed oncological rehabilitation for many years to patients who were cancer survivors. This study revealed the perception of patients towards rehabilitation that it can improve their quality of life. And the results proved that there is a strong correlation between the quality of life and the number of years of post-diagnosed oncology patients.

Authors Contribution

Conceptualization: KJ

Methodology: SRB, KAS, RI

Formal analysis: STC

Writing-review and editing: KAS, SA

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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