

## ORIGINAL ARTICLE

# QUALITY OF LIFE OF CANCER PATIENTS UNDERGOING TREATMENT AT TERTIARY CARE HOSPITALS OF PESHAWAR, PAKISTAN

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## ABSTRACT

**Background:** Deteriorating quality of life is a major concern in cancer patients undergoing treatment. These changes can be a result of the disease itself or a side effect of the treatment they're receiving. Objective of this study was to determine the quality of life of cancer patients in the following domains: Physical well-being, social wellbeing, emotional wellbeing and functional wellbeing

**Materials & Methods:** A cross-sectional analytical study was conducted at 3 major cancer hospitals in Peshawar. A sample size of 260 cancer patients was selected using the convenience sampling technique. After approval from the ethical review committee, data was collected using a structured and validated FACT-G questionnaire.

**Results:** The total FACT-G score was 64.6 ( $\pm 16.0$ ) on average, falling in the unsatisfactory quality of life range. Mean scores were recorded as: physical wellbeing  $13.6 \pm 6.6$  (minimum 0, maximum 28), social/family wellbeing  $21.5 \pm 5.3$  (Range 0-28), emotional wellbeing  $13.2 \pm 3.7$  (Range 0-24) and functional wellbeing  $16.2 \pm 6.8$  (Range 0-28). The most negatively affected domain in our population was physical well-being followed by emotional well-being, while the best quality of life was observed in the domain of social and family wellbeing.

**Conclusion:** This study concludes that the quality of life was not satisfactory in general among cancer patients. Life quality was specifically worse in the physical and emotional domains. On the other hand, the best quality of life was observed in the domain of social and family well-being.

**KEY WORDS:** Cancer; Emotional distress; Quality of Life; Symptom.

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## INTRODUCTION

Deteriorating quality of life is a major concern in cancer patients undergoing treatment. These changes can be a result of the disease itself or a side effect of the treatment they're receiving.<sup>1,2</sup> Fear of recurrence has also been reported to precipitate severe distress.<sup>3</sup> Patients have been reported to show not only physical symptoms like fatigability but also severe signs of emotional distress like anxiety and depression.<sup>4</sup> Increasing disease severity further

complicates the situation leading to higher emotional distress.<sup>6,7</sup> Comparison of the quality of life of cancer patients with the general population, has consistently shown emotional distress in the diseased.<sup>8</sup> In Europe childhood cancer survivors were found to have a low quality of life, with the most affected domains being physical and mental wellbeing.<sup>9</sup> A review of gynecological cancers in Nordic women found that women had severely affected quality of life even many years after their diagnosis and treatment. Many women experienced emotional distress, and physical symptoms like fecal leakage, compromised sexual activity and cancer-related fatigue.<sup>10</sup>

Developing countries have one of the worst QoL scores in the world. In such areas, the coping mechanisms vary as well. The use of complementary and alternative medicine and spirituality have been linked to better quality of life scores in such countries.<sup>11</sup> A study on breast cancer patients in Lahore concluded that anemia along with nausea and vomiting are the most commonly reported

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adverse reactions with chemotherapy, deteriorating the quality of life severely.<sup>12</sup> A similar study in Karachi showed low QoL scores, especially in physical and emotional domains.<sup>13</sup> Another study showed that cognitive functions were also affected in blood cancer patients in Pakistan.<sup>14</sup>

Cancer causes severe morbidity and mortality worldwide thus necessitating quality of life assessments from time to time. Malignancies in KP account for 16.5% of Pakistan's total in 2015-2019 with 45% of them being adults and a 51.7% female preponderance.<sup>15</sup> There is very limited research available on the quality of life of these patients. Through this study, we have tried to understand the quality of life to identify the specific needs of cancer patients in Peshawar to help inform policymakers, healthcare providers and support organizations. This will enable us to develop better care strategies, psychosocial interventions and support systems that work in favour of these patients.

## MATERIALS AND METHODS

We conducted a 4 monthly long cross-sectional Study in three different tertiary care hospitals/oncology wards of Peshawar including a dedicated public cancer hospital (A), an oncology ward of a public medical complex (B), and an oncology ward of a private tertiary care hospital (C). Ethical approval for the study was provided by Institutional Research and Ethical Board of the Hayatabad Medical Complex under the approval no. 1484. All patients admitted to the respective oncology wards undergoing treatment or as Outpatient Radio/Chemo-therapy treated patients for different types of cancers were included in the study. The sample size for this study was calculated using Open-Epi to be 260 based on the assumed population/number of patients at the hospitals (800), with a 95% confidence interval and a 5% margin of error.

Data was collected from patients undergoing treatment through the validated Questionnaire FACT-G from October 2023 to January 2024.<sup>16</sup> The Functional Assessment of Cancer Therapy-General (FACT-G), a 27-item scale was used to measure the quality of life among cancer patients. It contains four distinct sub-scales: physical well-being (PWB), emotional well-being (EWB), functional well-being (FWB), and

social/family well-being (SWB). All questions in the FACT-G use a 5-point rating scale (0 = not at all; 1 = a little bit; 2 = somewhat; 3 = quite a bit; and 4 = very much). Scales that were negatively worded were scored in reverse so that a higher score always meant a better quality of life. A total of 108 points-70 points or more was categorized as having a good QoL and less than 70 being an unsatisfactory QoL. Informed consent was taken from all participants before administering the questionnaire. Data was analyzed using SPSS version 24.0. Descriptive analysis was done for the data to be presented in the form of plain text, tables, figures, and graphs. Frequencies and percentages were calculated for the categorical data.

## RESULTS

Data was collected from 260 cancer patients at three different hospitals in Peshawar City including a dedicated public cancer hospital A (n=86), an oncology ward of a public medical complex B (n=86), and an oncology ward of a private tertiary care hospital C (n=87). The total FACT-G score was 64.6 ( $\pm 16.0$ ) on average, falling in the unsatisfactory quality of life range. Mean scores were recorded as: physical well-being  $13.6 \pm 6.6$  (minimum 0, maximum 28), social/family wellbeing  $21.5 \pm 5.3$  (Range 0-28), emotional wellbeing  $13.2 \pm 3.7$  (Range 0-24) and functional wellbeing  $16.2 \pm 6.8$  (Range 0-28). The most negatively affected domain in our population was physical well-being followed by emotional well-being, while the best quality of life was observed in the domain of social and family wellbeing. Table 1.

On further breakdown of each subscale, the following observations were made. We observed that among the physical symptoms, factors like lack of energy (mean score: 1.7), feeling ill (mean score: 1.6), and being forced to spend time in bed (mean score: 1.6) were comparatively more predominant. In the social and family well-being family acceptance of the disease (mean score: 3.4) and family support (mean score: 3.4) had the highest score among all. Patients were observed to be very worried about their death (mean score: 1.3) and felt sad (mean score: 1.8). Most patients had accepted their illness (mean score: 2.9) but were unable to work (mean score: 1.8). This has been detailed in table 2.

**Table 1. Score of well-being across all domains of FACT-G**

	Physical Well-being	Social/Family Wellbeing	Emotional Well-being	Functional Well-being	Total Score
Mean	13.6	21.5	13.2	16.2	64.6
Std. Deviation	6.6	5.3	3.7	6.8	16.0
Minimum	0.0	0.0	5.0	1.0	25.0
Maximum	28.0	28.0	20.0	28.0	104.0

**Table 2. Detailed breakdown of FACT-G means and standard deviations**

Subscale item	Mean	SD	Range
<b>PHYSICAL WELL-BEING</b>			
I lack energy	1.7	1.4	0-4
I have nausea	2.1	1.5	0-4
Because of my physical condition, I have trouble meeting the needs of my family	2.2	1.5	0-4
I have pain	2.0	1.5	0-4
I am bothered by the side effects of the treatment	2.1	1.5	0-4
I feel ill	1.6	1.3	0-4
I am forced to spend time in bed	1.8	1.5	0-4
<b>Total</b>	<b>13.6</b>	<b>6.6</b>	<b>0-28</b>
<b>SOCIAL/FAMILY WELL-BEING</b>			
I feel close to my friends	2.5	1.4	0-4
I get emotional support from my family	3.4	0.9	0-4
I get support from my friends	3.0	1.3	0-4
My family has accepted my illness	3.4	0.9	0-4
I am satisfied with family communication about my illness	3.2	1.0	0-4
I feel close to my partner (or the person who is my main support)	3.0	1.3	0-4
I am satisfied with my sex life	3.0	1.4	0-4
<b>Total</b>	<b>21.5</b>	<b>5.3</b>	<b>0-28</b>
<b>EMOTIONAL WELL-BEING</b>			
I feel sad	1.8	1.5	0-4
I am satisfied with how I am coping with my illness	2.6	1.2	0-4
I am losing hope in the fight against my illness	2.7	1.3	0-4
I feel nervous	2.4	1.4	0-4
I worry about dying	1.3	1.5	0-4
I worry that my condition will get worse	2.3	1.4	0-4
<b>Total</b>	<b>13.2</b>	<b>3.7</b>	<b>0-24</b>
<b>FUNCTIONAL WELL-BEING</b>			
I am able to work (including work at home)	1.8	1.5	0-4
My work (including work at home) is fulfilling	2.0	1.5	0-4
I am able to enjoy life	2.2	1.4	0-4
I have accepted my illness	2.9	1.2	0-4
I am sleeping well	2.5	1.3	0-4
I am enjoying the things I usually do for fun	2.3	1.4	0-4
I am content with the quality of my life right now	2.5	1.3	0-4
<b>Total</b>	<b>16.2</b>	<b>6.8</b>	<b>0-28</b>

**DISCUSSION**

In this study, we found that quality of life was not satisfactory in general and specifically worse in the physical and emotional domains. The best quality was observed in social and family well-being.

Our findings in physical wellbeing correspond with other studies that reported similarly low scores due to factors like lack of energy/fatigue, nausea and vomiting, diarrhea and loss of appetite.<sup>17,18</sup> Lack of energy and fatigue are associated with ongoing chemotherapy sessions and can also last for several years after completion of chemotherapy. Along with this QoL is usually lower in patients with pain compared to those who had no pain.<sup>19</sup>

Family and social well-being stood out as the domain where most patients had their best quality of life. Scores were high in all subscales including 'emotional support from family and friends', partner's support and family's acceptance of the disease. Similar results have been reported earlier in other studies in India as well as in a study on non-Hodgkin lymphoma patients.<sup>20,21</sup> On the other hand, most patients in our study who chose to disclose, said that they were satisfied with their sexual life, in contrast to the study on non-Hodgkin lymphoma patients among whom 90% were found to be not satisfied with their sexual life.<sup>20</sup> 'Sadness' and worry about death were prominent in our sample. This led to severe emotional distress, just as reported earlier in studies on gastrointestinal cancers and patients undergoing chemotherapy.<sup>5,22</sup> The fear of the future was present in 29% and that of disease and consequences in 26.5% and 76.2% compared to our study as it reported mixed reactions.<sup>21,23</sup> The patients in our sample exhibited moderate scores (2.0 and above) when asked about feeling nervous, coping with the disease and worrying about disease progression. This seems to be because most patients had accepted their illness and showed determination to beat it, similar to others.<sup>19</sup>

Like a couple of other studies in Melaka and India,<sup>18,21</sup> the patients of our sample also did not sleep well, leading to moderate functional well-being. Most of our patients were 'not able to work', Apart from this they mostly demonstrated low to moderate scores across other subscales of functional wellbeing i.e. enjoying life, fulfilling work, having fun at what they do and being content with the quality of life. None of the demographic variables were significantly related to the QoL in many of the studies reviewed<sup>5,18,19,24</sup> hence being the reason for us not to delve into the socio-demographic details of Cancer patients presenting to the oncology hospitals.

In comparison to the general population, cancer patients exhibit significantly poorer Quality of Life (QoL) in worsening order of inpatients, rehabilitation patients and outpatients.<sup>25</sup> Our population was

mostly outpatients which could be the reason for their higher well-being and better QoL scores than other studies.

## CONCLUSION

This study concludes that the quality of life was not satisfactory in general among cancer patients. Life quality was specifically worse in the physical and emotional domains. On the other hand, the best quality of life was observed in the domain of social and family well-being.

**Limitations:** This study was the first formal investigation of quality of life and lacks specific insights on the type of cancer, its stage, type of treatment, duration of treatment, etc. It also lacks significant demographic characteristics, thus further limiting its outcomes. The study was limited to specific locations, i.e., the hospitals that provided NOC for data collection.

**Recommendations:** We recommend detailed, qualitative studies on the quality of life of cancer patients and comparisons across various types of cancer, treatment modalities, staging, etc., for more accurate information on the subject. Apart from this, we recommend that all health professionals ensure that patients receive timely and appropriate education and care. Such measures need to be developed for effective management and QoL improvement.

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**CONFLICT OF INTEREST**

Authors declare no conflict of interest.

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**AUTHORS' CONTRIBUTION**

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: ZS, AK  
Acquisition, Analysis or Interpretation of Data: ZS, AK, AZ, BA, WA  
Manuscript Writing & Approval: ZS, AK, AZ, AE, WA

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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