



A Cross-Sectional Study of Deficits in Quality Of Life Associated With Post-Chemotherapy in Indian Cancer Survivors

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INTRODUCTION

Cancer is increasingly being treated as a chronic condition for people. The number of cancer survivors is rising quickly in the West due to rising incidence rates, faster detection, and better treatments. While most patients first prioritise life expectancy, quality of life (QOL) eventually takes on greater significance. However, more patients are dealing with the long-term adverse effects of cancer and its treatment, which can have a detrimental influence on patients' QOL, as a result of the increased incidence of cancer. Chemotherapy-induced peripheral neuropathy (CIPN), which can happen after using certain chemotherapeutic medicines like taxanes and platinum derivatives, is one of those potential side effects.^{1,2}

It is anticipated that CIPN will continue to spread due to the rising incidence of cancer, the expansion of chemotherapy's indications,^{3,4,5} the development of new chemotherapeutic agents with CIPN side effects, and the absence of an effective treatment or preventative approach for CIPN that it will grow to be a significant problem for cancer survivors.^{6,7}

Modern oncology places a greater emphasis on understanding the experiences of patients and their families, prioritising the use of resources, and organising and delivering comprehensive care that will measurably improve quality of life for patients.^{8,9} A dynamic, multifaceted notion, quality of life in cancer refers to all areas of a patient's life and their demands, and it regularly evaluates methods for striking a balance between the actual situation and the ideal situation at any given time.^{10,11,12} The subjective concept of quality of life is largely influenced by personal needs, convictions, values, and attitudes; it is also a concept that evolves with time.¹³ According to a review of the literature, there are many distinct types of requirements that cancer patients may have. Each individual has a unique response to the condition, which is an unpleasant experience. Personality factors and the patient's comprehension of their new situation influence mental responses connected to the condition and their requirements.^{14,15,16}



The patient often evaluates their own subjective quality of life, but if this is not possible, a doctor, nurse, or other caregiver may evaluate the patient's quality of life. The foundation for evaluating the condition of oncological patients is life-quality testing. They make it possible to get important data from patients regarding not only medical symptoms and side effects of treatment but also evaluation of the psychological, social, and spiritual elements.^{17,18,19,20}

Objective of the Work

The aim of the study was to assess the Deficits in Quality Of Life Associated With Post-Chemotherapy in Indian Cancer Survivors.

2. Data and Method

2.1. Study Design

A population-based, multi-area cross-sectional study was conducted among 90 patients of the IPD and OPD in Asian Institute of Medical Sciences, Faridabad, 2019–2022. Patients diagnosed with cancer were invited to participate in the study in order to assess their life quality. Due to the small sample size, it was important to include patients with fairly consistent characteristics.

Eligible patients were given an information package by their medical specialist, who was part of the research group. The information package consisted of a letter that outlined the objectives of the study and what participation would involve, a consent-to-contact form to be completed if patients were interested in the study and a non-consent sheet. After informed consent was obtained, an interview was conducted at the clinic by an interviewer who was part of the research group. The interview lasted approximately 40 min. In the case of patient fatigue, the interview was divided into parts in order to maintain the physical and mental comfort of the patients.

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2.2. Participant Recruitment, and Inclusion and Exclusion Criteria

Eligible patients (both genders) were identified from the department of oncology within three months of diagnosis. Medical specialists who were part of the research group recruited patients for the study. The main indicators of participation in the study were the diagnosis of cancer at least three months before the study, life expectancy age 18 years and above, undergone at least one dose of chemotherapy treatment or have received surgical intervention &/or radiotherapy, no history of other chronic diseases and awareness of the diagnosis and able to follow simple instructions.

Patients were excluded from the study if there is presence of Hereditary peripheral neuropathy (e.g., Charcot-marie-tooth disease), had other chronic neuropathic disease like Diabetic Neuropathy, Multiple Sclerosis, Neuritis etc., Treatment with antiepileptic drugs, antidepressants and major analgesics, Orthopaedic problem that affect balance (e.g. ACL reconstruction), Vestibular disorder and visual acuity problem, Chronic inflammatory

demyelinating polyneuropathy , Concomitant disease like diabetes, renal insufficiencies , Prior history of alcohol abuse, Lower limb amputee, Use of walking Aid.

Following their signature on the informed consent form, patients provided details about their sociodemographic traits, family history of cancer, first symptoms they believed to be related to cancer, perception of early symptoms, and response to those symptoms. Patients were also asked to answer a questionnaire about their quality of life related to their health at the same time.

2.3. Data on Quality of Life

The method used in the study was a clinical, direct, individual, structured interview, which was in-depth and focused. Quality of life was measured using the 12-Item Short Form Health Survey (SF-12).

The SF-12 uses the same eight domains Limitations in physical activities because of health problems, Limitations in social activities because of physical or emotional problems, Limitations in usual role activities because of physical health problems, Bodily pain, General mental health (psychological distress and well-being), Limitations in usual role activities because of emotional problems, Vitality (energy and fatigue), General health perceptions.

2.4. Data Analysis

All data obtained were collected and analysed with SPSS 17 software. Descriptive statistics and confidence intervals were used to analyse participant characteristics, demographics and prevalence of needs. Statistical characteristics of continuous variables are presented in the form of arithmetic means, standard deviations and medians. Statistical characteristics of step and qualitative variables were presented in the form of numerical and percentage distributions.

3. Results

The mean score of SF12 Questionnaire is 30.35, median 30 and range value 16. There was reduced score for SF12 which indicates the low level quality life of cancer survivors after chemotherapy treatment shown in table 1. In response to SF12 questionnaire, **Question 1** about health 75% showed poor health response. **Question 2** about MODERATE ACTIVITIES, such as moving a table, cleaning, 74.2% have major limitation and 25.8% have little limitation in activities. **Question 3** about climbing SEVERAL flights of stairs 74.2% have major limitation and 25.8% have little limitation. **Question 4 & 5** about accomplishing the regular activities and work 100% have major limitation. **Question 6** about emotional problems 90.4% have emotional problems. **Question 7** about having problem in performing task carefully as before (90.4%). **Question 8** about PAIN interference with your normal work (including both work outside the home and housework 44% had extreme problem due to pain, 35.4% had quite a bit problem, 19% had moderate problem and 1.6% had little

problem. **Question 9** about feeling calm and peaceful 28.6% didn't felt calm, 34.6% had little time of calmness, 32.8% had some time of calmness and 3.1% had good time of calmness and only 0.8% had most of time calmness.

Score	Frequency	Percent
22/48	3	3.33
23/48	1	1.11
24/48	1	1.11
25/48	3	3.33
26/48	3	3.33
27/48	5	5.56
28/48	12	13.33
29/48	11	12.22
30/48	9	10
31/48	7	7.78
32/48	7	7.78
33/48	8	8.89
34/48	7	7.78
35/48	6	6.67
36/48	2	2.22
37/48	1	1.11
38/48	4	4.44
Total	90	100.0

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Table 1: SF12 Total Score and percentage of population deficits in quality of life.

Question 10 about energy level 37.5% didn't have lot of energy, 55.7% had energy little of the time, 6.5% had energy some of the time and 0.3% had energy good of the time.

Question 11 about feeling downhearted and blue 26.3% had felt downhearted all the time, 40.9% felt most of the time, 18% felt good bit of the time and 14.3% felt some of the time and 0.5% felt none of the time.

Question 12 During the PAST 4 WEEKS, how much of the time has your PHYSICAL HEALTH OR EMOTIONAL PROBLEMS interfered with your social activities (like visiting with friends, relatives, etc.) 20.8% had interference with your social activities all the time, 50% had most of the time, 18% had good bit of the time and 4.4% had some of the time, 3.6% had little of the time and 3.1% had none of the time.



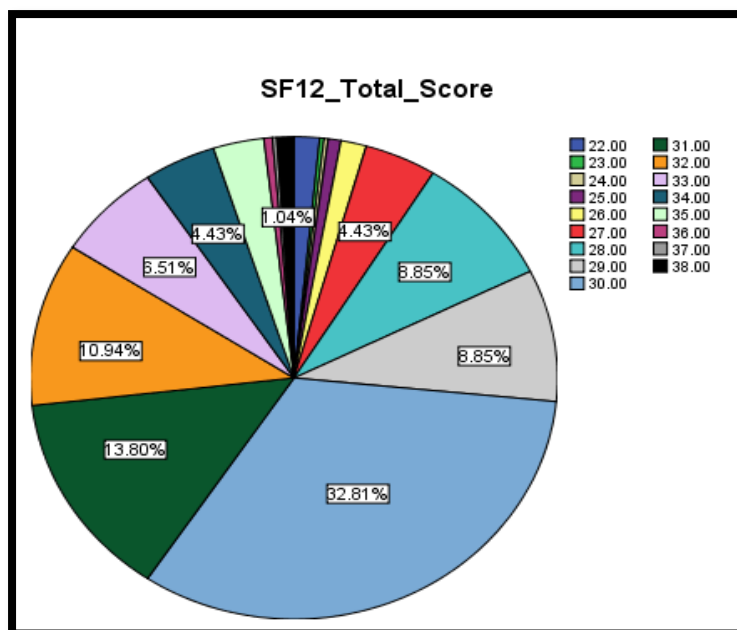


Figure 1: SF12 Total Score Pie chart denotes ranges of scoring of SF12 Majority of the patients occurred in partial impairment zone under which emotional Domain is affected vigorously.

4. Conclusion

Previous studies also indicates that Cancer survivors must be able to work in order to maintain their sense of self, identity, and living conditions. Society must give this priority in order to stop social inequality and keep people employed. Psychological distress can be made worse by changes in body image brought on by weight loss or gain, hair loss, changes in skin or nail texture, fatigue, stoma management, and limb loss. The person's sense of identity is questioned.²¹ Cancer undoubtedly has a negative impact on the quality of life of patients, which is related to the disease process itself, the treatment used and the duration of the disease. The necessity of frequent hospitalizations, negative emotions and numerous somatic ailments that change over time significantly reduce the quality of life of cancer patients. There are reduction in quality of life associated with the after effects of chemotherapy in Indian cancer survivors.

5. Implication

To achieve the best possible quality of life despite disease, it is important to regularly assess the quality of life of patients to quickly assess the problems of each sphere of life, which will enable the identification of high-risk patients and allow for early intervention depending on the identified needs or deficits. Undetected and untreated disorders threaten the results of cancer therapies, reduce the quality of life of patients and increase healthcare costs. Somatic symptoms accompany patients at every stage of the disease and are associated with increased disability and reduced quality of life. The factors that significantly influence the occurrence of symptoms depend on the phase of the disease, the cycles of chemotherapy and the duration of the disease.

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