

# Quality of Life in Cancer Survivors: A Systematic Review

Dr. Saira Afzal, Dr. Faiza Aziz, Ayesha Faheem, Ayesha Mehboob, Ayesha Niazi, Ayesha Qamar, Ayesha Qayyum, Ayesha Zahid, Anza Muhammad, Arbab Sarfraz, Dawood Ashfaq, Fahad ur Rehman

## Introduction

Cancer is a leading cause of death (1). In 2020, 19.3 million new cancer cases were diagnosed, and almost 10 million deaths from cancer were recorded (2). The number of cancer survivors is projected to grow to 26.1 million by 2040 (3).

Cancer not only puts a strain on a patient's physical health but also on his mental and emotional health and his financial resources. It is therefore important to study physical, emotional, mental and financial wellbeing of Cancer Survivors. Assessing the effects of cancer and treatment, as well as medical decision-making, requires knowledge of QOL across age groups and cultures (4). Cancer treatments cause numerous side effects and have a negative impact on all body systems (5). The mental anguish that accompanies physical trauma may manifest as anxiety, and fear of recurrence (6).

Most cancer survivors adjust well to life after cancer but some experience persisting in a negative mood, such as cancer-related fears, post-traumatic stress, anxiety, or depression (7). Fear of cancer recurrence (FCR) is a common psychological issue. Survivor's physical and mental well-being are negatively impacted by illness uncertainty. A study done in Karachi found that in oral and oropharyngeal cancer survivors quality of life deteriorates and this may lead to many limitations that include physiological as well as somatic (8). Most of the literature is focused on establishing factors/programs that improve quality of life in cancer survivors. Current research on the topic indicates that such programs should include aspects such as physical activity and a proper diet, which would form the basis of lifestyle change among CRC survivors (9). The purpose of this systematic review is to summarize the existing body of literature that serves to identify the psychosocial and physical, mental and financial problems faced by cancer patients and their families so that better and effective programs would be aimed to provide psychosocial support to these cancer patients from an early stage of disease management.

## Objectives

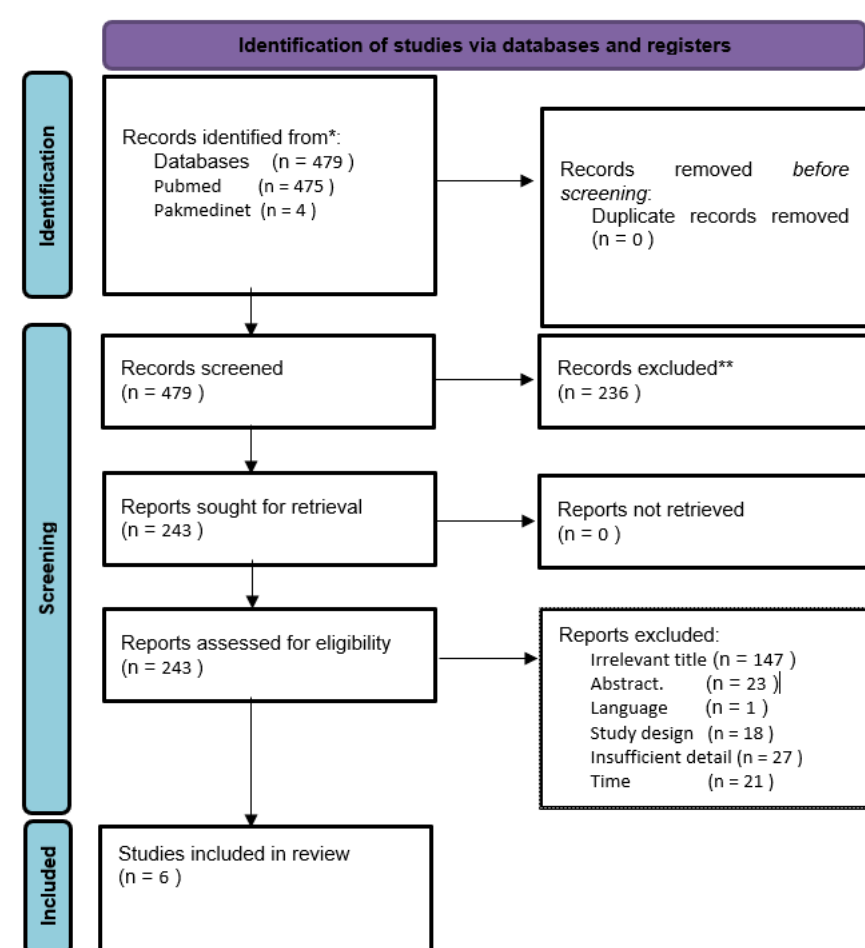
- To assess quality of life in cancer survivors
- To determine the effects of cancer and cancer treatment on their physical, mental, emotional health and finances.

## Methods and Materials

### 1-DATABASE AND SEARCH TERMS

(Quality of life) OR (Life Quality) AND (Cancer survivors) OR (Long-term cancer survivors) AND (5 year).

Data bases: PubMed and PakMedi.net



### 2- INCLUSION CRITERIA

- Studies with quantitative data.
- cross-sectional, prospective, case study, case series, and cohort studies.
- Studies with available full text in English and published between 2012 and 2022

### 3- EXCLUSION CRITERIA

- interventional studies, reviews, reports, commentaries, letters to the editor, and books.
- Spiritual effects of cancer.
- Studies other than in English language.
- Studies focused on diagnosis or therapeutic approaches and medication therapies.

### 4- DATA COLLECTION TOOLS

SF-36, GPH, and GMH subscales of PROMIS Global Health 10, BREAST-Q, QLQ-c30, QLQ-HN-35, and EORTC-ANL27.

### 5- QUALITY ASSESSMENT

The Newcastle-Ottawa Scale (NOS) was used

### 6- DATA EXTRACTION

Authors' name, publication date, country, data collection tool, study design, study population, and outcome measures.

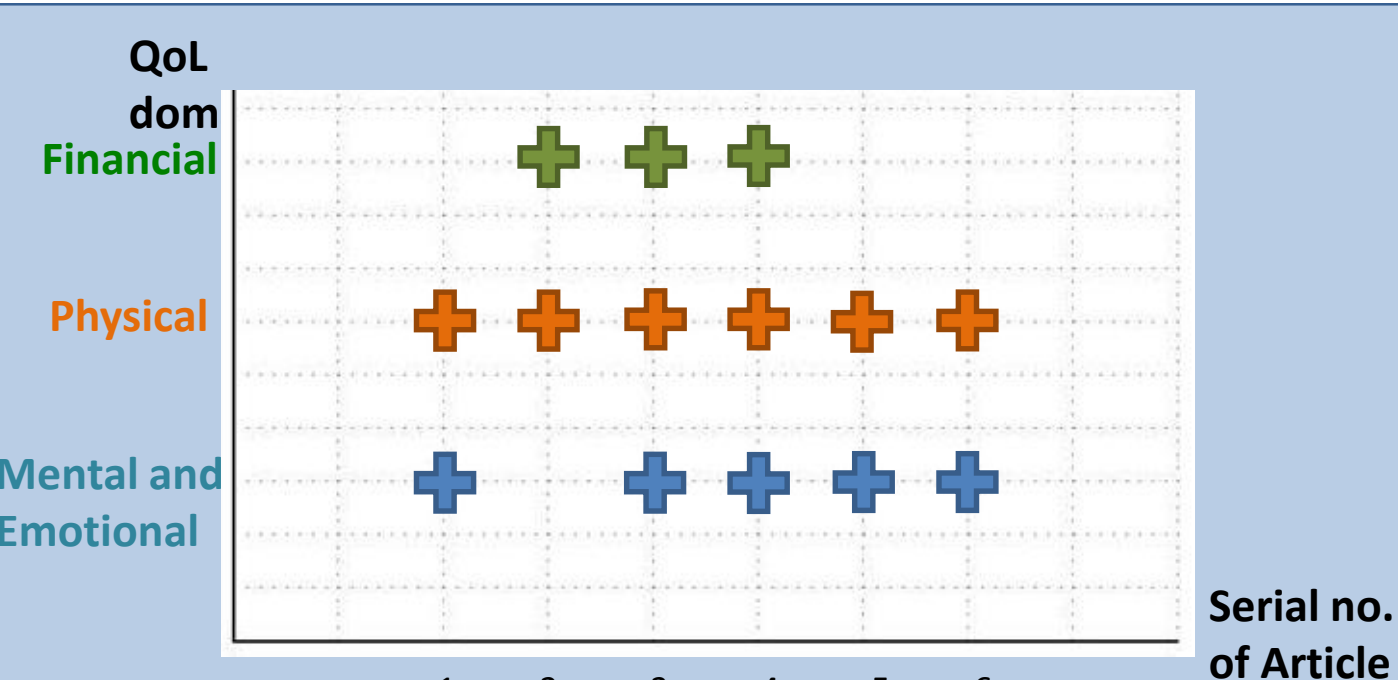


Figure 1. Distribution of various QoL domains among the articles selected for this systematic review.

Sr no.	First author, Year of publication, Country	Study design	Findings of study
1 <sup>(10)</sup>	Zsila S. Sadighi. MD, 2014, USA	Prospective cross sectional study	Headaches are common in ALL but only a minority has impairment of QOL
2 <sup>(11)</sup>	XuesongHan. PhD, 2021, US	Cross-sectional study	Hight GPH and GMH in families with high income. Smokers had worse GMH than non- smokers.
3 <sup>(12)</sup>	Laura Dominici. MD, 2021,US	Multi centre, prospective cohort study	Local therapy in young breast cancer survivors is persistently associated with poorer scores in multiple QOL domains. Socioeconomic factors also play a role.
4 <sup>(13)</sup>	Seung Soo Lee, 2014, Korea	Case control study	
5 <sup>(14)</sup>	Edward Abel, 2019,Sweden	Longitudinal follow up	A reduction in pain and feeling ill and an improvement in global QOL compared with baseline values.
6 <sup>(15)</sup>	Anna Axelson, 2022,Sweden	Prospective cohort	60% reported low QOL more prevalent among patients with major bother due to bowel dysfunction.

## Results

- Overall, physical and mental score was decreased in cancer survivors in all selected studies.
- Most ALL survivors complained of headache.
- Local therapy given to CA breast patients had negatives impacts in all QoL domains.
- GPH and GMH score of patients treated 5 years back or more was better than those treated recently.
- Low socioeconomic status had an even worse effect on QoL. Patients who belonged to financially stable families had better GPH and GMH scores than those who were financially unstable.
- Most of the gastric cancer survivors suffered from adverse eating habits, nausea and vomiting after gastrectomy.
- Head and neck cancer survivors suffered from headache, dysphagia and dry mouth.
- Anal cancer survivors suffered from bowel and urinary dysfunction. Sexual life was also affected.
- Finances were impaired.

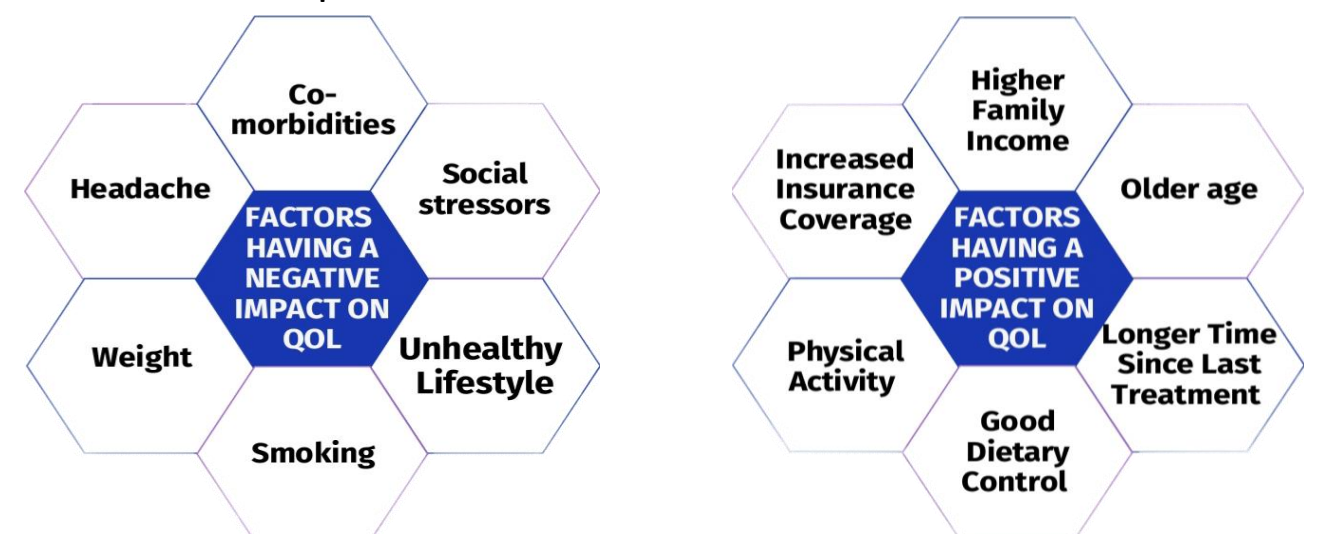


Figure 2. Factors affecting the QoL of cancer survivors

## Discussion

This systematic review explains the existing body of evidence in favor of our research hypothesis i.e. cancer survivors have a poorer health related quality of life as compared to the general population.

### Summary of key findings:

#### Effects of cancer:

- Physical: a wide variety. Headaches, dry mouth, nausea, joint pain, bowel dysfunction.
- Mental and emotional: anxiety and depression mostly due to memory of the cancer.
- Financial: financial strain due to expensive treatment, having to leave their jobs.

#### Effects of cancer treatment:

- Physical: side effects of treatment e.g. Dysphagia in patients undergoing radiotherapy for head and neck cancers.
- Mental: Fear of recurrence.
- Social: lower self esteem in mastectomy patients.
- Financial: regular follow ups.

#### Strengths:

- Studies with good sample size
- A range of age groups.
- Well tested QoL measures.
- Range of study designs.
- Variety of cancer types (makes generalization possible).

#### Limitations:

- Gender disparity among some studies.
- Cross sectional studies that provide evidence in a single timeframe.
- Only 2 databases were searched, and the screening process left behind only 6 articles.

## Conclusions

The Quality of Life of cancer survivors, though improving over time, is lower than that of the general population.

In all selected studies, patients had headache in common. One study showed worse prognosis in smokers as compared to non-smokers. Emotional, financial, psychological aspects and cognitive functioning scale were overall improved. Overall better quality of life is seen in emotional and cognitive perspectives.

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