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Original Research Article

A cross-sectional study to assess the "quality of life" among cancer patients in a tertiary care hospital in a metropolitan city

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ABSTRACT

Background: Cancer is a major cause of morbidity and mortality worldwide. Quality of life measures have now become a vital part of health outcome appraisal and an effective way of capturing the personal and social context of patients. The diagnosis of cancer brings many challenges, with a major concern being maintaining the highest quality of life possible during and after the experience. The objectives of the study were to assess the health-related quality of life among cancer patients and also to study the effects of type of cancer and treatment received after one month on their quality of life.
Methods: It was a descriptive, cross sectional and hospital-based study. Total duration of study was 6 months (August 2019-February2020), conducted in Oncology department of a Tertiary care hospital. A total of 90 cancer patients were selected as study subjects and interviewed by a validated SF-36 questionnaire.
Results: A total of 90 cancer patients were included in the study, of which 18 were males and 72 were females and majority were in the age range of 40-60 years. 75% of cancer patients were living a below average quality of life. The study population had different types of cancers. Among females 50% patients were suffering from CA Breast and remaining patients were suffering from different types of cancer.
Conclusions: Most of the patients who came to the oncology department of tertiary care hospital during our period of study had low quality of life.

Keywords: Quality of life, Cancer, SF-36

INTRODUCTION

Cancer is a major cause of morbidity and mortality and the second most common cause of death globally.[1-3] It is a group of diseases that occurs due to uncontrolled growth and proliferation of abnormal cells which can even lead to death if not controlled.[2,4] It also results in physical inadequacies and psychological problems with periods of remission and exacerbations.[5] Current dogma states that cancer is a multi-gene, multi-step disease which originates from a single abnormal cell (clonal origin) with an altered DNA sequence also known as mutation.[2]

Quality of life defined by WHO as "Individuals perceptions of their position in life in the context of the culture and value systems during which they live and in reference to their goals, expectations, standards and concerns". It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.

A person with cancer may experience severe effects on their physical, mental, and emotional well-being as well

as an increased chance of poorer quality of life for years after diagnosis (Harden et al).[5] Certain cancer therapies' physiological side effects, such as hair loss, erectile dysfunction, reduced fertility, and weight gain, can also contribute to stigma and prejudice and occasionally can be the reason a partner rejects a patient (Aubin et al).[4]

Males die from cancer at a higher rate than females do (207.9 per 100,000). (145.4 per 100,000). Lung, prostate, colorectal, stomach, and liver cancers account for a total of 4.3 million incidences of cancer among men worldwide. With a total of 3.7 million instances, breast cancer is the most frequent type of cancer in women, followed by colorectal, lung, cervical, and corpus uteri cancers.[1] With 1.01 million new cases of cancer each year, India has one of the highest rates of cancer in the world, country contributing to 7.8% of the global cancer burden.[1,5] Incidence of cancer in India varies from 44-122 per 100,000 populations in males and 52-128 per 100,000 populations in females and consistent with the International Agency for Research on Cancer GLOBOCAN project, it will nearly double in the next 20 years.[5]

Dehkordi et al concluded that cancer patients should be encouraged to finish a chemotherapy course because it plays a crucial role within the treatment outcome and therefore the QoL in cancer patients undergoing chemotherapy.[7] During a study done by Elsaie et al (2012) most function dimensions of QOL for colorectal cancer patient significantly decreased post the primary chemotherapeutic session and every one symptom dimensions except fatigue and overall symptoms are increased post the primary chemotherapeutic session.[8]

A study was done by Akca et al to guage the changes in quality of lifetime of the feminine patients who had undergone surgery for carcinoma. Female patients with breast-preserving surgery (BPS), modified mastectomy (MRM), mastectomy (SM) aged between 28-55 years were included within the study.[9] Hemavathy et al conducted a study to explore the standard of life among women with cervical cancer during which 280 samples were included consistent with her, QOL among cervical cancer patients is extremely important aspects in developing country like India and there's a requirement to assess the QOL and implement the relevant measures to cervical cancer survivors.[10]

Souza et al conducted a study to assess the QOL and performance status of head and neck cancer patients to seek out relation between domains of QOL and to seek out association between QOL and demographic and disease variables during which Karnofsky Performance Status (KPS) scale was wont to assess performance status.[11]

To assess the health-related quality of life in cancer patients and to study the effects of type of cancer and treatment (surgery and chemotherapy) received after one month on their quality of life.

To ascertain the socio demographic profile of cancer patients. To assess the health-related quality of life among cancer patients. To study the effects of type of cancer and treatment received after one month on their quality of life.

METHODS

A descriptive cross-sectional study was conducted in Surgical Oncology department of a tertiary care hospital during the period from August 2019 to February 2020. A total of 90 cancer patients were included in the study, of which 72 were females and 18 were males and majority were in the age range of 40-60 years All the follow-up cancer patients of age group18-70 years attending the surgical oncology OPD and the subjects who were diagnosed with any type of cancer of any site or stage with currently receiving treatment for cancer with a curative intent of any modality were also included in the study.

By complete enumeration method we collected data from all patients attending surgical oncology OPD which is working only once a week in our institution. Approximately 10-12 patients are attending, who have already received treatment (surgery and chemotherapy) to surgical oncology OPD in a week. So, in our study period of two months 90 patients were included in the study. Data was collected using pre designed semi-structured questionnaire about participants socio-demographic details, disease and treatment related details, occupational and family life characteristics together with SF-36 questionnaire.

Table 1: Sample size.

Weekly OPD	No. of patients
1st week	11
2nd week	12
3rd week	13
4th week	11
5th week	10
6th week	12
7th week	11
8th week	10
Total	90

Inclusion criteria

All the follow-up cancer patients of age group18-70 years attending the surgical oncology OPD will be included. Subjects who were diagnosed with any type of cancer of any site or stage with currently receiving treatment for cancer with a curative intent of any modality will be included in the study. Subjects willing and able to participate in the study.

Exclusion criteria

Pregnant women. Any mental disease and cognitive impairment. Pediatric age group.

Data collection tool

Semi-structured predesigned pretested questionnaire. It contains socio -demographic details, disease and treatment related details, occupational and family life characteristics. A standardized questionnaire, SF-36 v2, was used to measure QOL of cancer patients. The SF-36 is a standardized questionnaire with 36 questions and is one of the most widely used regarding health-related quality-of-life measures. The validity and reliability of SF-36 questionnaire was confirmed by several studies implemented previously in different populations at developed and developing countries, including patients with breast cancer.8-10 These are multidimensional measures of self-reported health status.

The SF-36 questionnaire measures physical and Mental Health status in relation to 8 health domains: physical functioning, Role Physical Functioning (role limitations due to physical health), Bodily Pain, General Health Perceptions, vitality (energy/fatigue), Social Functioning, Role Emotional Functioning (role limitations due to emotional health), and general Mental Health (psychological distress/well-being). Responses to each of the SF-36 items are scored and summed according to a standardized scoring protocol (Ware et al) (14) and expressed as a score on a 0 to 100 scale for each of the 8 health concepts. Higher scores represent better self-perceived health. Data was analyzed with the help of Microsoft excel and SPSS software version 22

RESULTS

The present study was based on the findings from 90 study subjects. All of the patients who attended the oncology OPD of a tertiary care hospital responded to the questionnaire. Most of the patients are in the age group 56-60 years (31%). More than half of the patients were females 72 (80%). About 57.7% of the study subjects were having high school education.

Table 2 represents the distribution of study subjects according to their age group. Maximum study subjects 28 (31.1%) belongs to 56-60 years of age followed by 23 (25.5%) in 51-55 years of age followed by 15 (16.6%) 46-50 years of age.

Among 90 participants majority of them are females ie, 72 (80%) and 18 (20%) were males.

Major findings of the socio-demographic details are given in Table 2. Out of 90 patients, 80% were females and 20% were males. Mean age of the patient was 55.3±5.3 years. 31.1% of the patients were in the range of 56-60 years with minimum age was 42 and maximum was 65. 78.8% of the patients were Hindu, 93.3% of the patients were married.

Table 2: Sociodemographic profile of study subjects (n=90).

Variables	Frequency (N)	Percentage (%)
Age in years		
41-45	10	11.11
46-50	15	16.66
51-55	23	25.55
56-60	28	31.11
>60	14	15.55
Total	90	100
Sex		
Male	18	20
Female	72	80
Type of family		
Nuclear	55	61.1
Joint	35	38.9
Educational status		
Primary school	4	4.4
Middle school	29	32.2
High school	52	57.7
Diploma	5	5.5
Occupation		
Semiprofessional	7	7.7
Skilled	21	23.3
Semiskilled	11	12.2
Unskilled	26	28.8
Unemployed	25	27.7

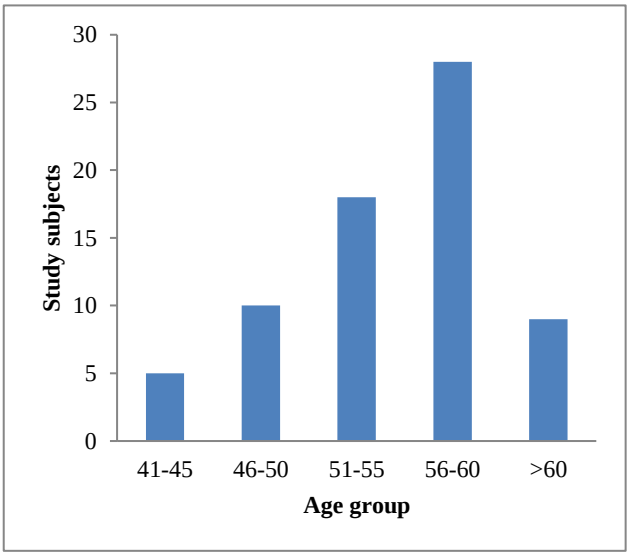

Figure 1: Age wise distribution of study subjects (n=90).

Most of the patients (40.7%) were belonging to class 4 socioeconomic status according to Kuppuswamy classification.

In our study 65% of females are having carcinoma breast followed by carcinoma colon, carcinoma esophagus and in males 42.8% are suffering from carcinoma colon followed by carcinoma rectum and carcinoma esophagus. Out of 90 patients, 51 (57.1%) were on chemotherapy and 39 are on post-surgery.

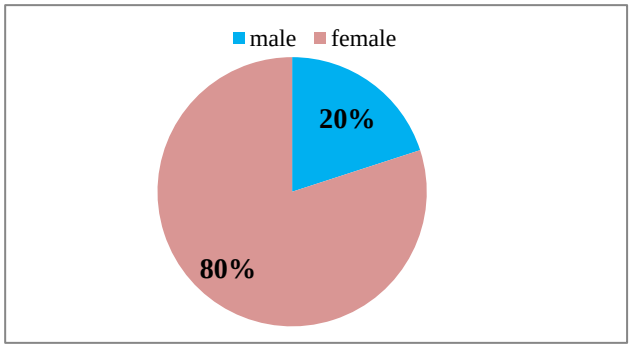

Figure 2: Gender wise distribution of study subjects (n=90).

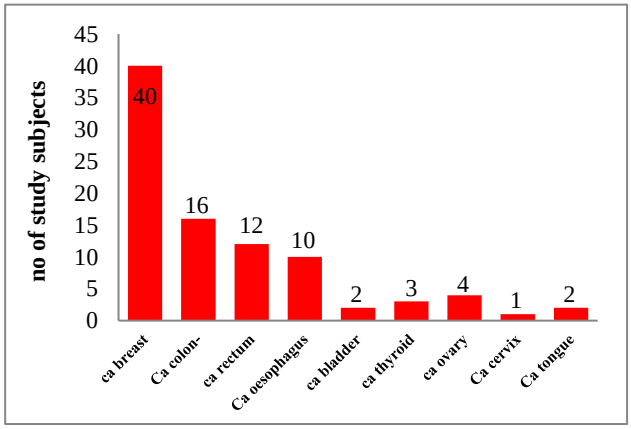

Figure 3: Distribution of study subjects according to different types of cancer.

Table 3: Distribution of study subjects according to SF-36 domains of cancer (n=90).

Domains of SF-36	Mean scores
Physical functioning	42.58±8.44
Physical health	55.00±19.70
Role limitation due to emotional problems	61.21±5.60
Emotional wellbeing (mental health)	40.26±11.79
Bodily pain	38.03±12.02
Vitality	48.41±10.04
General health	41.10±6.88
Social functioning	58.14±12.54

Physical functioning is affected most of the time for 54.28% of the participants.

A total of 60% of the study participants reported that their mental health was affected most of the time. Out of total, 70% of the study subjects were in the opinion that there physical role is affected most of the time. Pain was affecting most patients in our study, around 65% participants were affected. 42.14% of the participants commented that their general health is affected most of the time while it is all of the time for 34.28%.

In the present study, most of the patients were leading average and low quality of life. None of the patients were leading high quality of life.

In the present study from Table 3 mean scores of physical functioning domain observed was 42.58, mental health was 40.26, bodily pain was 38.03, vitality was 48.4 and general health 41.10 and these domains are showing poor health related quality of life.

Table 4: Distribution of physical and mental component summary according to according to SF-36 domains of study subjects (n=90).

Parameters	Physical component summary		Mental component summary	
	Mean±SD	P value	Mean±SD	P value
Sex				
Male	44.51±4.21	0.063	58.07±4.44	0.98
Female	46.45±5.49	0.085	57.73±4.43	0.97
Marital status				
Married	45.14±4.92		57.63±4.96	
Unmarried	46.09±3.03	*0.007	58.29±10.43	*0.021
Divorce	41.85±0.62		58.54±1.19	
Education				
Primary school	41.18±3.2		58.72±4.37	
Middle school	45.14±4.38		58.50±4.34	
High school	46.21±4.71	*0.045	57.35±4.39	0.07
Diploma	43.72±4.09		58.43±5.41	
Graduate	42.72±4.19		55.68±10.22	

Continued.

Parameters	Physical component summary		Mental component summary	
Socio economic status				
Upper	45.62±7.55	*0.002	54.27±6.67	*0.020
Upper middle	45.18±4.44		58.06±5.34	
Lower middle	48.92±2.83		58.35±2.78	
Upper lower	47.89±2.02		59.75±1.70	
Duration of cancer				
< 5 years	45.26±4.77	0.097	57.98±5.11	0.322
6-10 years	45.39±4.54		57.79±5.58	
>11 years	45.12±4.98		57.83±4.87	

From Table 4 it was observed that there is statistical significance between physical component domain of SF-36 (p=0.007), mental component domain (p=0.021) and marital status of the participants of SF-36. Also, observed that there is statistical significance between physical component domain of SF-36 (p=0.045).

There is statistical significance between physical component domain of SF-36 (p=0.045) with educational status. Also, it was observed that physical component domain of SF-36 (p=0.002) and mental component domain (p=0.020) of SF-36 with socio economic status is statistically significant.

DISCUSSION

The present study was a single centered, cross-sectional study conducted at the oncology OPD of a Tertiary care hospital in a Metropolitan city. A total of 90 study subjects were enrolled as per inclusion and exclusion criteria. The selection of study subjects was done as per steps mentioned in the methodology, in which all the cancer patients attending the oncology OPD were enrolled in the study.

Out of 90 patients, 72 (80%) were females and 18 (20%) were males. Mean age of the patient was 55.3±5.3 years. All patients are above 40 years of age with minimum age was 42 and maximum was 65. Most of the patients (40.7%) were belonging to class 4 socioeconomic status according to Kuppuswamy classification.

Dehkordi et al conducted a study on "Quality of Life in Cancer Patients undergoing Chemotherapy" in which the aim of the study was to assess the quality of life in cancer patients with solid tumours and at different chemotherapy (CT) cycle.[23] He concluded that cancer patients should be encouraged to complete a CT course as it plays an important role in the treatment outcome and the QoL in cancer patients undergoing CT. The result was similar to the study done by the same author in 2011.[15]

Kannan et al conducted a study on "Assessment of quality of life of cancer patients in a tertiary care hospital of South India" in which eleven types of cancer were identified. Study concluded that among the total samples, 80% of them has below average QOL, suggesting that an increasing importance should be given to the incorporation of Quality of Life as an outcome, in addition to other clinical endpoint.[13]

Tadele in which most prevalent types of cancer were breast cancer 29.4% and cervical cancer 26.3%.[17]

Sunderam et al conducted a study to assess the quality of life among cancer patients in relation to type of treatment (chemotherapy vs. radiotherapy) and to determine the quality of life in relation to number of chemotherapy cycle. 113 cancer patients (64 undergoing chemotherapy and 49 undergoing radiotherapy) were selected and interviewed by a validated questionnaire. Study concluded that cancer patients undergoing treatment had poor quality of life and among them patients undergoing chemotherapy had lower quality of life compared to patients undergoing radiotherapy. Treatment modalities due to their long-term side effects has impacts on QOL in patients.[1]

Sunanda et al stated in his study that the mean age of female and male cancer patients was 54±16 and 54±16 years respectively. The male to female ratio was found to be 1:6 and they were divided into six groups based on their age. The prevalence of cancer was found to be more in patients with age greater than 40 years (67%). Among 224 cancer patients, majority of them were females, as such 85 (37.9%) of them were diagnosed with breast cancer, followed by 40 (17.8%) patients with cervical cancer and 22 (9.8%) patients with ovarian cancer. Our results were in concordance with this study.[16]

CONCLUSION

According to this study, the majority of cancer patients have average or low quality of life (QOL) and encounter several symptoms that have an impact on it. It is necessary to create interventions for the efficient management of symptoms that will provide patients more control over their condition and treatment and enhance QOL. A crucial aspect of the treatment of cancer patients is the management of cancer pain. In our study, pain affected the majority of patients, which was also true of studies conducted by other researchers like Kannan, et al.

There is a need to develop interventions for effective management of symptoms that will empower the patients to have a greater sense of control over their illness and treatment and to improve QOL. Kannan G et al found in their study among cancer patients in a tertiary care hospital of South India that 84% of the total study population reported average and below average quality of life.

Recommendations

Strategies such as psychological screening and cancer support groups in the regular assessments can potentially help lessen emotional distress in cancer patients undergoing treatment. Educate patients and their families regarding the management of chemotherapy treatment, this minimizes frequent hospitalizations and helps in obtaining better health outcomes. Pain clinics are the need of the hour for cancer patients. This shows that these patients needed both pharmacological and non-pharmacological therapy for painful episodes as pain relief is the right of every cancer patient according to WHO.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Sunderam S, Jeseena KJ, Kashyap V, Singh SB, Kumar M. Study on quality of life of cancer patients in relation to treatment modality in a tertiary health institute of Jharkhand. IOSR Journal of Dental and Medical Sciences. 2016;15(5):16-20.
2. Mallath MK, Taylor DG, Badwe RA, Rath GA, Shanta V, Pramesh CS et al. The growing burden of cancer in India: epidemiology and social context. SERIES. 2014;1-8.
3. Anand P, Kunnumakara AB, Sundaram C, Harikumar KB, Tharakan ST, Lai OS, et al. Cancer is a preventable disease that requires major lifestyle changes. Pharmaceutical Research. 2008;25(9):2097-116.
4. Aubin S, Perez S. The Clinician's Toolbox: Assessing the Sexual Impacts of Cancer on Adolescents and Young Adults with Cancer (AYAC). Sex Med. 2015;3(3):198-212.
5. Harden J, Northouse L, Cimprich B, Pohl MJ, Liang J, Kershaw T. The influence of developmental life stage on quality of life in survivors of prostate cancer and their partners. J Cancer Surviv. 2008;2(2): 84-94.
6. Cella DF, Tross S. Psychological adjustment to survival from Hodgkin's Disease. J Consult Clin Psychol. 1986;54:616-22.
7. Haydarnejad MS, Hassanpur Dehkordi A, Solati Dehkordi K. Factors affecting quality of life in cancer patients undergoing chemotherapy. African Health Sciences. 2011;11(2):266-70.
8. Elsaie OA, Elazazy HM, Abdelhaie SA. The Effect of Chemotherapy on Quality of Life of Colorectal Cancer Patients before and 21 Days after the First Chemotherapeutic Sessions. Life Science Journal. 2012;9(4): 3504-14.
9. Akca M, Ata A, Nayır E, Erdoğdu S, Arıcan A. Impact of Surgery Type on Quality of Life in Breast Cancer Patients. J Breast Health. 2014;10:222-8.
10. Hemavathy V, Julius A. A study to assess the quality of life among women with cervical cancer in selected hospitals at Chennai. Int J Pharm Bio Sci 2016;7(4):722-4.
11. Prima Jenevive Jyothi D.Souza, Chakrabarty J, Sulochana B, Gonsalves J. Quality of Life of Head and Neck Cancer Patients Receiving Cancer Specific Treatments. Journal of Krishna Institute of Medical Sciences University. 2013;2(1):51-7.
12. Sunanda VN, Priyanka M, Architha J, Shravan MA. Rao S, Hadi MA. Quality of Life Assessment in Cancer Patients of Regional Centre of Hyderabad City. Journal of Applied Pharmaceutical Science. 2018;8(01):165-9.
13. Kannan G, Rani V, Madras R, Palani AT, Nigam N, Janardhan V, et al. Assessment of quality of life of cancer patients in a tertiary care hospital of South India. Journal of Cancer Research and Therapeutics. 2011;7(3).
14. John EW. SF-36 Health Survey: Manual and Interpretation Guide. Boston, MA: The Health Institute, New England Medical Center; 1993.
15. Dehkordi A, Heydarnejad MS, Fatehi D. Quality of Life in Cancer Patients undergoing Chemotherapy. Oman Med J. 2009;24(3):204-7.
16. Sunanda VN, Priyanka M, Architha J, Shravan M, Srinivasa Rao A, Hadi MA. Quality of Life Assessment in Cancer Patients of Regional Centre of Hyderabad City. J App Pharm Sci. 2018;8(01):165-9.
17. Tadele N. Evaluation of quality of life of adult cancer patients attending Tikur Anbessa specialized referral hospital, Addis Ababa Ethiopia. Ethiop J Health Sci. 2015;25(1):53-62.

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