

## A Review on Quality of Life and Related Comprehensive Management of Cancer Patients.

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Cancer, "Quality of life", "Health care services", Comprehensive management.

### Abstract

Cancer is one of very fatal condition that affects individuals all around the world. Cancer leads to various stressors and complications that affect cancer patient's life quality along with deteriorate lifestyle of them. There is a significant role of health care services in improving the life's quality among patients suffering from cancer. Thus, the objective regarding the review assesses the quality of life among the patients suffering from cancer and to find out the usefulness of comprehensive administrative to improve the life quality among the patients suffering from cancer. 24 research articles have included in this review as total. It is found that cancer deteriorates the quality of cancer patients and comprehensive management is very useful in enhancing the life's quality among the patients suffer from cancer. Early access to comprehensive management is not only enhancing the "quality of life" throughout various treatment but also beneficial for future as well. The comprehensive management can be helpful to reduce the amount of medication the cancer patient requires, which can bring down the chances of chemotherapy and radiation side effects and it also have the additional benefit of decreasing employment related absence and disabilities. Thus, various steps need to be taken by the government and health care agencies to provide adequate health facilities and care to cancer patients, so that their life's quality can be modified.

### 1. Introduction:

Patients that suffer from cancer in India projected around "679,421(94.1per 100,000)" for male and "712,758(103.6per 100,000)" among female reported in 2020. One female from around 29 females suffers from breast cancer, 1 male from 68 males suffer from lung cancer and overall single Indian among 9 Indians will advance cancer at their lifetime period.

Cancer is the one of the main health issues worldwide. Cancer is one of the reasons for the mortality worldwide along with various other serious complications among the public. According to WHO, 9.6m people died worldwide in 2018 due to cancer.<sup>2</sup>

Individuals affected with cancer, shows various signs and symptoms. Lack of adequate strategies for

management of these signs and symptoms can affect daily life activities of the cancer patients. The adequate and appropriate treatment modalities for cancer symptoms will help in relieving and reducing the sufferings of the cancer patients and also improve their quality of life (QOL).The continuously reducing QOL along with the progression of disease refer one of the most usual and concerning issue for patients suffering from cancer.

**"Quality of life" among patients suffering from cancer:** - "Quality-of-life" refer to as the sense for well-being related to the prospective of cancer or self-reported expressions of the cancer patients that are perceived by the patients as something that affects the various dimensions of life including social, financial, psychosocial, and physical life of cancer patients.

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QOL is a specific type of with the continuous improvement in healthcare system and continuous advancement in the medical facilities and advanced technologies, early detection and treatment is very much possible, because of that there is very much improvement in cancer patients for look forward to survival time. Because of that there shows increased interest for explore the “*quality of life*” related to health for the patients that suffer from cancer.<sup>3</sup>

A significant number of cancer rarely achieves remission with various treatment modalities including chemotherapy, surgery, or radiotherapy. In these cancer patients, the main aim of treatment therapy is to make improvement in their quality of life and to promote the functioning for daily life living activities among cancer patients. Health related QOL is a useful instrument to assess the functioning of cancer patients. Assessment of health related QOL is also very important and helpful to pass shared decisions between the cancer patient and the consultant regarding the treatment therapy.<sup>4</sup>

“*Complementary and alternative medicine*” or, “(CAM)” are getting integrated with treatment of cancer patients for better prognosis with minimal side effects. These therapies includes acupressure, mind body technique, massage therapy, meditation, relaxation therapy, music therapy etc. They reduce distress and anxiety. However patient and family member’s education, counselling and guidance in supportive management is essential. Its extent can be personal, family and social responsibilities management.<sup>5</sup>

## AIM:

This review highlights the status of “*quality of life*” among the patients suffer from cancer along with importance of comprehensive management in improving the wellbeing of cancer patients.

## 2. Method:

A comprehensive review of studies reporting about the status of “*quality of life*” among the patient suffer from cancer along with holistic approach apart from medical management in improving the wellbeing of cancer patients was performed. A total of 24 research article were extracted from various electronic database including; PubMed, Embase, Research-gate, Google Scholar. The review is based on publication from

2009 to 2020 that were retrieved by a selective search (cancer patients, factors that affect “*quality of life*”, type of intervention). 17 research articles show the variety of factors that affect “*quality of life*” for the patients suffering from cancer. Seven research articles are related to importance of comprehensive management in improving the wellbeing of cancer patients. The findings are as follows:

## Reviews on QOL between patients of cancer:

Anice George, Malathi G Nayak, (2017) et al. conducted an exploratory survey among patients suffering from cancer with 768 number selected by a technique of a convenient sampling. The study objective showed assess of “*QOL*” between the patients suffer from cancer. Burden of symptoms was interfered among 768 patients suffer from cancer, that is totally in their relationship with others among people with 445 number (57.9%), “*QOL among 433 patients*” (56.4%) and sleep among 491 patients (63.9%). The states of “*QOL*” were “*physical well-being, general well-being, psychological well-being, sexual and personal abilities, familial relationship, economic well-being, cognitive well-being, doctors’ cooperation, informational support, and body image*”. Significant correlation of a positive statistics among the states of general well being has been revealed by the data of the participants with “*physiological well-being being (r = 0.195, P = 0.001)*”, “*physical wellbeing (r = 0.265, P = 0.001)*”, “*body image (r = 0.168, P = 0.001)*”, and “*well-sexual and personal abilities (r = 0.278, P = 0.001)*”. This study gather the economic status of the patients suffer from cancer that shows the well-being of good cognitive for the patients with a positive sense of body image. The study concluded with patients suffer from cancer has poor “*QOL*” along with the domains of psychology. Many symptoms are shown among the patients of cancer that overblown the “*QOL*” of them. Developments of interventions are needed in terms of give empowerment to the patients for the greater sense to control their illness and to improve their “*QOL*” by implementing treatment.<sup>6</sup>

Qiao Zhang (2020) et al. conducted a systemic review to assess the effectiveness for the improvement of intense nursing care for various symptoms along with “*QOL*” inside liver cancer patients with intervention. Various databases were included to search the research articles including “*EMBASE*,

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*MEDLINE, Web of Science, the Cochrane central, Google scholar, and <http://www.ClinicalTrials.gov>”.*

Participants suffer from liver cancer with a number of 1205 had enrolled between 2010 and 2018 in the study while the participants with number 667 were assigned for care of intensive nursing. The findings of the study focuses the “QOL” that shows the prevention of the patients suffer from liver cancer along with the improvement of various symptoms by implementing intensive nursing care.<sup>7</sup>

**Saravana Kumar Ramasubbu (2020) et al.** did a cross-sectional study assessing the factors that affect the patients suffer from cancer along with measure the “QOL” for the treatment with chemotherapy. 120 patients had participated in the study that occurred among the patients suffer from cancer at the Oncology day care centre, department of radiotherapy & haematology, AIIMS, Rishikesh. The study findings revealed there was a very low QOL among the patients of cancer undergoing for the chemotherapy, thus the authors of the study suggested that the psycho-oncology should be an integral part of comprehensive cancer care to improve the QOL among cancer patients.<sup>8</sup>

**Horng-Shiuann Wu (2019) et al.** conducted a study to assess the co-morbidities, risk factors related to co-morbidities, and the association between co-morbidities with symptoms and QOL in patients that suffer from breast cancer. In order to complete the study 101 patients had participated. Collection of data conducted using psychometrically sound instruments. The study findings revealed that co-morbidities exert negative effects on the symptoms and QOL among cancer patients. Weight and smoking status are strong determinants of breast cancer comorbidities.<sup>9</sup>

**Jung Lim Lee and Younhee Jeong (2019)** conducted a study that showed the relationship about distress, resilience, social support and systems that identify predictors of “QOL” among the patient suffering from lung cancer. 212 adult patients in department of OPD at a hospital that was tertiary had located in Seoul, capital of Korea were included in the study. Questionnaires that were Self-reported along with records of clinic had utilized for the collection of data. Distress, social support, resilience, along with symptom burden refers to the “QOL” predictors in a non-small cell lung cancer population has been suggested in this study. Thus these predictors affect

each other directly or indirectly and also affect the QOL of the cancer patients. Moreover a development of a programme related to intervention and strategies that increase the social support along with increase resilience reduces the burden of symptom along with the distress are important for the improvement of “QOL” of non-small cell “cancer of lung” population patients.<sup>10</sup>

**Ping Li (2018) et al.** did a meta-analysis to determine the effectiveness of the preventions through nursing that increased the level of hope for the patients suffer from cancer. 9 randomized controlled trials were extracted from various electronic databases. Findings of the study gave away the positive nursing effect of interventions for hope in cancer patients.<sup>11</sup>

**Mateusz Kolator (2018) et al.** did a review on to assess the QOL in laryngeal cancer patients and concluded that development of specific kinds of scale is needed for the string for various cancer types so that the QOL among cancer patients can be assessed accordingly and appropriate steps can be taken.<sup>12</sup>

**Xiuju Cheng (2018) et al.** performed a systemic literature review in order to compare the “*quality of life*” among the patients suffer from cancer with nurse-led along with non-nurse-led interventions using a meta-analysis. Various databases were used to search the nurse-led interventions randomized controlled trials. 7 literatures and of 1110 patients were totally utilized to perform the review (556 in the “*control group*” along with 554 in the “*nurse-led group*”). The findings showed nurse-led interventions were more effective to improve the QOL among cancer patients.<sup>13</sup>

**Michelle Darezzo Rodrigues Nunes (2017) et al.** conducted a cross-sectional study that assesses the dimensions of various fatigue, health related QOL and the association between healths related QOL and fatigue among the children that are hospitalized along with adolescent patients suffer from cancer in the country, Brazil. A whole of 38 samples participated to perform the study. Findings related to the study indicated that adolescent cancer patients along with the children suffered fatigue problems that had associated with low health related QOL.<sup>14</sup>

**Camilla Zimmermann (2016) et al.** performed a clustered trial that was controlled randomly in order to

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assess the perceptions regarding palliative care among advanced cancer patients and their caregivers. 48 participants (26 in experimental group, 22 in control group) and 23 caregivers (14 in experimental group, 9 in control group) completed interviews. The study findings revealed about the strong misconceptions about the palliative care among the patients and their care givers. Thus appropriate measures need to be taken to educate the public, patients and health care members, so that stigma can be reduced.<sup>15</sup>

**I C van der Meulen (2014) et al.** did a study to determine the effectiveness of the counselling of nurse and later invention, or, “(NUCAI)” about HRQOL and symptoms related to depression in “(HNC)” or, “Head” and “Neck cancer” patients after the treatment of cancer between 12 months and 24 months. 205 patients were assigned to “NUCAI” “(N=103)” and “usual care” “(N=102)” randomly. The study findings revealed that the NUCAI has significantly improved several domains of HRQOL and symptoms of depression in HNC patients.<sup>16</sup>

**Marie Bakitas (2009) et al.** performed a trial randomly in order to assess the efficacy of nurses led intervention on QOL, intensity of the symptoms, mood, and resource use in advanced care cancer patients. 322 advanced level patients with cancer were utilized to perform the study between the times November 2003 - May 2008. A multi component, psycho educational nurses led intervention conducted by advanced practice nurses consisting of 4 weekly educational sessions and monthly follow-up sessions until death or study completion (n = 161) vs usual care (n = 161) were used for the study. The study findings revealed that the Nurse led intervention was more effective in improving the quality of life of cancer patients but doesn't have any effect on symptom intensity and hospital stay.<sup>17</sup>

**Anissa Mohammed Hassen et al.** conducted a study that was cross sectional for the evaluation of QOL and related factors between the patients suffer from breast cancer under the chemotherapy specialized hospital at “Tikur Anbessa”, “Addis Ababa”, “Ethiopia”. About 404 patients suffer from cancer in breast that undergone at least a single chemotherapy cycle for the study, who undergone at least one cycle of chemotherapy treatment. Face to face interview technique was used to collect the data at oncology unit of Tikur Anbessa specialized hospital day care centre.

The study findings revealed a poor “QOL” between the patients suffering from cancer in breast undergoing the treatment of chemotherapy. Thus, QOL assessments need to be associated with patient's treatment protocol.<sup>18</sup>

**Birsen Yucel, Ebru Atasever Akkas et al** conducted a longitudinal study to determine for changes in QOL and to evaluate the factors that affect the QOL among cancer patients who undergo radiotherapy at radiation oncology department of Cumhuriyet University School of Medicine. The study was conducted between January 2010 and June 2012. The study revealed a negative effect of radiotherapy on cancer patients' QOL, but it was also found that there was a significant restoration of QOL by 1-month post-treatment.<sup>19</sup>

**Kimman ML, Jan S, Peters SA et al** conducted a longitudinal study to assess HRQOL and the prevalence of psychological distress amongst cancer survivors in eight LMICs in Southeast Asia and also to identify the risk factors of these outcomes. 5249 first time cancer survivors followed up at 1 year after diagnosis for the study. This study recommends there a need for supportive interventions for the cancer patients that can address wider aspects of patient wellbeing, as well as certain policies that can address financial and other barriers to timely treatment.<sup>20</sup>

**Chiung-Yu Huang, Su-Er Guo et al** has conducted a Descriptive, co relational and predictive survey with 150 patients aged 18-65 diagnosed with breast cancer. The study was conducted to assess the effects of learned resourcefulness on the QOL and symptoms of depression. The study was conducted in the year 2010. Face-to-face 30 minutes interviews were conducted to collect the data in breast cancer outpatient departments of two teaching hospitals of southern Taiwan. Results showed that about 35% of the participants had symptoms related to depression. The study recommends that learned resourcefulness can be an effective tool of helping patients to improve their self-control behaviours and change their negative thoughts.<sup>21</sup>

**G. Damodar, S. Gopinath et al** conducted a prospective observational study to assess the reasons for low quality of life among cancer patients of MGM hospital, Warangal in the year 2004. The results of the study indicated that disease burden may affect the

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QOL among the cancer patients. The gender distribution of the study population revealed that females were mostly affected by cancer. The study shows that concern for improving the quality of patients' lives has in many contexts become as important as regard for extending QOL.<sup>22</sup>

## Reviews on importance of comprehensive management in improving the wellbeing of cancer patients:

**C Vasantha Kalyani, Suresh K Sharma (2018) et al** conducted a study of triangulation. The researcher examined about 30 young patients that were adult and were suffering from cancer at the age group of 20 years to 44 years that were admitted in various units of oncology of the hospital in the year 2018. Collections of data using the tools were the treatment for "*cancer quality of life questionnaire*" ("*version 3-Hindi*") and "*European organization for research*". Data were collected Utilizing the qualitative method that use questionnaire regarding the patients with cancer that were adult and enhanced the experience of patients, difficulties faced, feelings during diagnosis of cancer along with treatment. Global status of health among the young adult patients with cancer showed average score. Functions of their physical and social score were represented effect of both notably, since the functions of cognitive functions that were not affected. Their physical function as well as social function score depicted that both were affected much. Symptoms that frequently faced by the cancer patients that were young and adult and were in insomnia, fatigue, pain, nausea, vomiting along with appetite loss. Burden of finance faced by the caregiver along with the patients during the cancer treatment and diagnosis of cancer played a major issue. This study finished with the adult cancer patient's "*quality of life*" that had affected roughly in terms of social, physical, symptomatically, and financially. In order to improve "quality of life" among the patients this plan may help the patients along with the health professionals.<sup>23</sup>

**Zakia Rahman, Uma Singh et al.** conducted this study in order to assess the "*QoL*" "*quality of life*" among the women that suffer from cancer in cervix after or before the treatment for analyzing the different factors that affect the "*QOL*" along with

estimate the treatment impact and modalities on "*QOL*". Questionnaire of "*QOL*" had utilized in the study, the "*European Organization for Research and Treatment of Cancer*" "*QLQ30*", along with the module of cervical cancer "*(Cx24A)*" for the analysis a whole of ninety patients were included, among them 5 were lost to investigate. A significant improvement in statistics had found emotional, physical, fatigue, symptoms of vagina of the participants. Moreover in terms of cognitive, body image, social, sexual activity, functioning role or sexual enjoyment there found nothing significant improvement. Analysis of multivariate found a higher education level along with the batter "*QOL*" among the women that are young. Emotional functioning "*(p=0.001)*" along with the physical "*(p=0.04)*" of the participant improved by treatment. Women had better "*QOL*" who had better education along with belonging into the early stage of disease.<sup>24</sup>

**Yojana Sharma, Girish Mishra et al** conducted a prospective longitudinal study to in order to assess life's quality of patients with neck cancer, head cancer and different factors that affect the "*quality of life*" 130 patients with the size of sample along with the time period of one and half year of "*QOL*" ha assessed for the pre- treatment along with various stages of 4 times in order to follow the period. Data related to demographic was also taken for the comparison that showed the rate of neck and head cancer in male is common with percentage of 80 among the 35 to 50 year of age group. Demographic also showed the chronic 45% tobacco chewers with common cancer in the cavity of oral and the percentage with 61. Patients mostly presented at stage 4 of their cancer with 35% have higher "*QOL*" and has seen changes after the treatment of first 3 months. "*CTRT*" along with surgery experienced debilitating the most. Different factors regarding the detailed assessment hamper the "*QOL*" for the in terms of cancer in head and neck for the patients and thus should done by providing quality care along with a totally new experience for the health care and improving the satisfaction of the patients.<sup>25</sup>

**Nitin Gangane, Pravin Khairkar et al** conducted a study in order to assess factors related to clinical and socio-demographic that play vital role in the relation of "*QOL*" with the self-efficiency in rural India among the women suffer from breast cancer. The study included a total of 208 female patients with

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infiltrating breast cancer. There were sections on the questionnaire for sociodemographic information, the clinical stage of the cancer, and the patient's delay in seeking medical attention. In order to measure the self-effectiveness a instrument was applied to standardize. The instrument of “*WHOQOL – BREF*” was utilized to assess “*QOL*.” Lower education was connected negatively with the environmental domain of “*QOL*”. The psychological health and aspects of social relationships were negatively correlated with being divorced, widowed, or single, whereas the psychological health, social relationships, and environmental factors were positively correlated with higher income. The effectiveness of all four domains of “*QOL*” were positively associated. This study focused on the moderate “*QOL*” for the effected women in rural areas of India with breast cancer. Lack of education among the young people were negatively related with the “*QOL*” and the employment as the workers in industries or as casual, have a higher income e monthly for the family were positively associated qith the effectiveness of “*QOL*”. Health initiative related to the public health is required that include financial, along with environmental support that may provide quality “*QOL*” for the patients suffer from breast cancer.<sup>26</sup>

**Toshitaka Morishima, Isao Miyashiro (2017) et al** conducted randomized controlled trials in 2017 to assess the laughter therapy effects that is related to health and “*QOL*” or, “Quality of life” for the patients suffer from cancer where the participants were aged between 40 years and 60 years. Cancer assigned randomly for the control group that is no-laughter therapy along with group of intervention that is laughter therapy. A laughter routine of yoga involved in each session that was followed by performance of verbal traditional Japanese comedy of Manzai along with Rakugo. At the week between 3 and 7 along with the baseline with 0-week completed questionnaires. In order to compare measurement of changes that are dependent on time in every ‘*QOL*’ between the group of control along with the intervention from baseline. Totally 56 participants were taken and from them 30 included in the group of control and 36 included in the group of interventions. Models of mixed effect showed a better function of cognitive and fewer pain compared to the group of control in a short time. Laughter therapy may represent a beneficial, non-

invasive complementary intervention in the clinical setting. Further studies are needed to verify the hypotheses generated from this exploratory study.<sup>27</sup>

**Karen M Mustian, Catherine M Alfano et al** conducted an investigation to compare and establish the “*WES*” or, sizes of wight effects of the recommended 4 most common treatments for exercise of CRF, combined exercise, psychological, along with psychological, and pharmaceutical for identifying variables that are independent and also related to the efficacy of the treatment. Clinical trials among adults were randomly selected. Criteria of inclusion for CRF for the outcome of the severity and the exercise testing, psychological, exercise plus psychological or interventions of pharmaceutical. 12 rates along with 3 groups were reviewed independently utilizing a process of blind and systematic for the disagreement of reconciling. Results suggested that CRF treatment effectiveness was associated with cancer stage, baseline treatment status, experimental treatment format, experimental treatment delivery mode, psychological mode, type of control condition, use of intention-to-treat analysis, and fatigue measures (*WES* range, -0.91 to 0.99). Results also suggested that the effectiveness of behavioural interventions, specifically exercise and psychological interventions, is not attributable to time, attention, and education, and specific intervention modes may be more effective for treating CRF at different points in the cancer treatment trajectory (*WES* range, 0.09-0.22). The study concluded that exercise and psychological interventions are effective for reducing CRF during and after cancer treatment, and they are significantly better than the available pharmaceutical options. Clinicians should prescribe exercise or psychological interventions as first-line treatments for CRF.<sup>28</sup>

**Sally Bennett, Amanda Pigott et al** had done meta-analysis in order to determine the interventions that are related to the effectiveness of the education to manage the fatigue among adults that was cancer based. The study included randomised controlled trials (RCTs) of educational interventions focused on cancer-related fatigue where fatigue was a primary outcome. The main outcome considered in this review was cancer-related fatigue. Evidence using GRADE had assessed by them along with creating a tab le containing “*Summary of Findings*”. They included

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14 RCTs with 2213 participants across different cancer diagnoses. Four studies used only 'information-giving' educational strategies, whereas the remainder used mainly information-giving strategies coupled with some problem-solving, reinforcement, or support techniques. The study concluded that educational interventions may have a small effect on reducing fatigue intensity, fatigue's interference with daily life, and general fatigue, and could have a moderate effect on reducing fatigue distress. Educational interventions focused on fatigue may also help reduce anxiety and improve global quality of life, but it is unclear what effect they might have on capacity for activities of daily living or depressive symptoms.<sup>29</sup>

### 3. Conclusion:

Cancer is a main health problem affecting individuals worldwide. Due to effects of various signs and symptoms of cancer and side-effects of various treatment modalities of cancer like chemotherapy, etc., the quality of life among cancer patients is very low due to side-effects and various psychological effects, thus there is a strong need for various strategies to be implemented to improve the quality of life among the cancer patients.

### 4. Discussion:

Cancer is a very fatal condition worldwide with very low prognosis. Chemotherapy drugs and other treatment modalities of cancer leads an individual to get immune-depressed which can further lead to various opportunistic infections and other comorbidities. Cancer is one of the conditions where end of life care is required. It can lead to various psychological problems along with physical illnesses, as it is very difficult for an individual to accept the condition initially, denial can be observed. Due to all these comorbidities and cancer, individuals' life gets affected, some individuals would not be able to cope up with the condition. As cancer deteriorates the health condition of the individual by affecting various body organs. It affects the quality of life of the individual, making it difficult for the patient to cope up. It leads to burden and various psychological factors on the patient as well as on the family. Thus, various steps need to be taken by the health care system, family and governmental agencies to improve the quality of the cancer patients and there should be promotion of

various health care services and interventions to promote the QOL among cancer patients.

It is found that the health care workers need to inquire about the use of CAM in their patients routinely in a sensitive and non-judgmental way, and may need to advise patients to stop certain therapies. Yet in advanced cancer, a sensible balance needs to be struck between fear about adverse effects and interactions and the importance of making the remaining weeks/days/months as comfortable and enjoyable as possible.<sup>30</sup>

At the same time individual, family and overall public awareness about palliative care in terms with importance and clarifying misconception to prevent associated stigma is the need of the time.

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