



Systematic Review

A Systematic Review of Supportive Therapy Effect on Quality of Life in Cancer Patients**Suharyono Suhayono¹, Suhendra Agung Wibowo¹, Ira Purnamasari¹, Tintin Sukartini¹ and La Rahmat Wabula²**¹ Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia² Nursing Study Programme STIKes Maluku Husada, Indonesia**ABSTRACT**

Introduction: Supportive therapy is considered an important element in the treatment of cancer patients which is often associated with efforts to overcome life-threatening problems. However, the application of this intervention in clinical practice has not yet been fully carried out. This systematic review summarizes the evidence regarding the effect of supportive therapy in improving the quality of life (QoL) of cancer patients.

Methods: The review was performed according to PRISMA guidelines. We searched four electronic databases to identify studies comparing patients who received specific protocol interventions with the control group. The keywords used are "Supportive Therapy" AND "Palliative Supportive Care" AND "Quality of Life" OR "Health Quality" OR "Health-Related Quality of Life". The articles taken were published between 2016 and 2020. Then 117,011 articles were obtained, consisting of 2,554 articles from PubMed, 570 articles from Scopus, 25,748 articles from ScienceDirect, and 88,139 from ProQuest. Fifteen studies were included with title and abstract inclusion criteria following the desired topic. Methodological quality was assessed using the Downs and Black tool. Supportive therapy includes pain management, nutrition, elimination, blood index, and self-efficacy toward improving the quality of life of cancer patients, including symptom management counseling, complementary and Integrative Medicine (CIM), disease preferences, prognostic perceptions, health status, emotional support, social needs and spiritual, and can be seen from the difference in the ability of cancer patients in the intervention and control groups.

Results: In the study, the average quality of life assessment was carried out at 12 weeks and six months after the intervention. Seven of the 15 studies used QLQ-C30 to measure the quality of life of patients with cancer, which was managed to validate and assess the quality of life in patients with cancer, whereas of the 15 studies evaluating results reported, patients reported differences in favor of the intervention group.

Conclusion: The overall methodology quality is good. Several comparative studies have evaluated the impact of supportive therapy on the quality of life of cancer patients. The quality of this study is good and the results are acceptable in improving the quality of life of cancer patients undergoing chemotherapy treatment, and palliative care.

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CONTACT

Suharyono Suharyono

✉ suharyono-2019@fkip.unair.ac.id

✉ Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

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INTRODUCTION

As a chronic disease, cancer is a disease that affects all members of the body. Cancer does not only attack the main cancer cells, it will metastasize to other organs and tissues, resulting in malfunction of all organs. The impact on cancer depends on the cancer status itself. Because until now no drug can cure cancer, one of the final effects of cancer is death. Postoperative pain and discomfort, infection, and side-effects of postoperative adjuvant treatments contribute to eating difficulties and loss of appetite, which affects nutrition and quality of life (Chasen & Bhargava 2016). Patients with advanced cancer have high rates of psychological distress, including depression, anxiety, and spiritual despair (Breitbart et al., 2018). Quality of life in cancer patients is influenced not only by conduit disorders, but also by disruptions in sleep and changes in daily living which impact the survival rate (Chang et al., 2016).

Based on the results of research conducted by WHO and the World Bank, it is estimated that 12 million people in the world have cancer each year. This number continues to increase every year and it is estimated that cancer patients will reach 26 million people in 2030. The incidence of cancer throughout the world varies according to race and status of the country; cancer is more common in countries with low to medium economic levels, which is around 70% of all cancer incidents in the world. Incidence data, available through 2015, were collected by the Surveillance, Epidemiology, and End Results Program; the National Program of Cancer Registries; and the North American Association of Central Cancer Registries. Mortality data were collected by the National Center for Health Statistics. In 2019, 1,762,450 new cancer cases and 606,880 cancer deaths are projected to occur in the United States. A

rapid increase in cancer incidence occurs in poor and developing countries (Siegel & Miller, 2016).

The supportive therapy is a proper management of cancer patients receiving treatments and is based on many factors, including an adequate collection of the information about symptoms and side effects. Supportive therapies can significantly affect the Quality of Life (QoL) of patients, and a proper description of subjective symptoms is crucial (Siegel & Miller, 2016). Integrating methods in oncological care has resulted in positive effects on patient-reported outcomes (PROs), and is supported by international clinical guidelines. Meta-analyses indicate that, for instance, acupuncture and acupressure reduce nausea and pain, and aromatherapy has the potential to alleviate sleep and anxiety disorders. There is also recognized evidence that mind-body methods like yoga and meditation increase patients' QOL, and reduce fatigue and distress. There is benefit from a supportive care intervention, such as complementary Nursing in Oncology) (Chang et al., 2020).

The primary focus of cancer treatment has always been to increase overall and disease-free survival; however, Quality of Life has been increasingly recognized as an important endpoint. Although there is an instinctive understanding of the term "quality of life", there are multiple definitions, which gives testimony to the fact that it is a complex concept with many diverse facets and components. The standard dimensions used in QoL questionnaires measure the presence or absence of specific symptoms or overall general health. Various questionnaires and methodologies have been devised to understand patient preferences and priorities toward cancer treatment. In standard risk, patients are asked to choose between staying in a state of ill health for a specified period or choosing a treatment that may either cause their death or restore perfect health.

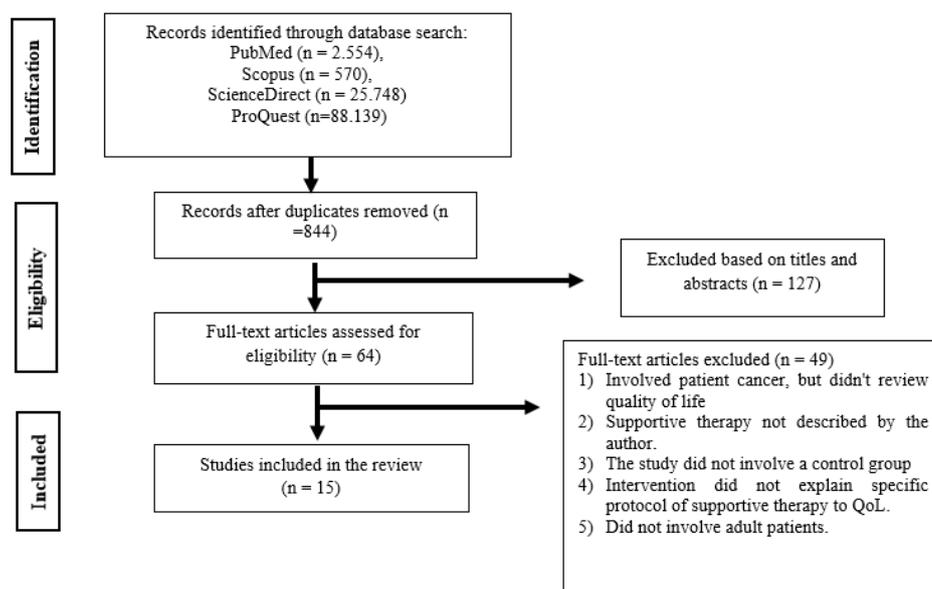


Figure 1. PRISMA flowchart showing included and excluded articles.

There may be a significant drop in QoL after an intervention, but an overall better long-term QoL and increased life expectancy. This systematic review aims to summarize the evidence regarding the effects of supportive therapy in improving the quality of life of cancer patients (Shrestha et al., 2020).

MATERIALS AND METHODS

Search strategy

This systematic review includes original journals that discuss the effect of supportive therapy on the quality of life of patients suffering from advanced cancer that requires palliative care and was conducted according to the PRISMA statement guidelines. A systematic literature search was carried out in several major databases such as PubMed, Scopus, ScienceDirect, and ProQuest, by entering keywords supportive therapy, quality of life, and cancer patients. There are no other restrictions that are used to maximize the literature search. A list of literature references is done manually. Search results: Full-text articles database assessed for eligibility are PubMed eight journals, Scopus 24 journals, ScienceDirect 18 journals, and ProQuest as many as 14 journals. The search was conducted to answer the research question of to what extent supportive therapy impacts quality of life on patient cancer outcomes in comparison to standard care.

Inclusion and exclusion criteria

Inclusion and exclusion criteria. Studies were included in the review if they met the following criteria: (1) involved adult patients having cancer in all stadium with palliative care; (2) a specific protocol for supportive therapy in-hospital was used as an intervention; (3) a control group receiving structured protocol given standard care already in place at the hospital that was used as a comparator; (4) discuss the quality of life; (5) were published in English; (6) the studies used the Randomized Controlled Trial (RCT) method on the effect of supportive therapy on the quality of life of cancer patients with a limitation of the years used for the past five years (2016-2020); and (7) RCT design studies must meet the PICO criteria among the population used, which are patients cancer who are currently undergoing palliative care. Studies were excluded if (1) they involved patients cancer but didn't review quality of life; (2) supportive therapy was not described by the author; (3) the study did not involve a control group, because we felt that we would not be able to separate the effects of supportive therapy versus standard care in hospital; (4) did not involve adult patients; (5) intervention did not explain specific protocol of supportive therapy to QoL.

Outcome measures

Outcome measures of interest in this review included psychological management, nutritional needs, pain management, infection control and treatment of side effects. Comparison in research consists of at least

two groups, namely the intervention group and the control group. The outcome produced is a measurement of the QoL of patients with cancer. Measures of health status were collected directly from patients through questionnaires on quality of life.

Study selection and data extraction

The research screened through the titles and abstracts of the articles yielded by the search strategy. Irrelevant articles were excluded while remaining full-text articles were then screened independently against the selection criteria inclusion and exclusion. Discrepancies were resolved by dealing within the research group. Data were then extracted independently from the articles chosen by research into a standardized data collection form. In addition to the outcome measures of interest, the researcher made a summary of the characteristics of included studies information about the type of cancer, measuring instrument, total number of patients, study design, and follow-up.

Quality assessment

The methodologic quality of each study was evaluated by investigators using the Downs and Black tool. This tool was chosen because it appraises the quality of both randomized controlled trials (RCTs) and nonrandomized comparative studies and has been shown to have good internal consistency, test-retest reliability, inter-rater reliability, and criterion-related validity. The Downs and Black tool consists of 27 items divided into five subscales: reporting (10 items), external validity (three items), internal validity-bias (seven items), confounding (six items), and power (one item). The tool generates an overall score with a maximum of 27 points (for testing results, the last item was scored 0 or 1). Disagreements regarding the quality assessment were resolved by the research group (Downs & Black, 2016).

RESULTS

Literature search

The literature search yielded a total of 844 citations after the removal of duplicates. Of these citations, 64 full-text articles were screened and 49 were excluded (Fig). The main reasons for exclusion were intervention in the article was an editorial or review, the study did not involve a control group, supportive therapy not described by the author, the study did not involve a control group, and intervention did not explain specific protocol of supportive therapy to quality of life. Fifteen full-text articles met our selection criteria and were included in the review.

Characteristics of the included studies

Fifteen studies involved cancer patients with different types of including advanced cancer, colorectal cancer, esophageal cancer, solid tumor cancer, ovarium cancer, breast cancer, and lung

Table I. Summary of characteristics of included studies

Reference	Type of cancer	Measuring instrument	Total of patients	Study design	Follow-up	Results
(Klafke et al., 2019)	Breast or gynecologic cancer	EORTC-QLQ-C30	126	RCT	6 months	Significant group effect of 6.643 (1.65 - 11.64) ($p = 0.010$), indicating a difference between the two groups IG and CG in favor of the IG, was found in the secondary analysis for the global QoL
(Temel et al., 2017)	Lung cancer	(FACT-G)-(PHQ-9)	125	RCT	12 weeks	Intervention patients (usual care) reported greater improvement in QoL from baseline to week 24 (1.59-23.40; $P5 .010$), but not week 12 (0.39-21.13; $P=0.339$).
(Chang et al., 2020)	Esophagectomy cancer	EORTC QLQ-C30	80	RCT	1, 3 and 6 months	The intervention group experienced significant improvements in nutrition, exercise capacity, and variables related to quality of life. The intervention group compared to controls (CI 0.09, 0.54, $p < .01$)
(Vanbutsel et al., 2020)	Advanced cancer	EORTC QLQ-C30	185	RCT	6 weeks and 12 weeks	Patients in the intervention group scored significantly higher on global health status/QoL of the EORTC QLQ C30, at 6 months (difference: 5.9 [0.06; 11.1], $p = 0.03$), 3 (difference: 6.8 [1.0; 12.6], $p = 0.02$), and 1 month (difference: 7.6 [0.7; 14.5], $p = 0.03$).
(Pace et al., 2019)	Solid tumor cancer	HRQOL	80	RCT	9 weeks and 13 weeks	The addition of CBCT to supportive oncology care programs to improve HRQOL in both members of the survivor-caregiver dyad
(Y. Zhou et al., 2017)	Ovarian Cancer	HRQOL	144	RCT	25 weeks	There was a statistically significant improvement in the fatigue score (Functional Assessment of Cancer Therapy-Fatigue) for exercisers (4.0, $SD = 1.1$, 95% $CI = 1.8$ to 6.2, $p < .001$).
(Breitbart et al., 2018)	Advanced cancer	MQOL	346	RCT	Before intervention 4 weeks, 8 weeks after treatment 16 weeks	The effect of IMCP was significantly greater than the effect of SP for quality of life and sense of meaning ($d = 0.19$), but not for the remaining study variables.
(Uster et al., 2017)	Gastrointestinal metastatic lung cancer	EORTC-QLQ-C30	58	RCT	3 and 6 months	Show good adherence to a combined nutrition and exercise program. The multimodal intervention did not improve overall QoL.
(Malmström et al., 2016)	Oesophageal cancer	QLQ-C30	120	RCT	2 weeks, 2, 4 and 6 months after discharge	Proactive nurse-led telephone follow-up has a significant positive impact on the patients' experience of received information
(Schuit et al., 2019)	Lung, breast, and colorectal cancer	EORTC QLQ-C15-PAL	136	RCT	3 months	The intervention group has the knowledge, skills and confidence of patients to manage their own health and health services after being given access to Oncokompas
(Jefford et al., 2016)	Colorectal cancer	QOL-C30 and QLQ-CR29	221	RCT	8 weeks and 6 months	Patients in the SC group were more satisfied with survivorship care than those in the UC group (significant differences in 10 of 15 items).

Reference	Type of cancer	Measuring instrument	Total of patients	Study design	Follow-up	Results
(Qiu et al., 2020)	Esophageal cancer	QLQ-C30	96	RCT	6 weeks	There were significant differences in the changes of serum albumin and total protein between the two groups throughout the trial ($p < 0.05$). Complications (radioactive esophagitis, skin symptom of complications) and quality of life were statistically different before and after the intervention ($p < 0.05$)
(Gok Metin, Karadas, Izgu, Ozdemir, & Demirci, 2019)	Breast cancer	QOL	29	RCT	12 weeks	A significant reduction in the BFI scores was reported in the PMR and MM groups when compared with the CG at weeks 12 and 14 ($p=0.002$).
(K. Zhou et al., 2016)	Breast cancer	HRQoL	90	RCT	12 months	This trial provides important evidence on the effectiveness of multimodal nursing interventions delivered by nurses in clinical settings. Study findings inform strategies for scaling up comprehensive standard intervention programs on health management in the population of female patients with breast cancer.
(Duluklu & Çelik, 2019)	Colorectal cancer patients with permanent colostomy	SQOLS	30	RCT	1 month	As compared with the control group patients, the experimental group patients who used lavender essential oil in the ostomy bag experienced statistically significant less odor, a higher quality of life, and better adjustment to ostomy (all $p < 0.05$)

*IG: intervention group, RCT: Randomized Controlled Trial, QoL: Quality of Life, CBCT: Cognitively Based Compassion Training, IMCP: SP: Supportive Psychotherapy, UC: usual Care, Individual Meaning-Centered Psychotherapy, BFI: Brief Fatigue Inventory, PMR: Progressive Muscle Relaxation, MM: Mindfulness Meditation, CG: Control Group.

Table 2. Quality assessment scores of included studies, using Downs and Black Checklist

Reference	Reporting (10)	External validity (3)	Internal validity -Bias (7)	Internal validity confounding (6)	Power (1)	Total
Klafke, N. et al., 2019 (Germany)	10	2	7	6	1	26
Temel, J. S. et al. 2016 (America)	9	2	6	5	1	24
Chang Y. L, et al., 2020 (Taiwan)	9	2	7	5	1	24
Vanbutsele, G. et al., 2020 (Belgium)	10	3	7	5	1	26
Pace, T. W. et al., 2019 (America)	8	2	6	5	1	23
Zhou, Y. et al., 2017 (England)	9	2	7	6	1	25
Breitbart, W. et al., 2018 (Amerika)	9	2	6	6	1	23
Uster, A. et al., 2017 (Switzerland)	8	3	7	5	1	24
Malmström, M. et al., 2016 (Sweden)	8	3	6	6	1	24
Schuit, A. S. et al., 2019 (Amsterdam)	9	2	7	5	1	24
Jefford ,M. et al., 2016 (Australia)	8	2	6	5	1	22

Reference	Reporting (10)	External validity (3)	Internal validity -Bias (7)	Internal validity confounding (6)	Power (1)	Total
Qiu, Y. et al., 2020 (China)	10	2	7	6	1	26
Metin, G. Z. et al., 2019 (Turkey)	9	2	7	6	1	25
Zhou, K. et al., 2016 (China)	9	2	6	5	1	23
Duluklu, B., 2019 (Turkey)	9	3	7	5	1	25

Table 3. Supportive therapy of each study

Study	Intervention group	Control group
Klafke, N. et al., 2019 (Germany)	The integrated supportive care intervention consisted of Complementary and Integrative Medicine (CIM) applications and counseling for symptom management, as well as CIM information material.	Routine care
Temel, J. S. et al., 2016 (America)	Early Integrated Palliative Care (PC) in patients with Lung and GI Cancer. Patients who were assigned to the intervention met with a PC clinician at least once per month until death.	Those who received usual care consulted a PC clinician upon request.
Chang, Y. L. et al., 2020 (Taiwan)	Exercise and nursing education health informatics program on quality of life, exercise capacity, and nutrition among patients following esophagectomy for esophageal cancer.	Usual post-surgery care
Vanbutsele, G. et al., 2020 (Belgium)	Patients with advanced cancer and a life expectancy of approximately 1 year were randomly assigned to either early integrated Palliative Care (PC) into oncological care (intervention) or standard oncological care alone.	Standard oncological care alone
Pace, T. W. et al., 2019 (America)	CBCT (Cognitively-Based Compassion Training) to improve the primary outcome of depressive symptoms and secondary outcomes of other HRQOL domains (anxiety, fatigue), biomarkers of inflammation and diurnal cortisol rhythm, and healthcare utilization-related outcomes in both cancer survivors and informal caregivers.	Only routine nursing care with their informal caregivers
Zhou, Y. et al., 2017 (England)	Women's Activity and Lifestyle in Connecticut (WALC) with ovarian cancer were randomly assigned to exercise for six-months telephone-delivered exercise intervention of primarily brisk walking to be associated with improved physical HRQOL in women with ovarian cancer	Attention control
Breitbart, W. et al., 2018 (Amerika)	Individual meaning-centered psychotherapy (IMCP) with supportive psychotherapy (SP) and in improving spiritual wellbeing and quality of life and reducing psychological distress in patients with advanced cancer, quality of life, sense of meaning, spiritual wellbeing, reducing anxiety and desire for hastened death	Enhanced usual care (EUC)
Uster, A. et al., 2017 (Switzerland)	Combined nutrition and physical exercise program on cancer patients with metastatic or locally advanced tumors of the gastrointestinal and lung tracts. The group received a minimum of three standardized individual nutritional counseling sessions and participated in a 60-min exercise program twice a week.	Received their usual care.
Malmström, M. et al., 2016 (Sweden)	Telephone supportive care program on quality of life (QOL), received information and the number of healthcare contacts compared to conventional care following oesophageal resection for cancer.	Conventional care
Schuit, A. S. et al., 2019 (Amsterdam)	eHealth application 'Oncokompas', supporting patients with incurable cancer in finding optimal palliative care, tailored to their quality of life and personal preferences	The waiting list control group receives care as usual and will have access

Study	Intervention group	Control group
Jefford, M. et al., 2016 (Australia)	Nurse-Led Supportive Care Package (Survivor Care) for Survivors of Colorectal Cancer to improve psychological distress, supportive care needs (SCNs), and quality of life (QOL) of patients with CRC. The intervention, called Survivor Care (SC), comprised educational materials, needs assessment, survivorship care plan, end-of-treatment session, and three follow-up telephone calls	Usual care (US) by Hospital Standards
Qiu, Y. et al., 2020 (China)	Patients with esophageal cancer treated with concurrent chemoradiation were randomized to an intervention group (treated with whole-course nutrition management from the Nutrition Support Team)	Treated with the general nutritional method
Metin, G. Z. et al., 2019 (Turkey)	Progressive Muscle Relaxation (PMR) and Mindfulness Meditation (MM) on fatigue, coping styles, and quality of life (QOL) in patients with early breast cancer applied concurrently with adjuvant paclitaxel regimen	Standard care received only a single time attention-matched education (15-min) on breast cancer before the start of the paclitaxel regimen.
Zhou, K. et al., 2016 (China)	Multimodal Standard Nursing Program (MSNP) on HRQoL in female patients with breast cancer. Inpatient female patients with breast cancer from each hospital will receive either MSNP plus routine nursing care immediately after recruitment. The intervention will be conducted by trained nurses for 12 months	Only routine nursing care
Duluklu, B., 2019 (Turkey)	The addition of lavender essential oil to the colostomy bag of the patients with permanent colostomy on the elimination of odor, quality of life, and ostomy adjustment.	Continued their routine practices about nutrition and stoma care for 1 month.

cancer. All journals used the Randomized Control Trial (RCT) research design with measurement results in the form of quality of life of cancer patients based on the effectiveness of supportive therapy. The characteristics of these studies are summarized in Table I, their quality assessment scores are shown in Table II and the Downs and Black checklist for the assessment of the methodological quality of randomized is in Table III (Downs & Black, 2016). In the current version of the checklist, the item score has been modified to 27, which refers to the strength of the study. Instead of assessing according to the range of study strengths available, we judge whether or not the study does power calculations. Thus, the maximum score for item 27 is 1 (power analysis is carried out). The range of Downs and Black scores is given the appropriate level of quality as previously reported: very good (26-28); good (20-25); fair (15-19); and poor (<14). The reviewers' results were compared with external reviewers and differences resolved in a consensus meeting. The checklist can evaluate randomized and uncontrolled trials. The RCTs had the highest methodologic quality (a score of 26/27 on the Downs and Black tool). The RCT was the study with the lowest quality (score of 22/27). From 15 journals, the highest five RCTs have methodologic quality (score of 24/27). The overall methodology quality is good.

There were a total of 1,866 participants included in the 15 studies, including 531 advanced cancer patients, 319 lung cancer patients, 296 esophageal

cancer patients, 251 colorectal cancer patients, 245 breast cancer patients, 144 ovarian cancer patients, and 80 solid tumor cancer patients. From 15 journals, data collection was carried out in America as many as three journals, China two journals, Turkey two journals, Taiwan one journal, Germany one journal, Switzerland one journal, Belgium one journal, England one journal, Sweden one journal, Australia one journal and Amsterdam one journal.

Supportive therapy interventions

The 15 journals discuss supportive therapy in reducing the psychological influence of symptoms management counseling, complementary and integrative medicine, disease preferences, prognostic perceptions, health status, support for emotional, social, and spiritual needs. Other supportive therapy is in the management of pain, nutrition, elimination, blood index, and self-efficacy to improve the quality of life of cancer patients. Supportive treatment in cancer patients is very important, so it is not infrequently more important than surgery, radiation or chemotherapy treatment because supportive treatment is often associated with efforts to overcome life-threatening problems. This supportive treatment is not only needed in cancer patients undergoing curative treatment, but also in palliative treatment.

The effects of cancer therapy is also one of the factors that influence the psychological condition of cancer patients. The painful effects of therapy, its long

duration and the large medical expenses can aggravate the anxiety and depression of cancer patients. Long-term effects of treatment that affect the function and appearance of the body are other important factors behind the decline in quality of life in cancer patients. An increase in quality of life means explaining that supportive therapy influences the quality of life of cancer patients who are undergoing chemotherapy, advanced stages, and palliative care. Quality of life is also influenced by the focus of supportive therapy provided so that it can provide benefits for all cancer patients.

Quality of life measurement tools

Quality of life (QoL) was determined via the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire version 3.0 (EORTC QLQ-C30) (Uster et al., 2017). QoL is measured by the global health status / QoL scale of the EORTC QLQ-C30, a two-item scale that is converted to a scale of 0-100. (It was also measured by the Single Item Scale and the Keill Quality Summary Score by the McGill Questionnaire (MQOL) containing the domains (physical, psychological, existential/ spiritual, and social) equally.

Core instruments assess the overall quality of life in patients with cancer (QLQ-C30) and specific diagnostic instruments assess quality of life among patients with cancer. All instruments use a Likert scale and are changed linearly to a scale of 0-100 before statistical testing. The European Organization in conducting Cancer Research and Treatment (EORTC) Quality of Life C-30 (QOL-C30) is a self-administered and validated questionnaire to assess HR-QOL in patients with cancer. It consists of nine multi-item scales: five functional scales (physical, role, cognitive, emotional, and social), three symptom scales (fatigue, pain, and nausea and vomiting), and global health and quality of life. HRQOL-related outcomes include outcomes of psychological HRQOL (depressive symptoms primary outcome), anxiety, positive affect, and self-compassion), physical HRQOL (fatigue), and social HRQOL (empathy, feelings of social connection/isolation, dyadic function) as well as global wellbeing (Jefford et al., 2016).

Effect of supportive therapy on the quality of life of cancer patient

Results Analysis of 15 journals that used supportive therapy for cancer patients in the form of psychological management, nutritional needs, pain management, and handling of side effects problems showed the effect of supportive therapy on the quality of life of cancer patients. Assessments were carried out step by step at four time points: before intervention, mid-treatment (four weeks), eight weeks after treatment, and 16 weeks after treatment with outcome variables (quality of life, meaning, spiritual well-being, anxiety, and desire for accelerated death). The analyzed results on average found that the assessment of quality of life was carried out at six weeks, and 12 weeks after

intervention supportive therapy was given. The results of this study proved to increase the QoL of cancer patients.

Patients with cancer in these studies reported that after being given supportive therapy, the results show good quality of life. We have summarized the 15 studies and the results among them show improving spiritual wellbeing, reduced anxiety psychological and depression and desire for hastened death, sleep quality starts to improve, pain management, increased their nutrition intake and reported a decline in nausea and vomiting, and desire for prolonged death. The availability of material and social support has a direct influence on the ability of patients to effectively cope with cancer and on their quality of life (Hughes et al., 2014). In different studies into the quality of life of cancer patients, it has been observed that changes in daily activities, in particular, in interpersonal relationships and in leisure time, have been consistently related to a depressed emotional state, negative assessment of QoL tiredness, insomnia, and pain (Foster et al., 2017). The study reported patients given supportive therapeutic interventions reported lower depression at week 24, controlling initial scores and improving the quality of life of patients. (adjusted mean difference, 21.17; 95% CI, 22.33 to 20.01; P = 0.048). The effect of the intervention varies based on the type of cancer likely to have a positive effect on their ability to cope with life, which might include remaining side effects and adverse symptoms for a long time.

DISCUSSION

Changes in scores in the experimental and control groups occurred significantly. This means that, in the experimental group given supportive therapy, there was an increase in quality of life; conversely, in the control group that was not given supportive therapy, there was no increase in quality of life. High motivation, open and cooperative attitude in giving feedback during therapy is given, where patients will tell their experiences and feelings during the therapy process, also supports the achievement of the goals of this therapy. Motivation in the form of a better future view is a very important factor in improving the quality of life of patients.

This study was to analyze the effect that a supportive therapy intervention had on the quality of life on cancer patients. The procedure was structured to obtain an active commitment from the subjects to beneficial and rewarding activities in their lives, despite their illness. The conditions which define the quality of life of an oncological patient (symptoms, emotional state, and functioning) were evaluated using standardized QoL questionnaires in each treatment session. The effects of the experimental intervention were measured for a control group that attended the same number of sessions of the same duration, but which were dedicated exclusively to evaluating quality of life. This strategy is considered an ideal way of eliminating the

possibility that the results of the intervention might be attributed simply to the extra attention patients taking part in the study received (Rodríguez et al., 2014).

Supportive service needs are defined as requirements for patient care related to managing symptoms and side effects, empowering adaptation and coping abilities, optimizing understanding and information in decision-making, and minimizing bodily capacity deficits (Maguire et al., 2015). Quality of life is an important goal in the treatment of cancer; cancer treatment has a significant impact on physical, psychological, information and social wellbeing, thus requiring support for strong supportive service needs (Baryam, Durna & Akin, 2014). The need for supportive services in this study was carried out for cancer patients. The supportive service needs are divided into five domains, namely the physical domain, the psychological domain, the domain of care support, the domain of health information and systems and the domain of sexuality. The results of the analysis of supportive service needs show that the need for physical domain supportive services is a requirement with the highest percentage.

The effectiveness of supportive therapy can be seen from the differences in the ability of cancer patients in the intervention and control groups. Increased ability to cope with depression in cancer patients who received supportive therapy group therapy was significantly higher than the increase in ability in the group who did not get therapy. This proves that supportive group therapy has a positive impact on patients' ability to improve their quality of life. We are aware that the study findings are limited by several factor characteristics of our patient sample, which consist of several different types of cancer, cancer stage of different patients, and duration of diagnosis. However, it is important to observe that these changes favor the intervention in assessing group quality of life during oncological treatment.

This therapy enhances feelings of belonging, networking and social support as well as family support in cancer patients. which is the basis for the patient's interpersonal abilities. In addition, through this therapy, the patient increases personal abilities, especially increasing the effectiveness of the patient's self, hardiness, and resourcefulness. In line with the main goal of this therapy is as a container to express feelings and thoughts that are felt. Through learning to convey feelings and listen to other people's complaints, patients become more able to respect themselves and others. By sharing experiences and listening to the experiences of others, patients learn to manage their emotions and feelings.

Active participation in expressive supportive group therapy means cancer patients get social support from other group members. Cancer patients getting support not only from family, but also from fellow patients is felt to be very meaningful because they feel other people understand the pain, worry and fear they feel. Having a social network and being able

to ask for and receive support when needed is a vital step in the healing process. Patients who receive social support are more likely to seek help and participate in therapy. Other factors reported by EBC patients that contribute to reduced ability while coping with stressful events and causing deterioration in the quality of life include long-term treatment period, uncertainty about the disease progression, and physical and psychosocial problems. In this regard, previous reports emphasized that patients with cancer using ineffective emotional coping strategies had greater disease-related distress and showed poor adjustment to their treatment (Lake et al., 2019). A previous report also indicated that lower quality of life was associated with ineffective emotional coping styles in patients with cancer (Kershaw et al., 2004).

This study has advantages in identifying the need for supportive services needed by cancer patients and can be the first step for health services to improve the quality of life of cancer patients. Also, it shows the need to improve communication and provision of information from the hospital service structure so that, when patients need information about the cancer suffered, they can get accurate information from health workers. Weaknesses in this study are different types of diagnosis of cancer patients with different stages and diverse supportive therapy given. But despite all these limitations, supportive therapy can provide a positive effect for cancer patients with evidence of improvement in their QoL.

Considering the study limitations, it may have been overoptimistic in choosing overall QoL as the primary endpoint. Although it is highly relevant in clinical trials, QoL is a complex phenomenon. In line with the present study, recently published trials and meta-analyses on exercise or nutritional interventions found no significant improvements in overall QoL. However, a handful of promising studies that investigated QoL in cancer outpatients do exist. These authors demonstrated that early individualized counseling is effective in improving QoL and survival. Furthermore, it is generally accepted that physical exercise reduces fatigue and improves QoL and physical functioning.

CONCLUSION

After reviewing related studies, it could be concluded that the impact of supportive therapy on the quality of life of cancer patients provides good benefits, such as meaning, spiritual wellbeing, reducing anxiety and the desire for accelerated death. The conclusion of this systematic review is that the quality of this study is good and the results are acceptable in improving the quality of life of cancer patients undergoing chemotherapy treatment, and palliative care.

CONFLICT OF INTEREST

The author declared no competing interests.

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