



Nursing Interventions on the Quality of Life of Cervical Cancer Patients: A Narrative Review

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ABSTRACT

Cervical cancer is the third most common cancer in women worldwide with 85% of cases occurring in developing countries. Cervical cancer can affect various aspects of the life of sufferers where this is related to the quality of life of cervical cancer sufferers. Therefore, cervical cancer sufferers not only need treatment to improve their physical function, but it is also important to pay attention to aspects of quality of life. The purpose of this study is to find out various interventions that are useful in improving the quality of life in cervical cancer patients. Article searches used the PubMed, CINAHL, and Garuda Kemendikbud databases. The search inclusion criteria were articles discussing breathing exercises for anxiety, full text articles, published in the last 10 years (2012-2022), types of articles in the form of RCT (Randomized Controlled Trial) and Quasi Experiment, in English and Indonesian. From the search results, 1,429 articles were found through the PubMed database, 330 articles through CINAHL, and 31 articles through Garuda Kemendikbud. Then the articles were selected based on inclusion criteria to 1,665 articles. Then the articles were selected based on suitability with the abstract which resulted in 5 articles to be reviewed in this study. Based on the results of the literature review, it was found that interventions could improve the quality of life for cervical cancer patients, namely physical exercise, counselling, electro acupuncture, and comprehensive postoperative care. These results are expected to be a reference and can be directly practiced as an intervention to improve the quality of life of cancer patients

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1. INTRODUCTION

This study describes nursing interventions related to improving the quality of life in cervical cancer patients. Various methods of providing nursing care are described as an illustration for nurses in providing nursing care. So far, nursing care has focused on physical nursing care, but has not carried out comprehensive quality of life assessments and interventions. So that this study can be a reference for nurses in improving the quality of life of cancer patients.

Cervical cancer is a malignancy that starts in cervical cells. Cervical cancer itself develops slowly (Liu et al., 2022; Osann et al., 2019). According to Dragon et al. Two out of three cervical cancer sufferers, as much as 85% come from developing countries. Data shows that in 2010 there were around

460,000 new cases of cervical cancer worldwide, and around 230,000 new cases in Asia, accounting for about 50% of cases worldwide. Currently, the number of deaths from cervical cancer each year reaches 30,000, and it has become a public health problem worldwide (Liu, Guo, Sun, & Liu, 2021).

Cervical cancer is the third most common cancer in women worldwide with 85% of cases occurring in developing countries, and is the second most common cause of death from cancer in women (Kumar et al., 2017). Cervical cancer can affect various aspects of the life of sufferers where this is related to the quality of life of cervical cancer sufferers. According to Preedy and Watson in Prastiwi (2012) quality of life as the impact of disease is related to physical function, psychological dysfunction, social function, nursing and cognitive function. Cervical cancer itself is associated with decreased quality of life and coping which causes tension, depression and worry. In addition, support and motivation from the environment can help patients in undergoing therapy so that the psychosocial problems felt by patients can be reduced (Arum, 2015).

Therefore, cervical cancer sufferers not only need treatment to improve their physical function, but it is also important to pay attention to other aspects related to quality of life (Araújo Correia et al., 2016; Khalil et al., 2015). This study aims to determine various interventions that are useful in improving the quality of life in cervical cancer patients. The results of this study are expected to be a reference related to interventions that can improve the quality of life of cervical cancer patients.

2. RESEARCH METHOD

The research design used is narrative review. The first stage is to identify research questions using the PICO approach. With Population: Patients with cervical cancer, Intervention: Intervention, the Comparison component was not used, because the purpose of this study was only to find out interventions that improve quality of life without comparing interventions, and Outcomes: Quality of life. Based on this, a research question emerged in the form of "What interventions can improve the quality of life of cervical cancer patients?".

Then, an article search was performed using the PubMed, CINAHL, and Garuda Kemendikbud databases. The main keywords compiled using the PICO approach were searched for synonyms using Medical Subject Headings (MeSH) and Thesaurus. The search keywords used are Patient with cervical cancer AND Intervention OR therapy OR management AND Quality of life.

The inclusion criteria in the search for articles were: articles discussing breathing exercises on anxiety, full text articles, published in the last 10 years (2012-2022), types of articles in the form of RCT (Randomized Controlled Trial) and Quasi Experiment, in English and Indonesian. While the exclusion criteria for this study were abstracts or summaries not in English and Indonesian, articles in the form of proceedings, theses, editorials, books, meta analysis reviews, systematic reviews, and research protocols.

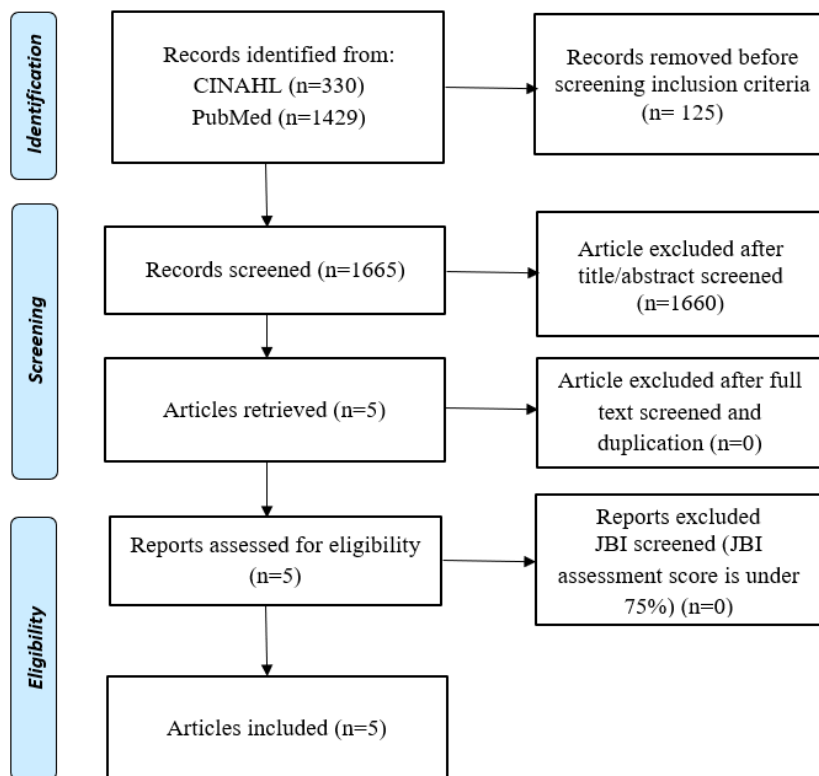


Figure 1. PRISMA Flow Diagram

3. RESULTS AND DISCUSSIONS

From the search results, 1,429 articles were found through the PubMed database, 330 articles through CINAHL, and 31 articles through Garuda Kemendikbud. Then the articles were selected based on inclusion criteria to 1,665 articles. Then the articles were selected based on suitability with the abstract which resulted in 5 articles to be reviewed in this study.

The articles that have been reviewed discuss nursing interventions that can improve the quality of life of cervical cancer patients (see Table 1).

Table 1. Extraction Data

No	Title/ Author	Country	Objective	Sample	Design	Intervention	Research result
1.	Reducing Depression, Anxiety, and Fatigue Levels in Cervical Cancer through Physical Exercise Intervention (Imelda et al., 2021)	Indonesia	To identify the effect of physical exercise on depression, anxiety, and fatigue in cervical cancer patients	30 respondents were selected by purposive sampling with inclusion criteria: Stage I-III, well communicated, and outpatients, where	A quasi-experimental study with a pretest-posttest with control group design	The intervention was carried out for 21 days with a divided schedule: progressive muscle relaxation exercises in the 1st week, physical exercises in the 2nd week, and giving a combination of physical exercises with progressive muscles in the 3rd week. Each physical exercise session is carried out for 30 minutes. Physical exercise is carried out by professionals who are experts in the field of sports who have certificates in the field of sports	There is a significant difference between the level of depression after physical exercise with $t = 3.552$ ($p < 0.05$). There is a significant difference between the level of anxiety after physical exercise with $t = 11.297$ ($p < 0.05$). There is a significant difference between the level of fatigue after physical exercise with $t = 17.457$ ($p < 0.05$).

No	Title/ Author	Country	Objective	Sample	Design	Intervention	Research result
				respondents were randomly selected in the experimental and control groups.			
2.	The effect of psychological nursing on the short- and long-term negative emotions and quality of life of cervical cancer patients undergoing postoperative chemotherapy (Liu et al., 2021)	China	The purpose of this study was to analyze the effect of psychological nursing interventions on short-term and long-term negative emotions and changes in quality of life in cervical cancer patients undergoing postoperative chemotherapy.	141 patients undergoing postoperative chemotherapy interventions for cervical cancer	cohort study	(1) Formation of a psychological intervention team. An intervention team was formed, consisting of surgeons, psychologists and primary nurses to study the key points of postoperative nursing for cervical cancer, common psychological disorders, and the application of psychological evaluation scales, and to develop a psychological intervention plan initially. (2) Psychological evaluation: Patients undergo one-to-one communication and evaluation to determine their psychological state. The patient's general clinical data were recorded to evaluate the impact on the patient's psychological state. Personal psychological intervention plans are developed with patients and their families. (3) Psychological intervention	The scores of the Quality of Life Questionnaire (EROTC-QLQ-C30) and Self-rating Anxiety Scale (SAS) of the patients in the two groups before the intervention were not significantly different ($P > 0.05$). A re-evaluation at the end of the 90-day intervention indicated that the EROTC-QLQ-C30 scores in the study group were significantly higher than those in the control group ($P < 0.05$). The dynamic evaluation showed that the proportion of patients with mild anxiety in the study group was higher than in the control group at 30, 60, and 90 days of intervention ($P < 0.05$). Spearman's correlation analysis showed that the SAS scale and the EROTC-QLQ-C30 score were negatively correlated ($r = -0.4438$, $P < 0.05$). Implementation of psychological interventions can help relieve short-term and long-term negative emotions in cervical cancer patients undergoing postoperative chemotherapy.
3.	The Effect of Electroacupuncture Therapy on Pain, Plasma β -Endorphin, and Quality of Life of Stage III Cervical Cancer Patient: A Randomized Control Trial (Saraswati et al., 2021)	Indonesia	To determine the effect of EA and conventional pain management on pain level, plasma β -endorphin levels, and quality of life in stage III cervical cancer patients.	participants were cervical cancer patients at RSU Dr. Soetomo as many as 28 people. Participants were divided into an intervention group of 14 and a control group of 14 participants	RCTs	Intervention group: participants received medical therapy plus EA. medical therapy is given every day for 3 weeks, while EA is given 10 times in 3 weeks. control group: participants only received medical therapy (paracetamol 4×500 mg and codeine 4×10 mg).	the results of the study showed that in both groups there was a decrease in the pain scale. However, it can be seen that the significant decrease was in the intervention group where the decrease was 2.71 ± 1.14 , while the control group was only 0.71 ± 1.33 ($p < 0.001$). then, there was a greater increase in β -endorphin levels in the intervention group, namely 88.57 ± 52.46 pg/ml, while in the control group, it was 12.86 ± 56.76 pg/ml group ($p = 0.001$). Furthermore, the intervention group experienced an increase in quality of life ($p = 0.001$), whereas in the control group there was no change in quality of life before and after therapy ($p = 1.000$).

No	Title/ Author	Country	Objective	Sample	Design	Intervention	Research result
4.	The effects of nursing intervention on the postoperative quality of life and early compliance of patients with cervical cancer (Li et al., 2020)	China	This study aims to analyze the effect of nursing interventions on postoperative quality of life and early adherence of cervical cancer patients.	A total of 96 patients underwent cervical cancer surgery, 48 patients were randomly selected to be treated comprehensively in the observation group, and 48 other patients were treated routinely in the control group.	RCTs	<p>Patients in the control group were treated routinely after surgery as follows: They were given information and guidance about relevant medicines, advised to eat a balanced diet to maintain nutrition and education about cervical cancer and health.</p> <p>In contrast, patients in the observation group were comprehensively treated as follows: 1. Rehabilitation training: They were guided to perform pelvic diaphragm muscle exercises at least 3 times a day, and the training was adjusted according to their status. 2. Psychological Treatment: The nurse pays close attention to the patient's psychological changes, so as to provide timely enlightenment when they show anxiety, fear, tension, or other negative emotions. Successful rehabilitation cases are explained to patients to help increase their confidence, and their families are communicated, so as to enlighten patients and their families together. 3. Information about the disease: Causes, treatment methods, efficacy, and prognosis of the disease are explained to patients, to help them understand the disease, and also provided information and treatment guide for them. 4. Dietary intervention: It is ensured that patients have a scientifically balanced and nutritious diet, especially including light and easily digestible foods designed to meet their energy needs.</p>	The observation group received significantly higher MMAS-8 and SF-36 scores than the control group and showed significantly higher total nursing satisfaction than the control group (all $P < 0.05$). A multivariate logistic regression analysis revealed that age, surgical approach, and nursing patterns were independent risk factors for postoperative bladder dysfunction. A comprehensive nursing pattern can effectively improve the quality of life and patient compliance after cervical cancer surgery
5.	Psychosocial Telephone Counseling for Survivors of Cervical Cancer:	Californian	Assessing the effectiveness of telephone-based psychosocial counseling in	204 respondents with cervical cancer fighters	RCTs	- Participants received a 5-minute call to reintroduce the intervention and schedule a	This telephone-based psychosocial counseling can manage cancer-specific moods and concerns as well as quality of life for cervical cancer sufferers. Improved quality of life with

No	Title/ Author	Country	Objective	Sample	Design	Intervention	Research result
	Results of a Randomized Biobehavioral Trial Lari Wenzel, Kathryn Osann, Susie Hsieh, Jo A. Tucker, Bradley J. Monk, and Edward L. Nelson 2015		the domain of quality of life for cervical cancer survivors	from stage I-1VA with at least 2 months of treatment and can speak English or Spanish		psychosocial interview in session I (60 minutes). - Sessions II-IV discuss the topics of managing stress, emotions, health, well-being, and managing relationship problems and sexuality (20-60 minutes). - Session V discussed the summary and integration sessions by reviewing the progress of the participants.	decreased T-helper type 2 and counter-regulatory cytokines supports biobehavioral potential pathways relevant to cancer survival.
6.	Quality of life in cervical cancer patients treated with radiation therapy Małgorzata Pasek, Lilia Suchocka and Krzysztof Urban'ski	Poland	The main objective is to evaluate the quality of life in hospitalized patients with cervical cancer who are treated with radiation therapy	Involved 205 women who were hospitalized for each stage of cervical cancer.	RCTs	The study used the EORTC QLQ-C30 questionnaire to evaluate the quality of life of patients. The survey was conducted three times: (1) stage 1 – before treatment, on admission, (2) stage 2 – after treatment, on discharge, and (3) stage 3 – five to six months after treatment.	Physical function was assessed worst before radiation treatment and improved gradually during later stages; all differences between stages proved significant. In contrast, emotional functioning scored highest before starting treatment and lowest at stage 2, a difference that was evident significant. The highest role function immediately after treatment and the lowest before treatment. The differences between stages proved to be significant. Financial Problem significantly increased its negative impact on patients' quality of life during this phase of the study. Age and stage of cancer are not independent significantly influenced the way participants viewed their global health, their physical, cognitive, emotional and social functioning, or their financial difficulties.

No	Title/ Author	Country	Objective	Sample	Design	Intervention	Research result
							Overall, quality of life was evaluated as highest immediately after the end of radiotherapy.

Discussion

1. Physical Exercise

Depression, anxiety, and fatigue are things that are often felt by cervical cancer sufferers. Some of these things can certainly reduce the quality of life of sufferers. According to Imelda et al. (2021) physical exercise combined with relaxation exercises and core movement exercises has benefits for anxiety and depression. Relaxation movement is an intervention that uses various techniques to facilitate the mind's capacity to influence physical symptoms and bodily functions to produce harmony in the body and mind which is believed to facilitate healing not only in the physical but also in psychological disorders such as anxiety and depression. This is possible because theoretically it is stated that psychological factors (anxiety, depression), physical (pain), sleep quality, and fatigue are interrelated things (Priscilla & Karen, 2008). Physical exercise will improve mood, reduce depression, and increase fitness which in turn will improve sleep quality, which in turn decreases the level of weakness (Kumar et al., 2014; Xie et al., 2013).

Physical exercise can increase the activity of endorphins which are hormones in the body. An increase in endorphins can increase the body's immunity and reduce pain perception which does not specifically improve mood and increase body activity (Adamsen et al., 2009). Psychologically, during physical activity, the ability to show desired gestures can increase self-esteem and affect mood. The amount and consistency of sleep needs can be increased by physical exercise carried out every day so that it has a better impact on energy and body activity.

2. Psychosocial Treatment

Nurses as the main caregivers of cancer patients, are often the most trusted people. We must identify their concerns and needs, use appropriate communication skills to tell the truth, provide them with the information they need, guide them in decision-making, advocate for patient rights, so that they have the opportunity to be involved in treatment plans and care consistently. with their values and preferences, and also they can feel more self-control and less psychological pressure (Lu, 2022).

Providing psychosocial counseling-based interventions studied by Wenzel et al (2015) resulted in an increase in quality of life and a positive effect on symptoms of depression, anxiety, and gynecological problems. This supportive intervention with psychosocial counseling helps effect during treatment both from chemoradiotherapy and psychological treatments such as managing stress, emotions, health, well-being. This treatment is supported by the existence of cytokine assays where there are cytokine changes relative to the biobehavioral paradigm that incorporates the psychoneuroimmune axis for cancer survival.

Psychological treatment refers to interventions carried out by nurses to positively influence the patient's psychological activity with psychology and technology applied in the nursing process to achieve nursing goals that have been proven effective in improving the quality of life and self-efficacy of advanced cancer patients (Liu, Guo, Sun, & Liu, 2021). Psychological treatment can also help improve self-care abilities and relieve negative emotions (Barchitta et al., 2018).

3. Electro Acupuncture

In a study conducted by Sarawati et al. (2021) used electro acupuncture with combination waves or commonly called Dense Disperse (DD) waves with a frequency of 2/20-25 Hz. Giving waves through acupuncture at a predetermined point combination will provide an analgesic effect on the body by providing stimulation to the central nervous system. The effects of electro acupuncture therapy appear at various levels, both peripheral, segmental (spinal), and central (Hikmat et al., 2022; Lee et al., 2016).

Endorphins are hormones secreted by the pituitary gland and hypothalamus. Endorphins are known to be associated with pain levels in cancer patients. Electroacupuncture therapy increases the excretion of peptides from the limbic system such as the hippocampus and PAD, so that the plasma levels of β -endorphin increase significantly after the therapy is given.

QoL or quality of life in cancer patients includes positive and negative subjective perceptions related to aspects of symptoms in cancer patients, whether physical, emotional, social, cognitive function and disease symptoms, as well as side effects of treatment. Acupuncture therapy is needed to overcome problems due to changes in the physical, psychological and social cancer sufferers. Physical aspects that experience changes due to the impact of the symptoms of the disease and the treatment being undertaken. Psychological aspects that are affected due to anxiety or depression due to loss of hope, loss of control and activity limitations. In addition, social aspects are hampered due to social difficulties in cancer patients. Electroacupuncture therapy stimulates the sympathetic nervous system where the interaction on this nerve and stimulation of the limbic system from acupuncture will reduce symptoms of nausea, vomiting, anxiety and fatigue (Saraswati et al., 2021).

4. Comprehensive Post Operative Care

Comprehensive care after surgical procedures in cervical cancer patients can improve quality of life. Patients who have undergone surgery are more prone to poor emotional states, psychological distress, fear of treatment failure, and other adverse consequences, thereby reducing patient compliance and quality of life (Mohanty et al, 2018).

Cervical cancer patients who have undergone surgery show a decrease in quality of life which can be influenced by various factors (Zhu et al., 2016). The quality of life of patients undergoing elective minor surgery may decrease on the first postoperative day but gradually increase when the patient is discharged even higher than the quality of life before surgery (Krivokapic et al., 2016).

Research by Li et al (2022), shows one way to improve the quality of life of cervical cancer patients who have undergone surgery is with comprehensive postoperative care, by increasing patient and family knowledge regarding the disease can provide peace and eliminate patient worries so as to increase compliance and patient quality of life (Yosep et al., 2022, 2023).

4. CONCLUSION

Changes in body systems and functions that occur in patients with cervical cancer can lead to a decrease in the quality of life of sufferers. Based on the results of the literature review, it was found that interventions could improve the quality of life of cervical cancer patients, namely physical exercise, counselling, electroacupuncture, and comprehensive postoperative care. These results are expected to be a reference and can be directly practiced as an intervention to improve the quality of life of cancer patients.

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