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| RESEARCH ARTICLE

Effectiveness of Acupressure Therapy against Constipation and comfort Cancer Patients Undergoing Chemotherapy: Systematic Review

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ABSTRACT

The complex state of cancer causes sufferers to face a variety of clinical symptoms, both physically and psychologically, dramatically affecting the Patient's daily life. Chemotherapy treatment or therapy undertaken by cancer patients has severe side effects. Some side effects, such as headache, myalgia, hypotension, urinary retention, and constipation, can cause discomfort in cancer patients. Therefore, complementary acupressure therapy is needed to reduce the symptoms of constipation and pain caused by the symptoms. This study aims to find evidence based on the effectiveness of acupressure therapy for constipation and the comfort of cancer patients undergoing Chemotherapy. The study method uses the eight stages in this review: identifying nursing problems, prioritizing problems and research questions, primary and secondary data frameworks, identifying relevant studies, prism flow diagrams, critical appraisal, data analysis, and data extraction. This review uses five databases with a period of 2013-2022. The search results for the total number of articles obtained were 1,241, and ten were selected for review. Several reports comparing constipation symptoms and comfort levels in the acupressure therapy group and without acupressure therapy showed that acupressure therapy is an effective nonpharmacological therapy to reduce constipation symptoms and discomfort in cancer patients undergoing Chemotherapy. Based on reviews of acupressure therapy's effectiveness in lowering constipation symptoms and distress in cancer patients, more high-quality evidence is needed to determine whether acupressure is more effective than other treatments.

KEYWORDS

Cancer; Constipation; Convenience; Chemotherapy; Acupressure Therapy.

ARTICLE INFORMATION

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1. Introduction

Cancer is one of the malignant tumors, the result of the change of normal cells into abnormal cells that have the potential to spread to other parts of the body. In addition, cancer is also defined as a disease that arises due to the abnormal growth of body tissue cells that turn into cancer cells. At the same time, tumors are conditions where cell growth is abnormal, thus forming lesions or, in many cases, lumps in the body. The leading cause of cancer is still unknown. Still, several risk factors can increase the occurrence of cancer, such as smoking, being overweight, alcohol consumption, air pollution, and carcinogenic agents in the surrounding environment (Ministry of Health, 2015). Data from the *Global Burden of Cancer* (GLOBOCAN) released by the World Health Organization (WHO) states that the number of cases and deaths due to cancer until 2018 was 18.1 million cases and 9.6 million deaths in 2018. Cancer deaths will rise to over 13.1 million by 2030 (Pangribowo, 2019).

The high incidence of cancer causes an increasing need for treatment to overcome the various effects caused by cancer. One of the most used treatments to treat cancer is Chemotherapy. Chemotherapy is one of the cancer treatments with chemical drugs that kill and inhibit the abnormal growth of cancer cells. Chemotherapy has been proven effective in killing cancer cells; however,

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chemotherapy drugs also kill normal cells in the body. This causes the use of chemotherapy drugs to be highly observed in dosage and duration of use (Ministry of Health, 2015).

Although Chemotherapy contributes to prolonging life, it is accompanied by severe side effects such as loss of appetite, nausea, and vomiting. Such side effects reduce the Patient's total food intake, reduce mobility, and cause constipation through increased use of antiemetics and painkillers (Park et al., 2009). Other studies have also revealed that constipation is one of the most common and painful side effects of cancer treatment (Hanai et al., 2016). Constipation causes severe physical symptoms such as intestinal obstruction and psychological symptoms such as anxiety and stress. Constipation negatively impacts the quality of life; thus, appropriate measures are required for intervention (Belsey et al., 2010). Cancer patients usually use many drugs to reduce Chemotherapy's side effects but prefer nonpharmacological interventions (Hanai et al., 2016).

The complex state of cancer causes the sufferer to face a wide variety of physical and psychological clinical symptoms, dramatically affecting the Patient's daily life. Indication of symptom management in people with cancer will have a significant impact on the quality of life of patients, which includes various types of aspects, including physical and psychological, in addition to the symptoms of cancer, treatment or therapy undergone by cancer patients have severe side effects physically and mentally (Nayak *et al.*, 2017). In addition, side effects such as headache, myalgia, hypotension, urinary retention, and constipation can generate discomfort in cancer patients. Therefore, complementary therapies are needed to reduce pain due to the symptoms caused (Fatma *et al.*, 2018).

Based on the literature review, several nonpharmacological therapies are recommended as companion therapies for medical therapy, including acupuncture, acupressure, progressive muscular relaxation, imagery guidance, and music therapy (Fatma Acupressure is one of the complementary and alternative treatment methods, based on the principle of applying pressure to acupoints to provide relaxation and relieve pain (Topdemir & Saritas, 2021). The mechanism of action of acupressure is based on the increased release of neurotransmitters and adrenocorticotropic hormones, thus lowering anxiety and ensuring rehabilitation. Besides, acupressure is also used to relieve different types of pain treated with analgesics (Tanriverdi & Saritaş, 2018). Based on the research of Hsiung et al. (2015), acupressure is a simple, noninvasive, safe, and economical procedure to improve comfort in cancer patients, which can be applied in the health care and clinical practice of health professionals who receive appropriate education and training, to provide acupressure therapy to patients. By integrating Traditional Chinese Medicine (TCM) with western medicine, nurses can improve the quality of care and reduce associated costs.

Currently, people's need for complementary therapies is relatively high. Approximately 80% of Indonesians seek alternative medicine because several factors, including confidence, finances, chemical drug reactions, and cure rates, influence it. Complementary therapy is a modality therapy that complements conventional therapies that aim to get maximum treatment results. The high number of people who choose complementary therapy is due to the ease of obtaining information about complementary therapy, an effective and efficient treatment, and common side effects, one of which is acupressure therapy (Komariah *et al.*, 2021). Studies have stated that acupressure therapy can be an effective alternative therapy and is safe to reduce pain; besides, it can improve the comfort of cancer patients (Hsiung *et al.*, 2015).

Several studies on the administration of acupressure therapy have been shown to reduce constipation symptoms and improve comfort but still provide diverse and varied results. So through systematic studies, we will obtain a thorough review and avoid bias from different research results. Therefore, researchers will conduct a systematic analysis to see if acupressure therapy effectively lowers constipation symptoms and improves comfort in cancer patients undergoing Chemotherapy.

2. Method

This systematic review followed the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) standard (Page et al., 2021).

2.1 Search Strategy

Researchers conducted a computer-based literature search using English, a systematic literature search between 2013 and 2022, using the following databases: ScienceDirect, ProQuest, Springer Link, PubMed, and Scopus. To find a Systematic Review or Meta-Analysis of any acupressure or acupressure combined with other treatments or acupressure for constipation problems and the convenience of using search terms as follows: ("Complementary" OR "Alternative" OR "Acupuncture" OR "Acupressure" OR "Auriculotherapy") AND ("Constipation" OR "Constipation") AND ("Comfort" OR "Comfort Level" OR " Comfortable") AND ("Chemotherapy" OR Chemical Treatment") AND ("Cancer" OR "Malignant Tumor"). In addition, a list of references is filtered from the studies taken, and review articles are used to identify further studies.

2.2 Inclusion and exclusion criteria

A systematic review or *meta-analysis* of acupressure on constipation or comfort problems is included. The subject should be diagnosed as a disorder in constipation and comfort level in patients with cancers undergoing Chemotherapy, and there are no restrictions on gender, age, race, time of onset, or source of cases. Researchers search all titles and abstracts for eligibility against inclusion and exclusion criteria. Studies were included in the review according to the following inclusion criteria: (1) reported the prevalence of constipation problems; (2) report the level of comfort; (3) diagnosis with all types of cancer; (4) get chemotherapy treatment; (5) Studies published in English. Sole criteria: (1) proto-kol papers and abstract conferences; (2) not published in English; (3) the journal cannot be accessed in full.

2.3 Quality Assessment

The researcher filters the results of multiple databases filtered by title and abstract and obtains full text. To be eligible for review, controlled trials must assess the effectiveness of acupressure therapy in managing constipation problems and comfort levels in cancer patients undergoing Chemotherapy. The data obtained were analyzed using the formula of the Joanna *Briggs Institute* (JBI) critical appraisal based on the recommendations of the *University of South Australia* (Joanna Briggs Institute, 2017). At each stage of the review process, disagreements regarding the article are discussed among reviewers. If there is a difference of opinion, a third reviewer will be involved to corroborate the data analyzed and included in the review. References from additional sources are filtered out, and duplicates are removed.

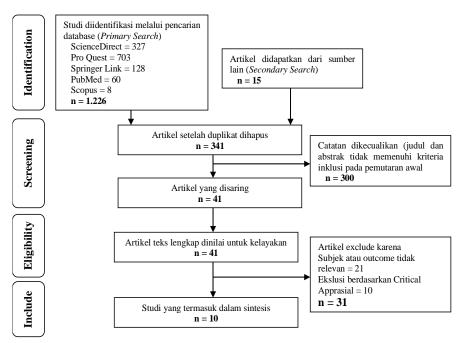
2.4 Data Analysis

Results Data analysis on the entire study was collected, and the prevalence of constipation and comfort were compiled. The studies were grouped into acupressure and in this category according to the health conditions treated. Health evidence is categorized according to the criteria from Waddell (Robinson *et al.*, 2011), namely, Category 1: generally consistent findings within the range of evidence from well-designed experimental studies. Category 2: either based on a single acceptable research or weak or inconsistent results in multiple reasonable multiples of the survey. Category 3: limited scientific evidence does not meet all good study criteria, or the absence of directly relevant studies of quality that well. This includes published expert opinions. This review has been reported following the principles in the PRISMA statement (Liberati *et al.*, 2009).

3. Result

3.1 Study Selection

A literature search identified 1. 241 articles with potentially relevant titles, then some of the same articles were deleted so that 341 articles were obtained, and 300 were excluded based on titles or abstracts that are not relevant to the topic, and 31 were excluded from the remaining 41 articles after reading the full text. Therefore, 10 *systematic reviews* are included in this overview. The PRISMA flow graph of the literature study with *the systematic review* is illustrated in figure 1.



Gambar 1. PRISMA flow diagram of search process

3.2 Data extraction

The next step is to extract data from selected articles. Data extraction is carried out to classify or categorize articles and make a big picture of the article's content. Data from 10 reports were extracted to include critical criteria such as title, author, year of publication of the article, research location, research objectives, methodology, population research, and significant results or conclusions. The authors independently record the information and then compare the extracted data. Articles discovered, identified and screened by the authors are then assessed for feasibility studies and dragged into a table with predetermined headings.

Table 1. Data Extraction

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
1	Complementary effects of auricular acupressure in relieving constipation symptoms and promoting disease- specific health-related quality of life: A randomized placebo- controlled trial (Li et al., 2014)	Hong Kong	To evaluate the complementary effect of auricular acupressure against constipation	A randomized placebo-controlled trial.	This randomized clinical trial was conducted from March 2009 to April 2010. Demographic and clinical data were collected before the administration of the intervention. Constipation was measured by assessment of the constipation symptom questionnaire (Cantonese Chinese for Hong Kong version (PAC-SYM)). Constipation assessment of the quality of life using Cantonese Chinese for the Hong Kong version (PAC-QOL).	Ninety-nine participants were randomly assigned to one experimental group (AA using auricular plaster with magnetic pellets) = 33 participants, placebo-controlled group 33 participants (AA using the auricular application with Vaccariae Cement), and 33 participants in the usual treatment group (AA using only acoustic plaster). AA used to be applied to seven auricular acupoints for ten days.	Significant group x time interaction effects were found on subscale satisfaction changes between the experimental and placebo control groups at D10 (p = 0.016) and D20 (p = 0.016) relative to the baseline. Both for constipation and disease-specific symptoms
2	Effects of Auricular Acupressure on Constipation in Patients With Breast Cancer Receiving Chemotherapy: A Randomized Control Trial (Shin & Park, 2018)	Korea	To test the effect of auricular acupressure against relieving constipation in breast cancer patients undergoing chemotherapy.	A randomized controlled trial	The study was conducted from May to October 2015 on patients with breast cancer who received Chemotherapy at the General	Participants were 52 patients with breast cancer who received Chemotherapy at E University Hospital, Seoul, Korea, randomized into	Assessment of the group's experimental Constipation-Quality of Life Score was significantly lower than the control group (p <.001).

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
					Hospital in Seoul.	two groups of the same size.	Acupressure auricularia was effective in eliminating constipation in patients with breast cancer receiving Chemotherapy .
3	Effect of acupressure on constipation in patients with advanced cancer (Wang et al., 2019)	Taiwan	To investigate the effects of short-term acupressure interventions in patients with advanced cancer	Non- Randomized , pre-post study design to assess the effects of acupressure intervention s	Data collection was carried out on inpatients from the hospice unit of a medical center in southern Taiwan recruited into the study from June 1, 2015, to December 1, 2017	A total of 34 patients with advanced cancer were recruited from the hospice unit at a medical center in southern Taiwan.	The study showed that short-term acupressure effectively reduced constipation symptoms among patients with advanced cancer. Furthermore, randomized controlled trials were needed to confirm the results.
4	The efficacy of acupressure in managing opioid-induced constipation in Patients with cancer: A single-blind randomized controlled trial (Yildirim et al., 2022)	Istanbul Turkey	This randomized controlled trial aims to investigate the effects of acupressure therapy on opioid-induced constipation management in patients with cancer	A single- blind, randomized controlled trial	This randomized controlled trial was conducted at an algology clinic of a university hospital in Istambul between August 2020 and June 2021	The trial was conducted on 140 cancer patients and each group of 70 participants	The findings of this trial suggest that 4-week acupressure is an effective way to improve quality of life and reduce the symptoms of subjective and objective constipation in patients with opioid-induced constipation.
5	Transcutaneous Acupoint Electrical Stimulation on ChemotherapyInduce	China	The study tried to examine the effects of TAES on constipation	Randomized Control Trial	Participants were patients diagnosed with NSCLC and	The study was conducted on 60 NSCLC patients who received	The BSFS and CAS scores for the experimental

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
	d Constipation for NonSmall Cell Lung Cancer Patients: A Randomized Controlled Trial (Mao et al., 2021)		among lung cancer patients receiving Chemotherapy. Thus, the results will be used as a primary criterion for developing nursing interventions		received Chemotherapy at Hunan Cancer Hospital, China. The study was conducted from October to December 2018.	Chemotherapy at Hunan Cancer Hospital, Changsha, China, assigned to the TAES (n=30) or control (n=30) group using a Research Randomizer.	group were significantly higher than those for the control group (P = 0.004 and P < 0.001, separately). TAES effectively reduces constipation in NSCLC patients receiving Chemotherapy and is a safe and practical nursing intervention.
6	Effects of self- acupressure on pregnancy-related constipation: A single- blind randomized controlled study (Kirca & Kanza Gül, 2021)	Istanbul Turkey	This study aims to show that acupressure can relieve symptoms of constipation during pregnancy.	A single- blind, randomized controlled study	The trial involved 120 20-year-old women conducted from November 2019 to February 2020.	M involved 120 randomly selected 20-year-old women divided into intervention and control groups. The women who participated were in the 1st, 2nd, or 3rd trimester of pregnancy and had complaints of constipation	In this study, after the application of acupressure itself, the severity of constipation decreased significant in the acupressure group compared to the control group
7	Acupressure improves the postoperative comfort of gastric cancer patients: A randomized controlled trial (Hsiung et al., 2015)	Taiwan	This pilot study evaluates whether acupressure affects postoperative comfort gastric cancer patients after subtotal gastrectomy	A randomized controlled trial	Data on demographic characteristics and medical conditions between groups were obtained. Random clinical research was conducted for three days with a duration of 12 minutes each day.	Sixty patients were recruited from the General Surgical Ward. Participants were randomly assigned to one of the control groups that received regular postoperative care or to an experimental group receiving additional acupressure at the Neiquan (P6) and Zusanli	Acupressure at P6 and ST36 acupoints can improve postoperative comfort by reducing pain and shortening the time until the first flatus. Acupressure administration, significant differences were found in postoperative pain (P = 0.03)

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
						(ST36) acupoints for three consecutive days.	and the first flatus time (P = 0.04), but neither PONV (P = 0.49) nor during the first bowel movement (P = 0.34).
8	The effect of Acupressure and Reiki application on Patient's pain and comfort level after laparoscopic cholecystectomy: A randomized controlled trial (Topdemir & Saritas, 2021)	Turkey	To test the effect of Acupressure and Reiki application on patients pain and comfort level after laparoscopic cholecystectom y	A randomized controlled trial	The authors collected data between July 2017 and August 2019 through face-to-face interviews. The Patient receives the application 3 hours after transfer to the clinic after surgery, which is the optimal postoperative time since the vital signs become stable and clinic compliance is achieved. It is noted that the treatment protocol involves the administration of analgesics in the 4th hour postoperatively . The pain and comfort levels of all patients in the experimental and control groups were determined at the 3rd hour postoperatively using Pain on VAS, Perianesthesia Comfort Scale	The study included 132 adult patients treated in the General Surgery clinic who underwent laparoscopic cholecystectomy . Subjects were then assigned to the Reiki group of 44, the Acupressure group of 44, and the control group of 44.	In patients receiving reiki and acupressure treatment, pain levels decreased, comfort levels increased, and differences between groups were found to be significant (p <0.05).

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
					(PCS), and the General Comfort Questionnaire (GCQ).		
9	Effectiveness of Acupressure at the Zusanli (ST-36) Acupoint as a Comfortable Treatment for Diabetes Mellitus: A Pilot Study in Indonesia (Fitrullah & Rousdy, 2017)	Indonesia n	This study investigated the effectiveness of acupressure on comfort and is an effective way to treat patients with diabetes mellitus	Withalso experimenta 	The study was conducted at the participants' homes in Surabaya and Malang from January 2015 to April 2015. Participants in the control group followed their standard therapy, while participants in the experimental group received acupressure in Zusanli (ST 36) using thumbs with pressure and rubbing	The pilot study involved 30 participants divided into two groups: 15 in the experiment and control groups.	This study shows that acupressure is an effective method to reduce blood glucose and helps reduce complications due to diabetes. The participants also felt comfortable with acupressure as an alternative treatment.
10	The effect of manual pressure after subcutaneous injection on pain and comfort levels (Karabey & karagözoğlu, 2021)	Turkey	This experimental study compared the effect of standard and manual pressure applications on injection pain and the comfort level of undergoing subcutaneous injection surgery.	Experimenta I studies	The experimental research study was conducted at the university's internal medicine polyclinic between October 1, 2020, and December 1, 2020.	This research was conducted on a single sample group with a pre-post design. Individuals in the sample group constituted the control group and the learning intervention group. 100 person was involved in the study to meet parametric test assumptions	The average pain kor of SC injection applications performed by applying manual pressure is statistically significantly lower than sc injection applications using the standard method. The rata-average comfort score of SC injection applied by applying manual pressure is statistically

N o	Title/Author/Year	Country	Purpose	Types of Research	Data Collection	Participants / Sample Size	Result
							higher (p<0.05)

4. Discussion

This systematic review summarizes ten studies on the effectiveness of acupressure therapy in treating constipation symptoms and comfort levels in cancer patients. This study provides an essential addition to the existing knowledge base regarding complementary therapies, particularly acupressure therapy, but is very limited in evidence of the efficacy of acupressure therapy in improving the comfort of cancer patients. To the author's knowledge, this is the first systematic literature review of acupressure therapy against constipation and comfort levels in cancer patients. The most robust evidence of acupressure therapy is for pain, nausea, and vomiting during cancer treatment therapy and also against sleep quality.

4.1 Acupressure Therapy

Cancer is known as one of the diseases that seriously impacts the body and psychologically of the sufferer. Developments in cancer detection and treatment have greatly helped reduce cancer mortality, but being diagnosed with cancer is still a deep *stressor* for the sufferer. This matter relates to people's understanding of cancer, which is synonymous with death, pain, and suffering (Kashani et al., 2014). Complementary therapy is widely agreed upon as a form of healing that originates in various health systems, modalities, and practices supported by theories and beliefs, as well as a form of effort to heal oneself. Meanwhile, complementary therapy is used to prevent or cure various diseases or improve one's health (Putri & Amalia, 2019).

One of the treatments that can be done by patients other than medical treatment is to carry out modality therapy that is currently developing, including psychopharmacological therapy, behavioral and cognitive change therapy, aggression management therapy, somatic therapy, complementary and alternative therapy, therapeutic group therapy and family therapy (Haryana & Misniarti, 2020). Complementary medicine acts as an excellent therapeutic option to treat various diseases. It can increase the level of comfort and reduce the symptoms of constipation, taking into account the economic aspect. Acupressure is a form of tactile therapy that utilizes the principles of acupuncture and Chinese medicine. In acupressure, the same tick points on the body are allowed as in acupuncture but are stimulated by finger pressure, not by piercing a needle. Acupressure is used to relieve various symptoms and pains. Acupressure can be used as part of a Chinese doctor's prescription, a massage therapy session, or a self-care for everyday aches and ailments (Hidayat, 2019).

4.2 Constipation

A study of breast cancer patients undergoing Chemotherapy found that the most common side effect was constipation (52%). Other studies have also revealed that constipation is one of the most common and painful side effects of cancer treatment (Hanai *et al.*, 2016). Constipation causes severe physical symptoms such as intestinal obstruction and psychological symptoms such as anxiety and stress. Constipation harms the quality of life; thus, appropriate measures are needed for intervention (Edianto *et al.*, 2020). Cancer patients usually use many drugs to reduce Chemotherapy's side effects but prefer nonpharmacological interventions (Hanai *et al.*, 2016).

Research that Wang has conducted shows that short-term acupressure effectively reduces constipation symptoms among patients with advanced cancer. This is in line with the investigation of Mao *et al.* (2021). *Transcutaneous Acupoint Electrical Stimulation* effectively reduces constipation in NSCLC patients receiving Chemotherapy and is a safe and practical nursing intervention. The results of the study conducted by Yildirim *et al.* (2022) stated that this experiment showed that 4-week acupressure is an effective way to improve the quality of life and reduce the symptoms of subjective and objective constipation in patients with opioid-induced constipation.

4.3 Comfort

Comfort is a fundamental and essential necessity in palliative nursing care. Patients in palliative care often experience physical, psycho-spiritual, socio-cultural, and environmental discomfort. However, comfort has not been the focus of health workers' attention in Indonesia (Nuraini *et al.*, 2017). Comfort is not only viewed from a physical point of view but also needs to be emphasized the importance of psychospiritual comfort, which can also directly affect the stages of the wound healing process (Nurachmah *et al.*, 2017).

Treatment therapy undergone by cancer patients has severe side effects physically and mentally (Nayak et al., 2017). Some side effects, such as headache, myalgia, hypotension, urinary retention, and constipation, can cause discomfort in cancer patients.

Therefore, complementary therapies are needed to reduce pain due to the symptoms caused (Fatma *et al.*, 2018). According to research, Topdemir & Saritas (2021) state some patients who get reiki and acupressure treatment, pain levels decrease, comfort levels increase, and differences between groups are found to be significant (p <0.05). A cursor is a simple, noninvasive, safe, and economical procedure to improve the comfort of patients undergoing gastric cancer surgery. Acupressure at P6 and ST36 acupoints can improve postoperative comfort by reducing pain and shortening the time until the first flatus. However, additional research is needed to explain how acupressure can improve postoperative outcomes (Hsiung et al., 2015).

In practice, holistic nursing requires a nurse who can integrate self-care and responsibility and have spiritual aspects reflected in everyday life. A nurse is expected to increase self-awareness of internal relationships within herself and external relationships with others, with the environment, and with her God. It is this awareness that will facilitate the healing of patients so that the practice of nursing holistically can align with the philosophy of complementary medicine approaches (Putri & Amalia, 2019). A nurse who performs treatment holistically has a role as a tool and facilitator in the healing process of patients. A nurse equipped with various experiences about health, beliefs, values, hopes, and creativity coupled with knowledge and expertise through further nursing research will treat patients as well as possible. The nurse has performed some complementary actions, while complementary therapy focuses on viewing humans as holistic beings. However, complementary measures are not the only therapy to treat or cure patients because complementary measures serve as a complement to conventional medical measures.

4.4 Study Limitations

It is possible that some eligible studies were missed, such as studies published in languages other than English and studies not published in *peer-reviewed* journals. Although the review of this study did not limit the public year, it still found a gap because most of the research taken was published after 2009 and above.

5. Conclusion

This thematic sis review identified ten studies that could influence the effectiveness of acupressure therapy administration against constipation symptoms and comfort levels in cancer patients undergoing Chemotherapy. Policy development in nursing practice where nurses are currently required to improve knowledge and skills so that they can be applied in nursing practice, as well as abilities about the provision of complementary therapies that are expected to improve services in nursing care so that client and nurse satisfaction together can increase. Complementary therapy is one way for nurses to create a therapeutic environment by using themselves as a tool or healing medium to help others with health problems. Complementary therapies are used in conjunction with conventional k medical therapy.

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References

- [1] Belsey, J., Greenfield, S., Candy, D., & Geraint, M. (2010). Systematic review: Impact of constipation on quality of life in adults and children. In *Alimentary Pharmacology and Therapeutics* (. 938–949). https://doi.org/10.1111/j.1365-2036.2010.04273.x
- [2] Edianto, Waluyo, A., Yona, S., & Gultom, Y. (2020). Application of Auricular Acupressure To Reduce Constipation of Chemotherapy Patients. Journal of Nursing, 5(2), 161–170.
- [3] Fatma, L. P. E., CHoiriyah, M., & Hidayah, R. (2018). The effectiveness of acupressure against decreased vomiting nausea due to Chemotherapy and pain in breast cancer patients. *Journal of Public Health*, 3(2), 75–83.
- [4] Fitrullah, & Rousdy, A. (2017). Effectiveness of Acupressure at the Zusanli (ST-36) Acupoint as a Comfortable Treatment for Diabetes Mellitus: A Pilot Study in Indonesia. *JAMS Journal of Acupuncture and Meridian Studies*, 10(2), 96–103. https://doi.org/10.1016/j.jams.2016.12.003
- [5] Hanai, A., Ishiguro, H., Sozu, T., Tsuda, M., Arai, H., Mitani, A., & Tsuboyama, T. (2016). Effects of a self-management program on antiemetic-induced constipation during Chemotherapy among breast cancer patients: a randomized controlled clinical trial. *Breast Cancer Research and Treatment*, 155(1), 99–107. https://doi.org/10.1007/s10549-015-3652-4
- [6] Haryani, S., & Misniarti. (2020). The Effectiveness of Acupressure in Reducing the Pain Scale of Hypertensive Patients in the Working Area of the Perumnas Health Center. *Rafflesia Journal of Nursing*, 2(1), 21–30. https://doi.org/10.33088/jkr.v2i1.491
- [7] Hidayat, A. A. (2019). Complementary therapies-alternatives: search for non-medical complementary treatment interventions. Scholarly
- [8] Hsiung, W. T., Chang, Y. C., Yeh, M. L., & Chang, Y. H. (2015). Acupressure improves the postoperative comfort of gastric cancer patients: A randomized controlled trial. *Complementary Therapies in Medicine*, 23(3), 339–346. https://doi.org/10.1016/j.ctim.2015.03.010
- [9] Joanna Briggs Institute. (2017). Critical Appraisal Checklist for Randomized Controlled Trials. The Joanna Briggs Institute. https://www.unisa.edu.au/contentassets/72bf75606a2b4abcaf7f17404af374ad/1g-jbi_rcts_appraisal_tool20171.pdf

- [10] Karabey, T., & karagözoğlu, Ş. (2021). The effect of manual pressure after subcutaneous injection on pain and comfort levels. *Journal of Vascular Nursing*, 39(4), 134–139. https://doi.org/10.1016/j.jvn.2021.09.003
- [11] Kashani, F. L., Vaziri, S., Akbari, M. E., Jamshidifar, Z., Sanaei, H., & Givi, F. (2014). Stress Coping Skills Training and Distress in Women with Breast Cancer. In *Procedia Social and Behavioral Sciences* (Vol. 159, pp. 809–813). https://doi.org/10.1016/j.sbspro.2015.09.001
- [12] Ministry of Health. (2015). Stop Cancer: The situation of cancer: Health Data and Information Center of the Ministry of Health of the Republic of Indonesia.
- [13] Kirca, A. Ş., & Kanza Gül, D. (2021). Effects of self-acupressure on pregnancy-related constipation: A single-blind randomized controlled study. *Explore*, *17*(5), 463–468. https://doi.org/10.1016/j.explore.2020.07.004
- [14] Komariah, M., Mulyana, A. M., Maulana, S., Rachmah, A. D., & Nuraeni, F. (2021). Literature Review Related To The Benefits Of Acupressure Therapy In Overcoming Various Health Problems. *Journal of Medika Hutama*, 02(04), 1223–1230. http://jurnalmedikahutama.com
- [15] Li, M. K., Lee, T. F. D., & Suen, K. P. L. (2014). Complementary effects of auricular acupressure in relieving constipation symptoms and promoting disease-specific health-related quality of life: A randomized placebo-controlled trial. *Complementary Therapies in Medicine*, 22(2), 266–277. https://doi.org/10.1016/j.ctim.2014.01.010
- [16] Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *PLoS Medicine*, 6(7). https://doi.org/10.1371/journal.pmed.1000100
- [17] Mao, T., Liu, X., Cheng, Q., & Chen, Y. (2021). Transcutaneous Acupoint Electrical Stimulation on Chemotherapy-Induced Constipation for Non-Small Cell Lung Cancer Patients: A Randomized Controlled Trial. *Asia-Pacific Journal of Oncology Nursing*, 8(4), 385–392. https://doi.org/10.4103/2347-5625.311129
- [18] Nayak, M. G., George, A., Vidyasagar, M., Mathew, S., Nayak, S., Nayak, B. S., Shashidhara, Y., & Kamath, A. (2017). Quality of Life among Cancer Patients. *Indian Journal of Palliative Care*, 23(4), 445–450. https://doi.org/10.4103/IJPC_IJPC_82_17
- [19] Nurachmah, E., Kristianto, H., & Gayatri, D. (2017). The comfort aspect of chronic wound patients is reviewed by transforming growth factor 81 and cortisol levels. *Makara*. *Health*. 5(1), 73–80.
- [20] Nuraini, T., Gayatri, D., Rachmawati, I. N., & Nur, I. (2017). Comfort assessment of cancer patient in palliative care: A nursing perspective. International Journal of Caring Sciences, 10(1), 209–215.
- [21] Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *The BMJ*, *372*. https://doi.org/10.1136/bmj.n71
- [22] Pangribowo, S. (2019). The Burden of Cancer in Indonesia. *Health Data and Information Center of the Ministry of Health of the Republic of Indonesia*, 1–16.
- [23] Park, J. H., Jin, E. Y., Kang, M. Y., Joung, Y. S., & Kim, G. S. (2009). Symptom experience and quality of life in breast cancer survivors. *Journal of Korean Academy of Nursing*, 39(5), 613–621. https://doi.org/10.4040/jkan.2009.39.5.613
- [24] Princess, D. M. P., & Amalia, R. N. (2019). Complementary Therapies: Concepts and Applications in Nursing. New Library.
- [25] Robinson, N., Lorenc, A., & Liao, X. (2011). The evidence for Shiatsu: A systematic review of Shiatsu and acupressure. *BMC Complementary and Alternative Medicine*, 11. https://doi.org/10.1186/1472-6882-11-88
- [26] Shin, J., & Park, H. (2018). Effects of Auricular Acupressure on Constipation in Patients With Breast Cancer Receiving Chemotherapy: A Randomized Control Trial. Western Journal of Nursing Research, 40(1), 67–83. https://doi.org/10.1177/0193945916680362
- [27] Tanriverdi, S., & Saritaş, S. (2018). The effect of acupressure on postoperative pain of lumbar disc hernia: A quasi-experimental study. Complementary Therapies in Clinical Practice, 32(February), 12–16. https://doi.org/10.1016/j.ctcp.2018.04.002
- [28] Topdemir, E. A., & Saritas, S. (2021). The effect of Acupressure and Reiki application on Patient's pain and comfort level after laparoscopic cholecystectomy: A randomized controlled trial. Complementary Therapies in Clinical Practice, 43(April). https://doi.org/10.1016/j.ctcp.2021.101385
- [29] Wang, P.-M., Hsu, C.-W., Liu, C.-T., Lai, T.-Y., Tzeng, F.-L., & Huang, C.-F. (2019). Effect of Acupressure on Constipation in With Advanced Cancer. Supportive Care in Cancer.
- [30] Yildirim, D., Kocatepe, V., & Talu, G. K. (2022). The efficacy of acupressure in managing opioid-induced constipation in patients with cancer: A single-blind randomized controlled trial. *Supportive Care in Cancer*, *30*(6), 5201–5210. https://doi.org/10.1007/s00520-022-06947-1