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Abstract

Chronic pain that is subjective is experienced by patients with advanced cervical cancer. Simple movements are used in spiritual emotional freedom technique (SEFT) therapy, a therapeutic approach that improves performance and achievement, addresses psychological and physical pain issues, and promotes happiness and serenity in life. In this systematic review study, we evaluate how SEFT affects patients with cervical cancer who have had chemotherapy and radiation treatment. Using databases from 2003 to 2023, including Google Scholar, PubMed, ScienceDirect, PsycINFO, and Ovid, this study employs a systematic review methodology. The keywords “spiritual emotional freedom technique” and “pain in cervical cancer post-chemoradiation” are used to search for relevant studies. After selecting and analyzing the studies, the results show that SEFT has a positive impact on reducing pain in cervical cancer patients who have undergone chemotherapy and radiation treatment.
freedom technique (SEFT), “emotional freedom technique (EFT),” and “cervical cancer” form the basis of the search strategy. Experiments and observational studies with a minimum sample size of two participants involving patients with cervical cancer meet the inclusion criteria. The results show that among patients with post-chemoradiation cervical cancer, SEFT therapy is beneficial in lowering pain, stress, and depression. Cancer patients who experience pain may see a reduction in their quality of life as well as physical health issues. Cervical cancer patients can experience marked improvements in their pain, stress, and depression when the SEFT therapy theory is applied.

Introduction

Most cases of cervical cancer are caused by infection with human papillomavirus (HPV) containing deoxyribonucleic acid. HPV is identified in approximately 95% of malignant cervical lesions. The majority of HPV infections are temporary and will resolve spontaneously. Various risk factors for developing cervical cancer have been identified, encompassing as many as 14 factors, including low socioeconomic status, low education level, early age at first coitus, multiple sexual partners, early age at first pregnancy, multiparity, long-term use of oral contraceptives, history of sexually transmitted infections (including herpes simplex virus type 2), history of genital warts, smoking, a diet low in folate, carotene, and vitamin C, lack of routine cytological screening or previous abnormal smears, human immunodeficiency virus, and immunosuppression.1

Cervical cancer ranks as the fourth most common cancer among women globally, with an estimated 604,000 new cases and 342,000 deaths in 2020. Approximately 90% of new cases and deaths worldwide in 2020 occurred in low- and middle-income countries.2 According to 2020 Global Cancer Observatory data, as many as 36,633 (17.2%) new cases were diagnosed in Indonesia, placing cervical cancer as the second most common cancer after breast cancer. Based on the report, cervical cancer cases occur at a rate of 24.4 per 100,000 population, with an average death rate of 14.9 per 100,000 population.3

Chemotherapy is a treatment for diagnosed cervical cancer patients. The impact of chemotherapy includes nausea, vomiting, pain, fatigue, diarrhea, and hair loss, as well as psychological effects such as worry and anxiety.4 Pain is the most common complaint among cervical cancer patients. Uncontrolled severe pain can interfere with daily activities and necessitates adequate pain management to maintain functionality. Pain management includes pharmacological and non-pharmacological approaches.5-7 In pharmacological management, patients receive painkillers post-chemotherapy. Non-pharmacological pain management methods, such as spiritual emotional freedom technique (SEFT) therapy, are implemented in the treatment room by nurses.
SEFT is an adaptation of Emotional Freedom Technique (EFT) therapy, which has been utilized in various studies worldwide to address fear, paranoia, obsessiveness, depression, and other psychological disorders.\textsuperscript{8} Emotional Freedom Technique, the keyword contained is the free flow of energy meridians in the human body.\textsuperscript{9} To overcome pain and fear in dealing with a disease, the method is considered effective and efficient because it costs nothing, is easy to do, and doesn’t take long as long as the patient is routine and requires concentration to do it.\textsuperscript{8}

The advantages of SEFT compared to other techniques or methods of therapy or counseling or training are: i) easy to learn and easy to practice by anyone; ii) quickly feel the results; iii) cheap (once learned we can use it forever, at various problems); iv) the effectiveness is relatively permanent; v) if practiced correctly, there are no pain or side effects, so it is very safe to be practiced by anyone; vi) universal (can be applied to any physical or emotional problems).\textsuperscript{8}

This SEFT will also help with pain due to cancer treatment, such as cervical cancer. The chemotherapy method of treatment has side effects caused by the drugs used, not only destroying cancer cells but also attacking healthy cells, especially cells that divide very quickly. The effects that appear in cervical cancer patients undergoing chemotherapy are the physical, physiological, social, and spiritual responses.\textsuperscript{10-12}

In terms of physiological impact and benefits, EFT has been shown to: i) lower levels of stress hormones such as cortisol; ii) reduce symptoms such as pain and traumatic brain injury; iii) produce epigenetic effects on stress gene expression; iv) improving general markers of health such as resting heart rate, blood pressure, and immunoglobulins.\textsuperscript{13}

Research by Rumambi et al. demonstrated that SEFT intervention can serve as a non-pharmacological therapy for pain management in advanced breast cancer patients.\textsuperscript{14} Based on this data, the authors aim to conduct a systematic review of the effect of SEFT on pain in cervical cancer patients post-chemoradiation.

Materials and Methods

The systematic review conducted in this study adhered to the rigorous guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020, as shown in Figure 1.\textsuperscript{15} The search for journals used as sources in this study came from journals related to the research topic using Google Scholar, PubMed, ScienceDirect, PsycINFO, and Ovid databases with publications from 2003-2023. The keywords used were based on the terms ‘Spiritual Emotional Freedom Technique (SEFT)’ AND ‘Emotional Freedom Technique (EFT)’ AND ‘cervical cancer’. After identifying the included articles, cross-references were examined to discover any additional relevant studies.
In evaluating the validity of the study, the critical appraisal tool developed by the critical appraisal skills program was employed. This tool facilitated the systematic assessment of key aspects of the systematic review, ensuring methodological rigor and minimizing bias. By addressing key questions pertaining to the validity of the study, the results obtained from this systematic review can be interpreted with confidence. Additionally, the systematic review’s findings, once synthesized and analyzed, will provide valuable insights into the efficacy of SEFT and EFT in the context of cervical cancer management. This, in turn, has the potential to inform clinical practice and guide decision-making at the local level, ultimately contributing to improved patient outcomes.

All selected studies fulfilled the following criteria: experimental studies and case studies reporting the effect of SEFT or EFT in cervical cancer patients and the minimum research sample is two people. Excluded were studies that did not report the effect of SEFT or EFT, participants who were not cervical cancer patients, and articles for which the full text was not available. Cross-sectional, cohort, and systematic reviews were also omitted.

Results

Based on the results of a systematic review of the six articles collected and the author’s analysis, it was found that there was a significant effect on the levels of pain, depression, and stress after the SEFT intervention, there was a decrease in the levels of pain, depression, and stress in cervical cancer patients (Table 1).16-21

Discussions

Conditions of chronic pain and fatigue pose a challenge to biomedical models due to psychological factors associated with their etiology and maintenance, including depression, anxiety, and somatization. Individuals with chronic pain and fatigue are more likely to use prayer and seek spiritual support as coping methods than the general population. People with chronic pain and fatigue who are both religious and spiritual are more likely to experience better psychological well-being and employ positive coping strategies.22

SEFT therapy incorporates relaxation techniques, which are a form of mind-body therapy from complementary and alternative therapies in nursing. SEFT is a technique that combines the body’s energy system (energy medicine) and spiritual healing by tapping certain points in the body. There are two versions of SEFT: the full version and the shortcut version. Both consist of three simple steps, with the difference lying only in the third step (the tapping). In the shortcut version, tapping is done at only nine points, while in the full version, tapping is performed at 18 points.8

The three steps SEFT technique is a suggestion to stimulate the nerves of the brain.
The set-up

The set-up aims to ensure that our body’s energy flow is directed properly. Steps were taken to neutralize “psychological reversal” or psychological resistance (usually in the form of spontaneous negative thoughts or beliefs. For example: (I am sad because I often get angry). The sentence to say is “Oh Allah/God… even though my head is dizzy because I am often angry, I am sincere, I completely surrender to You”. The set-up consists of two activities. First, is to say the sentence above with full humility, and sincerity, and surrender three times. The second, is to say it with feeling, pressing the chest precisely in the afternoon spot (pain point = the area around the upper chest which if pressed feels a bit painful) or tapping with two fingertips on the karate chop. After pressing the pain point or tapping on the karate chop while saying the set-up sentence as above, we continue with the second step “the tune-in”.

The tune-in

For physical problems, do a tune-in by feeling the pain experienced, then directing the mind to the place of pain, accompanied by heart and mouth saying: “Oh Allah/God, I am sincere, I surrender…” or “Oh Allah/God, I sincerely accept my pain Here, I surrender to You my healing.”

For emotional problems, tune-in is done by thinking about certain specific things or events that can generate negative emotions that we want to get rid of. When there is a negative reaction (anger, sadness, fear, and so on), our hearts and mouths say, “Oh Allah/God... I am sincere, I surrender”. Simultaneously with this tune-in we do the third step, namely tapping.

All of the above steps were carried out 3 times for 30 minutes. When finished, respondents were asked to express their feelings when doing SEFT and the obstacles they faced. In addition, respondents’ feelings were also examined after SEFT (on a scale of 1-10) and ended with a post-test. In this process, tune-in accompanied by tapping, we neutralize negative emotions or physical pain.

The tapping

Tapping is tapping lightly with two fingertips at certain points on the body while continuing to tune-in. These points are the key points of the major energy meridians which if we tap a few times will have an impact on neutralizing emotional disturbances or pain that is felt so that the body’s energy flow runs normally and is back in balance. The following details the key points of the major energy meridians.

For the short version, tapping is only done on the first nine points (gamut procedure) in the table. As for the full version after completing the nine gamut procedures, the final step is to repeat the
tapping from the first to the 17th point (ending in the karate chop) and ends by taking a deep breath and exhaling while giving thanks (Alhamdulillah).  

Of the six journals reviewed, three demonstrate that SEFT therapy can effectively reduce pain in cervical cancer patients.

Research by Hakam et al. found that the combination of SEFT intervention and analgesic therapy is more effective for reducing pain in cancer patients than analgesic therapy alone. Quasi-experimental were used in this study using pre-test and post-test designs with a control group. Samples, 20 respondents (in two groups). The intervention group received SEFT intervention combined with analgesic therapy and the control group was given only analgesic therapy. SEFT intervention was implemented after administrating analgesic, for 5-10 minutes every day for five days. The pain was measured using a numeric rating scale (NRS). The average pain of respondents with stage IIb cervical cancer in the intervention group using analgesic therapy in combination with SEFT tended to lower the average pain scale compared to the control group using only analgesic therapy. For further research, it is recommended that the number of respondents be greater and the type of pain that is acute.

Research by Safitri and Machmudah showed a decrease in the pain scale from moderate to mild in stage IIIB cervical cancer patients with deep breathing relaxation therapy intervention and SEFT therapy.

Case analysis

For the first day, the pain scale was 4, until on the third day the pain scale decreased to 3, for cases the first 2 days the pain scale was 3, until the third day it decreased to 2. The results of this case study indicate that deep breathing relaxation and therapy SEFT can reduce the pain scale. In this case, the researchers used two respondents of cervical cancer patients with stage IIIB. The SEFT works on more or less the same principles as acupuncture and acupressure. This technique seeks to stimulate key points along the 12 energy pathways (energy meridians) of the body which are very influential on our health. Non-pharmacological therapy of breathing relaxation and SEFT therapy can reduce pain scale in cervical cancer patients. The weakness of this case study is the room constraints when the therapy was carried out, namely the situation that was not a little supportive because of the crowds of patient attendants which resulted in the ineffectiveness of the actions taken. Patients become less concentrated when doing therapy. Future research is expected to increase the number of samples and therapy is carried out in calm environmental conditions so that the sample can feel the solemnity of this therapy.
Research by Niken showed there were differences before and after SEFT therapy in participants who complained of pain. The changes that occurred physiologically and psychologically were felt by each participant. The implementation of this therapy begins with the patient being able to tell in advance the negative feelings he is feeling. The results of interviews regarding SEFT therapy showed that participants said that they had experienced and experienced a lot of changes after 3 consecutive days of SEFT therapy, especially in their thoughts, feelings of peace, calm and feeling lighter, relaxed, and accepting of what was happening. This shows that the participants become aware of the spiritual side which helps calm the participants’ souls, so that the participants are calmer, relaxed, and think positively. The spiritual beliefs that the participants already have provide a sense of relaxation and positive hope so that they are expected to reduce the pain they are experiencing. The application of case studies using SEFT theory has a meaningful influence on reducing pain.\(^{18}\)

In line with previous studies that showed that SEFT therapy affected reducing pain in patients after transurethral prostate resection surgery.\(^{23}\) Previous studies have found that 30 minutes of EFT therapy can reduce severe to moderate pain in 40% of patients.\(^{24}\) In a study conducted by Church and Nelms, in a population with a frozen shoulder, 30 minutes of EFT therapy was associated with a reduction in psychological distress and pain.\(^{25}\) Another study conducted on 216 healthcare workers found a significant 68% reduction in pain and a 41% reduction in pain in patients with post-traumatic distress syndrome (PTSD).\(^{9,26}\) Functional magnetic resonance imaging analysis showed the post-EFT treatment significantly decreased connectivity between the medial prefrontal cortex (pain modulation area) and bilateral gray matter areas in the posterior cingulate cortex and thalamus, both areas associated with pain modulation and catastrophe. Psychological respondents were also found to support the effect of EFT interventions in reducing chronic pain and its impact.\(^{27}\) The relaxed condition elicited after SEFT can reduce the pain intensity of cervical cancer patients, thus reducing the patient’s stress.

Of the six journals that have been reviewed, two of them show that SEFT therapy can reduce stress in cervical cancer patients. The research conducted by Desmaniarti and Avianti used a quasi-experiment design in stage I to III cervical cancer patients undergoing chemotherapy as many as 68 people divided into two groups, namely the treatment group of 34 people and the control group of 34 people. The treatment group received SEFT guidance individually. The research showed that stress in cervical cancer patients decreased significantly after the SEFT intervention. Although the decrease in stress occurred in both groups of respondents, it appeared that the average decrease in stress in the treatment group was greater than that in the control group.\(^{19}\)

In line with previous studies showing that the SEFT intervention helps reduce stress in patients with acute coronary syndrome.\(^{28}\) Spiritual therapy affects the activity of the sympathetic nervous
system, the effect of relaxation is that the rhythm of breathing becomes slower, the pulse slows down, and blood pressure drops reducing oxygen consumption of the heart muscle and muscle tension. The relaxation response also affects the mental state and reduces muscle tension to create a comfortable atmosphere, which can reduce stress and also affect psychoneuroendocrine interactions.29

Of the six journals that have been reviewed, one of them shows that SEFT therapy can reduce the level of depression in cervical cancer patients. Based on the facts shown in the research by Wijayati et al., SEFT therapy reduces the level of depression in cervical cancer patients. Respondents experienced depression, a psychological reaction that can appear after a patient is diagnosed with cervical cancer. Generally, they feel mental shock, fear, unable to accept reality, to a state of depression. Management of depression in patients with cervical cancer can be done through independent nursing actions in the form of SEFT. It is necessary to develop a minimal quasi-experimental research design by including a control group to reduce research bias.21

Depression in cancer patients can be caused by several factors, namely related to the disease (prognosis, severity, pain, and diagnosis), and the patient’s individual internal (fear of death, feelings of helplessness, changes in self-image, age, education, and social roles). Treatment (side effects, therapy costs, length of treatment, repeated treatment), and the medical team (lack of communication and information).30 With SEFT therapy, the patient is more willing to accept the disease in his body.

In line with previous research which found an effect before and after SEFT therapy in depressed patients. The use of SEFT therapy must be carried out properly, starting from the therapeutic steps to the pronunciation of the therapy, because it is very influential in depressed patients.31 The results of other studies state that there is a difference in the decrease in the level of depression in heart failure patients who receive spiritual guidance, where spiritual guidance can increase social motivation, and physical symptoms and improve the health status associated with depression.32 A meta-analysis study showed that clinical EFT was highly effective in reducing depressive symptoms in various populations.33 The study by Bach et al. adds to the evidence base for EFT as being an effective mental health intervention. It also shows that EFT simultaneously enhances various health markers in various physiological systems. Experienced participants significant reduction in pain, anxiety, depression, and PTSD.34

The findings from the six review articles can be used to support or strengthen statements regarding the impact of SEFT on pain reduction. The study by Hakam et al. (2009) indicates that the combination of SEFT intervention with analgesic therapy is more effective in reducing pain in cancer patients compared to using analgesic therapy alone. This suggests that SEFT can provide additional benefits in managing pain in cancer patients.
The findings of the case study by Safitri and Machmudah state that relaxation techniques, deep breathing, and SEFT therapy can reduce the pain scale. This suggests that SEFT could be part of an effective approach in reducing pain in patients.\textsuperscript{17}

The findings by Niken \textit{et al.} show that the application of case studies using the SEFT theory has a significant effect in reducing pain. This provides additional support for the effectiveness of SEFT in managing pain at the individual level.\textsuperscript{18}

The study by Desmaniarti and Avianti indicates that stress in cervical cancer patients significantly decreases after SEFT intervention. This reduction in stress can positively influence patients’ perception and experience of pain.\textsuperscript{19}

The findings from Maryatun’s research show differences in stress levels before and after SEFT intervention in the intervention group. With these statistically significant differences, it can be concluded that SEFT has the potential to reduce stress levels in patients.\textsuperscript{20}

The results of the study by Wijayati \textit{et al.} demonstrate a significant decrease in depression scores after SEFT intervention. This significant decrease in depression scores suggests that SEFT can help reduce not only physical pain but also the emotional burden associated with cancer.\textsuperscript{21}

In SEFT practice, the patient’s spiritual aspects are given more attention by emphasizing solemn, sincere, and surrender aspects, and patients are convinced that the results to be obtained depend on the patient’s sincerity, submission, and belief in God. The more sincere, the more resigned, and the more confident God is who heals or calms the heart, the more optimal the results. The SEFT method is very useful in improving health, where the SEFT method can provide a relaxing effect to reduce or reduce pain. Stress and depression in cervical cancer patients also decreased significantly after the SEFT intervention.

The limitation of SEFT is that the key to the success of this method is a combination of five elements, namely belief, solemnity, sincerity, surrender, and gratitude starting from the stages of Set-Up, Tune-In, to Tapping. Various studies show that many of the main causes of treatment failure are neglect of one or all three of these things. In fact, the condition of the five elements in a person, especially in post-chemoradiation cervical cancer patients, is still difficult to control so that they have the same level for all aspects, which is the cause of the failure of the method.\textsuperscript{35} The limitations of this study are the lack of SEFT or EFT studies on pain in cervical cancer patients.

Conclusions

Based on research findings, SEFT demonstrates promise in reducing pain, depression, and stress levels among cervical cancer patients following chemoradiation treatment, potentially improving their quality of life and physical well-being. The integration of SEFT as an independent intervention
by nurses is recommended for managing pain, depression, and stress in cancer patients. Techniques incorporating spiritual and emotional elements may effectively reduce stress and enhance relaxation, potentially alleviating pain perception. Recommendations for patients include studying SEFT with a qualified practitioner, incorporating meditation or yoga practices, and maintaining open communication with their medical team to optimize pain management and receive emotional and spiritual support.

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Table 1. Studies enrolled in this systematic review.

<table>
<thead>
<tr>
<th>Author</th>
<th>Participants/studies/evens</th>
<th>Study type</th>
<th>Study name</th>
<th>Summary</th>
<th>Country setting</th>
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</thead>
<tbody>
<tr>
<td>Hakam et al. (2009)¹⁶</td>
<td>20 participants</td>
<td>Quasi-experimental</td>
<td>Spiritual emotional freedom technique (SEFT) intervention to reduce cancer patients’ pain</td>
<td>The combination of SEFT intervention and analgesic therapy is more effective for reducing pain in patients</td>
<td>Indonesia</td>
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<tr>
<td>Author</td>
<td>Participants/studies/events</td>
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<tr>
<td>Safitri and Machmudah (2021)(^{17})</td>
<td>2 participants</td>
<td>Case study</td>
<td>Pain reduction with combination intervention of breathing relaxation therapy and SEFT therapy in patients with stage IIIB cervical cancer</td>
<td>The results of this case study indicate that relaxation deep breathing and SEFT therapy can reduce the pain scale</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Niken et al. (2020)(^{18})</td>
<td>4 participants</td>
<td>Case study</td>
<td>The application of spiritual emotional freedom technique on pain in cancer patients</td>
<td>The application of case studies using the SEFT theory has a significant effect on reducing pain</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Desmaniarti and Avianti (2014)(^{19})</td>
<td>68 participants</td>
<td>Quasi-experimental</td>
<td>Spiritual emotional freedom technique decreasing stress on patients with cervical cancer</td>
<td>The results showed that stress in cervical cancer patients decreased significantly after the SEFT intervention</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Maryatun (2020)(^{20})</td>
<td>24 participants</td>
<td>Quasi-experimental</td>
<td>The effect of spiritual emotional freedom technique and supportive therapy on stress levels of cervical cancer patients</td>
<td>The results of this study indicate that there are differences in stress levels before and after it is carried out. SEFT in the intervention group ((P=0.000))</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Wijayati et al. (2020)(^{21})</td>
<td>33 participants</td>
<td>Pre-experimental</td>
<td>The effect of spiritual emotional freedom technique (SEFT) therapy on decreased depression level among cervical cancer patients</td>
<td>The results showed a decrease in depression scores from 28 (moderate depression) to 20 (clinical depression) after SEFT and changes in depression scores were statistically significant ((P=0.000)).</td>
<td>Indonesia</td>
</tr>
</tbody>
</table>

SEFT, spiritual emotional freedom technique.
Figure 1. Preferred reporting items for systematic reviews and meta-analyses of included studies -

**Identification of studies via databases and registers**

- Records identified in databases register (n=5); Total=670
  - Google Scholar (n=317)
  - Pubmed (n=71)
  - Science Direct (n=156)
  - PsycINFO (n=31)
  - Ovid (n=95)

- Records removed before the screening:
  - Duplicate records removed by the tool (n=376)
  - Records removed manually (n=0)

- Records screened (n=294)

- Records excluded (n=164)

- Reports sought for retrieval (n=130)

- Reports not retrieved (n=103)

- Reports assessed for eligibility (n=27)

- Reports excluded:
  - Non-cervical cancer (n=21)

- Studies included in the review (n=6)