



AN INFORMATION TECHNOLOGY-BASED SPIRITUAL EMOTIONAL FREEDOM TECHNIQUE (SEFT) THERAPY MODEL ON SLEEP QUALITY AND PREMENSTRUAL SYNDROME SCORES

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ABSTRACT

Premenstrual syndrome experienced by adolescent girls has many impacts, such as causing depression, which sometimes leads to suicidal thoughts or self-harm and others. The prevalence of premenstrual syndrome in Indonesia is 80.6% and in Semarang Polytechnic is 99%. By providing an information technology-based Spiritual Emotional Freedom Technique (SEFT) therapy model, it is expected to improve sleep quality and reduce premenstrual syndrome scores. This study used Research and Development (R&D) with a true experiment research design with a Pretest - Posttest Group Design. Non-probability sampling with purposive sampling technique was carried out to collect the sample. The results of the feasibility test with experts stated that the SEFT therapy model based on information technology deserved an average value of 88%. The information technology-based SEFT therapy model is effective to improve sleep quality and reducing premenstrual syndrome scores with a p-value of 0.00. The information technology-based SEFT therapy model is feasible to use as a medium to improve sleep quality and reduce premenstrual syndrome scores in adolescent girls.

Keywords: premenstrual syndrome; sleep quality; spiritual emotional freedom technique (SEFT)

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INTRODUCTION

Premenstrual syndrome is a set of symptoms that can occur in 7 to 10 days before menstruation or in the luteal phase menstrual cycle leading to physical, psychological and behavioral symptoms. It is known that in Indonesia the prevalence of premenstrual syndrome in 2019 was 80.6% (Sri sumarni, 2019). The prevalence of premenstrual syndrome at Semarang Polytechnic in 2022 was 99% (Emilinda, 2022). The dominant factors are premenstrual syndrome with symptoms of abdominal pain (26.9%), pain in the hip and joint area (24.6%), feeling depressed and inactive (20%) (Ilmi & Utari, 2018). A woman who experiences symptoms at a very severe level can cause functional impairment and reduced quality of life, where these symptoms are called premenstrual dysphoric disorder (PMDD) (Fatimah et al., 2016).

Based on these data, premenstrual syndrome in adolescent girls is still quite high and affects daily activities (Raval et al., 2016). One of those experiencing sleep disturbances that will be seen from the quality of one's sleep, where the symptoms of premenstrual syndrome can be exacerbated by the quality of one's sleep (Fitriana, 2019). Supported by a study which states that if a woman with poor sleep quality has the opportunity to suffer from moderate to severe

symptoms of premenstrual syndrome (Lutfiyati et al., 2021). Sleep and rest are part of the components of basic human needs. The amount of time for each stage and the number of cycles experienced by each person varies, depending on the amount of time spent sleeping (James Cousins, 2019). The sleep experienced by teenagers has a different pattern when compared to other ages, this can be caused by several changes that occur in teenagers at the end of puberty which often reduce and disrupt sleep time (Sari et al., 2021). Sleep disturbance factors in teenagers who can cause poor sleep quality due to lifestyle patterns and activities, such as doing assignments until late at night, playing games and long distances from school (Almira & Prasetyo, 2019).

Efforts to treat premenstrual syndrome often done by adolescents are rubbing eucalyptus oil to the stomach, drinking warm water, bathing with warm water, applying warm water compresses and deep breathing and taking drugs to reduce the pain for some adolescents (Hasan et al., 2017). Supported by Melania Wahyuningsih's research which stated that 51.7% of junior high school students' behavior in handling premenstrual syndrome was not optimal (Wahyuningsih & LIliana, 2018). One of the non-pharmacological therapeutic efforts that adolescents can do is the Spiritual emotional freedom technique (SEFT) which is a healing technique that can reduce mental and physical problems that can be caused by emotional and psychosomatic problems (Wijayati et al., 2020). The spiritual aspect is an important role in SEFT therapy, because it is what distinguishes SEFT therapy from other therapies such as cognitive behavioral therapy and emotional freedom technique (Revai, 2018). Spiritual Emotional Freedom Technique (SEFT) is given as one of the complementary treatments that can be used as a healing technique in solving physical and psychological problems through small touches (tapping) on the body's meridians (Roza et al., 2020).

Increasing public awareness toward the importance of health information can be done so quickly and easily due to the use of technology in the health sector (Nugroho et al., 2019). Nowadays, telehealth-based self-health management is widely developed, which has a positive impact on self-health programs. The various types of telehealth-based self-management of health and the components used provide a variety of options that can be applied according to patient needs (Elya Sespa, 2019). This situation is an opportunity to improve health for adolescent girls, especially regarding the management of premenstrual syndrome. SEFT therapy model based on application technology information that contains information related to handling premenstrual syndrome using SEFT therapy. Supported by research that provides mind healing technique long-distance method helps reduce the degree of adolescent menstrual pain and improve mood (Fikra et al., 2021). Smartphone-based educational media is an attractive alternative, most people utilize smartphones to access health information by being able to download various health applications (Rohmatika et al., 2020). In accordance with the aim of this research, it is to produce a SEFT therapy model based on information technology on the quality and score of premenstrual syndrome in adolescent girls. It is expected that adolescent girls who experience premenstrual syndrome can access this media as needed. It is also expected that the disorders of premenstrual syndrome experienced by adolescent girls will decrease and can be overcome independently (self-care) without dependence on painkillers.

METHOD

This research used Research and Development (R&D) with a true experiment research design with a Pretest-Posttest Group Design. The R&D method aims to develop information technology-based SEFT therapy for self-care of premenstrual syndrome experienced by adolescent girls. The Research and Development (R&D) research method is a research

method to find, develop, improve and produce products, then tested until a standardized product is produced where the result of the product can be a module, book, application, training or learning video. The population in this study were D3 midwifery students at level 1 and 2. The sampling used was Non-Probability with Purposive Sampling technique. The instruments used in this study include stress assessment questionnaires, sleep quality and premenstrual syndrome as well as technology-based SEFT therapy models. This research has obtained ethical permission from the Health Research Ethics Commission (KEPK) of the Ministry of Health Poltekkes Semarang with No. 078/EA/KEPK/2024.

RESULTS

The application feasibility test is carried out online by 3 validators with different expertise. This validity test was carried out to test the first minor hypothesis in this research using an expert validation instrument by looking at the Usability, Reliability, Functionality, Efficiency, Maintability and Portability aspects. The first validator is an IT expert. The second validator is midwife practitioners. The third validator is a psychology practitioner.

Tabel 1.
Expert Feasibility

Name	%	Average
Expert I	87	88
Expert II	88	
Expert III	90	

Measurement of Sleep Quality and Premenstrual Syndrome Score using this questionnaire was carried out on D3 Midwifery Poltekkes Semarang students with a total of 30 respondents.

Table 2.
Respondents Characteristics

Variable	f	%
Age		
19 years old	11	36,7
20 years old	16	53,3
21 years old	3	10,0
BMI		
Thin	4	13,3
Normal	22	73,3
Fat	4	13,3
Stress		
Non- stress	2	6,7
Mild stress	15	50,0
Moderate stress	13	43,3

Table 3.
Sleep Quality and Premenstrual Syndrome Frequency

Variable	Pretest		Posttest	
	f	%	f	%
Sleep Quality				
Good	9	14,7	11	18,3
Bad	21	85,3	19	81,7
Premenstrual Syndrome				
Normal			1	1,7
Mild	17	56,7	24	81,8
Moderate	11	36,7	5	16,5
Severe	2	6,7		

Table 4.
Analysist of Differences in Sleep Quality and Premenstrual Syndrome Score

Variable	Pretest		Posttest		p-value
	Mean	SD	Mean	SD	
Sleep Quality	6,47	1,961	7,30	7,17	0,00
Premenstrual Syndrome Score	23,90	7,508	20,53	5,399	0,00

DISCUSSION

Based on the results from table 1 above, it shows that expert I, as information technology expert, gave a feasibility score of 87% in the feasible category. Expert II as a material expert gave a feasibility value of 88% in the feasible category and expert III as a practitioner expert gave a feasibility value of 90% in the appropriate category. The average feasibility score is 88% in the feasible category. Expert validation results show that the information technology-based Spiritual Emotional Freedom Technique (SEFT) therapy model was declared feasible and also demonstrated as an educational medium and as a medium that can reduce premenstrual syndrome in adolescent girls. Table 2 shows the frequency distribution of respondent characteristics based on age, BMI (Body Mass Index) and stress. In this study, all respondents were aged 19-21 years consisting of 19 years 11 (36.7%) respondents, 20 years 16 (53.3%) respondents and 21 years 3 (10.0%) respondents. Entering the age of 20, the cycle usually starts to change. At this time, the ovulation process that occurs begins to be irregular. So that the incidence of premenstrual syndrome becomes erratic.

BMI with normal category was found to be 22 (73.3%) respondents, thin 4 people (13.3%), respondents and fat 4 (13.3%) respondents. According to the theory of DeRubies (2017) and Lubis (2016), the factors of age, stress and obesity reviewed through BMI can affect premenstrual syndrome. However, in this study, these variables could not affect sleep quality or premenstrual syndrome scores. Stress characteristics were found to be non-stressful 2 (6.7%) respondents, mild 15 (50.0%) respondents, moderate 13 (43.3%) respondents. According to research by Numiaty al (2011), stress can increase the incidence of premenstrual syndrome by 2.3 times. However, in this study stress was not associated with premenstrual syndrome. This could be because in this study the stress level was not too high, namely at mild to moderate levels. Table 3 shows the frequency of 30 respondents for each variable before and after being given the intervention. The pretest sleep quality variable showed that 21 (85.3%) respondents had poor sleep quality and 9 (14.7%) respondents had good sleep quality. The pretest premenstrual syndrome variable was found to be in the severe category for 2 (6.7%) respondents, moderate for 11 (36.7%) respondents, mild for 17 (56.7%) respondents. After being given the information technology-based SEFT model intervention for 7 days with a duration of 15 minutes, there was a change in frequency. The posttest sleep quality variable showed that 19 (81.7%) respondents had poor sleep quality and 11 (18.3%) respondents had good sleep quality. The posttest premenstrual syndrome variable was found to be in the moderate category for 5 (16.5%) respondents, mild for 24 (81.8%) respondents, normal for 1 (1.7%) respondent. These results show that there are differences in sleep quality and premenstrual syndrome before and after the intervention.

The results of statistical tests variable sleep quality and premenstrual syndrome scores showed a p-value of 0.00, which means that the effect of providing an information technology-based Spiritual Emotional Freedom Technique (SEFT) therapy model is effective to improve sleep quality and reduce premenstrual syndrome scores. This is in line with Babamahmoodi et.al.', (2015) study which shows that emotional freedom techniques effectively reduce symptoms of anxiety and insomnia in patients with PTSD (Nelms & Castel, 2016). Another study also

stated that there was an improvement in the quality of sleep with the provision of SEFT therapy for 3 consecutive days with a duration of 10-15 minutes in adolescents with insomnia cases (Fitriana, 2020). Various symptoms of premenstrual syndrome such as feelings of anxiety, reduced concentration, decreased sleep quality, loss of energy, headaches, abdominal pain, and breast pain that can be experienced on days 7 to 10 before menstruation (Prawirohardjo, 2011). Psychological symptoms are symptoms of premenstrual syndrome that are widely complained of, supported by research by Charisma Lumingkewas on complaining of behavioral symptoms such as fatigue, physical symptoms complained of, namely the appearance of acne with the biggest psychological symptom being mood swings (Lumingkewas et al., 2021).

Information technology-based Spiritual Emotional Freedom Technique (SEFT) therapy model performed for 15 minutes in 7 consecutive days can reduce symptoms of premenstrual syndrome. This study is in line with research on the effect of Spiritual Emotional Freedom Technique (SEFT) on reducing primary dysmenorrhea pain in adolescent girls (Murniati Ningsih, Nyna Puspita Ningrum, 2023). Supported by research that shows self-efficacy with acceptance and commitment therapy can increase psychological flexibility (Imamatul Faizah, Siti Nur Hasina, Ratna Yunita Sari, Riska Rohmawati, 2019). Light tapping performed on meridian energy points in accordance with the gate control theory proposed by Melzack & Wall's (1965) will close the gelatinous substance (SG) in the spinal cord and block pain impulses to the brain, in this condition a person will feel relaxed (Hirshkowitz et al., 2015)

CONCLUSION

The information technology-based Spiritual Emotional Freedom Technique (SEFT) therapy model was statistically proven to significantly improve sleep quality and reduce premenstrual syndrome scores in adolescent girls with a p-value of 0.00. When a patient prays calmly (accompanied by a heart of sincerity and surrender), the body will experience relaxation and cause a person to calm down. The steps in SEFT therapy are easy to perform, the learning process is fast and without complicated diagnostic procedures, using only light taps on 18 key points along the 12 energy bodies and the healing effects can be felt directly.

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