



Finger Hold Guided Imagery Relaxation Techniques Can Reduce Dysmenorrhoea

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ABSTRACT

Background: During menstruation, teenagers often experience pain, which is known as dysmenorrhea. In most cases, dysmenorrhea is very uncomfortable for adolescents in carrying out daily activities. So it is necessary to intervene in the form of relaxation techniques to reduce the scale of pain in the dysmenorrhoea. The relaxation technique taken is the finger grip relaxation technique. This study to determine the effect of finger hold guided imagery relaxation technique intervention to reducing primary dysmenorrheascale in adolescents.

Methods: The type of this research is Quasy experimental One Group Pretest Posttest research design. The measurement instrument used is finger hold guided imagery relaxation SOP and observation sheet. a total sampling was applied with 33 respondents.

Result: There is a significant effect of finger hold guided imagery relaxation technique intervention. This is evidenced by the results of the Wilcoxon test with p value < 0.05. Strengthened by the results of z count of -5.062 and z table -1.645, z count > z table.

Conclusion: Finger hold guided relaxation technique imagery is recommended for teenagers who have dysmenorrhea

Keyword: Dysminorrhoea; Finger Hold Guided Imagery Relaxation

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Background. Menstruation is an early stage for women to enter adolescence. Menstruation is periodic bleeding, i.e. blood discharge from the necrotic endometrium, which usually occurs about 14 days after ovulation in a 28-day cycle. Menstruation begins at the age of 9-12 years, but there are some small percentages who experience menstruation later.(Anurogo, D dan Wulandari, 2011).

Many problems are experienced by women when they are menstruating such as not having menstruation or heavy menstruation and prolonged menstruation, irregular menstruation, pain before menstruation and pain when menstruation comes(Laila, 2011). Symptoms that can be felt by women can occur physically or psychologically. When menstruation comes, many women experience pain so that it can interfere with daily activities. Menstrual pain is called desminorrhoea

The results of the Central Java Central Statistics Agency Census show that for adolescent girls who experience pain during menstruation as many as 11.78% of the total population of 32,548,687 people, and those experiencing dysmenorrhea there are 1,518,867 people (Ningsih, 2018).

From the results of a preliminary study by distributing questionnaires on October 12, 2020 aimed at young women aged 15-17 years. From the results of filling out the google form questionnaire, 15 girls in Neighborhood Association 3 experienced pain during menstruation as many as 12 teenagers (80%), Neighborhood Association 5 a number of 15 teenage girls who experienced menstrual pain as many as 9 teenagers (60%), Neighborhood Association 6 of 15 female adolescents experienced menstrual pain as many as 11 adolescents (73.3%), Neighborhood Association 7 a number of 15 female

adolescents experienced menstrual pain as many as 8 adolescents (53.3%), and in Neighborhood Association 9 there were 15 there are 13 adolescent girls who experience menstrual pain (86.7%). On average, young women who experience primary dysmenorrhea experience pain on a scale of 3-6. They usually do inhale and exhale technique (23.2%), imagine fun things (31.4%), clench their fingers (29.6%), massage the abdominal area (6.7%), some Usually they take an analgesic drug, mefenamic acid water, traditional herbs such as turmeric acid,. Some students also feel that they have lost their concentration in learning when they feel menstrual pain and there are also many students whose activities are disrupted because of the pain (Ribkha ltha Idhayanti, Munayarokh, 2019).

Dysmenorrhea can also have an impact on the activities or activities of women, especially teenagers. If a student experiences dysmenorrhea, their learning activities at school will feel disturbed and will not attend school. For example, a student who experiences dysmenorrhea cannot concentrate while study and learning motivation will decrease because of the dysmenorrhea that is felt during the learning process and sometimes someone asks for permission to go home because they cannot stand the dysmenorrhea they feel during menstruation(Diana Sari, Adnil Edwin Nurdin, 2015).

Beside experience the pain to feeling pain, primary dysmenorrhea can also cause nausea and vomiting, headaches, dizziness, fatigue, diarrhea, emotional instability during menstruation, and even fainting (Redeer, Martin, 2013). Dysmenorrhea that is not treated will have a bad impact and can cause losses, because women will experience paralysis. Dysmenorrhea is not dangerous but it is always experienced by a woman every month, if this is left alone it will be one of the causes of the symptoms of endometriosis (the inner lining of the uterine wall grows outside the uterus), which can significantly reduce women's health, quality of life and fertility.(Fitriana, 2019). Pain management can be given in two ways, namely

pharmacological and non-pharmacological methods. (Andarmoyo, 2013).

Finger grip relaxation techniques are very effective for reducing dysmenorrhea pain, this in accordance with the research by (Kalsum, 2017) which conducted research on the effect of finger grip relaxation techniques on decreasing dysmenorrhea pain intensity with the result that finger grip relaxation techniques were more effective for reducing dysmenorrhea pain. This is supported by research from (Sri Ramadina, 2014) who conducted research on the effectiveness of finger grip relaxation techniques on reducing dysmenorrhea with the results that finger grip relaxation techniques were more effective in reducing pain scale in dysmenorrhea.

And it is strengthened by research conducted by (Neila Sulung, 2017) explaining that there is an effect of finger grip relaxation techniques on reducing pain intensity in post appendectomy patients. Based on some of these studies, it turns out that finger grip relaxation techniques have an impact on reducing pain intensity.

Based on these problems, the authors are in to conduct research "The Effect of Finger Hold Guided Imagery Relaxation Techniques on Decreasing Primary Dysmenorrhea Pain Scale in Adolescents"

Methods. This type of research is a quasi experimental designs research with One Group Pretest Posttest research design. The population in this study were teenagers who experienced dysmenorrhea as many as 33 people who experienced premenopausal symptoms. The sampling technique in this research is total sampling. So the size of the sample taken in this study was 33 young women who had dysmenorrhea.

To see the difference before and after the intervention, the Wilcoxon test was used.

Result and Discussion.

a. Adolescent dysmenorrhea before intervention

Table 1. Frequency distribution of dysmenorrhoea level before finger hold guided imagery relaxation technique.

Category	frequency	Percentage (%)
Mild pain	28	84,4%
Moderate pain	5	15,2%
Total	33	100 %

Based on table 1 we can conclude that from the 33 respondents, 28% of the respondents were included in the mild pain category. These results were obtained from the acquisition of the respondent's pain count, namely as follows:

Table 2. Distribution of Respondents Dysmenorrhea Pain Items before the finger hold guided imagery relaxation technique

Pain Scale	Frequency	Percentage (%)
Scale 2	13	39,4%
Scale 3	15	45,5%
Scale4	4	12,1%
Scale 5	1	3%
Total	33	100%

Based on Table 2. can be concluded that the highest frequency of pain scale is on pain scale 3 which is 15 respondenst or 45,5 %

Based on table 1, the frequency distribution of the dysmenorrhoea pain scale before the finger hold guided imagery relaxation technique found that there were 28 respondents who experienced mild pain or 84.4%, 5 respondents who experienced moderate pain or 15.2%. When a woman experiences menstruation, things can cause pain, especially at the beginning of menstruation, but the degree of pain experienced varies). As in the results of the study, there were different pain categories, not all respondents were in the same category. For mild dysmenorrhea, dysmenorrhea occurs in a short time and the patient can resume his activities without feeling disturbed by the dysmenorrhea he feels (Fitriana, 2019).

These results are obtained from the acquisition of the respondent's pain count, which is as follows based on Table 2. Distribution of Dysmenorrhea Pain Items

Respondents before the finger hold guided imagery relaxation technique obtained answers per item of respondents' pain scale values. Respondents who got the most scores were on the pain scale 3, namely 15 people or 45.5%, then respondents with pain scale 2 were 13 people or 39.4% and respondents with pain scale 4 were 4 people or 12.1% and respondents with a pain scale of 5 as many as 1 person or 3%.

According to the medical mirror, this dysmenorrheal menstrual pain occurs since menarche, usually in the first months or years of menstruation. It usually occurs between the ages of 15 and 25 and then disappears in your late 20s or 30s. Respondent's pain scale is different and influenced by other factors as well. Everyone has risk factors for dysmenorrhea so that they have different pain scores/scales (Anurogo, D dan Wulandari, 2011). Dysmenorrhea pain is caused by various things.

The causes of dysmenorrhea are psychological and physical conditions such as stress, constriction of blood vessels, chronic disease, lack of blood, and decreased body condition (Purwahang, 2011). Primary dysmenorrhea is caused by contraction of the myometrium resulting in ischemia due to the presence of prostaglandins produced by the secretory phase of the endometrium. The molecule that plays a role in primary dysmenorrhea is prostaglandin F2a, which always stimulates uterine contractions, while prostaglandin E inhibits uterine contractions. There is an increase in prostaglandin levels in the endometrium when it changes from the proliferative phase to the secretory phase (Prawiroharjo, 2011).

The risk factors for dysmenorrhea obtained are: psychological factors: in girls who are emotionally unstable, even if they do not get an explanation about the process of menstruation, it will easily cause dysmenorrhea. Constitutional factors: factors that can reduce the body's resistance to pain. Factors in question such as anemia, chronic disease, and so on can cause dysmenorrhea (Zahra Aabedian, Mariam Kabirian, 2011).

b. Dysmenorrhoea pain level after intervention

Table 3. Frequency distribution of dysmenorrhea level after finger hold guided imagery relaxation technique.

Category	Frequency	Percentage (%)
No pain	8	24,2 %
Mild pain	25	75,8 %
Total	33	100 %

Based on table 3. it was found that most of the respondents experienced mild pain as many as 25 people or as much as 75.8%. Thus we can conclude that from the 33 respondents, 25 respondents were in the mild pain category. These results were obtained from the acquisition of the respondent's pain count, namely as follows:

Table 4. Distribution of Respondents Dysmenorrhea Pain Items after the finger hold guided imagery relaxation technique

Pain scale	Frequency	Percentage (%)
Scale 0	8	24,2%
Scale 1	18	54,55
Scale 2	7	21,2%
Total	33	100%

Based on Table 4. Respondents who get the highest frequency of respondents are on the pain scale 1, namely 18 people or 54.55%. Broadly speaking, respondents have been able to perform this relaxation technique optimally because most of the respondents experienced a decrease in the pain scale

Based on table 3. Frequency distribution of dysmenorrhoea level after finger hold guided imagery relaxation technique, it was found that respondents who experienced no pain were 8 people or 24.2%, respondents who experienced mild pain category were 25 people or 75.8%, respondents who experienced mild pain category were 25 people or 75.8%. moderate pain there are 0 people or as much as 0% and respondents who experience severe pain there are 0%. Thus we can conclude that from 33 respondents 8 respondents were included in the no pain category and 25 respondents were in the mild pain category.

As we can see, there is a decrease in the dysmenorrhea pain scale from before to after. From those before the intervention, there were no respondents who experienced no pain, then after the intervention there were 8 respondents who experienced no pain. Respondents who experienced mild pain category from 28 people to 25 people, and respondents who experienced moderate pain category from 5 to 0 people. In general, the interventions given have been able to reduce the intensity of pain. As we know that we can reduce or manage dysmenorrhea pain by pharmacological and non-pharmacological means. In this study, non-pharmacological methods are used, namely relaxation techniques.

Relaxation technique is a method that can be used to reduce anxiety and muscle tension. Imagery is a strategy that uses mental images (images) to aid relaxation. Clients can use imagination or imagine something to reduce pain. Imagination can be done in an easy way such as asking children to imagine something fun.

Imagination can be used more effectively in clients with chronic pain than acute pain, or severe pain. Researchers can teach clients to use imagination techniques (Pramadika, 2012). When the body is relaxed, there is no tension in the blood vessels in the uterus so that the uterus works in a relaxed (Ribkha Itha Idhayanti, Susilarini, 2017).

Specifically, the researcher used the finger hold guided imagery relaxation technique. Gripping and electrical stimulation of the transcutaneous nerves stimulate the skin to reduce pain, it also causes the release of endorphins, thereby inhibiting the transmission of painful stimuli. Cutaneous stimulation gives the client and family a sense of control over pain symptoms and treatment. Appropriate use of cutaneous stimulation helps reduce muscle tension that increases pain (Potter, P.A., & Perry, 2012).

In addition, according to (Pinandita, 2012), the decrease in pain felt by respondents was caused by holding a finger, it would produce impulses that were sent through non-nociceptor

afferent nerve fibers. This can happen because the formed imagination will be received as a stimulus by the various senses and will then be routed to the brain stem to the thalamus sensor.

Stimulus that reaches the thalamus will be formatted according to the language of the brain, a small portion of the stimulus is transmitted to the amygdala and the surrounding hippocampus, most of which is sent to the cerebral cortex, in the cerebral cortex a sensory association process occurs where stimuli are analyzed, understood, and compiled into images that will appear. and cause actual perception and affect pain receptors which can reduce pain intensity (Rosida, 2018).

b. The effect of finger hold guided imagery relaxation techniques on reducing primary dysmenorrhea pain scale in adolescent girls

The bivariate analysis in this study was used to prove the influence of the intervention using the Wilcoxon test, to see the difference between the level of the dysmenorrhea pain scale before and after being given the finger hold guided imagery relaxation technique with data from one group in pairs which had data that were not normally distributed and ordinal (categorical) data scale. Bivariate analysis here will prove changes before and after the intervention.

Tabel 5. *Wilcoxon Signed Ranks Test Pre-post Intervention*

Pain level before intervention		Mean Rank	Sum of Ranks
pain level after intervention	Negative Ranks	17,00	561,00
	Positif ranks		
Z score	-5,237		
P value	0,000		

Based on Table 5. Wilcoxon Signed Ranks Test for dysmenorrhea before and after the intervention of finger hold guided imagery relaxation techniques, it was found that the Negative Ranks value on N was 33, Chich means that all the respondents experience dysmenorrhea pain scale decreased after the intervention of finger hold guided imagery relaxation techniques. , which has a Mean Rank of 17.00 and a Sum of Ranks of 561.00.

Based on table 5. Test Statistics Wilcoxon obtained the results in the form of Z count that is -5,237. the Z table value with a significance of 0.05 is -1.645. Thus Z count > Z table. Which means that the finger hold guided imagery relaxation technique is able to reduce the dysmenorrhoea pain scale So Ha is accepted and Ho is rejected. strengthened by the obtained p-value of 0.000, therefore the p-value <0.05. This means that there is a difference before and after being given the finger hold guided imagery relaxation technique on the primary dysmenorrhoea pain scale in adolescents.

Menarche or first menstruation is an important event that occurs in girls who begin to enter adolescence. Menarche is also often considered a sign of a girl starting to mature. At this age, women need to experience dramatic changes, because they begin to produce sex hormones that will affect the growth and development of the reproductive system (Sri Rumini, 2014). During menstruation, most women will experience pain dysmenorrhea (Ribkha Itha Idhayanti, Munayarokh, 2019).

Pain is an unpleasant sensory and emotional experience associated with unpleasant actual and potential tissue damage that is localized to a part of the body or is often referred to as a "distraction" where the tissue feels like a prick, burning heat, twisting, like emotional feelings. fear and nausea (Potter, P.A., & Perry, 2012).

Many problems are experienced by women when they are menstruating such as not having menstruation or heavy menstruation and prolonged menstruation, irregular menstruation, pain before menstruation and pain when menstruation comes (Laila, 2011). Dysmenorrhea, was one of the most common complaints inthe women who come paramedic or to the clinic or doctor (Ribkha Itha Idhayanti, Arfiana, 2020).

Symptoms that can be felt by women can occur physically or psychologically. When menstruation comes, many women experience pain so that it can interfere with daily activities. Menstrual pain is called desminorrhea. Therefore, the researchers provided an

intervention in reducing dysmenorrhea pain, then the following results were obtained:

Based on Table 5. Wilcoxon Signed Ranks Test Dysmenorrhea before the intervention and after the finger hold guided imagery relaxation technique intervention it was found that the Negative Ranks value on N was 33, which means there were 33 respondents who experienced a decrease in the dysmenorrhea pain scale after the finger hold guided imagery relaxation technique intervention. , which has a Mean Rank of 17.00 and a Sum of Ranks of 561.00. In the Positive Ranks value, the N value is 0, either on the Mean Rank, or on the Sum of Ranks, which means that no respondents experienced an increase in the dysmenorrhea pain scale from before to after the finger hold guided imagery relaxation technique intervention. Ties is the same score/value obtained by the respondent.

In the results of this study, the ties value is 0. It means that there are 0 respondents who have the same pain scale value or score between before the intervention and after the intervention. Where the decrease in the score or value in this study shows the level of nerves is getting better because it shows the relaxation technique of finger hold guided imagery.

This is reinforced by the statistical results of Wilcoxon in this study, namely the results obtained in the form of Z count, which is -5.062. As is known, the Z table value with a significance of 0.05 is -1.645 . Thus $Z \text{ count} > Z \text{ table}$. So H_a is accepted and H_o is rejected. The meaning of the Z value in the results of this study shows that the finger hold guided imagery relaxation technique is able to reduce the pain scale in primary dysmenorrhea that is felt by women who experience menstruation by 5 times from the previous pain scale.

Finger grip relaxation techniques are very effective for reducing dysmenorrhoea pain, this agrees with research from (Sri Ramadina, 2014) which conducted research on the effect of finger grip relaxation techniques on decreasing dysmenorrhea pain intensity with the result that finger grip relaxation techniques were more effective for reducing dysmenorrhea pain.

Techniques on reducing dysmenorrhea with the results that finger grip relaxation techniques were more effective in reducing pain scale in dysmenorrhea. And it is reinforced by research conducted by (Neila Sulung, 2017) explaining that there is an effect of finger grip relaxation techniques on reducing pain intensity in post appendectomy patients.

Based on some of these studies, it turns out that finger grip relaxation techniques have an impact on reducing pain intensity. Reinforced by the obtained p-value of 0.000, therefore the p-value < 0.05 . This means that the finger hold guided imagery relaxation technique has a significant effect on reducing the level of dysmenorrhea pain in adolescents. This is in line with the theory (Purwahang, 2011) that along our fingers there are median nerves and channels or energy meridians that are connected to various organs and emotions, reflex points on the hands provide reflex (spontaneous) stimulation when holding hands.

The results of this study support previous research from Rosida that guided imagery techniques are effective for reducing pain levels at Dr. Moewardi Hospital Surakarta with p value $(0.000) < (0.05)$ (Rosida, 2018). When compared with the results of this study, it means that the guided imagery technique has a more significant effect in reducing pain. This is because guided imagery reduces pain by imagining pleasant images to relax the body.

According to (Risnawati, 2019) when holding fingers, gripping the fingers is done with gentle pressure, until you feel a pulse, so it should not be done by gripping too tightly. In addition, researchers combined guided imagery techniques. According to (Jihan Nisa Afdila, 2016) Guided Imagery therapy is one of the cognitive activities that can be used to reduce pain perception. And can be used in various circumstances, including reducing stress and dysmenorrhea pain. Respondents in this study when going to carry out Finger hold Guided Imagery there are several steps taken, namely: Preparation of the place (For the preparation of the place, look for a comfortable and quiet environment. According (Srinalesti Mahanani,

2017) A comfortable and calm environment is needed by the client to focus on finger hold guided imagery), Preparation time (The time used to do finger hold guided imagery is when the client is experiencing dysmenorrhea and this finger hold guided imagery is done for 15 minutes).

Conclusion and Suggestions. Before being given the finger hold guided imagery relaxation technique, most of the respondents experienced mild pain as much as 28 (84.4%), moderate pain as much as 5 (15.2%), and after being given the finger hold guided imagery relaxation technique most experienced a decrease in pain level. into mild pain as much as 25 (75.8%), and no pain as much as 8 (24.2%). There is an effect of giving the finger hold guided imagery relaxation technique to reduce the dysmenorrhea pain scale in adolescents with a p value of 0.000 (p value <0.05) and strengthened by a Z score of -5.062 which means that it is able to reduce the scale The pain in primary dysmenorrhea felt by adolescents who experienced menstruation was 5 times the previous pain scale.

Suggestion for Teenage Girls to Continuing the finger hold guided imagery relaxation technique according to what has been given as an independent action which will not only be useful in the current condition but can also be used in other conditions that require it. For Health Officers to Socializing about finger hold guided imagery relaxation therapy techniques, as the first step in managing the dysmenorrhea pain scale for adolescent girls.

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