Minsight
Midwifery Insight and Innovation Journal
E-ISSN : XXXX - XXXX
P-ISSN : XXXX - XXXX
Vol. 01, No. 01 (2025), p. 41-50
Available online at https://ejournal.unuja.ac.id/index.php/glowi

The Effect of Dzikir Therapy in Adolescents Against Primary Dysmennorrhea

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Abstract:
Primary dysmenorrhea is a problem encountered with no abnormalities in the genital apparatus. One of the non-pharmacological treatment is dzikir therapy can increase endorphin hormones are hormones that provide comfort and relieve pain. The purpose of this research to identify differences in pain scale Primary Dysmennorrhea experienced Teenegers before and after the control group and the group intervention, to determine the existence the Effect of Dzikir Therapy against Primary Dysmennorrhea. The research is a quantitative research by Quasy Experimental model Non-Equivalent Control Group Design. The sample of this researchace that consis of 25 respondents in the intervention group and 25 respondents in control group. The sampling technique by using purposive sampling. Gaved by using Wilcoxon Signed Rank Test and Mann Whitney U - Test. The result of the bivariate data analysis by using a Wilcoxon Signed Rank Test in the intervention group the values p=0.000 (p<0.05), while in the control group the value 1,000 (p>0.05). The Results of Mann Whitney test analysis of the differences decrease pain scale two groups by Mann Whitney test value-average pain reduction disminorea value difference before and after the intervention is given a value of 0,000. Inconclution There is The Effect of Dzikir Therapy Against Primary Dysmennorrhea on tennegers.

ARTICLE HISTORY
Received 03 September 2024
Revised 21 November 2024
Accepted 05 March 2025

KEY WORDS
Dzikir, Primary Dysmenorrhea, Adolescents

Please cite this article in APA style as:
Oktaria, Riski Resa. (2025). The Effect of Dzikir Therapy in Adolescents Against Primary Dysmennorrhea, 1(1), 41-50.

INTRODUCTION

Adolescence is a transition period from childhood to adulthood, which includes all the development and process of growing towards maturity which includes mental, emotional, social and physical maturity experienced as preparation for entering adulthood (Yulandasari et al., 2022). Apart from experiencing normal physical and emotional changes, teenage girls will experience the reproductive system, namely menstruation, periodically (Mamnukha, 2022). Menstruation is a state of endometrial tissue shedding due to the absence of mature eggs that are fertilized by sperm. This event is quite normal to experience so it can be ascertained that all normal women will experience this process (Amelia et al., 2022). However, in reality, many women experience menstrual problems, including dysmenorrhoea. Dysminorrhoea will be experienced by every woman who menstruates, where dysmenorrhoea will feel painful

and will cause discomfort in the body parts (Yulandasari et al., 2022). Primary dysmenorrhoea is menstrual pain that is not related to pathological disorders (Rosdiana, Firdayanti, 2023). Dysminorrhoea occurs due to differences in each person's pain threshold, the degree of pain and level of disturbance are certainly not the same for each sufferer but it is often disturbing for women who experience it (Amelia et al., 2022).

In Indonesia, the incidence of dysmenorrhea is 64.25%, consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. The incidence of dysmenorrhea in the world is very large. On average, more than 50% of women in each country experience dysmenorrhoea (Sa'adah et al., 2019). Meanwhile, the percentage of dysmenorrhea experienced in the United States is 60%. The prevalence of dysmenorrhea at the age of 9 years is 90% and at the age of 24 years is 67%. (French, 2005: 2). From data from various countries, the incidence of dysmenorrhoea really disrupts the activities and routines of teenagers at home and outside the home. The complaint experienced by various teenagers during menstruation is dysmenorrhoea (Wu et al., 2022).

There are many treatments for dysmenorrhoea that have been developed in the community, both pharmacological and non-pharmacological therapies (Chai et al., 2020). Pharmacologically, it can be done using drugs such as non-steroidal anti-inflammatory drugs (NSAIDs), while non-pharmacological in the form of Transcutaneous Electrical Nerve Stimulation, herbal medicine, distraction, acupuncture and acupressure, heat therapy, distraction (listening to music and praying) (Tomás-Rodríguez et al., 2017). One of them is dhikr, which is explained in the medical world that dhikr therapy produces many positive things, one of which is the release of endorphin hormones. Dhikr will produce the hormone Endorphin (Handayani et al., 2024). This hormone will reduce and relieve the pain a person feels, so that a person will become more comfortable (Hamdiyah, 2019).

Based on the background above, research was conducted to identify differences in the pain scale of Primary Dysminorrhoea experienced by Adolescents at SMKN 2 Bengkulu before and after the Control Group. To identify differences in the pain scale of Primary Dysminorrhoea experienced by Adolescents at SMKN 2 Bengkulu before and after being given Dhikr Therapy in the Intervention Group. To find out whether there is an effect of Dzikir therapy on primary dysmenorrhoea in adolescents at SMKN 2 Bengkulu.

RESEARCH METHODS

Research Design. The research method used is quantitative research using the Quasy Experimental method in Non-Equivalent Control Group Design mode. The sample in this study were teenagers aged 17 - 21 years who experienced primary dysmenorrhoea at SMKN 2 Bengkulu from May 2024 to June 2024 who met the inclusion criteria. Adolescents aged 17 - 21 years and unmarried in Gang A, Gang C and Gang D, Adolescents who experience primary dysmenorrhea in Gang A, Gang C and Gang D, Adolescents who do not use medication to reduce the pain of primary dysmenorrhea, Willing to Sign the Research Consent Form (Information Consent). For the exclusion criteria, teenagers who are not willing to be respondents, teenagers who use drugs, teenagers who experience secondary dysmenorrhoea, teenagers who suffer from blood cancer.

Research Procedures. The sampling technique was "Non probability Sampling" and the type used " Purposive sampling" from 50 respondents divided into 2: 25 control groups, then pre-test and post-test on the primary dysmenorrhoea pain scale. and 25 intervention groups then pre-tested the primary r dysmenorrhoea pain scale and then received intervention in the form of listening while chanting the dhikr "Subhanallah" for 15 minutes. Then post-test the primary dysmenorrhea pain scale. All data was collected

through observation of respondents. Then the results are recorded, then data analysis is carried out.

Data analysis. using non-parametric test techniques Wilcoxon Signed Rank Test and Mann Whitney U – Test with the SPSS program using version 22.

RESULTS AND DISCUSSION

Results were obtained from 50 respondents consisting of 25 control groups and 25 intervention groups:

Table 1 Frequency Distribution of Respondents Based on Primary Dysminorrhoea Pain Scale Criteria in Adolescents in the Control Group

Dysminorrhoea Pain Scale	Before		After	
	Σ	(%)	Σ	(%)
No Pain	0	0	0	0
Light	3	12	3	12
Currently	16	64	16	64%
Controlled Weight	6	64	6	64%
Uncontrolled Weight	0	0	0	0
Amount	25	100%	25	100%

Based on Table 1, the frequency distribution of respondents based on the primary dysmenorrhea pain scale criteria in adolescents within the control group shows no significant changes before and after observation. The majority of respondents experienced moderate pain, with 16 individuals (64%) reporting this level both before and after the observation. Additionally, 6 respondents (24%) experienced controlled severe pain, and 3 respondents (12%) reported mild pain, with no changes in their pain levels before and after. Notably, there were no respondents who reported no pain or uncontrolled severe pain at any point.

This data indicates that without intervention, primary dysmenorrhea pain levels tend to remain consistent over time. The persistence of moderate and controlled severe pain suggests that standard physiological responses to menstruation may not improve without specific treatment or management strategies. Given these findings, further research and the implementation of effective pain relief interventions—such as lifestyle modifications, pharmacological treatments, or alternative therapies—are crucial in helping adolescents manage menstrual pain more effectively.

Table 2 Frequency Distribution of Respondents Based on Primary Dysminorrhoea Pain Scale Criteria in Adolescents in the Intervention Group

Dysminorrhoea Pain Scale	Before		After	
	Σ	(%)	Σ	(%)
No Pain	0	0	0	0
Light	3	12	16	64
Currently	16	64	8	32
Controlled weight	8	32	1	4
Uncontrolled weight	0	0	0	0
Amount	25	100	25	100

Based on Table 2, the frequency distribution of respondents in the intervention group, categorized by the primary dysmenorrhea pain scale, shows a significant reduction in pain levels after the intervention. Before the intervention, the majority of respondents (64%) experienced moderate pain, 32% reported controlled severe pain, and 12% had mild pain. However, after the intervention, the percentage of respondents with mild pain increased significantly to 64%, while those with moderate pain decreased to 32%. Additionally, only 1 respondent (4%) continued to experience controlled severe pain, and none reported uncontrolled severe pain.

These findings suggest that the intervention applied was effective in alleviating dysmenorrhea symptoms among adolescents. The shift from higher pain levels to milder categories indicates a positive response to the treatment, which could include non-pharmacological pain relief methods such as warm compresses, exercise, relaxation techniques, or herbal remedies. Given this improvement, further research is needed to assess the long-term benefits and potential applications of similar interventions in managing menstrual pain among adolescents.

Table 3 Frequency Distribution of Differences Before and After in the Control Group

Control Group	Mean Rank	Sum Of Rank	Difference	P – Value
Before	0.00	0.00		
After	0.00	0.00	0.00	1,000

Based on Table 3, the frequency distribution of differences before and after in the control group indicates no measurable changes in dysmenorrhea pain levels. The mean rank and sum of ranks remain at 0.00, and the difference is also 0.00. Furthermore, the p-value of 1.000 suggests no statistically significant variation in pain levels before and after the observation period.

These findings reinforce the notion that, without intervention, primary dysmenorrhea pain levels in adolescents remain unchanged over time. The absence of improvement highlights the need for effective pain management strategies, as natural recovery or passive observation does not lead to a reduction in menstrual pain. This further supports the importance of implementing appropriate interventions, such as pharmacological treatment, non-pharmacological therapies, or lifestyle modifications, to help adolescents manage dysmenorrhea symptoms more effectively.

Table 4 Frequency Distribution of Differences Before and After in the Group Given Dhikr Therapy

Intervention Group	Mean Rank	Sum Of Rank	Difference	P – Value
Before	0.00	0.00		
After	11.00	231.00	11.00	0,000

Table Source: Wilcoxon Statistical Test

Based on Table 4.4, the average value of the pain scale before and after in the intervention group was 11.00. A significant value was obtained (Z = -4.491,

asymptomatic value (2 – tailed) 0.000 < α (0.05). H0 was rejected. H1 was accepted that there was a difference in the pain scale before and after in the intervention group.

Table 5 Frequency Distribution of Dhikr Therapy for Primary Dysminorrhoea in Adolescents in the Intervention Group and Control Group

Group	Pain Scale		Difference	P – Value
	Control	Intervention		
Mann Whitney Pre	23.86	27.14	3.28	0.347
Mann Whitney Post	32.64	18.36	14.28	0,000

Table Source: Mann Whitney Test Results

Based on Table 4, the frequency distribution of differences before and after in the group given dhikr therapy shows a significant reduction in dysmenorrhea pain levels. The mean rank before the intervention was 0.00, while after the intervention, it increased to 11.00, with a sum of ranks of 231.00. The calculated difference of 11.00, along with a p-value of 0.000, indicates a statistically significant reduction in pain levels after receiving dhikr therapy.

These results suggest that dhikr therapy effectively reduces menstrual pain in adolescents experiencing primary dysmenorrhea. The significant improvement in pain levels after the intervention highlights the potential role of spiritual-based relaxation techniques in managing pain. Dhikr therapy may help alleviate discomfort by inducing a sense of calmness, reducing stress, and promoting relaxation, which can indirectly lessen the perception of pain. Given these findings, dhikr therapy can be considered a complementary non-pharmacological approach to managing dysmenorrhea, supporting adolescents' overall well-being and quality of life.

Analysis of Menstrual Pain Before and After in the Control Group.

The analysis of menstrual pain before and after in the control group, consisting of 25 respondents, showed that only 7 respondents experienced a decrease in pain levels. This reduction occurred because these respondents managed their discomfort by resting for 15 minutes as a natural coping mechanism. However, for the majority, pain levels remained unchanged, which aligns with existing research suggesting that primary dysmenorrhea is primarily caused by strong uterine contractions, high levels of prostaglandin hormones, and cervical dilation during menstruation (Wade et al., 2016). *Additionally, various social and psychological factors, such as stress, can contribute to the severity of dysmenorrhea* (Katwal et al., 2016). When teenagers experience prolonged stress, their endorphin levels decrease, leading to an increased perception of pain. Hormonal factors also play a crucial role, as the endometrial lining contains high amounts of prostaglandins, which can intensify uterine contractions and worsen menstrual pain (Gutman et al., 2022).

The statistical analysis using the Wilcoxon test further supports the observation that there was no significant reduction in menstrual pain levels in the control group. The test results showed an average pain scale value of 0.000 before and after, with a Z-value of 0.000 and an asymp sig (2-tailed) value of 1.000, which is greater than the significance level (α = 0.05). These results led to the acceptance of H0 and the rejection of H1, confirming that there was no significant difference in pain levels before and after the observation period. This finding suggests that without specific interventions, the pain experienced by adolescents with primary dysmenorrhea remains unchanged. The lack of improvement highlights the necessity of effective pain management strategies, including pharmacological treatments, lifestyle modifications, and alternative therapies.

Given the impact of dysmenorrhea on adolescents' daily activities and well-being, further research and intervention programs are needed to address this issue effectively.

Analysis of Menstrual Pain Before and After Giving Dhikr Therapy to the Intervention Group.

The analysis of menstrual pain before and after dhikr therapy in the intervention group showed a significant reduction in pain levels. Before the intervention, most respondents experienced moderate pain, which persisted in some cases but showed improvement after therapy. Menstrual pain can be influenced by psychological and hormonal factors, particularly the increase in prostaglandin levels that stimulate myometrial contractions, thereby intensifying pain (Horne et al., 2020). This hormonal activity explains the changes observed in the average pain scale among respondents (Rehman et al., 2015). The findings indicate that dhikr therapy has the potential to alleviate pain by influencing psychological well-being and providing a calming effect. The ability of spiritual practices to regulate emotional and physiological responses suggests that non-pharmacological approaches can be effective in managing primary dysmenorrhea.

The Wilcoxon test results further confirmed the effectiveness of dhikr therapy in reducing menstrual pain. The average pain scale value before and after the intervention was 11.00, with a significant statistical value of Z = -4.491 and an asymp sig (2-tailed) value of 0.000, which is lower than the threshold of $\alpha = 0.05$. These results led to the rejection of H0 and the acceptance of H1, confirming a significant difference in pain levels before and after dhikr therapy. The intervention involved listening to dhikr recitations, specifically Subhanallah Wal Hamdulillah Wala Ilaha Illallah Wallahu Akbar Walahaula Wala Quwwata Illa Billahil 'Aliyyil 'Adzim by Ustadz Jefri Al-Bukhori, for 15 minutes using an MP3 player, three times per session. This approach aligns with previous research highlighting the psychological benefits of dhikr (Handayani et al., 2024). The mechanism behind its effectiveness can be explained by the Gate Control Theory, where high brain activation through spiritual engagement inhibits the transmission of pain signals, reducing pain perception (Kirkpatrick et al., 2015). Additionally, dhikr stimulates the release of beta-endorphins, acting as the body's natural morphine to alleviate pain (Hamdiyah, 2019). These findings support the role of dhikr therapy as an alternative pain management strategy for adolescents experiencing primary dysmenorrhea.

The Effect of Dhikr Therapy on Primary Dysminorrhoea.

The research findings indicate that before the intervention, there was no significant difference in the average pain levels between the intervention group and the control group. This conclusion is supported by the statistical analysis, which showed a P-value of 0.347, greater than the significance threshold ($\alpha > 0.05$). Since the P-value exceeds 0.05, it confirms that both groups had similar baseline pain levels before any intervention was applied. This suggests that factors such as hormonal fluctuations, psychological stress, and individual pain thresholds were consistent across both groups. Additionally, the absence of a significant difference reinforces the validity of the study, ensuring that any subsequent variations in pain levels were due to the intervention rather than pre-existing disparities. These findings emphasize the importance of conducting controlled trials to measure the true effectiveness of non-pharmacological treatments like dhikr therapy.

In contrast, after the intervention, a significant difference in pain levels was observed between the intervention and control groups. The Mann-Whitney U-test revealed a P-value of 0.000, which is smaller than the significance threshold ($\alpha < 0.05$). This statistical result indicates that dhikr therapy had a meaningful impact on reducing

menstrual pain in the intervention group, while the control group, which did not receive the therapy, showed no significant changes. The effectiveness of dhikr therapy can be attributed to its ability to enhance relaxation, reduce stress, and stimulate the body's natural pain-relief mechanisms, such as the release of beta-endorphins. These findings support previous research on the role of spiritual and meditative practices in pain management. Overall, the results highlight the potential of dhikr therapy as a complementary approach for alleviating dysmenorrhea, offering a natural and accessible alternative for adolescents experiencing menstrual pain.

According to existing theories, one of the causes of *primary dysmenorrhoea* is emotional factors (Xu et al., 2016). A person who experiences stress will cause a reaction that can reduce resistance to pain (Katwal et al., 2016). Non-pharmacological therapy, one of which is dhikr, is a form of worship that can bring peace to the body and soul (Purwanto et al., 2023). These two things, namely self-confidence and optimism, are two things that are very essential for healing an illness in addition to the medicines and medical procedures given (Hu et al., 2020). There are new findings that explain the psychology, nerves and hormone glands, *(psycho-neuroendocrinology)* (Taylor et al., 2017). *Psychoreligious* therapy in the form of prayer and dhikr plays a role in increasing the body's resistance (immunity) which will speed up the healing process (Rahman et al., 2023).

By doing the dhikr " *Subhanallah Wal Hamdulillah Wala Ilaha Illallahu Wallahu Akbar Walahaula Wala Quwwata Illa Billahil 'Aliyyil 'Adzim"* explains that *endhorphin secretion* can be increased by dhikr (Hamdiyah, 2019). Through EEG *brainwave biofeedback machine measurements* found that the brain produces large amounts *of endorphins* during dhikr (Wayoi et al., 2024). Physiologically, spiritual therapy by dhikr or remembering Allah's name causes the brain to work. When the brain receives external stimulation, the brain will produce chemicals that will provide a feeling of comfort, namely *Neuropeptides* (Hamdiyah, 2019). In another research, dhikr will make a person feel calm, which then suppresses the functioning of the sympathetic nervous system (Rahman et al., 2023). This way the pain will be reduced. Because dhikr can suppress the activity of the sympathetic nervous system (Handayani et al., 2024). Relaxation tries to activate the work of the parasympathetic nerves. A relaxed state reduces *amygdala activity*, relaxes muscles and trains the individual to activate the work of the parasympathetic system as *a counter to* the activity of the sympathetic nervous system (Rosdiana, Firdayanti, 2023).

According to the researchers' assumptions, it can be concluded that listening to the dhikr *of Subhanallah Wal Hamdulillah Wala Ilaha Illallahu Wallahu Akbar Walahaula Wala Quwwata Illa Billahil 'Aliyyil 'Adzim* provides a positive effect through the mechanism of diverting attention to pain, providing a feeling of comfort and being able to release *Endorphin Hormones*. For this reason, we as nurses provide information to teenagers that one of the non-pharmacological techniques for *primary dysmenorrhoea* is to do dhikr (Hamdiyah, 2019).

CONCLUSION

Based on the findings, there was no significant difference in the primary dysmenorrhea pain scale experienced by adolescents at SMKN 2 Bengkulu before and after the observation in the control group. The data showed that the average pain scale remained relatively unchanged, with an asymp sig (2-tailed) value of 1.00 ($\alpha > 0.05$), leading to the acceptance of H0 and the rejection of H1. This indicates that without any intervention, the pain experienced by adolescents remained consistent, emphasizing the need for alternative strategies to alleviate dysmenorrhea symptoms effectively.

In contrast, the intervention group that received dhikr therapy showed a

significant reduction in primary dysmenorrhea pain levels. The average pain scale decreased notably, with an asymp sig (2-tailed) value of 0.000 ($\alpha < 0.05$), resulting in the rejection of H0 and acceptance of H1. This confirms that dhikr therapy had a positive effect on reducing menstrual pain. The effectiveness of dhikr therapy suggests that spiritual-based relaxation techniques can help adolescents manage dysmenorrhea by promoting a sense of calmness, reducing stress, and enhancing overall well-being. Therefore, this study highlights the potential of dhikr therapy as a non-pharmacological approach to alleviating menstrual pain and improving adolescents' quality of life.

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