

THE EFFECT OF SUJOK THERAPY ON REDUCING DYSMENORRHEA IN ADOLESCENT FEMALES AT SAHABATQU ISLAMIC BOARDING SCHOOL

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Abstract. Adolescence is a transitional phase marked by puberty, menstruation, and lower abdominal pain, or dysmenorrhea. Pharmacological treatment generally involves analgesics, but long-term use can cause side effects. Therefore, non-pharmacological therapies are gaining popularity, including Sujok therapy. Sujok therapy is a complementary method originating in South Korea that stimulates specific points on the hands and feet to reduce pain. This study aims to determine the effect of sujok therapy on reducing menstrual pain in adolescent girls at the Sahabatqu Islamic Boarding School. This study was pre-experimental study with a one-group pre-test and post-test design was conducted at the Sahabatqu Islamic Boarding School on August 3–15, 2025. A total of 73 respondents were selected through consecutive sampling. Pain was measured using the Numeric Rating Scale (NRS) and analyzed using the Wilcoxon Signed-Rank test. Results: After 15 minutes of intervention, pain intensity decreased significantly. The Wilcoxon Signed-Rank test showed a z value of -7.64 with $p = 0.000$ ($p < 0.005$), indicating a significant difference between pain scores before and after therapy. In conclusion, there is an effect of sujok therapy on reducing the scale of dysmenorrhea in female adolescents at the sahabatqu Islamic boarding school.

Keywords: Adolescence, Boarding School, Dysmenorrhea, Sujok

1 Introduction

Adolescence is a critical transitional phase in human life, marked by various physical and emotional changes resulting from increased hormonal activity. One of the significant changes in adolescent girls is menstruation, which is part of primary sexual development. Menstruation is a natural process often accompanied by pain in the lower abdominal area, commonly referred to as dysmenorrhea.¹

Dysmenorrhea is classified into two types: primary dysmenorrhea, which occurs without any organic abnormalities, and secondary dysmenorrhea, which is caused by certain medical conditions such as endometriosis.² In Indonesia, the prevalence of dysmenorrhea among adolescent girls is relatively high. Around 64% experience menstrual pain, the majority of which is primary dysmenorrhea, potentially disrupting daily activities including studying and attending school.^{3,4}

The treatment of dysmenorrhea is generally pharmacological, using analgesics such as ibuprofen and mefenamic acid. However, non-pharmacological approaches are increasingly being adopted due to their perceived safety and minimal side effects. One such emerging non-pharmacological method is Sujok therapy, a complementary therapy originating from South Korea, developed by Prof. Park Jae Woo in 1987. This therapy involves stimulation of specific points on the hands and feet, which are believed to represent the entire body's organs.⁵

Stimulation in Sujok therapy can be performed in various ways, either through penetrative methods (such as using needles) or non-penetrative techniques (such as massage, applying pressure with plant seeds, color therapy, or magnets).⁶ Several studies have shown that Sujok is effective in reducing pain intensity. Research by Salsabila on medical students at Universitas Mulawarman reported a significant decrease in dysmenorrhea pain scores after Sujok therapy, from an average of 5.36 to 1.5.⁵ Similar results were found by Nurjannah, where the therapy reduced physical pain by up to 90.91% through the body correspondence system approach.⁷

A preliminary study conducted in August 2024 at Pondok Pesantren Putri Sahabatqu, Sleman, Yogyakarta, involving 15 respondents from 7th and 8th grade, showed that all respondents experienced dysmenorrhea from the first day to the end of menstruation. None of the respondents had ever tried non-pharmacological treatments such as Sujok and relied solely on pain relief medication as their primary management.

Based on these findings, as well as the limited research on the application of Sujok therapy particularly involving pressure on correspondence points such as the basic, insect, and mini systems on the hands and feet among adolescent girls in Islamic boarding schools further research is necessary. This study aims to investigate the effect of Sujok therapy on reducing menstrual pain intensity in adolescent girls at Pondok Pesantren Sahabatqu, Sleman, Yogyakarta.

2 Methods

This study is a quantitative employing a pre-experimental design using a one-group pre-test and post-test approach. This design involves a single group of respondents whose menstrual pain intensity is measured before and after receiving the Sujok therapy intervention, without a control group. The study was conducted at Pondok Pesantren Sahabatqu, Sleman, Yogyakarta, from August 3 to 15, 2025. The study population consisted of 73 seventh and eighth-grade female students from Pondok Pesantren Sahabatqu. The sampling technique used was consecutive sampling, in which participants were selected sequentially based on inclusion and exclusion criteria until the required sample size was met. The instrument used in this study was the Numeric Rating Scale (NRS), which has been tested by Arruda to measure pain intensity. This scale has been validated and found reliable, with a validity score of $r = 0.46$ ($p < 0.001$) and a reliability coefficient of 0.90.⁸ The Sujok method applied in this study was Correspondence Sujok, targeting the basic, insect, and mini system points. This research obtained ethical approval from the Ethics Committee of FK-KMK UGM on October 30, 2024. The data used were primary data collected from respondents who received the Sujok therapy intervention. The research form was distributed offline and consisted of three parts: (1) general information, informed consent, and researcher contact details; (2) demographic data and dysmenorrhea overview, completed during screening; and (3) the Numeric Rating Scale (0–10) questionnaire, filled out before and after the intervention. The researcher also recorded the pain points on the Sujok hand/foot system prior to the therapy session.

This study used two types of data analysis: univariate and bivariate analysis. Univariate analysis was performed to describe the characteristics of each variable through frequency distribution, percentage, and median values, while bivariate analysis was used to examine the effect of Sujok therapy on reducing menstrual pain intensity using the Wilcoxon Signed-Rank Test. This test was used to compare the two paired measurements of pain scores before and after the intervention within the same group.

3 Results And Discussion

3.1 Demographic Characteristics and Pain Quality of Adolescent Girls Experiencing Dysmenorrhea at Pondok Pesantren Sahabatqu

Based on the results of a study conducted on 73 adolescent girls at Pondok Pesantren Sahabatqu, it was found that the respondents' ages ranged from 12 to 15 years, with the majority being 13 years old (31 individuals). One of the key findings of this study is the high incidence of early menarche, which accounted for 71.2%, with the most common age of menarche being 11 years. Early menarche is defined as the first menstruation occurring before the age of 12, and it has been shown to be a significant risk factor for dysmenorrhea, as stated by Nagy and supported by Lee's theory, which suggests that the ideal age for menarche is between 12 and 14 years^{2,9}

This study is in line with Prayogi's findings, which demonstrate a strong correlation between early menarche and the occurrence of dysmenorrhea among adolescents. Menarche that occurs earlier often coincides with reproductive organs that have not yet matured optimally, including a uterus that is still relatively small and narrow. This condition contributes to the onset of menstrual pain due to stronger uterine contractions.¹⁰

Physiologically, the increase in estrogen and progesterone levels during the early phase of menstruation can trigger excessive production of prostaglandins. Prostaglandins, particularly type $F_2\alpha$, are known to cause intense uterine muscle contractions, vasoconstriction, and ischemia of the endometrium, leading to pain or menstrual cramps.^{11,12}

In fact, according to Glow, women with primary dysmenorrhea can produce 8 to 13 times more prostaglandins compared to those without dysmenorrhea. The high prevalence of early menarche among respondents strongly supports the theory that age and reproductive organ maturity are important factors in the occurrence of dysmenorrhea.¹³

The pain sensations experienced by respondents with dysmenorrhea varied, including cramping, stabbing, sharp, burning, and radiating pain. The majority of adolescent girls at Pondok Pesantren Sahabatqu reported experiencing stabbing pain during menstruation, with 42 individuals describing this sensation. This finding aligns with a study conducted in Ghana, which describes dysmenorrhea-related pain as cramping, stabbing, or biting in nature.¹⁴

The differences in pain sensation can be explained through the physiological mechanisms of pain. Physiologically, pain is transmitted through two types of nerve fibers: A-delta fibers, which produce sharp and localized pain, and C fibers, which produce dull, burning, and more diffuse pain.¹⁵ In dysmenorrhea, increased production of prostaglandin $F_2\alpha$ triggers strong uterine contractions, thereby stimulating both types of nerve fibers and resulting in varied pain sensations.¹⁶ The variation in dysmenorrhea pain sensations is the result of a complex interaction between uterine contractions, nerve fiber activation, chemical mediators, and central nervous system modulation, ultimately producing different pain experiences in each individual.

Table 1. Demographic Characteristics and Pain Quality of Adolescent Girls Experiencing Dysmenorrhea at Pondok Pesantren Sahabatqu

Karakteristik	N = 73	%
Age		
12	30	41,1
13	31	42,5
14	10	13,7
15	2	2,7
Class		
7	42	57,5
8	31	42,5
Age at Menarche		
8	1	1,4
9	5	6,8
10	13	17,8
11	33	45,2
12	19	26
13	2	2,7
Pain Quality		
Burning	6	8,2
Sharp	4	5,5
Stabbing	42	57,5
Throbbing	21	28,8
Total	73	100

(Source: Primary Data, 2025)

3.2 Location of Pain Points (Basic, Insect, and Mini Systems) in Adolescent Girls at Pondok Pesantren Sahabatqu

The pain points identified during massage among adolescent girls at Pondok Pesantren Sahabatqu were located on the basic system of the right hand in 42 participants, with the massage administered by the researcher for 15 minutes. Sujok therapy, as introduced by Prof. Park Jae Woo, is based on the Law of Correspondence (Law of Similarity), which states that the entire human body is projected onto specific areas of the hands and feet through a defined pattern. Pain felt at a correspondence point is a natural indicator of a disturbance in the related organ. Stimulation (through massage, pressure, or the use of aids such as rings or plant seeds) can rebalance disturbed energy. The effect is a reduction in pain intensity, improved energy circulation, and enhanced body homeostasis.¹⁷

The results of this study indicate that the correspondence points consistently associated with pain in respondents experiencing dysmenorrhea were located in the central area of the palm (basic system) and the middle joints of the fingers (insect system). This supports the theory proposed by Prof. Park Jae Woo that disorders in internal organs are reflected in pain points within the correspondence system. Following stimulation with Sujok therapy, the majority of respondents reported a reduction in menstrual pain intensity, consistent with the mechanism of activating the body's vital energy.¹⁸ A related study by Suryana reported that stimulation of correspondence points in the basic and insect systems using a probe for 5–15 minutes resulted in reduced pain in the head, lower limbs, upper limbs, back or waist, neck, and shoulders among respondents with hypertension.¹⁹

Table 2. Location of Pain Points (Basic, Insect, and Mini Systems) in Adolescent Girls at Pondok Pesantren Sahabatqu

Location of Sujok Pain Points	N = 73	%
Basic System Right Hand	47	64,4
Basic System Left hand	21	28,8
Insect System Right Hand	2	2,7
Insect System Left Hand	3	4,1
Total	73	100

(Source: Primary Data, 2025)

3.3 Menstrual Pain Scale in Adolescent Girls at Pondok Pesantren Sahabatqu Before and After Sujok Intervention

Before receiving Sujok therapy, the majority of adolescent girls at Pondok Pesantren Sahabatqu experienced menstrual pain ranging from moderate to severe. This indicates that most of the participants reported pain within the mild to moderate range, corresponding to a scale of 4–8. This reduction demonstrates the effectiveness of Sujok therapy in decreasing the intensity of menstrual pain among adolescent girls at Pondok Pesantren Sahabatqu.

These findings are consistent with a study conducted by Salsabila, in which, prior to Sujok therapy, the intervention group included 5 participants with mild pain, 9 with moderate pain, and 8 with severe pain. Following the Sujok intervention, the distribution shifted to 3 participants experiencing no pain, 6 with mild pain, 10 with moderate pain, and 3 with severe pain.⁵

Table 3. Menstrual Pain Scale in Adolescent Girls at Pondok Pesantren Sahabatqu Before and After Sujok Intervention

Pain Scale (NRS)	Before		After	
	N = 73	%	N = 73	%
2	0	0	5	6,8

3	0	0	33	45,2
4	27	37	13	17,8
5	13	17,8	11	15,1
6	17	23,3	11	15,1
7	11	15,1	0	0
8	5	6,8	0	0

(Source: Primary Data, 2025)

3.4 The Effect of Sujok Therapy on Reducing Dysmenorrhea in Adolescent Girls at Pondok Pesantren Sahabatqu

Based on the analysis results, a z-score of -7.64 was obtained with a significance value of $p = 0.000$ ($p < 0.005$). This result indicates a statistically significant difference between the level of dysmenorrhea before and after Sujok therapy. The negative direction of the z-score suggests that the level of dysmenorrhea decreased significantly following the therapy, demonstrating that Sujok therapy is effective in reducing menstrual pain (dysmenorrhea) among the respondents.

This finding indicates that Sujok therapy has an impact on reducing dysmenorrhea scores, and the hypothesis is accepted. The application of pressure techniques on correspondence points in the hand instructs the endocrine system to release a specific amount of endorphins as needed by the body. Endorphins are natural painkillers produced by the body in response to stimuli received by peripheral nerves around the massaged area, thereby helping to alleviate dysmenorrhea pain. This method involves massaging specific points on the hands or feet that correspond to the affected body parts and, theoretically, stimulates the nervous system to reduce pain.⁵

The basic correspondence in Sujok therapy refers to the principle that each part of the body has a reflex point in the hands and feet, which can be stimulated to relieve pain. One technique used is seed placement, where small seeds are placed on the reflex points to stimulate energy flow and support the healing process. This therapy targets specific pain areas in the hands and fingers, leading to a significant reduction in pain. Patients reported satisfaction with the outcomes and expressed interest in continuing the therapy.²⁰

The results of this study are strongly supported by several previous studies that highlight the effectiveness of Sujok therapy through the correspondence system and probe methods in pain reduction. These findings are consistent with research conducted by Salsabila, in which the average dysmenorrhea score in the intervention group before Sujok hand massage therapy was 5.36 and decreased to 3.77 after the therapy.⁵ This study also showed that self-administered Sujok massage significantly reduced dysmenorrhea pain compared to the control group ($p = 0.000$; $p = 0.014$). A retrospective study by Nurjannah & Hariyadi further confirmed that a combination of energy and correspondence therapy effectively reduced pain in 46 patients, with a significant decrease ($p < 0.01$).²¹

Another study involving two patients with heel pain treated using a probe massage followed by fenugreek seed placement showed a pain reduction from a scale of 7 to 5 and 5 to 3. Stimulation using seeds provided a more sustained effect, which may serve as an additional supporting factor in the effectiveness of Sujok therapy for faster pain relief. According to Suryana's study, the average duration of Sujok therapy using only the probe was 11 minutes, whereas the combination of probe and seeds required only 8 minutes.¹⁸

Table 4. The Effect of Sujok Therapy on Reducing Dysmenorrhea in Adolescent Girls at Pondok Pesantren Sahabatqu

Variabel	N	Mean Rank	Sig. (2 tailed)	Z Score
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Post-Therapy Pain Scale – Pre-Therapy Pain Scale	73	37	0.000	-7,64
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4 Conclusion

This study demonstrates that the majority of adolescent girls at Pondok Pesantren Sahabatqu experienced dysmenorrhea at an early menarche age (8–11 years), with the dominant pain characteristic being a stabbing sensation. The most frequently identified pain points were located in the basic system area of the right hand, consistent with the correspondence principles of Sujok therapy. Following a 15-minute Sujok therapy intervention, there was a significant reduction in menstrual pain intensity, shifting from moderate-severe to mild-moderate pain levels. Statistical analysis using the Wilcoxon Signed-Rank Test yielded a p-value of 0.000 ($p < 0.05$), indicating that Sujok therapy is effective in reducing the intensity of dysmenorrhea. Therefore, Sujok therapy can be considered a safe and effective non-pharmacological alternative for alleviating menstrual pain in adolescent girls, particularly within the Islamic boarding school setting.

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