

## Non-Pharmacological Approaches in the Management of Primary Dysmenorrhea: A Literature Review

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### ABSTRACT

**Background:** *The incidence of primary dysmenorrhea is a condition experienced by almost all adolescent women and of childbearing age, negatively impacting their quality of life and productivity. Although pharmacological treatments such as NSAIDs are frequently used, many individuals seek non-pharmacological alternatives to avoid long-term side effects. This study aims to explore the effectiveness of complementary therapies, including acupressure, herbal medicine, and yoga, in managing primary dysmenorrhea.*

**Method:** *A systematic literature review (SLR) was conducted using the PRISMA approach, selecting relevant articles from PubMed, ScienceDirect, and Google Scholar based on specific keywords. Articles that met the inclusion criteria, such as publication range (2020-2025) and topic relevance, were further analyzed.*

**Results:** *From a review of 17 articles that met the inclusion criteria, it was found that yoga can significantly reduce pain intensity by increasing relaxation and improving blood circulation in the pelvic area. Acupressure therapy, particularly on the SP6 point, has been proven effective in reducing menstrual pain by increasing the release of beta-endorphins. In addition, consumption of herbal medicines such as ginger has anti-inflammatory effects that help reduce the production of prostaglandins, one of the main causes of menstrual pain.*

**Conclusion:** *Non-pharmacological therapies—such as yoga, acupressure, and herbal remedies—are effective, safe, and affordable alternatives to pharmacological management. It is recommended that healthcare professionals, particularly midwives, provide education and facilitate the implementation of these complementary therapies as part of promotive and preventive efforts to address menstrual pain in adolescents and women of childbearing age.*

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## INTRODUCTION

Primary dysmenorrhea is the most common complaint experienced by adolescents and women of childbearing age, although this condition is not accompanied by a pathological condition in the internal genetic organs, but this problem causes discomfort and affects women's productivity (Durand et al., 2021; Hu et al., 2020; Wang et al., 2022). Data shows that dysmenorrhea complaints are experienced by around 50-90% of women (McKenna & Fogleman, 2021), and there are around 29% with complaints of severe pain. About 80% of adolescent girls have complaints of dysmenorrhea (Nagy et al., 2023).

Dysmenorrhea is associated with the incidence of premature menarche, menorrhagia, a family history of primary dysmenorrhea, women who smoke, caffeine consumption, and poor emotional state (Duman et al., 2022). This condition can reduce the quality of life and have an impact on academic and work productivity. Primary dysmenorrhea causes 75.9 women to feel a lack of energy for daily activities, and 66.9 % of women feel tired, this causes many women to take analgesics or other therapies (Leon-Larios et al., 2024; Sima et al., 2022).

Primary dysmenorrhea is characterized by cramping pain in the lower abdomen that occurs before or during menstruation without any organic abnormalities (McKenna & Fogleman, 2021). Its pathophysiology involves increased production of prostaglandins that cause excessive uterine contractions (Itani et al., 2022). Efforts to overcome dysmenorrhea are not only with pharmacological therapy, but also with various non-pharmacological therapies, including listening to murottal al-Qur'an, aromatherapy, acupressure, acupuncture, yoga, plasters with capsicum oleoresin content (Mulyaningsih et al., 2017; Ilmiah et al., 2023). Exercise, drinks or herbal medicines are often used as supportive therapies to reduce complaints of dysmenorrhea (Li et al., 2024; Thakur & Pathania, 2022).

Traditional Chinese medicine by emphasizing on specific points in the body to reduce pain is quite effective in dealing with dysmenorrhea complaints. Sanyinjiao dot (SP6) is often used in treating dysmenorrhea. Studies show that the application of acupressure at this point is effective in reducing pain intensity in adolescents with primary dysmenorrhea. Several herbs have been researched to reduce the symptoms of dysmenorrhea (Othman et al., 2019).

Ginger (*Zingiber officinale*), it has anti-inflammatory properties that can help reduce menstrual pain. A review states that ginger consumption can reduce the intensity of pain felt during menstruation (Moshfeghinia et al., 2024), However, other research shows that ginger consumption does not show a significant effect on dysmenorrhea (Negi et al., 2021). Evidence-based research on yoga on the reduction of dysmenorrhea is still needed to get better evidence (Saraf & Rawat, 2024).

Based on this background, this study was conducted to explore the effectiveness of complementary therapies, namely acupressure, herbs, and yoga, in reducing primary dysmenorrhea pain. Compared to previous reviews that focused on single interventions—such as yoga, acupressure, or herbal therapy—this study provides a broader synthesis of multiple non-pharmacological approaches for managing primary dysmenorrhea. By integrating evidence from recent studies (2020–2025), this review offers an updated and comprehensive perspective, highlighting both individual and combined effectiveness of yoga, acupressure, and herbal medicine.

Furthermore, it extends prior reviews by presenting practical recommendations for health practitioners and policymakers, thus bridging the gap between clinical evidence and public health application. By understanding the mechanism of action and the impact

of therapy, it is hoped that this study can provide evidence-based recommendations for health practitioners and individuals experiencing dysmenorrhea. Although pharmacological therapies such as NSAIDs; and hormonal contraceptives are often used, some women are looking for non-pharmacological alternatives to avoid side effects. Complementary therapies such as acupuncture, herbs, heat therapy, and yoga have gained attention as alternative approaches in dealing with dysmenorrhea.

This study aims to systematically review and synthesize current evidence on the effectiveness of complementary therapies—acupuncture, herbal medicine, and yoga—in reducing pain intensity and improving quality of life in women with primary dysmenorrhea. The study also aims to provide practical recommendations for healthcare practitioners and policymakers on integrating these non-pharmacological interventions into dysmenorrhea management strategies.

## **MATERIALS AND METHODS**

This research was conducted using the Literature Review method, conducted by looking for scientific articles published between 2020 and 2025. The databases used include PubMed, Scopus, and Google Scholar. The keywords used include: "acupuncture and dysmenorrhea", "herbal medicine and dysmenorrhea", "yoga and dysmenorrhea", and "complementary therapy for menstrual pain". This search process uses keywords that have been structured based on the Boolean Logic framework, with a combination of AND, OR, and NOT operators to filter articles accordingly.

Initial selection was carried out based on the title and abstract, followed by a review of the full text to ensure compliance with inclusion criteria, such as publication timeframe, research method, and relevance to the focus of the study. The Literature Review (LR) method in this study uses the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach to ensure that article selection is carried out systematically and transparently.

The process begins with the identification of articles from various databases according to predefined keywords, followed by initial filtering to remove duplicates and irrelevant articles based on titles and abstracts. Furthermore, a full-text assessment is carried out to exclude articles that do not meet the inclusion criteria, such as publication time ranges, inappropriate methodologies, or limited access. These stages are documented in a PRISMA diagram to show the number of articles screened and the reasons for exclusion at each stage. In this review, the screening and selection of articles were conducted manually based on the PRISMA framework to ensure accuracy and transparency.

The search results were organized in Microsoft Excel, where duplicate entries and irrelevant studies were removed manually. The screening process was carried out by two authors independently, both with backgrounds in maternal and women's health. Importantly, one of the co-authors possesses expertise in complementary nursing, ensuring that the evaluation of studies related to non-pharmacological therapies was guided by domain-specific knowledge.

Any discrepancies between reviewers during the selection process were resolved through discussion and consensus to maintain objectivity and methodological rigor. The final list of eligible articles was verified collectively by the research team before inclusion in the analysis. Using PRISMA, this method ensures that literature reviews are carried out systematically, objectively, and can be replicated. Articles that do not meet exclusion criteria, such as duplication, inappropriate methodologies, or limited access, and then

eliminated. The final result of this process will be presented in the form of a PRISMA diagram, which depicts the selection stages in a systematic and transparent manner.

Inclusion criteria include clinical studies, randomized controlled trials, and meta-analyses that address the effectiveness of the therapy in managing dysmenorrhea. Articles that are not available in English or do not have full access are categorized under the exclusion criteria. In the literature search stage, scientific articles are searched from various trusted databases to obtain references relevant to the research topic.

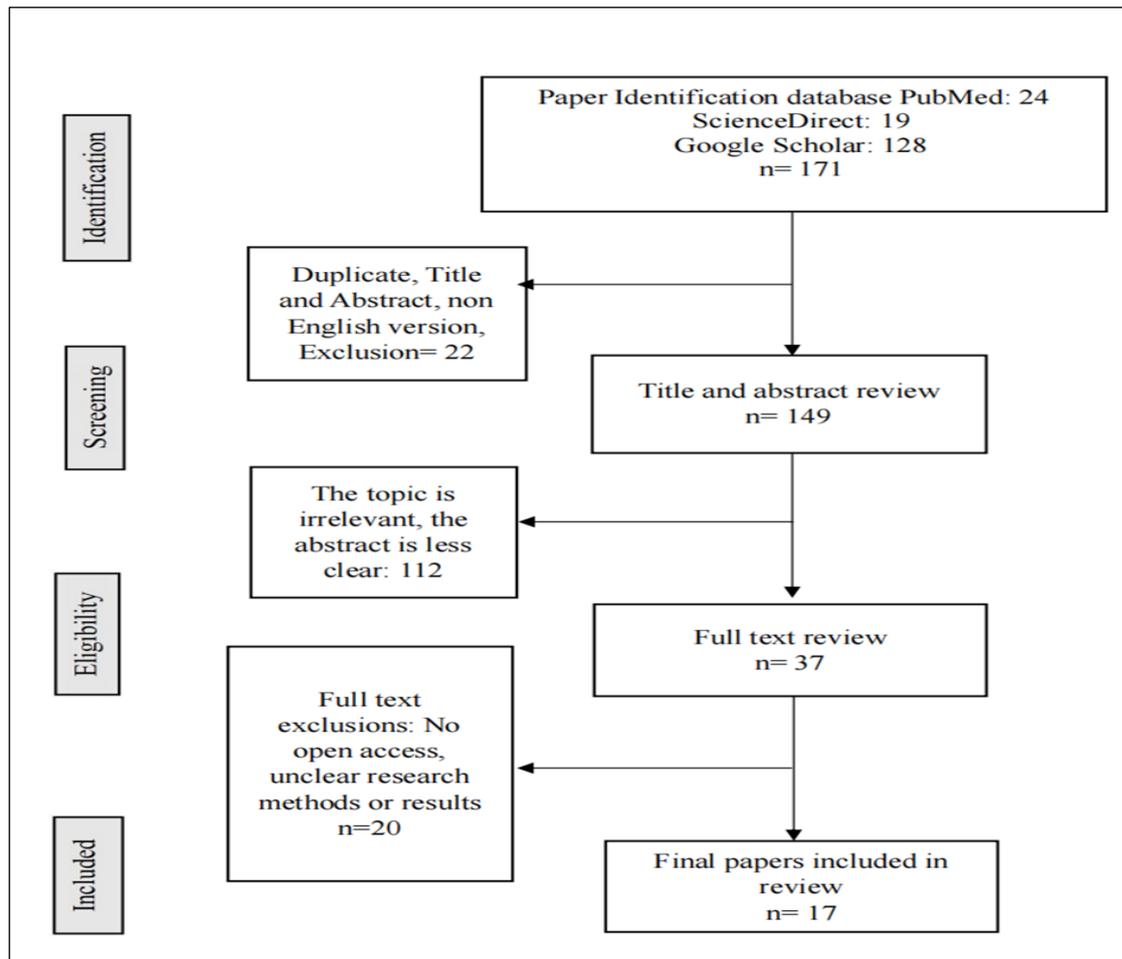


Figure 1. PRISMA Diagram

## RESULTS

The application of keywords in the journal database, then checked with the PRISMA Method, after obtaining the results there were 17 articles that met the inclusion criteria. Here are relevant articles to answer the research objectives.

**Table 1.** Literature Review Articles

No	Title	Name and Year	Purpose	Method	Result
1	Evaluating the Efficacy of Yoga & Ayurveda as a Complementary Treatment for Primary Dysmenorrhea: A Case Report	(Sharma et al., 2025)	Evaluate the effectiveness of combines yoga and Ayurvedic medicine in managing primary dysmenorrhea	The study involved a single reproductive-age woman diagnosed with primary dysmenorrhea who underwent a combination of Ayurvedic therapy and yoga for three menstrual cycles. The design was a case study focusing on pain reduction and quality of life improvement.	Yoga can be effectively traditional treatment for reducing dysmenorrhea. There is a reduction in pain, a reduction in the use of analgetics and an increase in comfort
2	Turning Cramps into Comfort: A Review of Yogas Role in Alleviating Primary Dysmenorrhea and Promoting Reproductive Health	(Sarva et al., 2025)	To examine that Yoga is the most effective treatment for primary dysmenorrhea	This systematic review synthesized findings from studies involving adolescent and young adult women experiencing primary dysmenorrhea, assessing the effectiveness of yoga interventions (asana, pranayama, and relaxation techniques).	The practice of yoga significantly reduces pain, applying Yoga as a holistic treatment in addition to physical health, also good for psychological and social
3	Exploring the effects of yoga on dysmenorrhea: A narrative review	(Saraf & Rawat, 2024)	Knowing the effectiveness of yoga in dysmenorrhea therapy	The review summarized studies conducted among women aged 18–35 years that examined the effects of various yoga postures (cobra, cat, fish poses), pranayama, and Yoga Nidra on menstrual pain	More quality studies with larger samples are needed to prove that yoga is an effective evidence-based treatment for women with primary dysmenorrhea.

No	Title	Name and Year	Purpose	Method	Result
				intensity and physiological parameters.	
4	Beyond Painkillers: A Meta-Analysis of Non-Pharmacological Approaches for Managing Dysmenorrhea Symptoms	(Wahdah, 2024)	Identify randomised controlled trials (RCTs)	The meta-analysis included adolescent and reproductive-age women who participated in randomized controlled trials (RCTs) using non-pharmacological interventions such as yoga, aerobic exercise, acupuncture, and heat therapy.	Aerobics and Yoga as effective interventions for the treatment of dysmenorrhea both for first line and supportive treatment.
5	Integrated Yoga Therapy with Primary Dysmenorrhea: A Comprehensive Review	(Vandana, 2024)	Assessing the efficacy of Integrated Yoga Therapy for reducing primary dysmenorrhea, exploring its benefits as a complement to conventional NSAIDs and oral contraceptives that have potential side effects.	This review analyzed data from studies involving women with primary dysmenorrhea receiving Integrated Yoga Therapy (IYT), a combination of postures, breathing, and meditation—highlighting both physical and psychological benefits.	Integrated Yoga Therapy (IYT), which combines yoga postures, breathing exercises, and meditation, not only reduces the severity and duration of menstrual pain, but also improves overall well-being, reducing the likelihood of severe episodes of dysmenorrhea in the future.
6	The non-pharmacological treatment of primary dysmenorrhea - efficiency and safety	(Zapała et al., 2023)	Present up-to-date knowledge includes the effectiveness and side effects that can occur from non-	The study encompassed evidence from females aged 15–35 years in observational and clinical trials on yoga, acupuncture, and	Acupuncture, heat therapy, exercise and yoga as well as the use of Transcutaneous Electrical Nerve Stimulation (TENS), are effective for

No	Title	Name and Year	Purpose	Method	Result
			pharmacological treatment	TENS therapy, evaluating both effectiveness and safety.	primary dysmenorrhea. It has an anti-inflammatory effect, and another advantage is that it is easy to use at a low cost. Side effects from non-pharmacological treatments are usually mild and rarely reported.
7	Integrating Lifestyle Focused Approaches into the Management of Primary Dysmenorrhea: Impact on Quality of Life	(Tsonis et al., 2021)	Find out how physical activity can reduce dysmenorrhea complaints and improve quality of life	This narrative review examined data from female university students and working women with dysmenorrhea, focusing on the impact of lifestyle modifications, including exercise, yoga, balanced diet, and stress management, on quality of life.	Lifestyle changes such as physical activity, e.g. yoga, Vitamin consumption, balanced diet, acupuncture, acupressure and the use of aromatherapy help reduce dysmenorrhea and improve quality of life.
8	Effect of oral and topical ginger on primary dysmenorrhoea: a systematic review	(Nazarpour Simbar, 2024)	& Exploring the effects of various topical and oral ginger methods for treating primary dysmenorrhea.	The review synthesized results from randomized controlled trials involving women aged 15–35 years who received oral or topical ginger compared with NSAIDs or placebo for menstrual pain relief.	Topical and oral administration of ginger is potentially effective for dysmenorrhea complaints. But more research with better quality is needed to provide a more accurate interpretation.
9	Acupoint herbal plaster for patients with primary	(Yu et al., 2018)	to assess the efficacy of Acupoint Herbal Plaster	The protocol described an RCT design enrolling women aged 18–35 years diagnosed with	The trial between AHP and lacebo showed that AHP was proven to be safe and

No	Title	Name and Year	Purpose	Method	Result
	dysmenorrhea: study protocol for a randomized controlled trial		compared to acupoint placebo plaster (APP) and placed in a waitlist control group in patients with primary dysmenorrhea.	primary dysmenorrhea, randomly assigned to three groups: Active Herbal Plaster (AHP), Placebo Plaster (APP), and Waitlist Control (WL).	effective for the treatment of dysmenorrhea.
10	The effectiveness of self-care and lifestyle interventions in primary dysmenorrhea: a systematic review and meta-analysis.	(Armour et al., 2019)	To know the effects of exercise, acupressure and heat therapy for reducing pain of primary dysmenorrhea	This meta-analysis included adolescent and reproductive-age women diagnosed with primary dysmenorrhea who participated in randomized and non-randomized trials evaluating self-care, exercise, acupressure, and heat therapy interventions.	Acupressure and heat therapy provide moderate effects, while exercise provides a strong effect, so all three therapies are good alternatives for women with dysmenorrhea.
11	Acupuncture with or without acupoint application for primary dysmenorrhea: protocol for a systematic review and meta-analysis	(Zhou et al., 2020)	This study will evaluate the results of a randomized controlled trial to determine the safety and efficacy of acupuncture with or without the application of acupoint for dysmenorrhea.	This protocol outlines a forthcoming systematic review and meta-analysis focusing on women aged 18–35 years diagnosed with primary dysmenorrhea. The study population comprises participants from randomized controlled trials (RCTs) comparing acupuncture with or without acupoint herbal application (AHA) against	Acupuncture therapy combined with acupoint application is considered a simple, comfortable, inexpensive therapy with few side effects, so it is widely accepted.

No	Title	Name and Year	Purpose	Method	Result	
				control interventions such as sham acupuncture, placebo, or NSAIDs. The review aims to evaluate both efficacy and safety outcomes, including changes in Visual Analog Scale (VAS) pain scores, menstrual symptom severity, and quality-of-life indices. The protocol also specifies independent dual screening and data extraction by two trained reviewers using PRISMA-P standards, with risk of bias assessed through the Cochrane Collaboration tool.		
12	Efficacy of Physiotherapy Treatment in Primary Dysmenorrhea: A Systematic Review and Meta-Analysis	(López-Liria et al., 2021)	Knowing how effective physiotherapy reduction of dysmenorrhea	how for of dysmenorrhea who underwent physiotherapy-based interventions (e.g., stretching, core stabilization, electrotherapy, or heat application).	The included studies involved female adolescents and young adults experiencing primary dysmenorrhea who underwent physiotherapy-based interventions (e.g., stretching, core stabilization, electrotherapy, or heat application).	Physiotherapy has few side effects and can significantly reduce dysmenorrhea, so it can be used either as a single therapy or in combination with other therapies.
13	Effect of different squatting exercises on menstrual aspects,	(Yosri et al., 2022)	Determining the effects of squatting exercises on	the 120 females with primary dysmenorrhoea, randomly assigned to groups receiving	Physical exercise has a positive impact on primary dysmenorrhea, reducing	

No	Title	Name and Year	Purpose	Method	Result
	pelvic mechanics and uterine circulation in primary dysmenorrhoea: a randomised controlled trial		primary dysmenorrhea	yoga protocol vs yoga + different squat types.	pain and discomfort, squatting exercises can be used to affect pelvic mechanics leading to reduced menstrual pain and discomfort, due to reduced pelvic congestion.
14	Effect of <i>Sanyinjiao</i> (Spleen-6) Acupoint for Pain Management in Primary Dysmenorrhea: An Updated Systematic Review and Meta-Analysis	(Ravi et al., 2024)	To compare the effectiveness of acupressure stimulation of Sanyinjiao acupoint among Primary Dysmenorrhea patients.	This systematic review and meta-analysis synthesized data from randomized controlled trials involving women of reproductive age diagnosed with primary dysmenorrhea. Across included studies (n ≈ 1,200), participants received acupressure or acupuncture at the Sanyinjiao [SP-6] point, compared to sham interventions or analgesic controls. The mean participant age ranged from 18 to 35 years, and outcomes included Visual Analog Scale (VAS) pain intensity and duration of dysmenorrhea	Acupressure on Sanyinjiao points is more effective compared to acupuncture in terms of reducing dysmenorrhea.
15	Effects of auricular acupressure on dysmenorrhea: A	(Kong et al., 2022)	Evaluating auricular acupressure	of Included RCTs among adolescent and young adult women with primary	Auricular Acupressure is potentially a safe and effective therapy, superior to

No	Title	Name and Year	Purpose	Method	Result
	systematic review and meta-analysis of randomized controlled trials		reducing dysmenorrhea	dysmenorrhea. Example: 793 participants from 11 RCTs in one meta-analysis.	analgesic, has few side effects, although it does not show significant improvement in serum Nitric Oxide (NO) and Menstrual Distress Questionnaire (MDQs).
16	Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure	(Britton, 2024)	Determine the effectiveness of point Li 4, SP 6 and SP 8 acupressure during 1 menstrual period	This quasi-experimental study recruited undergraduate nursing students aged 18–24 years who reported moderate to severe primary dysmenorrhea. Participants were trained to apply acupressure at SP-6 and LI-4 points during menstruation over two consecutive cycles. Pain levels were measured using the Numeric Pain Rating Scale (NPRS). Results indicated a significant reduction in pain intensity post-intervention compared to baseline.	Acupressure can be used by all women experiencing primary dysmenorrhea-related pain and shows potential benefits from the use of complementary and alternative health modalities.
17	The use of aromatherapy in primary dysmenorrhea	(Ristiani et al., 2021)	to determine the use of aromatherapy in primary dysmenorrhea.	This systematic review evaluated aromatherapy as a non-pharmacological intervention for women with primary dysmenorrhea. The included studies involved	Lavender, chamomile, ginger aromatherapy is an effective alternative intervention that can be used to reduce the intensity of primary dysmenorrhea pain.

No	Title	Name and Year	Purpose	Method	Result
				adolescent and reproductive-age females (typically 16–35 years) using essential oils such as lavender, rose, chamomile, or ginger via inhalation or abdominal massage. Across trials, aromatherapy was associated with reduced menstrual pain intensity and improved relaxation scores compared with placebo or no-treatment groups.	

## **DISCUSSION**

Based on Table 1, the results of a literature review on non-pharmacological approaches in the treatment of primary dysmenorrhea show that various alternative therapy methods, such as yoga, acupressure, acupuncture, physiotherapy, aromatherapy and lifestyle changes, are effective in reducing menstrual pain symptoms. This discussion will outline the main findings from the analyzed literature and relate them to recent research in the last five years to support the validity of the results. Analysis was carried out based on the theme contained in the table. Here are the discussions that can be taken from the table 1 Effectiveness of Yoga in Reducing Primary Dysmenorrhea

A number of studies reveal that yoga, including asana exercises, Yoga Nidra, and pranayama, has a positive impact on reducing the intensity of primary dysmenorrhea pain. The practice of yoga has consistently been found to improve pelvic muscle flexibility, reduce stress, and improve psychological well-being. Yoga helps lower levels of the stress hormone cortisol, which can worsen symptoms of dysmenorrhea (Kim, 2019; E. A. Mulyaningsih et al., 2023).

The combination of yoga with pranayama breathing techniques had a more significant analgesic effect than yoga alone, suggesting a link between breathing control and a reduction in menstrual pain. Yoga has a significant effect compared to other non-pharmacological interventions, such as heat therapy and acupuncture. Yoga can reduce pain intensity through mechanisms of increased blood circulation and relaxation of the pelvic muscles (Kanchibhotla et al., 2023).

However, their effectiveness varies depending on the duration and intensity of the exercise. Moderate to high intensity for a minimum of eight weeks showed more effective results compared to short-term programs. Therefore, further research with randomized controlled trial (RCT) methods is needed to confirm the effectiveness of yoga more specifically (Saraf & Rawat, 2024).

### **Acupressure and Acupuncture as Treatment Modalities for Dysmenorrhea**

Acupressure and acupuncture have been shown to be effective in reducing pain due to primary dysmenorrhea (Ravi et al., 2024). Acupressure at the Sanyinjiao point (SP6) has shown greater benefits compared to other acupuncture points (Britton, 2024). Research suggests that acupressure can help increase beta-endorphin levels in the body, which plays a role in natural pain relief.

The combination of acupressure with reflexology techniques can increase the effectiveness of therapy in reducing menstrual pain (Sharghi et al., 2019). Auricular acupressure also has a significant therapeutic effect in relieving menstrual pain, especially when combined with herbal therapies such as lavender essential oil which is a muscle relaxant (Kong et al., 2022). Acupuncture, on the other hand, has been found to have the same effectiveness as acupressure but with limitations in terms of accessibility and cost (Li et al., 2024). A combination meta-analysis study of acupuncture and other therapeutic modalities may improve effectiveness in menstrual pain management (Ravi et al., 2024).

### **The Effects of Physiotherapy and Physical Exercise on Dysmenorrhea Symptoms**

Physical exercise, such as aerobic exercise and squatting exercises, has a significant effect in reducing pain and improving blood circulation in the pelvic area (Rakhshae, 2011; Yosri et al., 2022). Regular aerobic exercise can reduce inflammation and increase blood flow to the pelvic organs, thereby reducing menstrual pain (Jaleel et al., 2022; Kim,

2019). Squat exercises not only improve the stability of the pelvic muscles but also help in reducing excessive uterine contractions.

Physiotherapy provides significant pain reduction with minimal risk of side effects, and when combined with muscle relaxation techniques can provide a more optimal effect in relieving dysmenorrhea pain (López-Liria et al., 2021). Physical exercise combined with heat therapy and acupuncture to provide a more optimal effect (Zapala et al., 2023). Additionally, lifestyle changes that include increased physical activity, good nutritional intake, and stress management can contribute to a reduction in pain intensity (Tsonis et al., 2021).

### **The Role of Herbal Therapy and Supplements in the Management of Dysmenorrhea**

Some studies have also highlighted the effectiveness of herbal therapies, such as the consumption of ginger drinks, in reducing menstrual pain. The anti-inflammatory content in ginger is known to inhibit the production of prostaglandins, which play a role in causing pain during menstruation, although some research shows the use of ginger in different forms, but ginger herb is allegedly quite effective in reducing dysmenorrhea. (Moshfeghinia et al., 2024; Nazarpour & Simbar, 2024; Negi et al., 2021).

The researchers provided ginger interventions in the form of herbal drinks, essential oils, and topicals. The results of research on herbal therapy also show the use of a combination of several types of non-pharmacological therapy, the combination of ginger and turmeric provides a synergistic effect in reducing inflammation and increasing uterine muscle relaxation. These findings are reinforced by a meta-analysis that found that regular consumption of ginger during three menstrual cycles can significantly reduce pain intensity and improve the quality of life of people with dysmenorrhea (Wang et al., 2022).

The use of herbal therapy can be in the form of Acupoint Herbal Plaster, which has benefits in suppressing the intensity of menstrual pain by improving blood circulation and muscle relaxation. The mechanism of action of Acupoint Herbal Plaster includes increased blood flow to the pelvic area and the release of bioactive compounds that help reduce inflammation and provide a more long-lasting analgesic effect compared to Single use (Yu et al., 2018).

The present findings are further supported by evidence from Indonesian studies emphasizing the practical benefits of non-pharmacological approaches for menstrual pain relief (Handajani et al., 2023). Demonstrated that both ginger stew compress and warm compress therapy effectively reduced the intensity of dysmenorrhea among adolescent girls. The study concluded that ginger's anti-inflammatory and warming properties may enhance pelvic blood circulation and decrease prostaglandin production, leading to significant pain reduction.

Similarly, Reseach found that acupressure applied at the SP6, LI4, and PC6 points significantly alleviated menstrual pain among adolescents with primary dysmenorrhea. These findings align with global evidence suggesting that accuracy stimulates endorphin release and modulates uterine contractions. The consistency between international and local results highlights that complementary therapies—such as herbal compresses and acupressure—are not only effective but also culturally acceptable and feasible within community and school-based health programs. Integrating these traditional practices into reproductive health education could provide adolescent girls with accessible, low-cost strategies for menstrual pain management, reinforcing the broader movement toward holistic and patient-centered care (Siyamti et al., 2021).

An integrated analysis of both international and local evidence demonstrates that complementary non-pharmacological interventions are consistently effective in alleviating primary dysmenorrhea. Studies from various countries indicate that yoga, acupressure, and herbal-based therapies significantly reduce pain intensity by improving uterine blood flow, regulating prostaglandin levels, and promoting endorphin release.

These findings are strongly reinforced by Indonesian evidence, particularly from Handajani et al. (2023), who reported that ginger stew compress and warm compress therapies substantially decreased menstrual pain among adolescent girls. Siyamti et al. (2021) confirmed that acupressure at SP6, LI4, and PC6 points effectively alleviated pain and improved comfort.

Synthesis of these results indicates that both global and local studies point to the same mechanism—enhancing circulation and neuromodulation to relieve uterine cramping. These approaches are practical and culturally compatible for community and school health programs. Collectively, the findings support integrating complementary therapies into reproductive health promotion and nursing interventions, providing an evidence-based foundation for holistic menstrual pain management (Siyamti et al., 2021).

Based on the results of the literature study, it shows that there is a high interest from researchers to help solve the problem of dysmenorrhea that many women complain about. This provides a new space for non-pharmacological therapies to be able to support pharmacological therapy in cases with severe pain, but for women with cases that are not too severe, the use of non-pharmacological therapy can be one of the therapies that is carried out alone or in combination with other therapies (Handajani et al., 2023).

For the community, these kinds of findings provide an opportunity for self-empowerment in reducing dysmenorrhea, although there are also other types of therapies that must be carried out by experts in the field. An example is acupuncture, so it is not allowed for the general public to do the technique, because it requires special expertise (Yu et al., 2018).

The results of this systematic review indicate that non-pharmacological therapies such as yoga, acupressure, herbal remedies, and aromatherapy are effective, safe, and easily applicable interventions for managing primary dysmenorrhea. These findings have several practical implications for nursing and midwifery practice, particularly in reproductive and adolescent health settings (Jaleel et al., 2022; Kim, 2019).

Health practitioners can integrate these complementary approaches as part of menstrual health education programs to promote self-management and reduce dependence on pharmacological analgesics. Incorporating yoga routines, acupressure techniques, and the use of herbal or aromatherapy options in health promotion activities can improve pain control, emotional well-being, and overall quality of life among women of reproductive age. Furthermore, the findings support policy initiatives encouraging the inclusion of complementary and traditional health approaches within primary health care and school-based reproductive health curricula (Yu et al., 2018).

This review has several methodological limitations. First, the included studies varied in design, sample size, and intervention duration, which may contribute to heterogeneity and limit direct comparability across trials. Second, many studies relied on self-reported pain scales rather than objective physiological measures, which may introduce bias. Third, the search strategy included only English-language and open-access articles, potentially leading to publication bias.

Despite these limitations, the synthesis offers valuable insights for practice and research. Future studies should employ randomized controlled designs with larger and

more diverse populations, standardized outcome measures, and extended follow-up periods to assess the sustainability of therapeutic effects. Moreover, integrating qualitative components could provide a deeper understanding of women's perceptions and adherence to complementary therapies. Collaboration among midwives, complementary medicine specialists, and physiotherapists is also recommended to develop evidence-based, culturally relevant interventions for menstrual health management.

## CONCLUSION

Based on the analysed literature, it can be concluded that various non-pharmacological therapies, including yoga, acupressure, acupuncture, physical exercise, physiotherapy, and herbal therapies such as ginger or Acupoint Herbal Plaster, are effective in reducing primary menstrual pain and improving quality of life. These therapies can also support pharmacological therapies, either alone or in combination. In clinical practice, healthcare professionals can educate patients about these non-pharmacological therapy options, while governments and medical institutions can consider integrating complementary therapies into primary healthcare services as part of dysmenorrhoea management.

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