

Tinjauan Pustaka

Yoga for Managing Dysmenorrhea and Well-being in Women: A Literature Review Through the Lens of Tri Hita Karana

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Abstract

Introduction: Dysmenorrhea significantly impacts women's quality of life and well-being. Yoga is considered an effective non-pharmacological intervention. Dysmenorrhea significantly influences women's quality of life and overall well-being. Yoga is considered as an effective non-pharmacological intervention for managing dysmenorrhea. Primary dysmenorrhea can lead to considerable physical discomfort and emotional distress, ultimately resulting in a decline in overall quality of life. Implementing yoga practices may provide substantial benefits in alleviating dysmenorrhea.

Methods: A systematic literature review was undertaken using PubMed and Google Scholar, focusing on the years 2015-2025. The selected keywords for this review included 'yoga', 'dysmenorrhea', and 'quality of life'. The review specifically targeted peer-reviewed studies in any language focusing on women with primary dysmenorrhea. Following the screening of titles and abstracts, relevant full-text articles were analyzed to extract key findings.

Discussion: To analyze scientific evidence regarding the role of yoga in the management of dysmenorrhea and its potential to enhance overall well-being through the perspective of Tri Hita Karana philosophy. This approach encourages a holistic understanding of health and wellness.

Conclusion: Yoga plays a vital role in enhancing pain relief, fostering emotional balance, and creating a holistic connection that aligns with Tri Hita Karana principles. Yoga and Tri Hita Karana can offer a sustainable approach to promoting women's health and well-being.

Keywords: Dysmenorrhea, Tri Hita Karana, Well-Being, Yoga

1. INTRODUCTION

Dysmenorrhea, or pain during the menstrual cycle, is the most

common gynaecological problem for women of childbearing age. It can last for hours or days and is

characterised by severe cramping in the quadriceps, lower abdomen, or back. There are two kinds of dysmenorrhea: Primary dysmenorrhea is menstrual pain that isn't caused by a pelvic disease. It usually starts before or during the menstrual cycle. Secondary Dysmenorrhea defines as menstrual pain due to and underlying pelvic pathology such as endometriosis, adenomyosis, and leiomyomas.¹ The uterine endometrial layer separates, causing periodic vaginal bleeding, following this causes women to feel the symptoms of dysmenorrhea.^{2,3} Myometrial muscles contracting too much that lower the blood flow. As a result, myometrial cells lack of oxygen causing pain during menstruation, which in turn creates heartburn in the stomach.⁴ The claimed incidence of Primary Dysmenorrhea (PD) differs greatly between studies, ranging from 11% to 90%. This significant variability highlights the differences in diagnostic criteria, population characteristic, and research methodologies used. Apparently, contributing factors influence the condition's heterogenous nature. Dysmenorrhea has been associated to a number of factor, such as anxiety, stress, and depression; a family history of primary dysmenorrhea; lifestyle (such as smoking, alcohol, diet, and physical activity); menstrual

characteristics (such as menstrual bleed, cycle duration, menstrual regularity, and menstrual flow), obesity, age, and quality of life.⁵ In Indonesia, 64.25% of women suffer from dysmenorrhea.⁶ Three-fourths of adolescents with primary dysmenorrhea experienced mild to moderate pain, and one-quarter experienced severe pain, accounting for 60–75% of cases.⁷ Besides physical discomfort, dysmenorrhea has significant effects on academic performance, productivity loss, and mental health; many affected individuals report feeling more anxious, irritable, and having a lower quality of life.⁸ Pain is a significant factor that affects quality of life (QOL). QOL is identified as a person's general well-being in a range of social, mental, and physical aspects involving discomfort, sleep quality, negative feelings, productivity, and relationships.⁹

Alongside traditional treatment, including oral contraceptives and non-steroidal anti-inflammatory medicines (NSAIDs), several complementary and alternative medicines (CAM) have been explored to improve the quality of life among women to reduce dysmenorrhea.⁹ Due to their potential benefits, transcutaneous electrical nerve stimulation, acupuncture, acupressure, topical heat, behavioural interventions,

relaxation, herbal, and dietary therapy have gained interest. Yoga has become one of the more promising CAM interventions among these therapies.¹⁰ Yoga integrates body awareness, breathing exercises, physical posture, and meditation, which have additional biopsychosocial benefits.¹¹ Despite their common use, pharmacologic treatments present a failure rate ranging from 10% to 20%, leaving many women without sufficient pain relief.⁹ In addition to their limited effectiveness, these medications can lead to various adverse side effects such as gastrointestinal disturbances (e.g., vomiting, diarrhoea, gastrointestinal bleeding), cardiovascular risk (e.g., venous thrombosis, heart attack, stroke), and contraindication women (e.g., those seeking pregnancy or with specific health conditions).⁹ Moreover, traditional treatments often fail to enhance overall QOL emphasizing its potential side effects, personal references, contraindications, and how well symptoms can be effectively managed.

Yoga is recognized to be an effective stress management option as it induces physiological changes that reduce stress and pain response.¹² A mind-body exercise that integrates physical postures (*asana*), controlled breathing (*pranayama*), and

mental focus (*dhyana*) to enhance holistic well-being, aligns closely with Tri Hita Karana philosophy — a Balinese Hindu concept that highlights the importance of harmony in three meaningful relationships: between people (Pawongan), with nature (Palemahan), and with the divine (Parahyangan). This philosophical approach strengthens the therapeutic benefits of yoga through the balance of physical, social, and spiritual dimensions.¹³ This Balinese local wisdom is the main foundation in yoga practice for managing primary dysmenorrhea it also helps women foster a deeper connection to nature, offering a sense of peacefulness and harmony for preserving their mental well-being. This study aims to evaluate on the effectiveness of yoga for dysmenorrhea critically and enhancing overall well-being while employing Tri Hita Karana philosophy as an analytical lens to explore its multidimensional impacts. This study also focuses on how yoga impacts dysmenorrhea and overall well-being and Tri Hita Karana principles are reflected in yoga for women's health.

2. METHOD

This study used PubMed and Google Scholar databases to identify relevant publications on yoga for dysmenorrhea, yoga, and quality of life, Tri Hita Karana yoga

mode. Specific keywords were applied and combined using Boolean operators “AND”, such as: “yoga” AND “dysmenorrhea” AND “yoga” AND “quality of life” AND “tri hita karena yoga model”

The inclusion criteria consisted of: (1) peer-reviewed articles published between 2015-2025, (2) intervention using yoga and dysmenorrhea; benefits of yoga on quality of life; Tri Hita Karana yoga model, (3) no language restrictions (both English and Indonesia studies were considered). While, these studies exclude (1) nonwomen

populations, (2) studies on secondary dysmenorrhea or unclassified dysmenorrhea. This literature review includes studies published within the last ten years to ensure the relevance, validity, and timeliness of the evidence used. The selection process involved reviewing titles and abstracts for relevance, downloading and thoroughly examining full-text articles to extract key findings, and using Google Scholar as cross-referencing for supplementary studies supporting the selections made from PubMed.

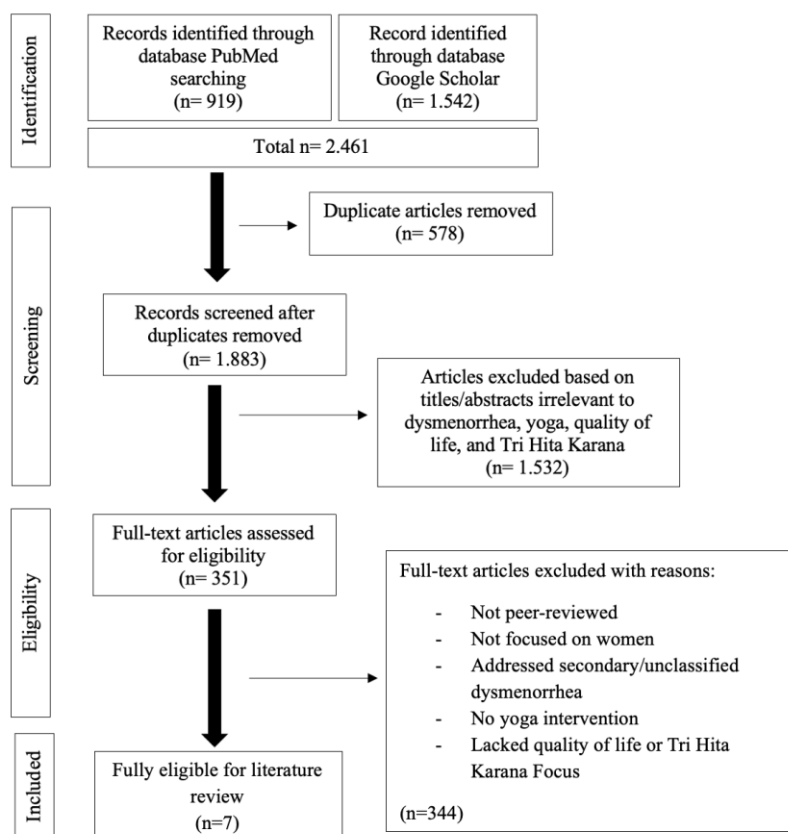


Figure 1. Flowchart of Record Eligibility Assessment and Literature Included for Review

Table 1. Summary of Eligible Studies for Literature Review

No	Author (Year)	Benefits	Study Design	Conclusion
1	Desriva, et al. (2022)	Pain reduction, improved relaxation, non-drug therapy, better physical health	Quantitative research. Quasi-experimental with a pre-test and post-test approach	Yoga movements are effective in reducing menstrual pain in adolescent girls at SMAN 1 Tambang.
2	Chhikara, et al. (2023)	Stress relief, holistic well-being, hormonal balance, anxiety reduction, enhanced coping	Experimental study	Yoga helps reducing stress and anxiety in women who experience dysmenorrhea.
3	Widowati & Acihayati. (2023)	Pain reduction, quality of life improvement, non-pharmacological option, promotes self-care, accessible practice.	Quantitative research. Quasi-experimental with a pre-test and post-test approach	Yoga is an effective therapies in reducing dysmenorrhea and improving the quality of life in adolescent girls
4	Yonglitthipagon, et al. (2017)	Pain relief, better physical fitness, enhanced quality of life, non-drug treatment, sustainable practice	Experimental study, Randomized controlled trial (RCT)	Yoga reduce dysmenorrhea and improve physical fitness and quality of life in young women with primary dysmenorrhea
5	McGovern, et al. (2018)	Improves quality of life, pain reduction, mental health benefits, improves sleep and functioning, holistic care option	Systematic review	Yoga improves the quality of life and reduces symptoms of primary dysmenorrhea in women
6	Muliarta, et al. (2024)	Cultural integration, enhanced well-being, stress reduction, self-awareness and balance, practical tool	Quantitative research	Yoga model based on Tri Hita Karana principles is effective for supporting well-being
7	Muliarta, et al. (2024)	Mental well-being support, culturally rooted practice, holistic development, practical implementation	Experimental study	Tri Hita Karana yoga model effectively improves the mental well-being

3. DISCUSSION

3.1 Yoga and Its Impact on Dysmenorrhea

Yoga is a holistic practice that combines physical postures (*asanas*), breathing techniques (*pranayama*), and mental focus (*dhayana*).¹⁴ Traditionally, yoga

integrates specific philosophy with meditation (*dhayana*), prayer, a variety of physical postures (*asanas*), breathing exercises (*pranayama*), and deep relaxation (Yoga Nidra).⁹ Yoga can enhance character development, aligning with yoga's ultimate goal of uniting

the mind and body for beneficial effects (e.g., to train balance, flexibility, and strength).¹⁵ This mind-body exercise integrates physical movement with focused mental awareness, makes yoga itself considered to be one of the most effective holistic approaches to stress management as it triggers various physiological changes in the body that help reduce stress and pain response.¹⁰

Asanas are the physical postures and poses in yoga are designed to enhance flexibility, strength, balance, and circulation. *Asanas* effectively relieve tension in the pelvic area, abdomen, and lower back. The benefits of these asanas are reduced lower back pain, decreased menstrual distress and anxiety, improved physical fitness and quality of life, and a notable decrease in oxidative stress markers such as homocysteine levels.¹⁰ *Asanas* are practiced in various positions, such as sitting, standing, and lying down (supine). They also include movements that involve bending, twisting, and balancing, which enhance musculoskeletal function while creating either calming or energizing effects. These postures are frequently combined with meditation (*dhyana*) and practicing yoga prayers to strengthen the connection between the mind and body.⁹

Pranayama refers to the structured practice of breath control that includes various techniques for managing the rhythm, depth, and breathing pattern. *Pranayama* is an effective way to impact the nervous system and the body response to pain and stress. It is an essential component of yoga that involves a variety of techniques. A common technique involves rhythmic diaphragmatic breathing that is synchronized with each asanas. The ideal breath is characterized by its calmness and continuity between inhalation and exhalation. Self-awareness and mindfulness are increased by practicing this breathing technique.⁹

Yoga Nidra is a restorative practice and relaxation method typically performed at the end of a yoga session in a supine (lying position). Often referred to as “psychic sleep”, Yoga Nidra can be particularly beneficial for women related to menstrual issues, e.g., stress and anxiety.¹⁶ It involves several steps where attention is focused on the breath, emotions, and different body parts to achieve relaxation for both body and mind. Compared to regular sleep, Yoga Nidra allows the mind to enter a deeper state, maintaining a “blissful awareness” an intense state of relaxation.⁹

3.2. Mechanism of Action for Dysmenorrhea Relief

The pathophysiology of primary dysmenorrhea is mainly linked to the excessive production and release of prostaglandins from the endometrium that sheds during menstruation. Uterine spasms that cause dysmenorrhea can be influenced by various physical and psychological factors, such as stress and hormonal changes, particularly the effect of prostaglandins. The increased levels of prostaglandins contract the uterus, that which lead to ischemic vasospasms in uterine arterioles. This, in turn, results in the collapse of the endometrium in the lower abdomen, causing bleeding and cramps that stimulate pain during menstruation.

Prostaglandins play a dual role in inducing menstrual pain. First, they stimulate intense, high-frequency contractions of the myometrium, leading to increased pressure within the uterus. Second, they cause significant vasoconstriction of the small endometrial blood vessels. This combination decreased blood flow and increased myometrial activity, resulting in uterine tissue ischemia, a lack of oxygen supply that directly activates pain receptors. The production of prostaglandins is by the facilitated by cyclooxygenase (COX) enzyme, that which leads to COX

activity in women who suffer from dysmenorrhea. Vasopressin plays a role in creating an ischemic condition by inducing the contraction of blood vessels and elevating pressure within the uterus.

One option relaxation method that helps lessen dysmenorrhea is yoga.¹⁷ Specific yoga movements, such as pelvic movements, knee positioning, chest stretching, and breathing techniques, can be effective in reducing dysmenorrhea. The joints are moved within their full range of motion, which helps rejuvenate cartilage that may not be frequently used and promotes better circulation of oxygen and blood throughout the body. Teenagers who experience dysmenorrhea may gain benefit from yoga as a therapy and do it daily without the need for painkillers. It also prevents young women from getting addicted to menstrual pain medications.¹⁸

3.3. Yoga and Well-being

There exists increasing evidence that mental health conditions such as depression, anxiety, and stress have been connected to chronic pain and coexist with dysmenorrhea. Dysmenorrhea and issues associated with the menstrual cycle, emotional and behavioural issues are likely to worsen the situation. Yoga serves as a valuable therapy for

improving both physical and mental well-being by helping individuals effectively manage stress, promoting a sense of calm and ease.¹⁶ Research indicates that practicing asanas enhances physical health by decreasing activity in the sympathetic nervous system and the hypothalamic pituitary adrenal axis. It also provides physiological benefits related to neurotransmitter activity and the immune system.¹⁶

Yoga is a relaxation method that might lessen dysmenorrhea by releasing endorphins. The pituitary and hypothalamus produce endorphins, that are endogenous opioid polypeptides that serve as natural analgesics. Pituitary gland releases endorphins during menstruation, that reduce tension and pain. Engaging in yoga also stimulates the release of endorphins, contributing to the overall sense of well-being associated with this practice.¹⁸

Therefore, yoga helps to downregulate this body's alarm system, which leads to a feeling of calm and relaxation. A control group that engaged in reading and another that participated in an asana-focused yoga session had different amounts levels of gamma-aminobutyric acid in the brain, according to a study by Franklin et al. Participants who practiced Ashtanga, known for its

emphasis on asanas, demonstrated improvements in diastolic blood pressure, perceived stress levels, and overall health. Additionally, they showed advancements in flexibility, upper body strength, and trunk muscular strength and endurance.¹⁶

3.4. Analysis Through Tri Hita Karana Principles

The three primary principles of Tri Hita Karana, a traditional Balinese philosophy of life, are Parahyangan (harmonious relationship with God), Pawongan (harmonious relationship with fellow humans), and Palemahan (harmonious relationship with the environment).¹³ Combining yoga with Tri Hita Karana philosophy offers a culturally sensitive and holistic approach to addressing dysmenorrhea and enhancing women's well-being. This integration merges evidence-based yoga practices with Balinese cultural wisdom, creating a sustainable model for women's health.

Parahyangan emphasizes integrating of spiritual and religious values to foster awareness and maintain a deep relationship with God, the source of all life.¹³ Parahyangan charismatic principles are enriched with the salutary and mindfulness facets of yoga that offer a secure background to

acquire inner serenity and the acknowledgement of physical alteration that accompanies the menstruation. With practices like yoga, which unites spiritual health with successful treatment of stress-related changes in hormone levels contributing to menstrual cramps, there is a great possibility of promoting spiritual well-being. Using the Tri Hita Karana key in yoga classes women will be able to establish a more positive and empowering relationship with their bodies helping to both relieve themselves physically and develop themselves personally and gain self appreciation.

The application of the concept of Pawongan in yoga is aimed at promoting good relations between people.¹³ Group yoga classes create a beneficial environment because of nurturing closer relationships with other people and reducing loneliness that help to support Pawongan. Female yoga groups can provide safe havens to share stories and normalise discussions of menstruation health and to heal through a group. Thanks to the incorporation of Tri Hita Karana principles into yoga education training, Balinese and Indonesian women now have a much easier learning experience when practising yoga as cultural neutrality will be ensured through this teaching practice.

Palemahan is strong as an instrument of understanding the environment and ecological responsibility.¹⁹ By introducing outdoor yoga into outdoor environments like beaches or woods, we will be able to utilize the therapeutic effect of nature, which can be of tremendous help in pain reduction and in enhancing a person mental clarity. Additionally, the adoption of environmentally friendly yoga-related activities, including those that involve the use of natural equipment and practicing mindful breathing in open areas enhances our connection with the environment and encourages sustainability.²⁰ Adding the conscious diet and the seasonal practices, as well as Tri Hita Karana, would be very much helpful in achieving the natural hormonal balance.

The concept of integrating yoga and Tri Hita Karana, a Balinese cultural philosophy, provides a feasible approach of enhancing the health of women through balance in three other aspects: Women can achieve inner peace, appreciation, and body appreciation by associating yoga and meditation and embracing Parahyangan (harmony with God) aspects. The Pawongan (harmony with people) could be expressed in any support group where women are allowed to share experiences. By teaching women

to see their menstrual cycle as a normal process and a natural regularity rather than an issue, they can achieve *Palemahan* (harmony with nature). This integrated approach provides a sustainable and powerful solution. The body, mind, spirit and social well-being are all addressed. By providing them with the information and resources to naturally manage their health, it empowers women.

4. CONCLUSION

Yoga works well as a complementary therapies for well-being and dysmenorrhea. Including three dimensions, *Tri Hita Karana* enhances our knowledge of yoga as a comprehensive discipline rather than simply physical exercise. It involves culturally respectful approaches to advance women's health. Yoga is a useful adjunctive treatment for improving general well-being and relieving dysmenorrhea. Through cultural acceptance, the *Tri Hita Karana* principle enhances our understanding of yoga as a comprehensive practice that incorporates three fundamental aspects.

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