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Review Article

The role of physiotherapy in menstrual health: a narrative review

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ABSTRACT

The field of menstrual health integrates the various aspects of menstrual cycle to enhance overall functioning and quality of life. Physiotherapy plays a key role by providing a comprehensive, evidence-based approach through conservative management strategies. Literature search was performed in the month of September and October 2025 through major academic databases including PubMed, Scopus, Web of Science and Google Scholar. The research included studies from January 2010 until October 2025. The terms used for the study are "menstrual health" and "dysmenorrhea" and "physical therapy" and "premenstrual syndrome" and "endometriosis" and "chronic pelvic pain" and "therapeutic exercise" and "physiotherapy" to find systematic reviews, meta-analyses and randomized controlled trials (RCTs). Existing evidence indicates that physiotherapeutic methods are safe treatment options that can be used with the conventional medical care. Physiotherapy represents a vital yet underutilized approach in the management of menstrual health. Incorporating accessible physiotherapy services into public health strategies will be helpful in reducing treatment gaps while improving menstrual related health care.

Keywords: Dysmenorrhea, Premenstrual syndrome, Physical therapy, Physiotherapy, Therapeutic exercise

INTRODUCTION

Menstrual health (MH) is a holistic, multi-dimensional concept encompassing physical, mental, and social well-being related to the menstrual cycle not merely an absence of disease.[1] It goes beyond access to absorbents, addressing complex physiological, psychological, and socio-cultural factors.[2] Dignified menstrual management is a human right, influencing health, education, and economic participation.[3] Globally, over 300 million individuals menstruate daily, yet Menstrual Health and Hygiene (MHH) remains marginalized due to cultural taboos and limited measurable evidence.[4-6] In India, challenges like menstrual poverty, stigma, and lack of sanitation exacerbate the burden.[7,8] Furthermore, Primary dysmenorrhea (PD) affects 46-76% of women, impairing quality of life and work productivity.[9,10] Management for the problems associated with reproductive health relies on NSAIDs and hormonal contraceptives, which may cause side effects or incomplete relief.[11]

Physiotherapy (PT) presents a vital, often ignored alternative offering low-risk and non-pharmacological interventions.[12] These methods effectively reduce pain, anxiety, and depression, yet remain poorly integrated into menstrual health protocols.[13] The study was conducted with the purpose of reviewing the comprehensive nature of menstrual health issues, combined with the high national burden of menstrual disorders in India, necessitates a shift toward integrating effective, non-pharmacological conservative management strategies. Therefore, the review was conducted with an intention to outline the contemporary scope of menstrual health and describe the global as well as Indian burden of menstrual health disorders. It aims to identify and critically appraise the physiotherapy techniques currently used to manage

menstrual issues. Furthermore, the review seeks to highlight existing gaps in evidence and practice, and recommend future directions for research and implementation of physiotherapy-based strategies, particularly in low-resource settings.

METHODS

For the appropriate methodology of the review, SANRA guidelines was used. The literature search was conducted in September and October 2025 across major biomedical and interdisciplinary databases to ensure comprehensive coverage.

The databases searched included; PubMed/MEDLINE, Scopus, Web of Science, Google Scholar

The search was limited to articles published between January 2010 to October 2025, to capture recent and modern evidence-based practices in menstrual health and physiotherapy. A combination of Medical Subject Headings (MeSH) terms and free-text keywords, employing Boolean operators (AND, OR), was utilized to capture the full scope of the research question. The search strategy involved combining three main concept blocks:

Block 1: Menstrual health and burden (Context)

"Menstrual health" OR "menstrual hygiene" OR "menstrual disorders" OR "primary dysmenorrhea" AND "global burden" OR "epidemiology India" OR "neglected issue"

Block 2: Physiotherapy interventions (Intervention)

"Physiotherapy" OR "physical therapy" OR "therapeutic exercise" OR "manual therapy" OR "pelvic floor exercise" OR "Transcutaneous Electrical Nerve Stimulation" OR "TENS" OR "acupuncture"

Block 3: Condition and outcome (Population and Focus)

"Menstrual pain" OR "dysmenorrhea" OR "menstrual symptoms" OR "quality of life".

Inclusion and exclusion criteria

The following criteria guided the selection of literature.

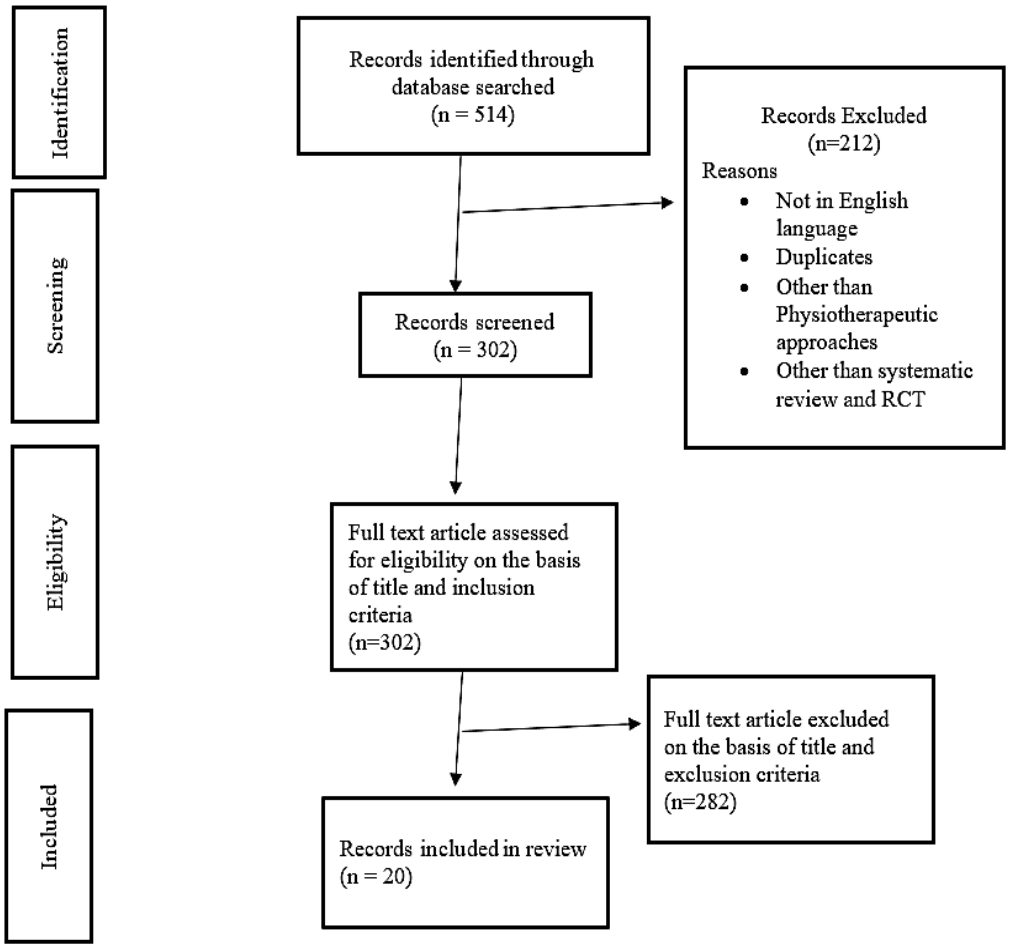

Figure 1: Selection process.

Table 1: Selection criteria of narrative review.

Criteria	Inclusion	Exclusion
Publication type	Systematic reviews, meta-analyses, randomized controlled trials (RCTs), narrative reviews, cohort studies, epidemiological studies, and key policy/white papers.	Editorials, opinions, commentaries, conference abstracts, animal studies, *in vitro* studies, and dissertations/theses (unless published).
Population	Studies involving women and adolescent girls of reproductive age (15-49 years) with primary menstrual health issues, including primary dysmenorrhea (PD).	Studies focusing solely on secondary dysmenorrhea (pain arising from conditions like endometriosis, fibroids, or pelvic inflammatory disease), or non-human subjects.
Intervention	Articles describing non-pharmacological, conservative physical management strategies (exercise, manual therapy, electrotherapy).	Studies focusing only on pharmacological (NSAIDs, hormones) or surgical interventions, or alternative therapies without a clearly defined physical mechanism.
Timeframe	Articles published from January 2010 to October 2025.	Articles published outside the designated timeframe.
Language	Full-text articles available in the English language.	Non-English language articles or those without full-text access.

RESULTS

Following the systematic search outlined in the methods section, a total of 30 primary studies, systematic reviews, and meta-analyses were selected for in-depth analysis and inclusion in this review. These articles were chosen for their robust methodologies (RCTs, high-quality reviews) and their direct relevance to the physical management of primary dysmenorrhea (PD).

Table 2: Characteristics of key studies on physiotherapy for primary dysmenorrhea.

Author and year	Age group	Origin of country	Variables	Intervention	Conclusions
Cai J et al (2025)[7]	15-43 years	China	Pain intensity (VAS, menstrual symptom questionnaire), pain duration	Running, yoga, pilates, zumba, HIIT training, brisk walking	Aerobic exercises significantly reduced pain intensity and pain duration in women with primary dysmenorrhea
Xia li et al (2024)[9]	Reproductive age group	China	Pain intensity or severity, menstrual distress questionnaire, adverse events and effective rate.	Manual therapy	Manual therapy proves to be effective in relieving menstrual pain with least adverse events compared with no treatment and NSAIDs
Meltem et al (2022)[13]	Reproductive age group	Turkey	Pain intensity, pain related interference with daily activities	TENS	Helpful in reducing pain intensity related to Menstrual cycle in females with primary dysmenorrhea
Yonglitthipagon et al (2017)[14]	Young women with PD	Thailand	Menstrual pain, physical fitness, quality of life	Yoga	Yoga significantly reduced menstrual pain, improved physical fitness, and enhanced quality of life in women with primary dysmenorrhea
Dehnavi et al (2018)[15]	Adolescent girls	Iran	Pain intensity, duration	Aerobic exercise	Aerobic exercise significantly reduced pain intensity and duration in adolescent girls with primary dysmenorrhea

Continued.

Author and year	Age group	Origin of country	Variables	Intervention	Conclusions
Manisha et al (2015)[16]	Adolescent girls	India	Pain intensity	Conventional TENS vs. spinal mobilization	Both interventions reduced pain, but spinal mobilization showed superior effects in managing primary dysmenorrhea
Berde et al (2015)[17]	Young women	India	Pain intensity	Core strengthening and chair aerobic exercises	Both exercises were effective in reducing pain intensity in women with primary dysmenorrhea
Gopal et al (2024)[18]	Unmarried girl	India	Pain intensity, relaxation	Core stability exercise and relaxation technique	Combined intervention improved pain and relaxation in primary dysmenorrhea
Mathewman et al (2018)[19]	Reproductive age group	UK	Pain intensity, quality of life	Physical activity	Physical activity significantly reduced menstrual pain and improved quality of life
Peper et al (2025)[20]	Women with PD	USA	Menstrual symptoms	Diaphragmatic breathing	Diaphragmatic breathing reduced menstrual symptoms both in-person and online settings
Fitz et al (2012)[21]	Women with pelvic floor dysfunction	Brazil	Pelvic floor muscle function	Biofeedback	Biofeedback improved pelvic floor muscle function and reduced symptoms
Lopez-liria et al (2021)[22]	Reproductive age group	Spain	Pain intensity, quality of life	Physiotherapy treatment	Physiotherapy was effective in reducing pain and improving quality of life in primary dysmenorrhea
Jin et al (2025)[23]	Women with PD	South Korea	Pain, uterine artery indices	Myofascial release	Myofascial release reduced pain and improved uterine artery hemodynamics
Jo J et al (2018)[24]	Women with PD	South Korea	Pain relief, quality of life	Heat therapy	Heat therapy significantly reduced pain and improved quality of life
Abdelrehman et al (2024)[25]	Adolescent females	Egypt	Pain intensity, quality of life	Aquatic vs aerobic exercise	Both exercises were effective; aquatic exercise showed slightly better improvement in quality of life
Gharlighi et al (2012)[26]	Young women	Iran	Pain severity	Acupressure	Acupressure significantly reduced severity of primary dysmenorrhea
Song et al (2023)[27]	Young women	South Korea	Pain, physical function, sleep, psychological factors	Pilates	Pilates improved pain, physical function, sleep quality, and psychological well-being
Ortiz et al (2015)[28]	Women with PD	Mexico	Pain intensity	Physiotherapy program	Physiotherapy program effectively reduced pain intensity in primary dysmenorrhea
Kim et al (2006)[29]	Employed women	South Korea	Menstrual cramps	Abdominal meridian massage	Massage reduced menstrual cramps and dysmenorrhea symptoms
Pegado et al (2020)[30]	Women with PD	Brazil	Pain intensity	Transcranial direct current stimulation (tDCS)	tDCS showed promising results in reducing pain in primary dysmenorrhea

The key characteristics, variables, interventions, and conclusions of the included literature are summarized in Table 1. The findings collectively highlight the multifaceted efficacy of physiotherapy, ranging from neurophysiological pain modulation (TENS) to improved central nervous system effects (exercise).

DISCUSSION

Menstrual health is the crucial aspect in women lifespan helps to address various issues associated with reproductive life. The current narrative review helps to understand the multi-dimensional role of physiotherapy in menstrual health by analysing numerous researches available and synthesizing evidence from diverse geographical mapping and age groups.

Evidence shows that exercise based Physiotherapy interventions including Aerobic exercise, Yoga, Pilates, aquatic exercise are consistently effective in reducing pain intensity and menstrual discomfort in women with primary dysmenorrhea.[14] Improved pelvic blood circulation, endorphin release, decreased prostaglandin levels, and improved neuromuscular control are probably the mechanisms underlying these interventions' analgesic effects.[15] The holistic advantages of physiotherapy in menstrual health care are highlighted by mind-body techniques like yoga and Pilates, which also enhance physical fitness, sleep quality, psychological well-being, and overall quality of life.[25,27]

Manual therapy methods like spinal mobilisation and myofascial release have proven to be more or equally effective than modalities and pharmaceutical approaches.[9,16] As demonstrated improvements in uterine haemodynamics after myofascial release, these interventions may affect pain perception through neuromodulation, mechanical correction, and improved uterine and pelvic blood flow.[23] Heat therapy, transcutaneous electrical nerve stimulation, and new methods like transcranial direct current stimulation are examples of electrotherapeutic modalities that have demonstrated encouraging outcomes in reducing menstrual pain and improving quality of life.[30] Significantly, spinal mobilisation has been shown to reduce pain more than traditional TENS, indicating the significance of treating the neuromuscular and spinal causes of dysmenorrhea rather than depending only on symptomatic pain relief.[16]

The role of physiotherapy in managing menstrual health is further expanded by core stability exercises, pelvic floor rehabilitation, diaphragmatic breathing, and biofeedback. While pelvic floor biofeedback enhances muscle function and relieves related symptoms in women with pelvic floor dysfunction, core strengthening in conjunction with relaxation techniques has been demonstrated to lessen pain intensity and improve relaxation responses.[17] The growing potential of tele-physiotherapy interventions in managing menstrual symptoms is highlighted by diaphragmatic breathing, which is effective in both in-person and virtual settings.[20] Furthermore, complementary physiotherapy techniques like acupressure and abdominal meridian massage have been shown to significantly lessen menstrual cramps and pain, especially in young, working women. This makes them accessible and culturally acceptable choices for community-based care.[26,29]

Overall, the results of this narrative review highlight that physiotherapy offers a safe, economical, and non-pharmacological approach to managing menstrual health, addressing not only pain but also functional limitations, psychological well-being, and participation restrictions. As a means to promote self-management and decrease the usage of medications such as analgesics, physiotherapy is significantly important for long-term menstrual health management. But the differences in approaches to interventions, results, and studies emphasize the importance of standardized physiotherapy and quality long-term studies.

Strength and limitation

This review synthesizes evidence from diverse sources, thereby ensuring a broad and evidence-based perspective on physiotherapy interventions for menstrual health. The inclusion of both national and international data enhances contextual relevance, while the focus on conservative, non-pharmacological strategies underscores physiotherapy's unique contribution to public health.

However, certain limitations must be acknowledged. As a narrative review, the synthesis is inherently vulnerable to selection and interpretation bias compared with systematic reviews or meta-analyses. Variability in intervention protocols, outcome measures, and reporting standards across included studies limits comparability and generalizability. The exclusion of non-English language publications may have led to omission of region-specific evidence, particularly from low-resource settings. Future research should aim for standardized physiotherapy protocols, larger multicentric trials, and culturally sensitive approaches to strengthen the evidence base and facilitate integration into menstrual health policy and practice.

CONCLUSION

Problems associated with menstrual health represents a substantial, yet treatable, contributor to compromised quality of life. Physiotherapy interventions offer an essential, evidence-based pillar in conservative management, providing targeted, non-pharmacological relief via mechanical and neurological mechanisms.

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