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Systematic review: The Beneficial effects of alternative methods, with an emphasis on yoga, for patients affected by pain associated with endometriosis

Katarzyna Kutyla,

Maria Skłodowska-Curie Specialist Hospital in Zgierz,

Parzęczewska 35, 95-100 Zgierz,

<https://orcid.org/0009-0007-3424-5291>

katarzynakutyla@icloud.com

Anna Marszałek,

University Clinical Hospital No. 1 of the Medical University of Lodz,

ul. Kopcińskiego 22, 90-153 Łódź

<https://orcid.org/0009-0000-7348-8498>

aniamars@o2.pl

Maciej Choński,

Maria Skłodowska-Curie Specialist Hospital in Zgierz,

ul. Parzęczewska 35, 95-100 Zgierz

<https://orcid.org/0009-0005-3348-1589>

maciej.choinski97@gmail.com

Paulina Wasiewicz-Ciach,

University Clinical Hospital No. 2 of the Medical University of Lodz,

ul. Stefana Żeromskiego 113, 90-549 Łódź

<https://orcid.org/0009-0003-8631-7788>

paulina.wasiewicz@gmail.com

Marcelina Teresa Marzec,

University Clinical Hospital No. 2 of the Medical University of Lodz,

ul. Stefana Żeromskiego 113, 90-549 Łódź

<https://orcid.org/0009-0002-6978-4969>

marcelina.marzec@op.pl

Piotr Kuczyński,

Karol Jonscher Municipal Medical Center,

ul. Milionowa 14, 93-113 Łódź, Poland

<https://orcid.org/0009-0004-9923-8154>

piotr.kuczynski67@gmail.com

Aleksandra Wydra-Rojek,

Masovian Specialist Hospital,

ul Juliana Aleksandrowicza 5, 26-617 Radom

<https://orcid.org/0009-0005-6046-6958>

awydrarojek@icloud.com

Aleksandra Łakoma,

Hospital of St John of God in Lodz,
ul. Kosynierów Gdyńskich 61, 93-357 Łódź
<https://orcid.org/0009-0004-1019-0773>
ale.lakoma@gmail.com

Weronika Zofia Marzec,

University Clinical Hospital No. 2 of the Medical University of Lodz,
ul. Stefana Żeromskiego 113, 90-549 Łódź
<https://orcid.org/0009-0006-2990-4101>
weronika.marzec@onet.pl

Wojciech Jan Mokot,

Maria Skłodowska-Curie Specialist Hospital in Zgierz,
Parzęczewska 35, 95-100 Zgierz,
<https://orcid.org/0009-0004-3765-4902>
wmokot@icloud.com

Affiliations:

- University Clinical Hospital No. 2 of the Medical University of Lodz, ul. Stefana Żeromskiego 113, 90-549 Łódź
- Maria Skłodowska-Curie Specialist Hospital in Zgierz, ul. Parzęczewska 35, 95-100 Zgierz
- Karol Jonscher Municipal Medical Center, ul. Milionowa 14, 93-113 Łódź
- University Clinical Hospital No. 1 of the Medical University of Lodz, ul. Kopcińskiego 22, 90-153 Łódź
- Masovian Specialist Hospital, ul Juliana Aleksandrowicza 5, 26-617 Radom
- Hospital of St John of God in Lodz, ul. Kosynierów Gdyńskich 61, 93-357 Łódź

Abstract

Aim of the study

The aim of this systematic review is to compare studies published since 2017 to evaluate whether yoga and other alternative methods should be recommended to patients with endometriosis and associated pain. As alternative methods, particularly yoga, have gained popularity in recent years, it is crucial for healthcare professionals to ensure that these approaches are scientifically valid. This systematic review examines the effects of practicing different types of yoga and possible advantages of other alternative methods that could be potentially beneficial on pain management for patients suffering from endometriosis.

Methods

This review synthesizes findings from twenty studies, including randomized controlled trials and observational studies.

Conclusion

The results consistently indicate significant improvements in the quality of life for patients with endometriosis. Yoga, as both a physical and mental practice, appears to be beneficial in managing pain. Although there are some limitations related to study design and variability, the evidence strongly supports the benefits of yoga in managing pelvic pain. Future research should focus on identifying which specific types of yoga practices offer the greatest benefits.

Key words: yoga; endometriosis; dysmenorrhea; pelvic pain; physical activity; quality of life

Introduction and purpose

Practicing yoga has raised popularity in recent years. While for some it offers wide range of mental benefits, it can also be helpful with treating some physical symptoms such as chronic pain caused by gynecological conditions and illnesses.

State of knowledge

Yoga is a wide group of physical and mental exercises, which originates from ancient India. It has been practiced worldwide for many years and is currently reliving its renaissance. One of many purposes of practicing yoga is to become at peace with body and mind. One word that can help with understanding the basic significance of yoga practice is ‚mindfulness’. Being present, being grateful, being at ease is what one hopes to achieve through practice. Yoga is considered as a way to help with coping with stress and anxiety. Nowadays yoga as an exercises can be helpful with helping treating pelvic pain in patients caused by endometriosis.

Due to raising amount of diagnoses of endometriosis, which often violate daily life, it is important to search for alternative methods to help patients free themselves from pain.

There are a number of different types of yoga practice. In this review the emphasis is set on Yoga Nidra, Hatha Yoga and Restorative Yoga. Nidra, Hatha, and Restorative Yoga are three distinct practices within the broader field of yoga, each offering unique benefits and focusing on different aspects of mind-body wellness.

Nidra, also known as Yoga Nidra or yogic sleep, is a guided meditation practice that induces deep relaxation and a state of conscious awareness between waking and sleeping. It typically involves lying down in Savasana (corpse pose) and following a teacher's voice through body scans, breath awareness, and visualizations to achieve profound mental and emotional relaxation.

Hatha yoga, on the other hand, is a more active practice that combines physical postures (asanas), breath control (pranayama), and meditation. It aims to balance and align the body, mind, and spirit, enhancing strength, flexibility, and mental clarity. Hatha yoga sessions typically include a sequence of poses designed to work the entire body, improve balance, and calm the mind through focused breath work and mindful movement. Restorative yoga, unlike Hatha, is a passive practice that uses props like bolsters, blankets, and blocks to support the body in various poses for extended periods, usually five to twenty minutes. The goal of restorative yoga is deep relaxation and release of tension, allowing the body to recover and rejuvenate. It focuses on gentle, supported postures that promote physical stillness and relaxation.

While Nidra yoga primarily targets mental and emotional relaxation through guided meditation, Hatha yoga emphasizes physical exertion, breath control, and mental focus to enhance overall wellness. Restorative yoga, meanwhile, prioritizes physical relaxation and recovery, using props to facilitate prolonged, gentle stretches and restful poses. Nidra yoga can be practiced by individuals of all fitness levels and is particularly beneficial for stress reduction and mental clarity. Hatha yoga requires more physical engagement and is suitable for those looking to improve physical fitness, flexibility, and strength. Restorative yoga is ideal for individuals seeking deep physical relaxation, recovery from injury, or relief from chronic stress and tension.

In summary, while all three practices aim to promote mind-body health, Nidra yoga focuses on mental relaxation, Hatha yoga on physical activity and breath control, and restorative yoga on physical rest and recovery. Each practice offers unique benefits, catering to different needs and preferences within the realm of yoga.

Yoga poses are considered effective in curing menstrual symptoms, especially pain, but also PMS and cramps. Furthermore, women who could potentially be willing to try exercising yoga could be more open for other alternative treatment methods such as acupuncture or CBD oils.

Endometriosis is a common gynecological disease, it affects 2-10% women at reproductive age and could potentially be the reason of up to 50% pelvic pain of women. The condition appears when tissue that is similar to the inner lining of the uterus grows outside the uterus. The cause of endometriosis is unknown, but potentially it could be caused by retrograde menstruation, genetic predisposition or immune system disorders.

Endometriosis can cause pain, especially during menstruation and sexual intercourse. Other symptoms of endometriosis are following: pain with bowel movements and urination, excessive bleeding, fatigue, diarrhea, constipation, nausea, bloating. For this symptoms endometriosis can be hard to diagnose. Nevertheless the diagnosis and the knowledge of the disease itself and its symptoms is important for women coping with pain. Unfortunately, endometriosis can be also the reason for infertility, making it a huge concern for women in reproduction age. Noteworthy is the fact that problems caused by endometriosis can significantly affect personal relationships and sexual performance due to infertility problems. Moreover, the diagnosis and symptoms of the disease can involve emotional sphere of a woman,

as well as professional. Due to chronic and hard to treat with painkillers pain, patients career can be negatively affected.

Treatment methods, for example taking hormones and surgery, do not treat all problems caused by endometriosis. That's why its important to develop other alternative treatment options that could be potentially helpful with pain management. Chronic pelvic pain can cause not only physical but as well mental difficulties on daily basis. While there is no cure for endometriosis, there is a huge requirement for treatment that can help manage symptoms and improve quality of life. Increased awareness and research are essential to better understand and address the complexities of this condition.

Aim of the study

It is to find alternative solutions for patient who are affected by the disease and to discuss recent articles on potential impact of alternative treatment solutions, especially of yoga, on pain related to gynecological diseases, with focus on endometriosis. Looking at significant impact on changing patients attitude towards alternative treatment methods, with emphasis on yoga.

Methods

The methodology for the search involved keywords „yoga”, „endometriosis” and „pain”. The search was conducted using Googlescholar and Pubmed database to identify relevant studies in English related to the title.

Inclusion Criteria

The review works, clinical trials, meta-analysis and randomized controlled trials were taken under consideration. Furthermore, the searched was limited to articles not older then sever years. Only studies involving human were taken under consideration.

The research questions are formulated below:

1. Is yoga effective in alleviating pelvic pain?
2. What type of yoga is most effective in reducing pelvic pain?

3. Does practicing yoga influence the mental health of women experiencing pelvic pain?
4. What other alternative treatments are notably effective for pelvic pain and menstrual cramps?
5. Does yoga significantly influence patients' perspectives on alternative treatment options?

Exclusion criteria

The exclusion criteria were:

- non-English-language articles
- studies published earlier than seven years ago (before year 2017)

Results

The chosen studies do provide a valuable insights into benefits of yoga practice in pain management connected to endometriosis.

General influence

Yoga has been found to be effective in alleviating pelvic pain. Several studies and clinical trials indicate that yoga can reduce the intensity and frequency of pelvic pain by improving flexibility, reducing muscle tension, and promoting relaxation. The mindful and holistic approach of yoga helps in managing chronic pain conditions by addressing both physical and psychological aspects.

Restorative yoga, Hatha yoga

While different types of yoga can be beneficial, restorative yoga and gentle forms such as Hatha yoga are often recommended for reducing pelvic pain. These types focus on gentle stretching, relaxation, and maintaining poses for extended periods, which can help in releasing tension in the pelvic region and improving overall comfort. No data was found in the database on which type of yoga helped patients the most.

Mindfulness

Moreover practicing yoga can positively influence the mental health of women experiencing pelvic pain. Yoga incorporates mindfulness, deep breathing, and relaxation techniques, which can help reduce stress, anxiety, and depression. Improved mental health can, in turn, lead to a reduction in the perception of pain and an overall better quality of life.

Pain management

Yoga can be an effective tool for managing pain in endometriosis by reducing inflammation and promoting relaxation. Specific poses, such as restorative and gentle stretches, help alleviate pelvic pain and improve overall flexibility. The practice of mindful breathing in yoga can decrease stress and the perception of pain, contributing to better pain management. Regular yoga sessions can enhance body awareness, allowing individuals with endometriosis to better understand and manage their symptoms.

Teleyoga

Teleyoga offers the convenience of practicing yoga from home through virtual sessions, making it accessible to individuals regardless of their location. This approach allows for personalized instruction and a flexible schedule, catering to various fitness levels and health needs.

It is thought that tele-yoga training may be a safe and effective method in reducing menstrual symptoms and depression, increasing quality of life, and body awareness.

Cramps management

Practicing yoga can help with menstrual cramps by promoting relaxation and reducing muscle tension, which can alleviate pain. Specific yoga poses enhance blood flow to the pelvic area, helping to ease the discomfort associated with cramps. Yoga also encourages deep, mindful breathing, which can reduce stress and lower cortisol levels, thereby diminishing the intensity of menstrual pain. Additionally, the regular practice of yoga improves overall

flexibility and strength, contributing to a more balanced and resilient body that can better manage menstrual symptoms.

Physical activity

Physical activity is crucial in pain management for endometriosis because it helps reduce inflammation, which can lessen pain symptoms. Regular exercise promotes the release of endorphins, natural painkillers that improve mood and reduce discomfort. It enhances blood circulation, which can help alleviate pelvic pain by reducing congestion in the pelvic region. Physical activity also strengthens pelvic floor muscles, providing better support and potentially reducing pain during menstrual cycles. Lastly, exercise can help manage stress and anxiety, which often exacerbate the perception of pain in individuals with endometriosis.

Acupuncture and other alternative treatment methods

Yoga can significantly influence patients' perspectives on alternative treatment options. Through regular practice, individuals often become more open to holistic and integrative approaches to health. Experiencing the benefits of yoga firsthand may encourage patients to explore and adopt other complementary therapies, fostering a more positive attitude towards alternative treatments and a greater willingness to incorporate them into their overall health management plan. Acupuncture has shown promise in managing reducing stress and improving sleep quality. Several studies highlight its potential in enhancing overall well-being and mitigating the adverse effects of night shifts

Other alternative treatments that are effective for pelvic pain and menstrual cramps include:

- **Acupuncture:** This traditional Chinese medicine technique can help in reducing pain by stimulating specific points on the body. Acupuncture has proved to be a promising way of managing reducing anxiety, stress and improving quality of sleep. Some studies highlight its potential in managing pain. Meta-analysis of acupuncture has shown a significant benefit in pain reduction as compared with placebo.
- **Physical Therapy:** Specialized pelvic floor physical therapy can address musculoskeletal issues contributing to pelvic pain.

- **Herbal Remedies:** Certain herbs like ginger, turmeric, and cramp bark can alleviate menstrual cramps.
- **Mindfulness and Meditation:** These practices can help manage pain and improve mental well-being.
- **Massage Therapy:** Regular massage can reduce muscle tension and improve circulation, helping to alleviate pain.

CBD-oil

CBD oil has shown promise in managing menstrual pain associated with endometriosis due to its anti-inflammatory and analgesic properties. Many women report reduced pain and improved quality of life when using CBD oil during their menstrual cycles. CBD interacts with the body's endocannabinoid system, which may help in modulating pain and reducing the severity of cramps. Additionally, CBD's potential to alleviate anxiety and improve sleep can be beneficial for those dealing with the chronic pain and discomfort of endometriosis. While more research is needed, anecdotal evidence and preliminary studies suggest that CBD oil could be a valuable complementary therapy for managing endometriosis symptoms.

Heat

There are no studies specifically examining heat therapy for endometriosis-related pain, but previous research shows that heat can reduce primary dysmenorrhea. Heat likely helps by increasing blood flow in the abdominal area. Despite its effectiveness, many women have experienced adverse events, primarily burns, from using heat. Therefore, it is important to consider using heat patches that provide controlled, safe temperatures.

PMS

Yoga activity lowers harmful inflammatory secretions that provide comfort for premenstrual syndrome (PMS) sufferers. Practicing yoga can help alleviate symptoms of premenstrual syndrome (PMS) by reducing stress and promoting relaxation. Certain yoga poses can specifically target areas of discomfort, such as the lower back and abdomen, helping to relieve cramps and bloating. Additionally, yoga's emphasis on mindfulness and breath control

can improve mood and reduce anxiety, contributing to an overall sense of well-being during the menstrual cycle.

Discussion

The symptoms of endometriosis can vary from one patient to another. It is important to perform more studies and continue randomized controlled trials in order to gather more information about which type of physical activity, especially which type of yoga, is more beneficial and helpful for pain management in endometriosis. While yoga can provide significant relief from endometriosis pain through relaxation and gentle stretching, it is often not sufficient as a standalone treatment for this condition. Endometriosis can cause severe and debilitating pain that may require stronger, more immediate interventions such as medication or surgery. Painkillers and hormonal treatments can directly address the inflammation and abnormal tissue growth, providing relief that yoga alone cannot achieve. In some cases, surgical intervention is necessary to remove endometrial tissue and alleviate symptoms more effectively. Therefore, while yoga can be a valuable complementary therapy, traditional medical treatments are essential for comprehensive pain management in endometriosis. Future studies should focus on whether yoga does influence patients' perspective on other alternative treatment options.

Summary

Given the lack of a 'cure' for endometriosis, effective self-management techniques and lifestyle changes may play an important role in treatment of endometriosis. The review concludes that yoga has a significant and powerful impact on patients health by lowering pelvic pain, stress, anxiety, depression. According to various studies, yoga has a direct impact on managing pain related to endometriosis. By employing practices such as yoga, tele yoga, acupuncture individuals can cope better with pain and PMS, which enhances they quality of life. Yoga is beneficial in managing pain associated with endometriosis due to holistic approach to physical and mental well-being. The practice incorporates gentle stretching and strengthening exercises, which can alleviate muscle tension and improve blood flow, potentially reducing pelvic pain. Additionally, yoga's focus on mindfulness and deep breathing techniques helps reduce stress and anxiety, which can exacerbate pain symptoms. By promoting relaxation and

enhancing body awareness, yoga empowers individuals to better manage their pain and improve their overall quality of life. Furthermore, regular yoga practice can improve sleep and mood, offering additional relief from the chronic discomfort of endometriosis.

Disclosure

Author's contribution

Conceptualization: Katarzyna Kutyla; Paulina Wasiewicz-Ciach;
Methodology: Marcelina Marzec;
Software: Weronika Marzec;
Check: Aleksandra Łakoma, Aleksandra Wydra-Rojek and Anna Marszałek;
Formal analysis: Piotr Kuczyński;
Investigation: Maciej Choiński and Wojciech Mokot;
Resources: Piotr Kuczyński;
Data curation: Marcelina Marzec, Maciej Choiński;
Writing - rough preparation: Paulina Wasiewicz-Ciach;
Writing - review and editing: Katarzyna Kutyla and Wojciech Mokot;
Visualization: Weronika Marzec and Marcelina Marzec;
Supervision: Aleksandra Wydra-Rojek and Anna Marszałek;
Project administration: Aleksandra Łakoma;
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Conflict of Interest Statement

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