

Awareness of Physical Therapy in Managing Endometriosis among Obstetrician and Gynecologists

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¹ Substantial contributions to the conception or design of the work for the acquisition, analysis or interpretation of data for the work, ² Drafting the work or reviewing it critically for important intellectual content, ² Final approval of the version to be published, ³ Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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A B S T R A C T

Background: Endometriosis, a chronic inflammatory condition where endometrial cells grow outside the uterus, affects approximately 10% of women of reproductive age. The prevalence is higher among women experiencing infertility or chronic pelvic pain. Research supports physical activity and physical therapy interventions such as manual therapy, pelvic floor strengthening, kinesiotherapy, and electrotherapy as effective in managing endometriosis symptoms.

Objective: To determine the awareness regarding the role of physical therapy in endometriosis among gynecologists.

Methodology: A descriptive cross-sectional study was conducted from June to December 2023 with 100 obstetricians and gynecologists in Lahore, including 34 PGRs, 13 MOs, 27 Senior Residents, and 26 Associate Professors. Sixty-two participants were from private hospitals, and 38 were from government hospitals. Data was collected using a pre-tested, 22-item self-administered questionnaire, with written consent obtained from participants. Non-probability convenient sampling was applied.

Results: The study showed that most participants (82.0%) agreed on the need for awareness of physical therapy's effectiveness in managing endometriosis, with 31.0% strongly agreeing, 51.0% agreeing, 10.0% neutral, and a small percentage (8.0%) disagreeing.

Conclusion: Most respondents recognized the role and benefits of physical therapy as a complementary treatment. However, many gynecologists rarely refer patients to physical therapy or collaborate with physical therapists.

Keywords: Awareness, Endometriosis, Physical Therapy.

Introduction

Endometriosis is a persistent and inflammatory condition that involves the existence of tissue similar to the uterine lining outside the uterus.¹ A chronic condition involves endometrial cells outside the uterus, leading to ongoing inflammation caused by hormonal imbalances. This condition is reliant on estrogen, distinguished by the expansion of endometrial glands and supporting tissue beyond the confines of the uterine cavity. Endometrial carcinoma is the

most common gynecologic malignancy in developed countries. It ranks 6th among cancers in women worldwide. In the year 2020, it accounted for 4,17,000 new cases and 97,000 deaths.² Broadly, based on their location of occurrence, these abnormalities can be categorized as ovarian, where abnormal tissue is attached to the ovaries, peritoneal, or lesions that penetrate deeply.³

It has been estimated that 10% of women in their reproductive or childbearing age have endometriosis, with or

without clinical diagnosis.⁴ This condition affects a significant global population, impacting about 176 million women. The percentage rises to 30% to 40% for women with a history of infertility and nearly 50% for those with chronic pelvic pain syndrome.⁵ Endometriosis often causes distressing symptoms and related health issues, including fertility problems. However, accurate figures are challenging to determine as the condition can be asymptomatic.

Women with this condition commonly experience dysmenorrhea, dyspareunia, dyschezia, dysuria, and chronic pelvic pain.⁵ While the primary symptoms are pelvic-related, about 95% of diagnosed women also report coexisting conditions such as migraines, depression, anxiety, irritable bowel syndrome, and more.⁶ Endometriosis is associated with an increased risk of various cancers (ovarian, breast, and melanoma) and conditions such as lupus, rheumatoid arthritis, and heart disease.⁷

Common risk factors include prolonged estrogen exposure, such as early menarche, late menopause, shorter menstrual cycles, and lower adult BMI. Smoking's impact is mixed, and lifestyle factors like alcohol use are inconsistent. The role of dietary choices in endometriosis risk is complex due to changing lifestyles.⁸ According to the revised American Society for Reproductive Medicine (ASRM) system, it's categorized into four stages determined by implant location and extent. Types include peritoneal, ovarian, and deep infiltrating endometriosis. The four stages I to IV indicate the severity, location, and size of growths, with the latter involving tissue extending over 5mm beneath the peritoneum.⁹ Endometriosis is classified into three types: superficial peritoneal disease, ovarian endometrioma, and deep endometriotic lesions. Adenomyosis is a type of uterine endometriosis, involves endometrial glands and stroma within the myometrium, causing inflammation and thickening.¹⁰

Even though endometriosis was initially described over 150 years ago by Carl Von Rokitansky. Contributing factors to delayed endometriosis diagnosis include symptom underestimation by physicians, limited access to affordable diagnostics, and low awareness among patients and general practitioners (GPs).¹¹ The literature emphasizes endometriosis's impact on many aspects of life. Addressing not only the patient's physical well-being but also raising awareness and improving treatment and care options is vital.¹²

Diagnosing endometriosis is essential for effective management. Symptoms are nonspecific and may be suspected in women with infertility or pain. Surgery or laparoscopy is typically needed for a definitive diagnosis.¹³ Endometriosis treatment aims to alleviate symptoms, prevent

progression, and preserve fertility. Initial therapy is oral contraceptives. Second-line is GnRHa, aromatase inhibitors, with 10% adverse effects. Surgery, such as laparoscopy, is a third-line option with a recurrence risk. Early intervention prevents chronic pain. Pain management: NSAIDs, opioids, with effectiveness and side effects challenge.¹⁴ As these treatments affect ovulation, the potential desire for current or future pregnancy should be taken into account when prescribing them.¹⁵

Comprehensive endometriosis treatment involves specialists like nutritionists, physical therapists, pain management experts, and psychologists. Complementary therapies like acupuncture, yoga, and manual therapy are also considered.¹⁶ This study emphasizes physiotherapy's role in reducing endometriosis pain and improving quality of life, including kinesiotherapy, manual therapy, and self-therapy for effective management.¹⁷ Pelvic floor physiotherapy is a noninvasive approach that effectively improves dyspareunia and enhances psychological well-being. It addresses both superficial and deep dyspareunia and positively impacts pelvic floor morphometry with ultrasound feedback.¹⁸ Physical activity lessened endometriosis discomfort, enhanced posture, disrupted the pain cycle, and boosted serotonin production, particularly with activities such as walking and swimming.¹⁹ The primary goal of this study is to investigate and present insights into the current level of awareness among gynecologists regarding the role of physical therapy in the management of endometriosis. By exploring gynecologists' existing knowledge and perceptions, the aim is to contribute to the understanding of the interdisciplinary aspects of women's health care, ultimately informing strategies to enhance collaboration between gynecologists and physical therapists for the comprehensive and effective management of endometriosis.

Methodology

This descriptive cross-sectional study was conducted over six months following approval of the topic, from June 2023 to December 2023 with ethical approval no: DPT/ERB/16 from ethical review board in Lahore College of Physical Therapy. Data were collected from several hospitals as Ghurki Trust Teaching Hospital, Lady Aitchison Hospital, Shalamar Hospital, Jinnah Hospital, Park Red Crescent Hospital, and Kishwar Fazal Hospital. Using non-probability convenience sampling, the sample size was determined through the census method²⁰ including all participants who met the inclusion criteria within the timeframe, totaling 100 gynecologists and obstetricians. The inclusion criteria specified gynecologists with a minimum of two years of

clinical experience licensed and practicing gynecologists, including PGR or WMO, and assistant professors,²¹ and those practicing in various tertiary settings, including teaching hospitals,²² who are actively involved in patient care and regular patient interaction, across both government and private hospitals.²³ Exclusion criteria ruled out subjects who had received physiotherapy for their gynecological condition,²³ retired or non-practicing gynecologists, medical students, and those with minimal professional experience, and gynecologists unwilling or unable to provide informed consent for participation.

Data were collected through a self-administered, structured, and pretested questionnaire, validated and approved by the physiotherapy department at Lahore College of Physical Therapy and Ghurki Trust Teaching Hospital, with a panel of 10 experts having an average experience of 8.2 years. The content validators rated each question on a four-point scale (1 = Relevance, 2 = Clarity, 3 = Simplicity, and 4 = Ambiguity). Questions with a content validity index of ≥ 0.80 were considered valid, while those below 0.80 were modified based on expert advice.²⁴ After modification, 15 questions were finalized out of the initially formulated 19 questions for the study. The questionnaire's reliability was confirmed by Cronbach's Alpha, with a value of 0.749 for the closed-ended items.²⁵ Participants were informed of the study's purpose, and informed consent was obtained to ensure confidentiality. The questionnaire, consisting of 22 variables with 15 closed-ended questions on awareness, beliefs, clinical practice, and patient interactions, was prepared in English and distributed via Google Forms and print copies to accommodate participant preferences. Proportionate cluster sampling was used to enhance sample representation and generalizability. Data from both formats were compiled and analyzed using SPSS for a comprehensive assessment of gynecologists' awareness of physiotherapy's role in endometriosis management.

Data were analyzed using SPSS (version 16), with continuous variables reported as mean and standard deviation, and categorical variables as frequency and percentage. Results were presented in tables, graphs, and charts. The Lahore College of Physical Therapy (LCPT) ethical board approved the study. Data confidentiality was maintained, and information was stored on a password-protected laptop. Informed consent was obtained from participants before data collection.

Results

The study surveyed 100 gynecologists among the participants; 93% were female, and 7% were male.

The histogram illustrates the age distribution of 100 participants, with ages ranging from 23 to 62 years, a mean age of 37.53 years, and a standard deviation of 10.32.

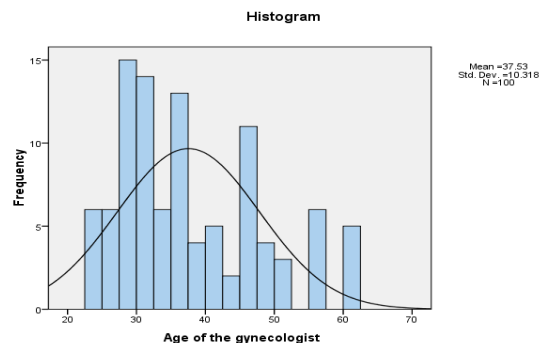


Figure 1: Histogram of the age of participants

Table 1: Gynecologists' opinions about the primary role of PT

	Frequency	Percent
Pain Management	17	17.0
Rehabilitation	10	10.0
Symptom Relief	23	23.0
Quality of life improvement	48	48.0
Unsure \ No opinion	2	2.0
Total	100	100.0

This table shows that the respondents attribute physiotherapy to various roles, among which 17.0% to pain management, 10.0% to rehabilitation, 23.0% to symptom relief, 48.0% to quality-of-life improvement, and 2.0% express uncertainty or no opinion.

Table 2: Participants' awareness of physiotherapy management in endometriosis

No.	Variables	Frequency
	Participants from the hospital setting	Government = 38 Private = 62
1.	Awareness about the role of physical therapy?	Strongly agree = 31 Agree = 51 Neutral = 10 Disagree = 5 Strongly disagree = 3
2.	Believe that physical therapy can be an effective complementary treatment?	Strongly agree = 20 Agree = 53 Neutral = 22 Disagree = 5
3.	Awareness about the potential benefits of physical therapy?	Very aware = 30 Moderate aware = 45 Slightly aware = 20 Not aware at all = 5
4.	Believe that there is a need for an increase in awareness about the role of physical therapy	Strongly agree = 53 Agree = 46 Neutral = 1

5.	On average, a patient encounters a month	None = 2 1-5 = 70 6-10 = 21 11-20 = 3 More than 20 = 4
6.	Referral or recommendation of the patient for physical therapy	Strongly agree = 10 Agree = 40 Neutral = 25 Disagree = 19 Strongly disagree = 6
7.	Discussion about the physical therapy management with patients	Strongly agree = 15 Agree = 46 Neutral = 24 Disagree = 12 Strongly disagree = 3
8.	Collaboration or consultation with a physical therapist regarding management	Frequently = 3 Occasionally = 27 Rarely = 34 Never = 35 Not applicable = 1
9.	Observe any improvement in the health outcome of a patient who incorporates physical therapy in their treatment plan	Definitely yes = 7 Yes = 42 Neutral = 35 No = 14 Definitely no = 2
10.	Patient inquiry or recommendation about physical therapy treatment based on their research	Always = 30 Frequently = 15 Sometimes = 32 Rarely = 18 Never = 5
11.	Familiarity with specific physical therapy techniques	Extremely familiar = 1 Very familiar = 26 Moderately familiar = 32 Slightly familiar = 25 Not familiar = 16
12.	Opinion about the primary role of physical therapy in endometriosis management	Pain management = 17 Rehabilitation = 10 Symptom relief = 23 Quality of life improvement = 48 Unsure/no opinion = 2
13.	Interested in attending training sessions and workshops	Strongly agree = 43 Agree = 46 Neutral = 7 Disagree = 3 Strongly disagree = 1
14.	Aware of any recent research that investigates the effectiveness of physical therapy management	Extremely aware = 1 Very aware = 13 Moderate aware = 41 Slightly aware = 24 Not aware at all = 21

This table shows the summary of participant responses (N = 100) regarding awareness, beliefs, and practices related to physical therapy, including workplace setting, perceived effectiveness, familiarity with techniques, frequency of patient referrals, interprofessional collaboration, and interest in further training.

These findings highlight a clear need for increased awareness and collaboration between gynecologists and physical therapists in managing endometriosis. Despite understanding the benefits of physical therapy, gynecologists rarely refer patients, indicating a gap between awareness and practice. Education and workshops could bridge this gap, supporting more comprehensive and effective patient care.

Discussion

This study looked at whether gynecologists and obstetricians in teaching hospitals know about the role of physical therapy in treating endometriosis. Most research focuses on general women's health, so this study was unique in looking specifically at endometriosis. It found that gynecologists in teaching hospitals, where doctors learn continuously and work together on various cases, lacked awareness of the benefits of physical therapy for endometriosis. The study suggests that there's room for improvement in how gynecologists and physical therapists collaborate, which could lead to better care for patients with endometriosis.

Another study conducted on awareness of obstetricians and gynecologists regarding the role of physical therapy in managing gynecological and obstetric patients, which revealed that the obstetricians and gynecologist working in private and government hospitals are equally aware about the role of physical therapy in managing gynecological and obstetric patients and there is a need to increase their awareness level.²³ The current study similarly concluded that gynecologists recognize physical therapy as a beneficial complementary treatment for endometriosis but show limited awareness of its specific value. Awareness levels were distributed as follows: 31% strongly agree, 51% agree, 10% neutral, 5% disagree, and 3% slightly disagree.

A systematic review with meta-analysis was conducted on the benefits of physical therapy in improving quality of life and pain associated with endometriosis, which concluded that the non-pharmacologic conservative therapies are a therapeutic option for women with endometriosis for improving pain intensity and physical function.²⁰ The current study echoes this finding, highlighting a need to boost awareness among gynecologists about the benefits of

physical therapy to foster more effective and collaborative care in gynecology.

A research study conducted in May 2023 on gynecologists' awareness of physiotherapy for managing uterine prolapse found that referrals for physiotherapy varied by hospital type and doctors' education levels. It recommended timely referrals for physiotherapy interventions, such as pelvic floor muscle training and prenatal to postnatal physiotherapy, to help strengthen the pelvic floor.²² The study also emphasized the need for educating women on uterine prolapse. Similarly, the current study highlighted gaps in referrals by gynecologists and suggested that awareness among gynecologists and patients could be improved through seminars and other initiatives.

Wójcik et al., in 2022, conducted a study on the Physiotherapy Management in Endometriosis, highlighting physiotherapy as a valuable adjunct in managing endometriosis.¹⁷ The findings revealed that various forms of physiotherapy can effectively complement gynecological treatments for endometriosis, contributing to the reduction of inflammation, pain relief, and a substantial enhancement in the quality of life for women. Physiotherapy modalities for endometriosis encompass kinesiotherapy, manual therapy, including visceral therapy, physical therapy, spa treatments, such as balneotherapy, and hydrotherapy. The study's objective is to capture insights into gynecologists' awareness of the role of physiotherapy in endometriosis, with potential impacts on both current medical practices and future medical education. The current study also emphasizes the benefits and importance of physical therapy management in endometriosis.

Conclusion

The majority of respondents were aware of the role of physical therapy, its potential benefits, and believed it could be an effective complementary treatment. However, a significant number of gynecologists lack patient referral for physical therapy and collaboration with physical therapists. This highlights a gap between theoretical awareness and practical implementation, indicating a need for awareness campaigns to bridge the knowledge into practice. Enhancing interdisciplinary collaboration can lead to more comprehensive and patient-centered management of endometriosis.

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