

YOGA VERSUS STRUCTURED EXERCISE FOR IMPROVING PAIN AND HEALTH-RELATED QUALITY OF LIFE IN WOMEN WITH ENDOMETRIOSIS

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ABSTRACT:

Endometriosis continues to be a condition that disturbs women's health related quality of life in multiple ways and for a long duration. This study aimed to compare the short-term effects of yoga and physical exercise with structure on pain and quality-of-life outcomes in women with confirmed endometriosis. Fifty-two patients participated in a prospective randomized clinical trial with the data analysed. At the end of this period 37 women were included in the yoga group and 15 in the structured-exercise group, who attended 8 sessions every week, online. Pre and post intervention was evaluated with pain measures, Short Form-36, and Endometriosis Health Profile-30. Yoga had a significant effect on dysmenorrhea, dyspareunia, non-menstrual pelvic pain, and some of the physical and psychosocial health areas. Functional capacity, physical-role functioning, bodily pain, emotional-role functioning and mental health were significantly improved with structured exercise. There were no significant differences between groups in the outcomes measured. Both interventions might thus be viable complementary options for symptom management in the short-term. Further randomized trials with equal sized groups and longer follow-up time are needed to establish comparative and ongoing effectiveness.

KEYWORDS: Endometriosis, yoga, structured exercise, pelvic pain, quality of life

1. INTRODUCTION

Endometriosis is a condition in which endometrial tissue grows outside the uterus, and is often found in women during their reproductive years. The clinical burden is not limited to gynecological health and includes pelvic pain, dysmenorrhea, dyspareunia, bowel discomfort, urinary symptoms, fatigue, and infertility. Enduring symptoms can affect mobility and work participation, intimate relationships, and emotional health. These effects are complex and that is why the severity of the symptoms is not sufficient to describe the actual experience of endometriosis. Thus, HRQOL has become a critical endpoint to assess treatment effectiveness and chronic disease management (Desai et al., 2024).

Medication and surgery are still the backbone of endometriosis treatment, but they are not a magic bullet for everyone and are not effective for all patients. Hormonal therapy can relieve symptoms, but can also have side effects or may not be right for women who want to become pregnant. Surgical treatment may be indicated to remove visible lesions, but the pain can still be felt or return. Psychological issues, fear of worsening symptoms, and decreased confidence with physical activity can also make recovery more challenging. Hansen et al (2023) in a three-arm randomized trial, found that psychological interventions have a positive impact even if the pain persists to some extent, suggesting that the benefits of psychological interventions for health are not restricted to complete pain reduction. Telehealth-based cognitive behavioural therapy (CBT) has also demonstrated benefits on pain and health-related quality of life, to complement traditional treatments, that are more accessible when using telehealth (Evans et al., 2026).

Physical activity has become a focus area of interest as it could affect pain processing, inflammation, muscles function, fatigue, mood and daily functioning. Exercise is also a tool to enhance autonomy, by providing women with an active role in symptom management. A systematic review and meta-analysis indicated that physical activity and exercise may be beneficial for women with endometriosis and that there were some limitations in the consistency and quality of the evidence available (Xie et al., 2025). There are few randomized trial studies that address endometriosis-related pain; the diversity of intervention type, intensity, duration, and outcomes makes it difficult to compare across studies (Moretti-Chaves et al., 2025). An emerging narrative synthesis also indicates that there may be support for symptom management and quality of life for physical activity, but still there is a need for individual prescription (Chrobak et al., 2026).

Structured exercise could be a way to get progressively more measurable exposure to physical activity with planned exercise movements that focus on strength, mobility, endurance and functional performance. Strength

training has shown to increase physical fitness and perceived health in women with endometriosis, suggesting a potential implementation of well-designed strength training programmes in this target group (Alex et al., 2026). Despite this, women's personal experiences demonstrate how their participation in physical activity is influenced by fluctuations in pain, doubts about safe exercise, and a lack of access to appropriate guidance (Gethmini, 2025). Further, emerging research in resistance training highlights the importance of information regarding women's exercise practices, perceptions and symptom responses, but not all such programmes will be equally effective for women (Banjanin, 2026). Videoconference delivery can alleviate geographical and scheduling constraints, and permit supervised participation from home.

Yoga (which also incorporates controlled breathing, body awareness and relaxation), provides a similar but unique method. These can help relax muscles, regulate emotions and enhance self-assuredness of movement without strenuous activity. Yoga, specifically savasana and associated practices, have been qualitatively explored as potentially beneficial components of self-directed pain management in the treatment of endometriosis (Samudraningsih, 2023). Complementary self-care practices can have an impact on health-related quality of life, but must be taught, followed and integrated into patient care (Cummins, 2025). Yoga is thus pertinent as a multidimensional treatment targeting psychological reactions to chronic symptoms and physical discomfort.

There are few direct comparisons between yoga and organized exercise in the research on endometriosis. Evidence from women suffering from primary dysmenorrhea indicates that both tend to affect pain, muscle performance, stress and quality of life; however, it is not possible to directly apply these findings to women with confirmed endometriosis (Ahuja et al., 2025). Non-pharmacological pain management is also reviewed in broader contexts, underscoring the importance of care that involves addressing emotional as well as physical aspects of pain (Kori et al., 2025). There is evidence that a number of non-pharmacological interventions have positive effects on pain or quality of life, although it remains unclear about how these interventions compare in effectiveness (Zheng et al., 2026).

The main knowledge gap is the lack of head-to-head randomized comparison studies with validated general and endometriosis-specific outcome measures. There have been reviews, small intervention studies, dissertations, and observational accounts but little evidence to support decisions regarding use of yoga vs conventional structured exercise. Comparative results are needed to account for pain as well as physical, emotional, social, and reproductive issues when using a holistic management approach. This study fills that void by comparing 8-week rounds of yoga with a structured exercise program for women who have a clinical diagnosis of endometriosis. The objectives were:

- To compare changes in endometriosis-related pain following yoga and structured exercise interventions.
- To evaluate both interventions using general and endometriosis-specific health-related quality-of-life measures.
- To determine whether improvement patterns differ between yoga and structured exercise across measured outcomes.

2. MATERIALS AND METHODS

2.1 Research Design

This pre-post comparative intervention design was employed to assess the effect of the interventions on the women's pain and on the health related quality of life (Murayama et al., 2026). The participants were divided into two groups: yoga group and structured physical-exercise group. Evaluations were conducted at the beginning and at the end of 8 sessions of the intervention. The design allowed for assessment of change in each group as well as differences in improvement between the two interventions. Only participants who were documented as having completed the intervention protocol and in the final data set were included in the analysis.

2.2 Data Source and Study Population

A secondary dataset was used for the study that included clinical, demographic, symptoms, and quality-of-life data from women who were enrolled in yoga and/or structured exercise. There were 52 unique participants, 37 in yoga group and 15 in structured physical-exercise group. Characteristics available were age-related information, race, height, weight, body mass index, hormonal treatment, infertility and symptoms associated with endometriosis. The number of participants who were retained in the data set was determined after completing the intervention protocol.

2.3 Intervention Groups

Participants were split into two groups: Yoga and Structured Physical Exercise. Each intervention was eight sessions in length and all who were included in the analytical sample had eight sessions reported. Yoga was considered as a mind-body intervention that included both physical postures and controlled movement as well as relaxation-related practices. Structured exercise was an organized programme of physical activity, separate from yoga. Change in pain and health-related quality-of-life outcomes from baseline to post-intervention were compared between the two treatments using the treatment group variable.

2.4 Study Variables and Outcome Measures

The primary outcomes were the severity of pain and health-related quality of life which were assessed before and after the interventions. Dysmenorrhea, deep dyspareunia, abdominopelvic pain unrelated to menses, and cyclical intestinal and urinary symptoms were the pain indicators. Functional capacity, physical limitations, bodily pain, general health, vitality, social functioning, emotional limitations, and mental health were measured in terms of general health outcomes. The questionnaires used to assess the quality of life associated with endometriosis were measures of perceived control, emotional well being, social support, self-esteem, working life, sexual life, treatment concerns, infertility-related issues, and overall health.

2.5 Data Preparation

Duplicated participant identifiers, inconsistent treatment labels, missing observations and implausible values were checked in the dataset. Participant identifiers and paired variables were used to match baseline measures to post-intervention measures. Treatment categories were collapsed into yoga or structured physical exercise. All continuous measures were left on the scales used, and all categorical measures were coded in the same way for analysis. For variables for which the meaning of the missing values varied, such as sexual activity and questions about infertility, missing values were not replaced. Only observations that were valid for each comparison were analysed.

2.6 Statistical Analysis

Categorical data were reported as percentages and continuous data were reported as means with SDs. Independent-samples tests were used to determine baseline differences between groups depending on the nature of the variables and their distribution. Paired tests were used to compare the pre–post changes within each intervention group. Change scores were derived for both groups by subtracting baseline scores from post intervention scores and compared across groups. Probability values were provided with report of effect sizes (with 95% confidence intervals). Two-sided testing was used with a p value < 0.05 considered to be statistically significant.

3. RESULTS

3.1 Participant Characteristics and Intervention Completion

Fifty-two patients were finally included in the final analysis: 37 in the yoga group and 15 in the structured-exercise group. All participants attended 8 sessions and were documented as having attended the entire intervention protocol. Mean body mass index was 23.92 ± 4.17 kg/m² in the yoga group and 25.52 ± 5.17 kg/m² in the exercise group. The percentages of participants who reported using hormonal treatment were 54.1% and 53.3%, respectively. Most of the participants in both intervention groups were white (Table 1) (Table 2) (Figure 1).

Table 1. Participant characteristics and intervention completion

Characteristic	Yoga (n = 37)	Structured exercise (n = 15)
Height (m)	1.63 ± 0.07	1.60 ± 0.06
Weight (kg)	63.68 ± 13.20	65.14 ± 13.55
BMI (kg/m ²)	23.92 ± 4.17	25.52 ± 5.17
Hormonal treatment, n (%)	20 (54.1)	8 (53.3)
Eight sessions completed, n (%)	37 (100)	15 (100)
Full protocol completed, n (%)	37 (100)	15 (100)

Table 2. Baseline demographic and clinical profile by intervention group

Characteristic	Category	Yoga, n (%)	Structured exercise, n (%)
Race	White	23 (62.2)	9 (60.0)
	Mixed race	9 (24.3)	3 (20.0)
	Asian	2 (5.4)	1 (6.7)
	Black	1 (2.7)	1 (6.7)
	Not reported	2 (5.4)	1 (6.7)
Sexual activity	Yes	31 (83.8)	11 (73.3)
	No	5 (13.5)	3 (20.0)
	Not reported	1 (2.7)	1 (6.7)
Infertility status	Infertility reported	6 (16.2)	4 (26.7)
	No infertility	6 (16.2)	2 (13.3)

	Not attempting pregnancy	25 (67.6)	9 (60.0)
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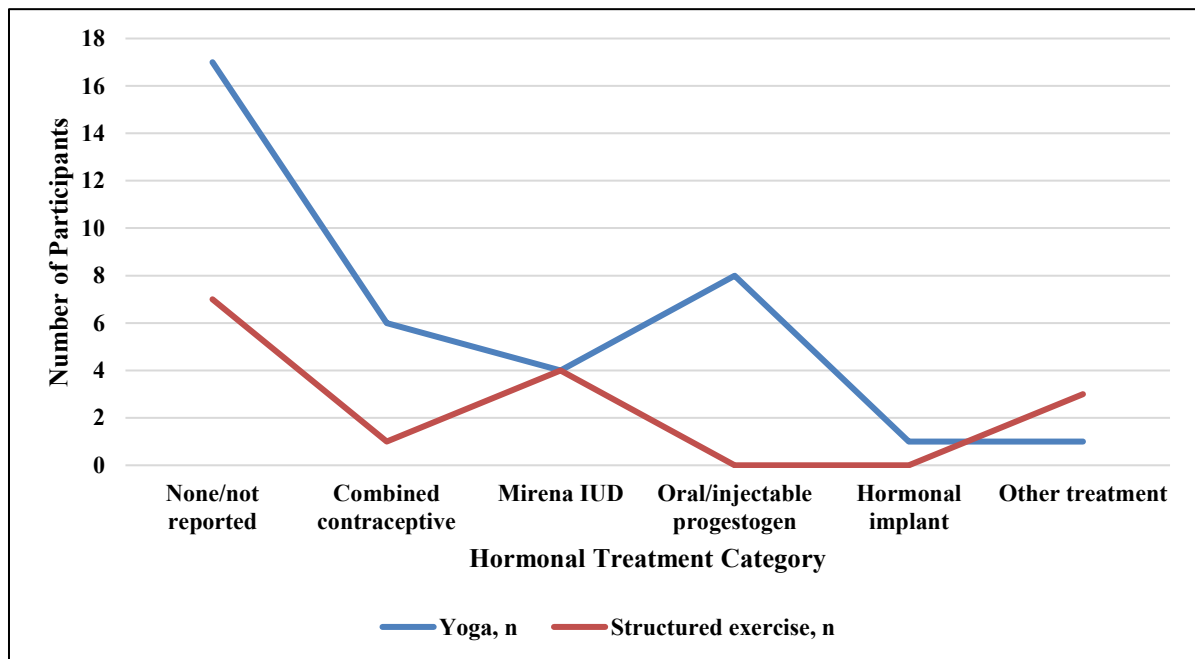


Figure 1. Distribution of hormonal treatment categories by intervention group

3.2 Changes in Endometriosis-Related Pain

The yoga group showed a significant reduction in dysmenorrhea from 5.78 ± 2.93 to 3.86 ± 3.03 ($p < 0.001$). Deep dyspareunia decreased from 5.48 ± 3.30 to 4.37 ± 3.31 ($p = 0.018$), while non-menstrual pelvic pain declined from 5.41 ± 2.57 to 3.97 ± 2.76 ($p = 0.008$). Reductions in the structured-exercise group were not statistically significant. However, the two groups showed higher post-intervention SF-36 bodily pain scores, reflecting a decrease in pain-interference (Table 3) (Table 4) (Figure 2).

Table 3. Changes in endometriosis-related pain

Outcome	Group	Baseline	Post-intervention	Change	p-value
Dysmenorrhea	Yoga	5.78 ± 2.93	3.86 ± 3.03	-1.92	<0.001
	Exercise	6.00 ± 3.18	5.27 ± 2.89	-0.73	0.556
Dyspareunia	Yoga	5.48 ± 3.30	4.37 ± 3.31	-1.11	0.018
	Exercise	5.11 ± 3.79	2.89 ± 3.76	-2.22	0.093
Non-menstrual pelvic pain	Yoga	5.41 ± 2.57	3.97 ± 2.76	-1.43	0.008
	Exercise	5.87 ± 2.70	5.07 ± 2.99	-0.80	0.267

Table 4. Outcome-specific paired observations available for analysis

Outcome	Yoga, n (%)	Structured exercise, n (%)
Dysmenorrhea	37 (100.0)	15 (100.0)
Dyspareunia	27 (73.0)	9 (60.0)
Non-menstrual pelvic pain	37 (100.0)	15 (100.0)
Functional capacity	36 (97.3)	15 (100.0)
Physical-role functioning	37 (100.0)	15 (100.0)
Bodily pain	37 (100.0)	15 (100.0)
General health	37 (100.0)	15 (100.0)
Vitality	37 (100.0)	14 (93.3)
Social functioning	37 (100.0)	15 (100.0)
Emotional-role functioning	37 (100.0)	14 (93.3)
Mental health	35 (94.6)	15 (100.0)
Overall EHP-30 impact	37 (100.0)	15 (100.0)

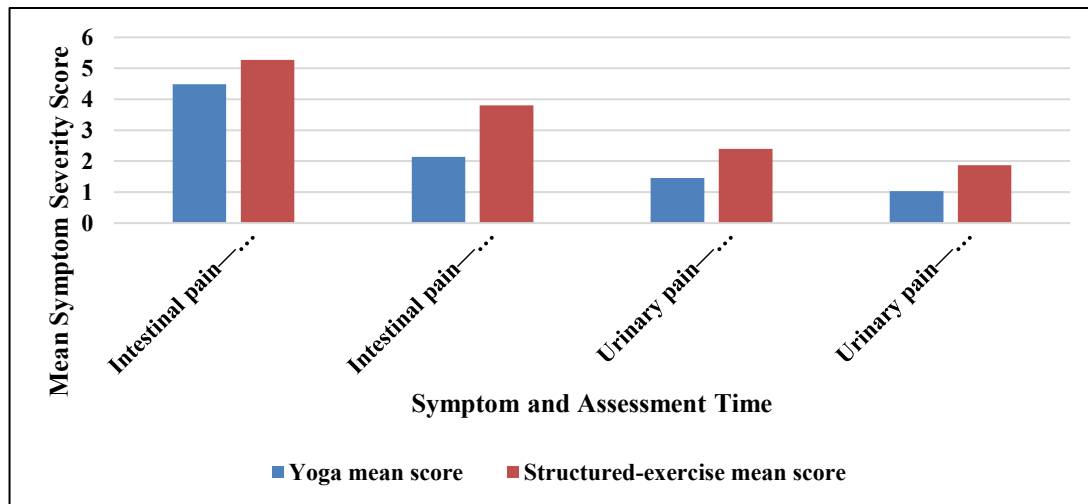


Figure 2. Cyclical intestinal and urinary pain before and after intervention

3.3 Physical Health and Functional Outcomes

There was a significant increase in functional capacity in the structured-exercise group from 80.00 ± 19.64 to 85.67 ± 15.68 ($p = 0.029$) and a non-significant increase in the functional capacity following yoga from 80.40 ± 20.30 to 83.27 ± 17.26 ($p = 0.272$). Both groups experienced an increase in physical-role functioning (26.67 points; $p = 0.044$ and 15.54 points; $p = 0.050$, respectively). There was only slight variation in general-health scores in either group. Both structured exercise and yoga led to significant increases in bodily-pain scores, 13.20 and 13.46 points respectively (Table 3) (Figure 3) (Figure 4).

Table 3. Changes in physical health outcomes

Outcome	Group	Baseline	Post-intervention	Change	p-value
Functional capacity	Yoga	80.83 ± 17.05	84.44 ± 17.68	3.61	0.081
	Exercise	80.00 ± 19.64	85.67 ± 15.68	5.67	0.029
Physical-role functioning	Yoga	52.03 ± 40.13	67.57 ± 39.91	15.54	0.050
	Exercise	33.33 ± 40.82	60.00 ± 36.35	26.67	0.044
Bodily pain	Yoga	47.32 ± 18.56	60.78 ± 20.27	13.46	<0.001
	Exercise	48.27 ± 16.84	61.47 ± 19.57	13.20	0.002
General health	Yoga	57.03 ± 8.90	58.05 ± 9.41	1.03	0.479
	Exercise	54.53 ± 9.48	56.87 ± 9.94	2.33	0.533

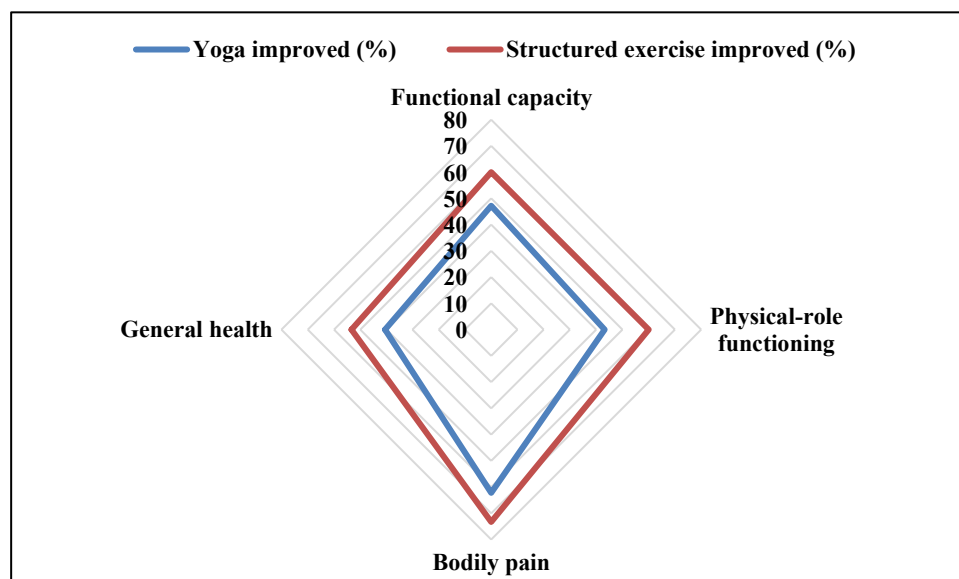


Figure 3. Percentage of participants showing improvement in physical health outcomes

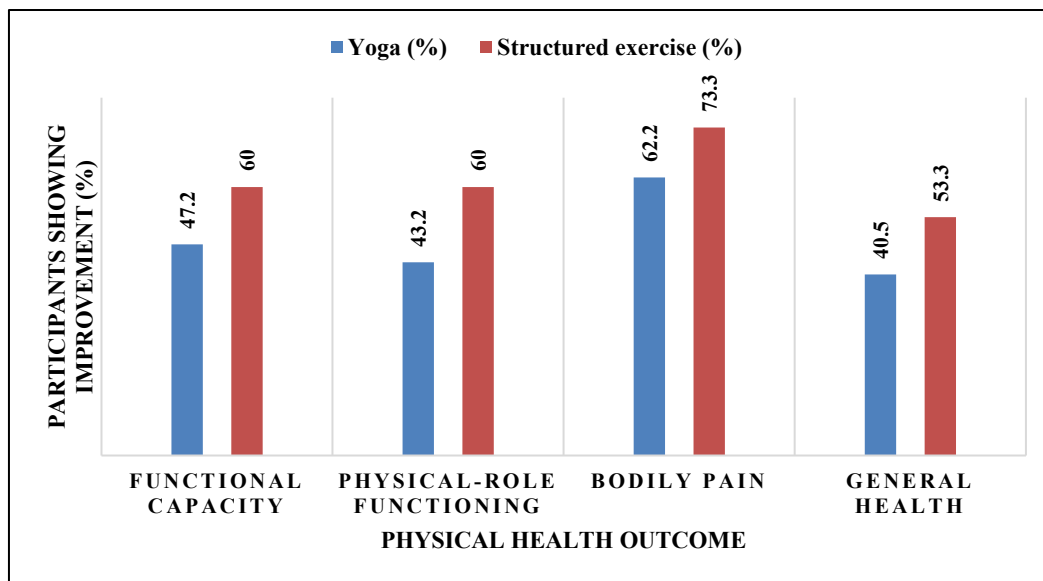


Figure 4. Participants showing improvement in physical health outcomes

3.4 Psychosocial Quality-of-Life Outcomes

The effect of yoga was noted to be very positive on vitality, social functioning, emotional-role functioning and mental health. Vitality increased from 37.03 ± 19.95 to 53.51 ± 18.29 ($p < 0.001$), while social functioning rose from 49.66 ± 22.14 to 65.88 ± 20.34 ($p < 0.001$). Mental health improved by 10.06 points ($p < 0.001$). There was a significant improvement in emotional-role functioning (40.48 points; $p = 0.004$) and mental health (10.93 points; $p = 0.018$), with no significant changes in vitality and social functioning (Table 4).

Table 4. Changes in psychosocial quality of life

Outcome	Group	Baseline	Post-intervention	Change	p-value
Vitality	Yoga	37.03 ± 19.95	53.51 ± 18.29	16.49	<0.001
	Exercise	33.57 ± 19.06	44.64 ± 23.73	11.07	0.089
Social functioning	Yoga	49.66 ± 22.14	65.88 ± 20.34	16.22	<0.001
	Exercise	45.83 ± 24.40	58.33 ± 25.73	12.50	0.087
Emotional-role functioning	Yoga	43.24 ± 39.18	63.96 ± 40.35	20.72	0.009
	Exercise	7.14 ± 19.30	47.62 ± 46.62	40.48	0.004
Mental health	Yoga	52.34 ± 16.67	62.40 ± 18.46	10.06	<0.001
	Exercise	45.87 ± 17.23	56.80 ± 23.33	10.93	0.018

3.5 Comparison between Yoga and Structured Exercise

There were no differences between interventions in the pain or quality-of-life outcomes measured. Between-group comparisons were non-significant for dysmenorrhea ($p = 0.369$), dyspareunia ($p = 0.392$), non-menstrual pelvic pain ($p = 0.466$), bodily pain ($p = 0.958$), vitality ($p = 0.431$), and mental health ($p = 0.854$). The overall endometriosis related impact score was lower following yoga than structured exercise (-17.81 vs. -8.61 points, respectively), although this difference was not significantly different ($p = 0.138$) (Table 5) (Figure 5).

Table 5. Between-group comparison of outcome changes

Outcome	Yoga change mean	Exercise change mean	Between-group p-value
Dysmenorrhea	-1.92	-0.73	0.369
Dyspareunia	-1.11	-2.22	0.392
Non-menstrual pelvic pain	-1.43	-0.80	0.466
Functional capacity	3.61	5.67	0.509
Physical-role functioning	15.54	26.67	0.443
Bodily pain	13.46	13.20	0.958
General health	1.03	2.33	0.743
Vitality	16.49	11.07	0.431
Social functioning	16.22	12.50	0.640
Emotional-role functioning	20.72	40.48	0.167
Mental health	10.06	10.93	0.854
Overall endometriosis-related impact	-17.81	-8.61	0.138

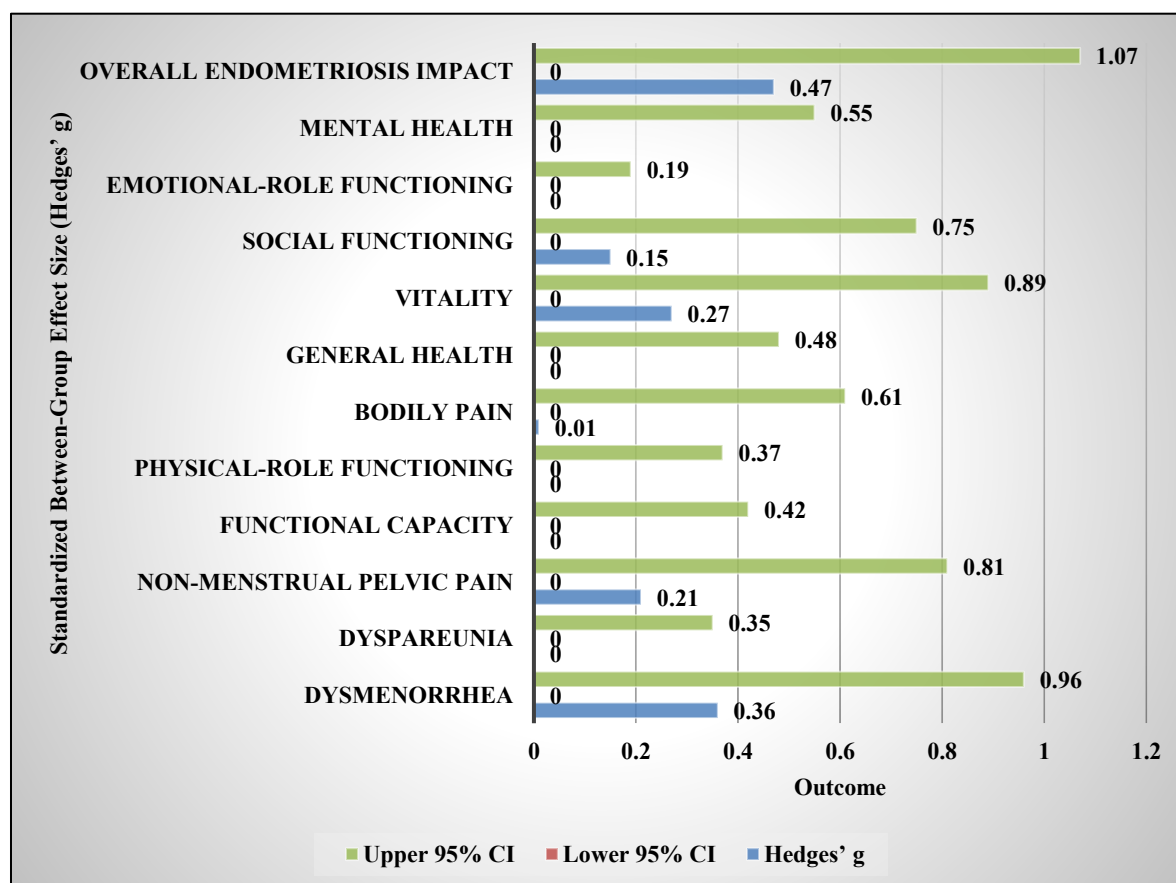


Figure 5. Standardized differences in improvement between yoga and structured exercise

4. DISCUSSION

Immediate effect of yoga and directed physical activity on pain and health-related quality of life among women suffering from endometriosis. Both interventions resulted in improvements in multiple outcomes but in different ways. Significant reduction in dysmenorrhea, dyspareunia and non-menstrual pelvic pain was associated with Yoga. The functional capacity, physical-role functioning, bodily pain, emotional-role functioning and mental health scores increased significantly after structured exercise. Yoga also enhanced bodily pain, physical-role functioning, vitality, social functioning, emotional-role functioning and mental health. However, none of the between-group differences in any measured outcome was found to be statistically significant in this study. The results suggest, therefore, that either intervention could be effective in the short term, but do not conclude superiority between the two interventions.

Yoga's pain relief is consistent with hypothesized benefits of mind-body therapeutic interventions to treat menstrual and pelvic pain. Yoga involves gentle movement, focus on breath, regulation of attention and relaxation, all of which can decrease muscle tension and change the way the body reacts to chronic pain. Yoga and mindfulness-based interventions have been suggested as possible treatments for dysmenorrhea as they may be effective for managing both physical symptoms and emotional reactions to dysmenorrhea (Genagrits, 2025). The present study further explores this aspect in women with diagnosed endometriosis. The improvements seen in several pain measures were observed after yoga, but do not reflect disease modification as no changes in lesion activity or inflammatory processes were measured.

Structured exercise was more effective than yoga in improvement of functional capacity. Exercising wisely can enhance confidence of movement, muscle function and tolerance of activities of daily living. The modifications observed are consistent with the literature, which indicates that physical activity could play a role in managing symptoms and overall functioning in endometriosis patients, although the results from other studies are highly varied in terms of programme design and methodological quality (Tourny et al., 2023). Besides, core strengthening exercise has also alleviated menstrual pain, which promoted the QoL of primary dysmenorrhea university students (Cicek et al., 2026). While this population is distinct from the women with endometriosis, the comparison suggests that developing targeted muscular conditioning responses could help to enhance physical functioning and minimize interference with pain.

The two groups showed significant improvement in SF-36 bodily-pain score with the amount of change being nearly the same. This similarity is a possible reason why there is no significant between-group effect. Exercise and endometriosis have been reviewed and there is some evidence to suggest that exercise has potential benefits, although limited. There is not yet enough evidence to determine the best type, intensity, or duration of exercise for the condition. The present results agree with that conservative view. Although yoga and structured exercise

work somewhat differently, they both have the possibility of decreasing the amount of pain that would affect the ability to do everyday activities. The absence of superiority should therefore be interpreted as a comparison of uncertainty, not as an indication of the absence of effectiveness of the interventions.

There was widespread but uneven improvement in quality of life outcomes. After yoga, the vitality, social functioning, emotional-role functioning and mental health scores were significantly improved and after structured exercise, the scores for emotional-role functioning and mental health were significantly improved. The severity of symptoms, psychological status, lifestyle, social situation, and treatment experiences impact HRQoL in endometriosis (Wu et al., 2024). These multi-dimensional enhancements noted here may, therefore, be more than just a reduction of pain. A systematic review of patient and lifestyle determinants also demonstrated that quality of life is influenced by interplay between clinical and behavioural factors, and not by any one symptom alone (Breton et al., 2026). It was valuable to have both SF-36 and EHP-30 measures since they were able to capture general health as well as concerns related to endometriosis.

Complete attendance was noted in the final analytical sample which may have been due to online delivery. Tele-sessions can decrease travel requirements and may allow someone to participate even if they do not have the time to travel or have symptoms that change. The videoconference format is in line with the CRESCENDO programme which integrates physical activity with endometriosis education in a remote format (Escriva-Boulley et al., 2023). In addition, digital supportive-care programmes are being developed to improve access to multidisciplinary endometriosis care and to assess the implementation and cost-effectiveness of these programmes (Mikocka-Walus et al., 2025). Internet-based cognitive behavioural methods also illustrate the larger trend of home-based interventions for quality of life (QoL) and this approach has been shown to target a variety of QoL domains (Schubert et al., 2022). Only participants who completed the analyses, however, are considered acceptable in the final results as post-randomization losses were not included in the final data set.

The results indicate that exercise-based care should be used as an additional intervention and not as a substitute for medical treatment. The literature currently available indicates that physical activity, psychological support, dietary measures and other complementary interventions can be part of personalized treatment of endometriosis (Węgrzyn et al., 2025). Symptom pattern, physical ability, personal preference, accessibility and willingness to participate in group-based online sessions may therefore be factors when choosing an intervention. For women looking for a less intense mind-body practice, yoga might be the right choice, and if functional conditioning is the goal, exercise may be more preferred.

There are a few points to note. The number of participants in each group was unequal, with 37 in the yoga group and 15 in the exercise group, limiting the precision and statistical power of the final groups. The sample consisted of completers only, which may have resulted in attrition bias and thus an incomplete intention-to-treat analysis. Eight sessions of intervention were conducted, and the duration of the change and maintenance is unknown. Self-reported outcomes, and concurrent hormonal treatment may have impacted pain and quality of life. Limited interpretation of the results of infertility, sexual relationships and family-related outcomes was also due to small domain-specific samples. More extensive randomized trials are needed to include all enrolled individuals and have longer follow-up, record intervention content and adherence, and control for baseline differences and hormonal therapy. These steps would help answer the question of which is clinically superior in specific patient populations.

5. CONCLUSION

Effects of yoga and structured physical activity for reducing pain and enhancing health-related quality of life (HRQoL) in women with endometriosis. Both interventions yielded positive immediate results, but there were no statistically significant differences between them for all outcomes measured. Yoga was correlated with a decrease in dysmenorrhea, dyspareunia, and non-menstrual pelvic pain, as well as an increase in vitality, social functioning, emotional-role functioning and mental health. Participants who exercised in a structured way had better functional capacity, physical-role functioning, bodily pain, emotional-role functioning, and mental health. These results indicate that both interventions could be useful as additional treatments to pain reduction, and as tools to achieve better physical and psychological health. The different levels of development suggest a variety of interventions should be chosen based on the individual's symptomology, functional needs, physical capabilities, preference, and access to supervised programmes. While yoga might appeal more to women who want to engage in a lower-impact mind/body exercise, structured exercise may be more appealing to others who value physical conditioning and functional improvement. Both interventions should not be a substitute for appropriate medical or surgical treatment. Rather both can be seen as part of individual multidisciplinary care. Conclusions are limited by the small sample size, reliance intervention losses, brief time and self-reported outcomes. To establish long-term efficacy of the interventions and to better understand who is most likely to benefit from each, larger randomized clinical trials with balanced groups, intention-to-treat analyses, standardized protocols and longer follow-up are needed.

REFERENCES

1. Ahuja, S., Yadav, A., Mittal, M., & Jeyanthi, S. (2025). A COMPARATIVE STUDY OF YOGA AND STRUCTURED EXERCISES ON PAIN, MUSCLE PERFORMANCE, STRESS AND QUALITY OF LIFE IN PRIMARY DYSMENORRHEA. *The Indonesian Journal of Public Health*, 20(3), 526.

2. Alex, M. R., Jose, F. R. M., Leandro, F. M., Carlos, S. P., Luis, M. G., & Teresa, P. C. M. (2026). Effects of strength training on physical fitness and perceived health in women with endometriosis. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 115385.
3. Banjanin, D. (2026). Resistance training and endometriosis: a scoping review, and online questionnaire to understand exercise practices, perceptions and impacts among Australian women living with endometriosis.
4. Breton, Z., Colombo, G. E., Mokraoui, N., Mahamat-Saleh, Y., Pinault, M., Conforti, J., ... & Kvaskoff, M. (2026). Patient characteristics and lifestyle determinants of quality of life among women with endometriosis: a systematic review. *Reproduction and Fertility*, 7(2).
5. Chrobak, A., Bessmylna, K., Kravets, A., Zhukava, L., Alansi, A., Weng, K. C., & Żukowska, J. (2026). Impact of Physical Activity on Symptoms and Quality of Life in Women with Endometriosis: A Narrative Review. *Quality in Sport*, 55, 70924-70924.
6. Cicek, G., Candan, D., Greco, F., Murfone, F., Prigitano, V., Tarsitano, M. G., & Emerenziani, G. P. (2026). Core Strengthening Exercise on Menstrual Pain and Quality of Life in University Female Students with Primary Dysmenorrhea: A Randomized Trial. *Women*, 6(3), 57.
7. Cummins, S. E. (2025). Complementary Self-Care Therapies to Self-Manage Endometriosis in Association with Health-Related Quality of Life (Doctoral dissertation, Walden University).
8. Desai, J., Strong, S., & Ball, E. (2024). Holistic approaches to living well with endometriosis. *F1000Research*, 13, 359.
9. Escrive-Boulley, G., Philip, C. A., Warembourg, S., Lenotre, L., Flore, P., Faure, P., ... & Chalabaev, A. (2023). Effects of a physical activity and endometriosis-based education program delivered by videoconference on endometriosis symptoms: the CRESCENDO program (inCRease physical Exercise and Sport to Combat ENDometriosis) protocol study. *Trials*, 24(1), 759.
10. Evans, S., Skvarc, D., Esterman, A., Mackay, M. I., O'Shea, M., Van Niekerk, L., ... & Mikocka-Walus, A. (2026). Telehealth cognitive behavioural therapy improves health-related quality of life and pain in endometriosis: the Healing Pelvic Pain Intervention (HaPPI)—a randomized controlled trial. *Human Reproduction Open*, 2026(1), hoag006.
11. Genagritsis, E. (2025). Addressing Dysmenorrhea Through Mindfulness and Yoga Poses (Doctoral dissertation, Georgetown University).
12. Gethmini, D. U. (2025). The Influence of Exercise on Endometriosis Symptoms. Exploring Experiences and Practices among Colombo-Based Members of the Endometriosis Support Group in Sri Lanka. *Wah Academia Journal of Health and Nutrition*, 1(3), 5-23.
13. Hansen, K. E., Brandsborg, B., Kesmodel, U. S., Forman, A., Kold, M., Pristed, R., ... & Vase, L. (2023). Psychological interventions improve quality of life despite persistent pain in endometriosis: results of a 3-armed randomized controlled trial. *Quality of Life Research*, 32(6), 1727-1744.
14. Kori, A., Singh, A., Caroicar, Y. S., Thomas, P. E., Chandra, A., Caroicar, Y. S., & CHANDRA, A. (2025). The intersection of psychology and gynecology: a comprehensive review of pain management strategies in women's health. *Cureus*, 17(6).
15. Mikocka-Walus, A., Naude, C., Coitinho Biurra, Y., Blake, L., Bowring, J., De Araugo, S., ... & Evans, S. (2025). Co-designing, evaluating and implementing online supportive care for endometriosis in Australia: study protocol for the hybrid type 1 effectiveness, cost-effectiveness and implementation randomised controlled trial of the CodeEndo program. *BMJ open*, 15(9), e097872.
16. Moretti-Chaves, D. A., Pucci, I. M., Zaninelli, T. H., Casonatto, J., & Borghi, S. M. (2025). Physical exercise interventions for endometriosis-related pain symptoms in randomized controlled trials: A systematic review and meta-analysis. *Journal of Endometriosis and Pelvic Pain Disorders*, 22840265261446823.
17. Murayama, B. A. R., Mello, P. L. P., Della Giustina, A., Andres, M. P., & Abrão, M. S. (2026). Yoga versus structured physical exercise for pain and quality of life in women with endometriosis: A randomized controlled trial (Version 1) [Data set]. Mendeley Data. <https://doi.org/10.17632/gk8xwbf6pw.1>
18. Samudraningsih, P. (2023). Endometriosis & savasana: exploring pain management for endometriosis through the practice of yoga: a thesis presented in partial fulfilment of the requirements for the degree of Master of Arts in Psychology at Massey University, Albany, New Zealand (Doctoral dissertation, Massey University).
19. Schubert, K., Lohse, J., Kalder, M., Ziller, V., & Weise, C. (2022). Internet-based cognitive behavioral therapy for improving health-related quality of life in patients with endometriosis: study protocol for a randomized controlled trial. *Trials*, 23(1), 300.
20. Tourny, C., Zouita, A., El Kababi, S., Feuillet, L., Saeidi, A., Laher, I., ... & Zouhal, H. (2023). Endometriosis and physical activity: A narrative review. *International Journal of Gynecology & Obstetrics*, 163(3), 747-756.
21. Węgrzyn, J., Waśniowska, M., & Wiernek, M. (2025). Adjunctive Interventions for Endometriosis: A Review of Current Literature. *Journal of Education, Health and Sport*, 81, 66816-66816.
22. Wu, Y. H., Lu, Y. Y., & Liu, K. F. (2024). Factors influencing health-related quality of life in women with endometriosis: A cross-sectional study. *Nursing & health sciences*, 26(1), e13100.
23. Xie, M., Qing, X., Huang, H., Zhang, L., Tu, Q., Guo, H., & Zhang, J. (2025). The effectiveness and safety of physical activity and exercise on women with endometriosis: A systematic review and meta-analysis. *PLoS One*, 20(2), e0317820.

24. Zheng, X., Wang, Y., Li, H., Zhang, J., Liu, J., Zheng, X., ... & She, Y. (2026). Comparative Effectiveness of Non-Pharmacological Interventions for Pain and Quality of Life in Women with Endometriosis: A Systematic Review and Network Meta-Analysis. *Journal of Pain Research*, 577080.