

Murfitt, Philippa and Smith, Sarah (2023) A systematic review on the effectiveness of yoga for endometriosis-associated symptoms. In: Chartered Society of Physiotherapy (CSP) Annual Conference 2023: Physiotherapy: Transforming Population Health, 1 November 2023, Birmingham, UK. (Unpublished)

Downloaded from: <http://insight.cumbria.ac.uk/id/eprint/7179/>

***Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.***

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

**provided that**

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
  - a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

**You may not**

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

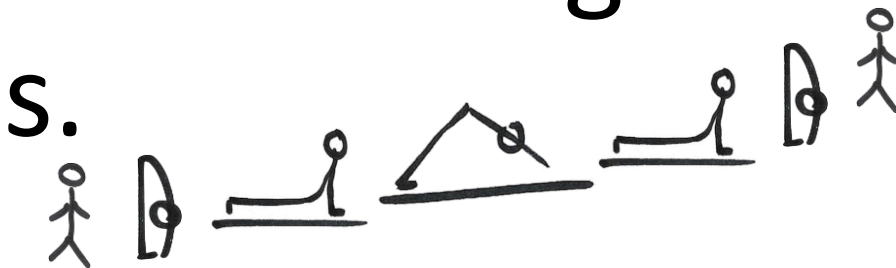
The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing [insight@cumbria.ac.uk](mailto:insight@cumbria.ac.uk).

# A Systematic Review on the Effectiveness of Yoga for Endometriosis-Associated symptoms.

Philippa Murfitt MSc BSc, Sarah Smith MSc BSc MCSP PGC

Abstract no: 107  
Theme:  
Evolving Practice



## 1. Background

Endometriosis is the growth of endometriotic tissue, due to estrogenic hormonal input, manifesting outside of the uterus. Menstrual shedding still occurs causing chronic inflammation and pain. Dysmenorrhea is a primary symptom of Endometriosis (Chapron *et al.*, 2019; Signorile *et al.*, 2022).

Current Endometriosis Guidelines recommend surgical intervention; ablation, excision, Hormone replacement therapy, Hysterectomy, NSAIDs, Progestins, combined oral contraceptives, coil (Kalaitzopoulos *et al.*, 2021).

The effect of exercises on endometriosis has been researched with a review finding numerous RCT from 1995 to 2017 have improved outcomes on pain and quality of life from walking, and aerobic exercise combined with acupuncture, TENS and Danazol (Mira *et al.*, 2018).

## 2. Purpose

- To ascertain the effectiveness of Yoga on endometriosis-related symptoms: pain, quality of life (QoL), and mental health.
- To allow clinical guidelines to incorporate yogic style relaxation and exercise-based interventions aiding endometriosis symptom management.

## 3. Method

Preferred reporting items for systematic reviews and meta-analysis (PRISMA) 2020 guidelines were followed.

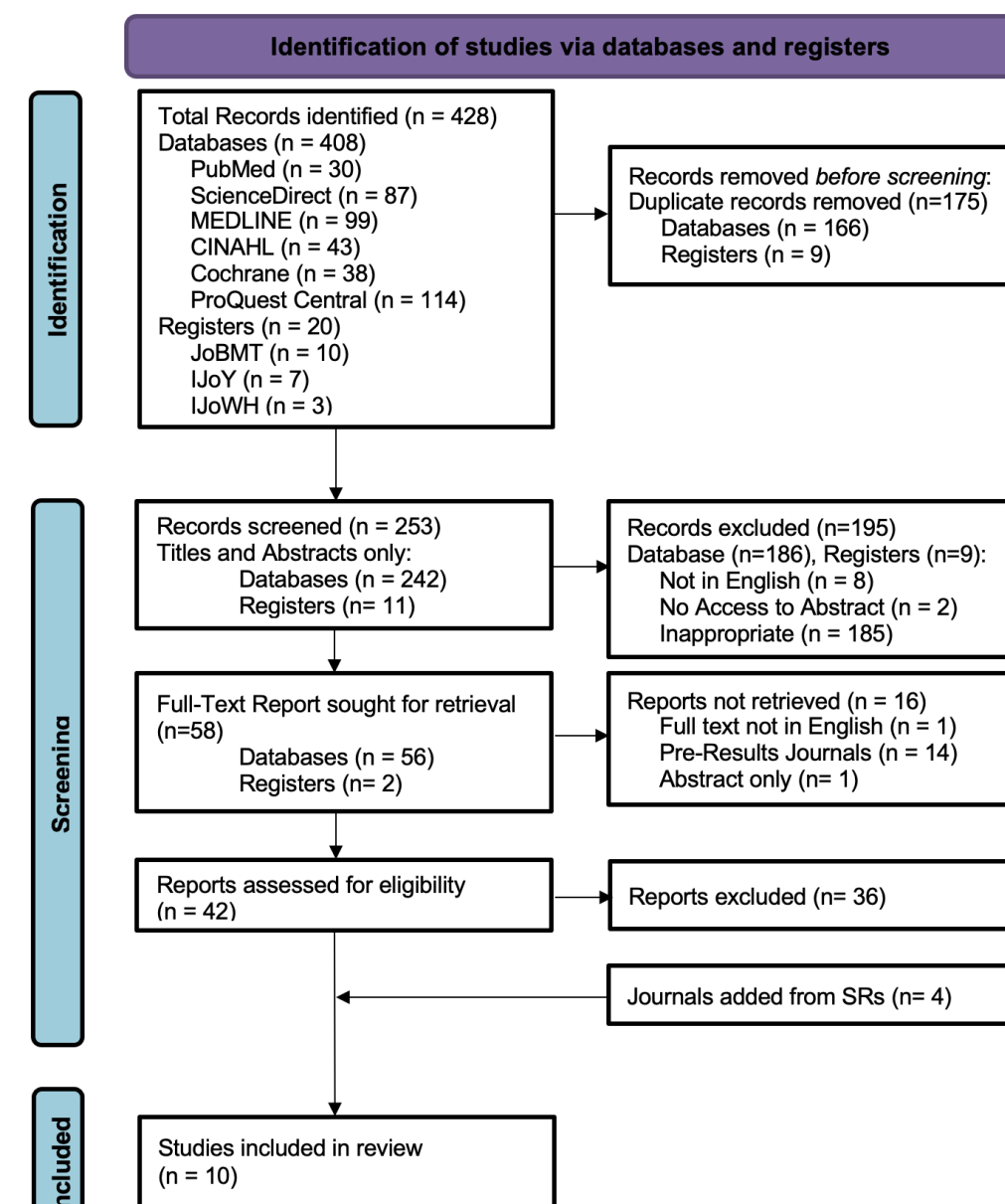
**6 Databases;** PubMed, ScienceDirect, MEDLINE, CINAHL, Cochrane, ProQuest Central, and **3 Registers;** International Journal of women's health (IJoWH), Journal of Bodywork and Movement Therapies (JoBMT), International Journal of Yoga (IJoY), were searched from **January 2012 to March 2022.**

**Inclusion criteria:** Peer-reviewed written English research articles, quantitative primary research, Yoga vs control or other modality, Human female-only participants between 16-55years with PD, SD, CPP and/or Endometriosis, using outcome measures or physiological changes to measure intervention effect.

Abstracts, titles and full texts **reviewed independently by researcher** and **compiled into tabular format.**

Risk of bias assessed through Physiotherapy evidence database scale (PEDro). Research scoring 5 or less excluded.

## 4.1 Results



2020 PRISMA flow-diagram for new systematic review searches of databases and registers only.

Abbreviations: n = number of studies. Registers a.k.a Journals.

First Author. Year. Country.	Design	Participant No., Pathology, Intervention Intervention Duration, sessions per wk.	Outcome Measure / physiological	Results
1 Chein <i>et al.</i> , 2013, Taiwan	PCT	30 Healthy vs 30 Primary Dysmenorrhea 8 weeks of Yoga, 2x 30min weekly sessions	MDQ SH	Improved MDQ SH↓ PD = 46.46%, H=51.37%
2 Ganesh <i>et al.</i> , 2015, India	RCT	90 Primary Dysmenorrhea; Nadi Shodhana vs Kapalbhathi. 4 weeks: 2x daily 10mins each.	NPRS MMDQ	Both improved OM score. Shodhana overall better.
3 Goncalves <i>et al.</i> , 2017, Brazil	RCT	28 Endometriosis; No exercise vs Hatha Yoga. 8 weeks: 2x 120min weekly sessions	VAS EHP-30	Yoga VAS scores ½ from 60.8 to 32.39. ↓EHP-30 scores.
4 Kirca <i>et al.</i> , 2021, Turkey	RES	60 PD; No exercise vs Hatha Yoga. 12 weeks: 1x 60min weekly session.	VAS	Yoga VAS scores ½ by 4 <sup>th</sup> MC.
5 Kirthika <i>et al.</i> , 2018, India	RCT	30 Primary Dysmenorrhea; Yoga vs Pilates. 12 weeks: 3x 18min weekly sessions.	VAS MDQ	Yoga VAS < Pilates VAS.
6 Prabhu <i>et al.</i> , 2019, India	ES	78 Primary Dysmenorrhea; Yoga vs Pilates. 6 weeks: 4x 30min (yoga), 4x 20min (Pilates).	PSS MMDQ	Yoga PSS > Pilates PSS. Pain better in Pilates group.
7 Rani <i>et al.</i> , 2012, India	RCT	126 Mixed PD & SD. NSAIDs vs Yoga Nidra. 6mnth, 35min 5days per wk.	HAM-A HAM-D	Nidra group Anxiety 78.57% improved scores.
8 Saxena <i>et al.</i> , 2017, India	RCCS	60 Chronic Pelvic Pain; NSAIDs vs Hatha Yoga. 8 weeks: 5x 60min weekly sessions.	VAS WHOQOL-BREF	Yoga VAS scores ½. QoL improved.
9 Yang <i>et al.</i> , 2016, Korea	RCT	40 Primary Dysmenorrhea; No Yoga vs Yoga. 12 weeks: 1x 60min weeks sessions.	VAS SF-MDQ	Yoga VAS improved. MC symptoms improved.
10 Yonglitthipagon <i>et al.</i> , 2017, Thailand	RCT	34 PD; No exercise vs Yoga 12 weeks: 2x 30min weekly sessions.	VAS SF-36	Yoga VAS scores >½ improved. QoL improved.

PD=Primary Dysmenorrhea. H=Healthy. TENS=Transcutaneous Nerve Stimulation. pwk= per week. MC = Menstrual Cycle. NSAIDs = non-steroidal anti-inflammatory drug. SH = Serum Homocysteine (SH)  
RCT = Randomised controlled trial. RCT1 = Randomised Comparative Trial. RCT2 = Prospective Controlled Trial. RCCS = Randomised case-control study. ES = Experimental Study. RES = Randomised Experimental Study with Control Group.  
PSQI = Pittsburgh sleep Quality Index. PSS = Perceived Stress Scale. HAM-A = Hamilton Anxiety Scale. HAM-D = Hamilton Rating Scale for Depression. WHOQOL-BREF = World Health Organization quality of life-BREF. EHP-30 = Endometriosis Health Profile. MDS = Menstrual Distress Questionnaire. MMDS = Moos Menstrual Distress Questionnaire. VAS = Visual Analogue Scale. NPRS = Numerical Pain Rating Scale.

## 4.2 Result Summary

- 10 studies, 6 different countries - non-UK based.
- All externally valid. Methodological risk of bias 'good', or 'excellent'.
- Wide variety of yogic practices and asanas used, with varying duration and frequency.



## 5. Conclusion

The review confirms yoga is a beneficial symptom management technique associated with endometriosis; positive effects on pain, sleep, stress, anxiety, depression, flexibility, and activity levels have been found.

## 6. Further Research

- Confirmed disease stage 1-4 and the longevity of yoga on symptom management.
- Splitting the individual aspect of yoga up into RCT; relaxation, meditation, pranayama, asanas, Nidra, Surya namaskar and each's longitudinal effects.
- Other conservative management techniques i.e. Pilates, Cognitive Behavioural Therapy, Somatic movements, other holistic modalities.

## 7. References

Chapron, C., Marcellin, L., Borghese, B., Santulli, P. (2019) 'Rethinking mechanisms, diagnosis and management of Endometriosis'. *Nature Reviews: Endocrinology*. 15(no 10 issue), pp 666-682. DOI: 10.1038/s41574-019-0245-z.

Kalaitzopoulos, D., Samartzis, N., Kolovos, G., Mareti, E., Samartzis, E., Eberhard, M., Dinas, K. and Daniilidis, A. (2021) 'Treatment of Endometriosis: A Review with Comparison of 8 guidelines', *BMC Women's Health*, 21(1), pp. 1-9. DOI: <https://doi.org/10.1186/s12905-021-01545-5>

Mira, T., Buen, M., Borges, M., Yela, D., and Benetti-Pinto, C. (2018) 'Systematic review and meta-analysis of complementary treatments for women with symptomatic Endometriosis'. *International journal of gynecology and obstetrics*. 143(1), pp. 2-9. DOI: 10.1002/ijgo.12576.

Signorile, P., Viceconte, R., and Baldi, A. (2022) 'New insights in Pathogenesis of Endometriosis' *Frontiers in Medicine*, 9(1), DOI: 10.3389/fmed.2022.879015