Understanding the association between mental health outcomes and chronic pain in endometriosis: a targeted review of published meta-analyses (MA)

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CONTEXT[1]

~10% of women of reproductive age live with endometriosis (about 190 million worldwide)

Endometriosis is a chronic inflammatory gynecologic disease characterized by endometrium tissue growing outside the uterine cavity.

Recent studies highlighted that pelvic pain in endometriosis patients is associated with decline in mental health.

OBJECTIVES

➔ **Review published meta-analyses linking endometriosis with mental health and quality of life, to identify the psychological burden.**

METHODS

A targeted literature review was conducted on Pubmed and Google Scholar, on keywords associated with the pathology (“endometriosis”) and mental health (“Quality of life”, “Anxiety”, “Depression”, “Psychological”, “Mental health”, “depressive”, “HRQOL”). Publications were reviewed using PRISMA guidelines. Studies published in English during the last 10 years were included. No restriction on location was made. Studies investigating changes in outcomes based on surgery, therapy, treatment or alternative medicines were excluded for heterogeneity reasons.

DISCUSSION / CONCLUSION

Pain at the core: The psychological burden of endometriosis appears largely shared with chronic pelvic pain, supporting an integrated pain–mental health approach rather than a diagnosis-centred one.

Heterogeneous evidence: Very high heterogeneity, varied instruments and inconsistent distinction between symptoms and diagnosed disorders limit comparability across reviews.

No causal inference: Primary studies are mostly cross-sectional and overlap across meta-analyses

Review limitations: Overlap between primary studies may reduce the independence of evidence across reviews.

Psychological interventions may improve well-being and pain, but evidence remains limited; within the French National Strategy against Endometriosis, further research is needed to integrate psychosocial support into care pathways.



RESULTS

Selected studies

Among 32 publications, only four relevant meta-analyses were identified. These studies allowed to provide outcomes on complementary aspects of endometriosis, including depression, anxiety, psychiatric symptoms, emotion (**Table 1**).

Heterogeneity on the studies included in these publications could be highlighted (in terms of study design, sample size, outcomes and measurement instruments especially).

Table 1. Included meta-analyses: evidence and dimensions assessed

Study	Evidence	Depression	Anxiety	QoL	Pain	Confidence in evidence
Van Barneveld 2021[2]	47 studies (cross-sectional, longitudinal and retrospective cohorts) N = 1 933 846 patients	●	●		●	**Moderate** Registered · PRISMA · risk of bias unclear
Carvalho 2025	16 cross-sectional studies N = 3 687 patients	●		●	●	**Moderate** Registered · PRISMA-P · cross-sectional only
Delanerolle 2021	N = 34 cross-sectional studies Number of patients not reported	●	●		●	**Low** Registered · NOS · **15 vs 12 studies reported**
Chaman-Ara 2017	7 observational studies N = 1 619 patients			●	●	**Low** Not registered · 7 studies · $I^2 > 90\%$

Most reviews reported using established methodological or reporting frameworks, supporting the transparency of their methods. However, adherence to these frameworks does not necessarily indicate a low risk of bias. Reporting inconsistencies were particularly evident in Delanerolle et al. (2021), where the abstract and main text reported different numbers of studies included in the meta-analysis, reducing clarity about the evidence contributing to the pooled results.

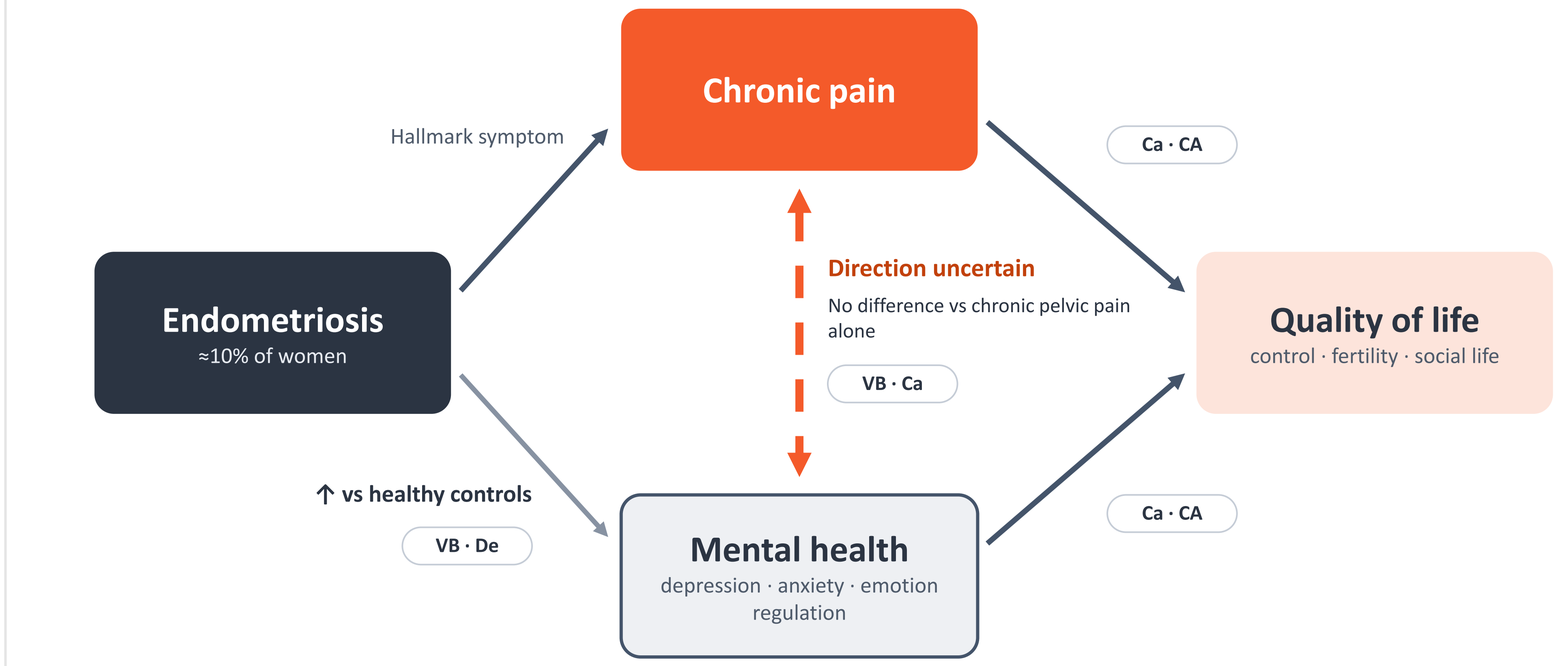
Results from the MA

The available evidence highlighted a psychiatric and quality-of-life burden among women with endometriosis. Higher depression and anxiety scores compared with healthy controls support the inclusion of psychological assessment within comprehensive endometriosis care (VB).

The severity of symptoms and pain appear to be correlated with mental health impairment: depression and anxiety scores did not differ significantly between women with endometriosis and women with chronic pelvic pain without endometriosis (VB). This supports considering pain and mental health together, although the direction of their relationship remains uncertain.

Endometriosis impact can also be highlighted in perceived control and fertility-related concerns (Chaman-Ara et al., 2017). These findings support a multidisciplinary, person-centred approach addressing physical symptoms, psychological needs and individual reproductive priorities. These elements are synthesized in **Figure 1.**

Figure 1. Synthesis framework of the associations between endometriosis, chronic pain, mental health and quality of life, derived from the four included meta-analyses.



Solid arrows: associations reported; dashed arrow: association whose direction has not been established. Pills indicate supporting meta-analyses: VB, Van Barneveld 2021; Ca, Carvalho 2025; De, Delanerolle 2021; CA, Chaman-Ara 2017.

References :

1. World Health Organization. Endometriosis – Fact sheet. 2023./Taylor HS, Kotlyar AM, Flores VA. Endometriosis is a chronic systemic disease: clinical challenges and novel innovations. Lancet.
2. van Barneveld, E., Manders, J., van Osch, F. H., van Poll, M., Visser, L., van Hanegem, N., ... & Leue, C. (2022). Depression, anxiety, and correlating factors in endometriosis: a systematic review and meta-analysis. *Journal of women's health*, *31*(2), 219-230.
3. Carvalho, S. A., Eulálio, I., & Guiomar, R. (2025). A systematic review and meta-analysis of the relationship between emotion regulation, pain, depressive symptoms and quality of life in women with endometriosis. *Journal of psychosomatic research*, *195*, 112205.
4. Delanerolle, G., Ramakrishnan, R., Hapangama, D., Zeng, Y., Shetty, A., Elneil, S., ... & Raymont, V. (2021). A systematic review and meta-analysis of the Endometriosis and Mental-Health Sequelae; The ELEMI Project. *Women's Health*, *17*, 17455065211019717.
5. Chaman-Ara, K., Bahrami, M. A., Moosazadeh, M., & Bahrami, E. (2017). Quality of life in women with endometriosis: a systematic review and meta-analysis. *world cancer research journal*, *4*(1).

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