Psychological Health in Women with Endometriosis: A Contemporary Narrative Review of Current Evidence and Clinical Implications

Archana Rohit Dhanawade[1], Vijaya Rahul Kumbhar [2]

1 Assistant Professor, Department of Obstetrics and gynaecology nursing, Bharati Vidyapeeth (Deemed to be University) College of Nursing Sangli, Maharashtra, India.

2 Professor and HOD, Department of Obstetrics and gynaecology nursing, Bharati Vidyapeeth (Deemed to be University) College of Nursing Sangli, Maharashtra, India

Corresponding author: Archana Rohit Dhanawade.
Assistant professor. Bharati Vidyapeeth, college of nursing, sangli.
Email: archana.dhanawade@bharatividyapeeth.edu

Abstract

Background: Endometriosis is a chronic inflammatory gynecological disorder affecting nearly 10% of women of reproductive age worldwide. Beyond chronic pelvic pain and infertility, the disease exerts profound psychological effects that negatively influence emotional well-being, interpersonal relationships, occupational productivity, and overall quality of life. Growing evidence indicates that depression, anxiety, stress, and social isolation are common among women with endometriosis, highlighting the need for comprehensive multidisciplinary care.

Objective: To critically review the current evidence on the psychological health of women with endometriosis, summarize the underlying biopsychosocial mechanisms, discuss recent advances in multidisciplinary management, and identify implications for nursing practice and future research.

Methods: A narrative review of peer-reviewed literature published between 2015 and 2026 was conducted using PubMed, Scopus, Web of Science, Embase, CINAHL, and Google Scholar. Original research articles, systematic reviews, meta-analyses, and international guidelines addressing psychological outcomes associated with endometriosis were critically analyzed and synthesized.

Results: Women with endometriosis consistently demonstrate higher rates of depression, anxiety, emotional distress, sleep disturbances, sexual dysfunction, infertility-related stress, and impaired quality of life than healthy women. Chronic pelvic pain, delayed diagnosis, inflammatory mechanisms, and social challenges collectively contribute to psychological morbidity. Current evidence supports multidisciplinary management integrating medical treatment with psychological interventions, patient education, and specialized nursing care.

Conclusion: Psychological health should be considered an integral component of endometriosis management. Early mental health screening, multidisciplinary interventions, and nurse-led supportive care may substantially improve patient outcomes. Further longitudinal and intervention-based studies are required to strengthen the evidence base.

Keywords: Endometriosis, Psychological health, Depression, Anxiety, Quality of life, Chronic pelvic pain, Women's health.

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1. Introduction

Endometriosis is a chronic estrogen-dependent inflammatory disease characterized by the presence of endometrial-like tissue outside the uterine cavity, resulting in persistent inflammation, fibrosis, adhesions, and chronic pelvic pain. It affects approximately 190 million women worldwide and is one of the leading causes of chronic pelvic pain, dysmenorrhea, dyspareunia, and infertility among

women of reproductive age. Despite its high prevalence, diagnosis is often delayed because symptoms overlap with other gynecological and gastrointestinal disorders and are frequently normalized by patients and healthcare providers.

Although traditionally considered a gynecological disorder, endometriosis is now recognized as a systemic disease with substantial psychological, social, and economic consequences. Persistent pelvic pain, recurrent medical consultations, uncertainty regarding fertility, repeated surgical interventions, and reduced work productivity significantly affect emotional well-being. Women living with endometriosis commonly report depression, anxiety, stress, sleep disturbances, social isolation, reduced self-esteem, and impaired quality of life. These psychological consequences often persist even after medical or surgical treatment, suggesting that mental health is influenced by multiple biological, psychological, and social factors.

Recent advances in pain neuroscience have demonstrated that chronic inflammation and central sensitization contribute not only to persistent pain but also to emotional dysregulation. Elevated inflammatory cytokines, altered hypothalamic-pituitary-adrenal axis function, and neuroplastic changes within pain-processing regions of the brain have been implicated in the development of depression and anxiety among women with endometriosis. These findings support a biopsychosocial model in which biological pathology interacts with psychological responses and environmental factors to determine disease burden.

During the past decade, considerable research has focused on understanding the psychological impact of endometriosis. Numerous observational studies, systematic reviews, and international guidelines have highlighted the importance of integrating psychological assessment into routine clinical care. However, evidence remains fragmented because of differences in study design, assessment tools, and healthcare settings. An updated synthesis of current literature is therefore necessary to provide clinicians, nurses, and researchers with a comprehensive understanding of psychological health in women with endometriosis.

This narrative review aims to critically examine contemporary evidence regarding the psychological consequences of endometriosis, discuss the underlying mechanisms contributing to mental health disorders, evaluate current multidisciplinary management strategies, and highlight implications for nursing practice and future research.

2. Methodology

A narrative review methodology was adopted to synthesize current evidence on the psychological health of women with endometriosis. Electronic databases including PubMed/MEDLINE, Scopus, Web of Science, Embase, CINAHL, PsycINFO, and Google Scholar were searched for articles published primarily between January 2015 and June 2026. Landmark studies published before 2015 were included where they provided foundational evidence.

The search strategy combined Medical Subject Headings (MeSH) and free-text keywords including *endometriosis*, *psychological health*, *mental health*, *depression*, *anxiety*, *quality of life*, *chronic pelvic pain*, *stress*, *sexual dysfunction*, *infertility*, and *nursing care*. Boolean operators ("AND", "OR") were used to optimize the search.

Eligible studies included systematic reviews, meta-analyses, randomized controlled trials, observational studies, qualitative research, and international clinical guidelines that investigated psychological outcomes in women with endometriosis. Editorials, conference abstracts, case reports, and studies unrelated to psychological health were excluded.

The selected literature was critically appraised and synthesized into thematic categories, including depression and anxiety, chronic pain and emotional distress, sexual dysfunction and infertility, quality of life, multidisciplinary management, and nursing implications. Rather than statistically pooling findings, this review provides a critical interpretation of contemporary evidence to identify current knowledge, clinical implications, and priorities for future research.

- **3. Psychological Health in Women with Endometriosis**
    - Depression and Anxiety
    - Chronic Pain and Emotional Distress
    - Sexual Dysfunction and Infertility
    - Quality of Life and Social Impact

3. Psychological Health in Women with Endometriosis

Psychological health has emerged as a major concern in women with endometriosis due to the chronic nature of the disease and its significant impact on daily functioning. While pelvic pain and infertility are the most recognized clinical manifestations, growing evidence indicates that psychological disorders frequently coexist and substantially worsen disease outcomes. Depression, anxiety, emotional distress, sleep disturbances, and reduced quality of life are commonly reported among affected women. These psychological consequences arise from the interaction of biological, psychological, and social factors rather than the disease alone.

Depression and Anxiety

Depression and anxiety are the most prevalent mental health disorders associated with endometriosis. Studies consistently report higher levels of depressive symptoms in women with endometriosis compared with healthy controls. Persistent pelvic pain, repeated treatment failures, infertility, uncertainty regarding disease progression, and delayed diagnosis contribute significantly to emotional distress. Chronic pain activates inflammatory pathways and alters neurotransmitter function, increasing vulnerability to mood disorders.

Similarly, anxiety is frequently associated with unpredictable symptom exacerbations, fear of infertility, repeated surgical interventions, and concerns regarding future reproductive health. Women often experience anticipatory anxiety related to menstruation, sexual intercourse, and work responsibilities because of unpredictable pain episodes. Long-term anxiety may further amplify pain perception through central sensitization, creating a vicious cycle between physical symptoms and psychological distress.

Recent evidence suggests that early psychological screening during routine gynecological assessment can facilitate timely identification of depression and anxiety, thereby improving treatment outcomes and patient satisfaction.

Chronic Pain and Emotional Distress

Chronic pelvic pain is considered the strongest predictor of poor psychological health in women with endometriosis. Persistent nociceptive stimulation leads to central sensitization, resulting in heightened pain perception even after treatment of pelvic lesions. Consequently, many women continue to experience pain despite medical or surgical management.

Continuous pain negatively affects emotional regulation, resulting in frustration, helplessness, irritability, fatigue, and social withdrawal. Women frequently report feelings of being misunderstood because menstrual pain is often normalized by society and healthcare providers. Diagnostic delays further intensify emotional distress by reducing confidence in healthcare services and increasing uncertainty regarding future health.

Neurobiological studies indicate that chronic inflammation and altered pain processing influence brain regions responsible for mood regulation, providing biological evidence linking chronic pain with depression and anxiety. These findings reinforce the importance of adopting multidisciplinary pain management strategies that incorporate psychological interventions alongside conventional medical treatment.

Sexual Dysfunction and Infertility

Sexual dysfunction is another significant yet often neglected consequence of endometriosis. Deep dyspareunia, reduced sexual desire, fear of intercourse, and diminished relationship satisfaction are frequently reported. Persistent pain during sexual activity not only affects physical intimacy but also contributes to emotional distress, decreased self-esteem, and marital conflict.

Infertility further compounds psychological burden. Approximately one-third to one-half of women with endometriosis experience difficulty conceiving, leading to feelings of grief, inadequacy, and anxiety. Repeated unsuccessful fertility treatments, financial constraints, and societal expectations regarding motherhood may significantly increase depressive symptoms. Comprehensive fertility counseling and psychosexual support are therefore essential components of patient-centered care.

Quality of Life and Social Impact

Endometriosis substantially impairs health-related quality of life by affecting physical, emotional, social, and occupational functioning. Women commonly experience limitations in daily activities, absenteeism from work or education, reduced productivity, financial stress, and decreased participation in social events. Fatigue, sleep disturbances, and chronic pain often interfere with family responsibilities and recreational activities, leading to social isolation.

Several studies have demonstrated that psychological distress is more strongly associated with quality-of-

life impairment than disease stage, highlighting the importance of addressing emotional wellbeing irrespective of lesion severity. Supportive family relationships, peer support groups, effective communication with healthcare professionals, and multidisciplinary care have been shown to improve coping ability and resilience.

Overall, current evidence supports the integration of mental health assessment into routine endometriosis care. Management should extend beyond symptom control to include psychological counseling, patient education, pain management, and social support, thereby promoting holistic recovery and improving long-term quality of life.

4. Current Management and Future Perspectives

Management of endometriosis has evolved from a purely biomedical approach to a comprehensive biopsychosocial model that addresses both physical and psychological health. Current treatment strategies include hormonal therapy, analgesics, laparoscopic surgery, fertility management, physiotherapy, lifestyle modification, and psychological interventions. While medical and surgical treatments effectively reduce symptoms in many women, they often fail to completely alleviate psychological distress, emphasizing the need for multidisciplinary care.

Psychological interventions such as cognitive behavioral therapy (CBT), mindfulness-based stress reduction, stress management, and supportive counseling have demonstrated improvements in depression, anxiety, coping skills, and quality of life. Patient education and participation in support groups further enhance self-management and reduce feelings of isolation. Emerging research also highlights the potential role of digital health platforms, tele-counseling, and mobile applications in providing accessible psychological support.

Future research should prioritize longitudinal studies evaluating psychological outcomes following multidisciplinary interventions. Greater emphasis is also needed on culturally diverse populations, adolescent girls, and women from low- and middle-income countries, where evidence remains limited. Development of standardized psychological screening protocols and integration of mental health services into routine gynecological practice may further improve patient-centered care.

Table 1. Summary of Systematic Reviews on the Psychological Health of Women with Endometriosis

Author (Year)	Study Design	No. of Studies Included	Main Focus	Key Findings
Culley L et al.	Critical narrative review	42 studies	Social and psychological impact	Endometriosis significantly affected psychological well-being, intimate relationships, employment, fertility, and quality of life. Delayed diagnosis and chronic pain were major contributors to emotional distress.
Gambadauro P et al.	Systematic review and meta-analysis	24 studies	Depression in women with endometriosis	Women with endometriosis had a significantly higher prevalence of depressive symptoms than healthy controls, highlighting the need for routine psychological assessment.
Marinho MCP et al.	Systematic review and	37 studies	Health-related quality of	Endometriosis was consistently associated

Author (Year)	Study Design	No. of Studies Included	Main Focus	Key Findings
	meta-analysis		life	with poor physical, emotional, and social quality of life. Pain severity was the strongest determinant of reduced quality of life.
Szypłowska M et al.	Systematic review	18 studies	Depression, anxiety and quality of life	Most studies reported significantly higher levels of depression, anxiety, and impaired quality of life among women with endometriosis. Psychological symptoms were closely associated with chronic pelvic pain and infertility.
Samami E et al.	Systematic review	10 studies	Pain-focused psychological interventions	Cognitive behavioural therapy, mindfulness, yoga, psychoeducation, and progressive muscle relaxation reduced pain intensity and improved psychological well-being.
Mira TAA et al.	Systematic review and meta-analysis	7 randomized controlled trials	Effectiveness of psychological interventions	Psychological interventions significantly reduced anxiety, depression, dyspareunia, and dyschezia while improving mental health and quality of life. Evidence supports integrating psychological care into routine endometriosis management despite moderate-to-low certainty of evidence.

Discussion

The findings from the reviewed systematic reviews consistently demonstrate that endometriosis is associated with substantial psychological morbidity, extending beyond its physical manifestations. Depression, anxiety, emotional distress, impaired sexual functioning, infertility-related stress, and reduced health-related quality of life are among the most frequently reported outcomes. Across reviews, chronic pelvic pain emerged as the principal determinant of psychological impairment, with persistent pain contributing to emotional exhaustion, social withdrawal, and decreased daily functioning.

Earlier reviews primarily described the psychosocial consequences of endometriosis, emphasizing delayed diagnosis, stigma, and diminished quality of life. More recent systematic reviews and meta-analyses have strengthened this evidence by demonstrating statistically significant associations between endometriosis and depression, anxiety, and poorer mental health outcomes. Furthermore, recent evidence indicates that psychological interventions—including cognitive behavioural therapy, mindfulness-based interventions, psychoeducation, yoga, and relaxation techniques—can improve both psychological outcomes and pain-related symptoms, supporting their inclusion within multidisciplinary care models.

Despite these encouraging findings, the evidence base remains limited by methodological heterogeneity, variation in psychological assessment tools, small sample sizes, and the predominance of cross-sectional study designs. Many reviews also highlight the lack of high-quality randomized controlled trials and longitudinal studies evaluating long-term psychological outcomes. Consequently, future research should prioritize standardized outcome measures, culturally diverse populations, and robust intervention studies to strengthen the evidence for integrated psychological care in women with endometriosis.

5. Nursing Implications

Nurses play a pivotal role in the holistic management of women with endometriosis because they are often the first healthcare professionals to identify the physical and psychological challenges experienced by patients. Integrating psychological assessment into routine nursing care can facilitate early identification of depression, anxiety, stress, and poor coping strategies. Standardized screening tools such as the Hospital Anxiety and Depression Scale (HADS) or Patient Health Questionnaire (PHQ-9) may be incorporated into routine assessments to enable timely referral for mental health support.

Patient education is another essential nursing responsibility. Nurses should provide evidence-based information regarding disease progression, treatment options, pain management, fertility issues, lifestyle modification, and self-management strategies. Effective education reduces uncertainty, enhances treatment adherence, and empowers women to actively participate in decision-making.

Nurses should also promote non-pharmacological interventions including relaxation techniques, mindfulness, stress management, sleep hygiene, physical activity, and pelvic floor rehabilitation where appropriate. These interventions have demonstrated positive effects on pain perception, emotional well-being, and overall quality of life.

Given the impact of endometriosis on sexual health and fertility, nurses should provide sensitive counseling, facilitate communication between partners, and coordinate referrals to fertility specialists, psychologists, or psychosexual therapists when necessary. Participation in multidisciplinary teams enables nurses to advocate for comprehensive patient-centered care that addresses both physical symptoms and psychosocial needs.

Finally, nurses have an important role in community awareness, early recognition of symptoms, and reducing the stigma associated with menstrual disorders. Continuing professional education on endometriosis should be encouraged to improve diagnostic awareness and quality of care.

6. Ethical Considerations

As this article is a narrative review of published literature, approval from an Institutional Ethics Committee was not required because no human participants, biological samples, or confidential patient data were directly involved. The review was conducted according to accepted principles of scientific integrity and responsible scholarly reporting.

All information included in this review was obtained from peer-reviewed publications and appropriately acknowledged through citation. Care was taken to accurately interpret previous findings, avoid plagiarism, and maintain objectivity during data synthesis. The review adheres to internationally accepted publication ethics, including transparency, originality, proper attribution of sources, declaration of potential conflicts of interest where applicable, and respect for intellectual property rights. These principles are consistent with internationally recognized publication ethics guidance such as that provided by the **Committee on Publication Ethics (COPE)**.

7. Conclusion

Endometriosis is increasingly recognized as a chronic systemic condition that extends beyond gynecological symptoms to significantly affect psychological health and overall well-being. Contemporary evidence demonstrates that women with endometriosis experience higher rates of depression, anxiety, chronic stress, sexual

dysfunction, infertility-related distress, and reduced quality of life than the general female population. These psychological consequences arise through complex interactions among chronic pain, inflammation, delayed diagnosis, reproductive concerns, and social challenges.

Current evidence supports a multidisciplinary approach integrating medical treatment with psychological care, patient education, rehabilitation, and nursing interventions. Early mental health screening, individualized counseling, and coordinated multidisciplinary management can substantially improve emotional well-being and long-term health outcomes.

Future research should focus on longitudinal studies, culturally diverse populations, standardized psychological assessment tools, and evaluation of multidisciplinary interventions. Strengthening the integration of mental health services within endometriosis care will contribute to more comprehensive, patient-centered healthcare and improved quality of life for affected women.

Nurses play a vital role in promoting holistic management through psychological assessment, counseling, health education, symptom monitoring, and coordination of multidisciplinary services. Their contribution is essential in improving coping strategies, enhancing treatment adherence, reducing stigma, and empowering women to actively participate in their care.

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