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<b>JOURNAL</b>	International Journal of Innovative Technologies in Social Science
<b>p-ISSN</b>	2544-9338
<b>e-ISSN</b>	2544-9435
<b>PUBLISHER</b>	RS Global Sp. z O.O., Poland
<b>ARTICLE TITLE</b>	THE CORRELATION BETWEEN ENDOMETRIOSIS PAIN, MENTAL HEALTH DISORDERS, AND QUALITY OF LIFE IMPACT
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<b>ARTICLE INFO</b>	Marta Zgierska, Natalia Pacocha, Jakub Jędrychowski, Justyna Popczyńska, Natalia Karpowicz, Małgorzata Krzyżanowska, Julia Kaszucka, Agnieszka Raczyńska, Kinga Kosiec, Oliwia Krzemień. (2024) The Correlation Between Endometriosis Pain, Mental Health Disorders, and Quality of Life Impact. <i>International Journal of Innovative Technologies in Social Science</i> . 2(42). doi: 10.31435/rsglobal_ijitss/30062024/8152
<b>DOI</b>	<a href="https://doi.org/10.31435/rsglobal_ijitss/30062024/8152">https://doi.org/10.31435/rsglobal_ijitss/30062024/8152</a>
<b>RECEIVED</b>	18 April 2024
<b>ACCEPTED</b>	23 May 2024
<b>PUBLISHED</b>	26 May 2024
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# **THE CORRELATION BETWEEN ENDOMETRIOSIS PAIN, MENTAL HEALTH DISORDERS, AND QUALITY OF LIFE IMPACT**

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**DOI: [https://doi.org/10.31435/rsglobal\\_ijitss/30062024/8152](https://doi.org/10.31435/rsglobal_ijitss/30062024/8152)**

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**ARTICLE INFO**

Received 18 April 2024  
Accepted 23 May 2024  
Published 26 May 2024

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**KEYWORDS**

Climate Change, Extreme  
Precipitation Events, Statistical  
Analysis, Semi-Arid Climate.

**ABSTRACT**

**Introduction.** Endometriosis ranks among the prevalent gynecological conditions, impacting approximately 10% of women during their reproductive years. Primarily characterized by pain, endometriosis is also associated with several psychiatric comorbidities such as anxiety, depression and eating disorders. Research also demonstrates a significant decline in the quality of life among patients.

The objective of this study is to undertake an exhaustive literature review on endometriosis in women, with a specific focus on understanding its effects on mental health and quality of life.

**Material and methods.** We conducted a literature review utilizing the resources available in the "PubMed" database. The search was performed using following keywords: endometriosis; pelvic pain; anxiety; depression; mental health; eating disorders.

**Discussion.** Research indicates that women diagnosed with endometriosis, particularly those experiencing pain, exhibit elevated stress levels and a diminished quality of life compared to women without the condition. Importantly, depression and anxiety are more prevalent in women with endometriosis, and the presence of psychiatric disorders correlates more to the severity of the endometriosis-related pain than to other disease characteristics. In terms of treatment implications, clinical trials have shown that both medical and surgical interventions for endometriosis not only alleviate physical symptoms but also improve perceived stress, anxiety, and depressive symptoms.

**Conclusions.** We found that severe endometriosis-related pain and the presence of psychiatric disorders were linked to reduced quality of life. Ensuring holistic care for endometriosis is essential for enhancing patients' quality of life. Furthermore, effectively treating endometriosis can alleviate the psychological strain it imposes.

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**Citation:** Marta Zgierska, Natalia Pacocha, Jakub Jędrychowski, Justyna Popczyńska, Natalia Karpowicz, Małgorzata Krzyżanowska, Julia Kaszucka, Agnieszka Raczyńska, Kinga Kosiec, Oliwia Krzemień. (2024) The Correlation Between Endometriosis Pain, Mental Health Disorders, and Quality of Life Impact. *International Journal of Innovative Technologies in Social Science*. 2(42). doi: 10.31435/rsglobal\_ijitss/30062024/8152

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**INTRODUCTION.**

Endometriosis, a prevalent chronic gynecological condition, involves the presence of tissue resembling the endometrium outside the uterus, often resulting in intense pelvic pain and infertility. Typically, tissue resembling the endometrium is found in pelvic regions, but in uncommon instances, endometrial implants may appear in areas beyond the pelvis, including the gastrointestinal and urinary tracts, or even more distant locations such as the thorax, central nervous system, or nasal cavity. (Spagnolo et al., 2014) Approximately one in ten women of reproductive age experience endometriosis, while it affects as many as half of all women experiencing infertility. (Lagana et al., 2017) While the exact cause of endometriosis remains uncertain, it is widely acknowledged that hormonal, genetic, inflammatory, and immunological factors play a role in its development. Various treatment options are accessible for individuals

with endometriosis, ranging from surgical interventions to pharmaceutical remedies. Responses to these treatments vary; while some patients effectively manage their symptoms, others may encounter ongoing or recurrent issues. (Nassiri Kigloo et al., 2024) The clinical presentation of endometriosis includes a variety of symptoms including persistent pelvic discomfort, infertility, dysmenorrhea and irregularities in menstrual cycles (Aubry, et al., 2017) According to Škegro (2021) Patients diagnosed with endometriosis demonstrate higher rates of depression and anxiety than those in the general population. The coexistence of depression and anxiety has been linked to more severe endometriosis symptoms and unfavorable prognosis. Recent research has shown that women with endometriosis experience a diminished quality of life related to health when compared to the general population. (Zippl, Reiser, & Seeber, 2023) This study aims to perform an extensive literature review concerning endometriosis in women, with a specific emphasis on examining its impact on their mental health and overall quality of life.

### **MATERIALS AND METHODS.**

We conducted a thorough literature review using the resources available in the PubMed database. This process included searching the database using specific keywords like: endometriosis; pelvic pain; anxiety; depression; mental health. The collected data underwent meticulous examination and rigorous analysis to ensure thorough scrutiny and comprehensive understanding.

### **DISCUSSION.**

Studies indicate a heightened likelihood among women suffering from endometriosis to develop conditions such as generalized anxiety disorder, depression, alcohol addiction, and attention deficit hyperactivity disorder. (Casalechi et al., 2021) The severity of endometriosis-related pain appears to have a stronger correlation with the presence of psychiatric disorders than with other characteristics of the disease.

#### **Anxiety.**

Consistent research findings indicate that women diagnosed with endometriosis are at a heightened risk of experiencing symptoms of anxiety when compared to the broader population. While the World Health Organization estimates that around 6% of women globally experience anxiety, this prevalence notably escalates within the endometriosis population, ranging from 10% to as high as 87.5%. Patients with chronic pelvic pain (CPP) or any form of pain disorder related to an underlying condition like endometriosis are more likely to experience generalized anxiety disorder (GAD) at higher rates compared to those without such pain conditions. (Mallorquí, Martínez-Zamora, & Carmona, 2022). Women experiencing more severe pain often report elevated levels of anxiety. (Dior et al., 2022) There have been suggestions that an inherent genetic susceptibility might also contribute to the emergence of mental health conditions, such as anxiety, among women diagnosed with endometriosis. (Koller et al., 2023) What is more, the uncertainty regarding the future course of endometriosis, fertility apprehensions, and the management of symptoms often leads to psychological stress and anxiety. Studies revealed that women who could adapt to their condition and viewed the diagnosis as a temporary interruption tended to have better outcomes compared to those whose lives were significantly disrupted by endometriosis. This substantial disruption caused considerable distress and anxiety among women with the condition. (Facchin et al., 2021)

#### **Depression.**

Research consistently shows a higher prevalence of depression among women with endometriosis compared to other groups. This difference becomes particularly notable when the comparison includes only well-matched healthy controls, as demonstrated in a recent meta-

analysis. (Sullivan-Myers et al., 2023) What is more a significant number of individuals with endometriosis endure persistent pain throughout their menstrual cycle phases. This enduring and severe chronic pain elevates the likelihood of developing depression and additional psychiatric comorbidities. (van Barneveld et al., 2022) According to Sullivan (2001) Among those experiencing chronic pelvic pain (CPP), depression was documented in as many as 86%, whereas only 28% of those without pain reported depression. Catastrophizing refers to a cognitive and emotional reaction to chronic pain, characterized by fixating on pain symptoms and experiencing feelings of helplessness and pessimism. It's a pessimistic outlook consistently linked with increased pain perception. (Martin et al., 2011; Lagana et al., 2019) Moreover, genetic predisposition for depression was also noted in individuals with endometriosis. (Škegro et al., 2021) Additional potential contributors to depression among women with endometriosis encompassed disrupted sleep patterns and fatigue, negative body image perceptions, previous use of gonadotropin-releasing hormone agonists, and oral contraceptives. (Mundo-López et al., 2020) However, while certain findings indicate that being younger (under 35 years) constitutes an extra risk factor for experiencing depression alongside endometriosis (Estes et al., 2021), other research suggests that the likelihood of depression with endometriosis remains unaffected by age. (Chen et al., 2016) Presently, there are no established guidelines concerning screening protocols for depression in women with endometriosis. However, The National Institute for Health and Care Excellence (NICE) underscores that endometriosis is a chronic condition with enduring physical, sexual, psychological, and social consequences, necessitating sustained support. Due to these factors, healthcare providers attending to women with endometriosis should inquire about signs of depression, particularly among those experiencing symptomatic endometriosis, chronic pelvic pain (CPP), and other concurrent chronic illnesses. (Delanerolle et al., 2021) Limited information exists regarding the direct impact of endometriosis treatment on depression, however, the meta-analysis demonstrated a notable enhancement in the mental component score following surgery for various forms of endometriosis. On the other hand, contrary findings suggest that alleviating chronic pelvic pain (CPP) did not lead to a decrease in depressive symptoms among women diagnosed with endometriosis. (Taylor, Kotlyar, & Flores, 2021; Spagnolo et al., 2014)

### **Quality of life.**

Research reveals that women diagnosed with endometriosis, particularly those experiencing discomfort, report elevated stress levels and a diminished quality of life compared to women without the condition. (Facchin, 2015) Endometriosis carries considerable social, public health, and economic consequences. It can diminish quality of life through intense pain, fatigue, depression, anxiety, and infertility. For some individuals with endometriosis, the debilitating pain they experience can impede their ability to attend work or school. Endometriosis also affects interpersonal aspects like sexual and social functioning. In this context, the existence of chronic pelvic pain (CPP) and dyspareunia may correlate with increased levels of social anhedonia, prompting patients to avoid social situations, experience reduced satisfaction from social interactions, and, specifically in the case of dyspareunia, encounter challenges in sexuality, partner intimacy, and marital harmony. (La Rosa et al., 2022; Sullivan-Myers et al., 2023) Sexual dysfunction can adversely impact the emotional and sexual well-being of partners of individuals with endometriosis, potentially leading to strain in the relationship. In fact, relationship issues resulting from sexual dysfunction have been reported in 15% to 34% of women diagnosed with endometriosis. Furthermore, in severe cases of the condition, there may be changes in bladder and bowel function, leading to a notable decline in quality of life. (Spagnolo et al., 2014; Dior et al., 2022)

### **Eating disorders.**

A research study was conducted with the aim of identifying the prevalence of eating disorders (EDs) among patients with endometriosis. The preliminary findings suggest that while only 3.33% of patients with endometriosis are impacted by eating disorders (ED), there are statistically significant variations in the average scores of assessment scales for disordered eating behaviors (DEBs) and emotional eating attitudes (EEAs). These differences were observed when patients were grouped according to their body mass index (BMI) levels, which indicate a risk for infertility and coronary heart disease, as well as based on the levels of moderate to severe pain experienced. (Panariello et al.,2023) In another research study, it was reported that within their study sample, 77.3% of individuals diagnosed with endometriosis experienced disruptions in their perception of body image. (Sullivan-Myers et al.,2023) Nevertheless, they did not explore the potential correlation with eating disorders; however, it could serve as another potential risk factor. On the other hand certain researchers discovered a genetic association between endometriosis and eating disorders. (Škegro et al.,2021) Overall, limited evidence exists regarding the link between eating disorders and endometriosis. While some researchers suggest a genetic connection, factors such as altered eating habits due to pain and the prevalent disturbance of body image among women with endometriosis may also play a role. (Zippl, Reiser, & Seeber, 2023)

### **Treatment options.**

The results of the research study underscore the necessity of a multidisciplinary approach in treating patients with endometriosis, given the diverse range of symptoms affecting mental health and quality of life. Presently, it is recommended to explore psychotherapeutic interventions, particularly cognitive-behavioral therapy, alongside other techniques aimed at alleviating anxiety and depressive symptoms. Additionally, for infertile couples experiencing distress, sexual or couples therapy may be beneficial. (La Rosa et al., 2020; Facchin et al., 2015) The primary goals of treatments should encompass managing pain, enhancing quality of life, preventing disease recurrence, preserving fertility, and minimizing anatomical damage. Hormonal therapy seeks to suppress ovarian function, thereby decreasing estrogen stimulation that fuels the growth of endometriotic tissue. (Zhao et al.,2012; Bedaiwy et al.,2017) The research study indicates a significant reduction in symptoms, with key factors affecting quality of life, such as sleep disturbances, anxiety, and depression symptoms, showing notable improvement following hormonal treatment. (Bergqvist & Theorell, 2001)

### **CONCLUSIONS.**

Endometriosis is frequently associated with depression and generalized anxiety disorders in women. Individuals with endometriosis experiencing pelvic pain exhibited lower quality of life and mental well-being in comparison to those with symptom-free endometriosis and individuals without the condition. (Koller et al., 2023) Moreover, possible links were identified among anxiety, depression, and endometriosis, both with and without persistent pain symptoms. Timely identification and effective management of endometriosis are crucial in potentially preventing the onset of psychological comorbidities associated with this chronic condition. (Zippl, Reiser, & Seeber, 2023)

In conclusion, it's crucial for clinicians to acknowledge the increased prevalence of anxiety, depression, and other mental health challenges among individuals with endometriosis. Clinicians must pay particular attention to individuals experiencing chronic pelvic pain, as they may be especially vulnerable to mental health complications. Early diagnosis of endometriosis and appropriate management of this chronic disease are vital and will hopefully prove to be a preventive measure for the development of psychological comorbidities. It is important to emphasize the significance of personalized treatment for these patients, considering both the

physical and psychological aspects of the disease. Providing comprehensive care for endometriosis is crucial for improving the quality of life of patients.

**Acknowledgments:**

**Author's contribution.**

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All authors have read and agreed with the published version of the manuscript.

**Funding statement.**

The study did not receive any external funding.

**Institutional Review Board Statement.**

Not applicable

**Informed Consent Statement.**

Not applicable.

**Data Availability Statement..**

Not applicable.

**Conflict of Interest Statement**

No potential conflict of interest was reported by the authors.

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