

PSYCHOSOCIAL IMPACT OF ENDOMETRIOSIS COMPLICATIONS A PATIENT-CENTERED EVALUATION

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Abstract: Endometrial glands outside the endometrium are defined to be endometriosis, and it often causes chronic pelvic pain and infertility. When a patient suffers from a condition that affects her significantly, it acts very much on that individual's quality of life. This study aims at describing the WHOQOL-BREF questionnaire on quality of life among women diagnosed with endometriosis; furthermore, we also investigate pain rates as well as other complications among those who have had laparoscopy for their endometriosis. Eighty-eight women patients aged 30-50 were studied in this cross-sectional study on endometriosis. The study sample comprised of patients who had undergone laparoscopy and were subsequently diagnosed with endometriosis, besides excision and ablation of the lesions at the same time between 5th January 2023 to 20th July 2024. Data on patients' demographics and clinical data were collected from hospitals across Baghdad in Iraq. A variety of questionnaires measuring quality of life were administered to the participants, including WHOQOL-BREF, VAS Scale for pain assessment as well as a general health questionnaire post laparoscopy.

Additionally, our work engaged patient complications and clinical records. A total of 63.64% of patients who underwent laparoscopy were between the ages of 30 and 40. Among patients with a body mass index (BMI) of 18.5 to 24.9, 39 cases were identified, while 30 cases were observed among patients with a BMI of 25 to 29.9. Pelvic pain was present in 30 cases, dyspareunia in 67 cases, and an irregular menstrual cycle in 22 cases. The laparoscopy procedure time ranged from 1 to 2 hours, and the total hysterectomy was performed in 73 patients, while a subtotal hysterectomy was performed in 15 patients. The laparoscopy procedure was performed under general anaesthesia in 91% of patients, with a blood loss rate of 40.04 ± 3.10 mL and a length of stay in the hospital of 1–2 days. Eighty-one-point-eight-two percent of patients expressed high levels of satisfaction. Post-operative complications occurred in 22.73% of patients, with infection, scarring, and nausea and vomiting representing the most common complications. Our study indicates that pelvic pain, as well as dyspareunia in women suffering from endometriosis, can be effectively treated by laparoscopic diagnosis and ablation of endometrium lesions, which have been used to improve the quality of life.

Key words: Endometriosis; Laparoscopy surgery; Symptoms; Complications; and WHOQOL-BREF quality of life questionnaire.

Introduction

Chronic diseases are the leading cause of death and disability in the world. It is estimated that of the 57 million deaths that occurred worldwide in 2008, 36 million were due mainly to diseases such as cardiovascular diseases, cancer, diabetes, and chronic lung diseases, which are those that occur most

frequently, but there are other pathologies whose incidence is lower and which are also considered chronic due to their progression and duration. [1 – 3]

The World Health Organization (WHO) considers that 10% of women suffer from endometriosis, in addition to being one of the main causes of infertility, being the most frequent pathology of the female reproductive system, along with the presence of uterine fibroids. [4]

According to the Guide for the Care of Women with Endometriosis in the National Health System (NHS), the endometriotic tissue has hormonal dependence of the menstrual cycle, causing bleeding and detachment of it with menstruation. The tissue has the ability to develop, infiltrate, and even spread in a similar way to tumor tissue, but its malignant transformation is very rare. [5,6]

Physical and emotional changes are not well received by society, so it create an impact both at a social and, individual, and family level, where many prejudices and insecurities are created. Even more so when complications appear, such as endometriosis in this case, which affects mental health and, above all, worsens people's quality of life [7 – 10]. Sometimes, it presents high psychological morbidity, especially depression, and anxiety, as a side effect of medical and surgical treatments; that is why the disease can alter the ability to work, social relationships, and family life, disabling the patient. [11]

The fact that this impact occurs in the lives of patients makes it a disease with considerable costs, not only caused by medical and surgical treatment but also due to the loss of productivity and work disabilities due to clinical manifestations. [12]

The time it takes to be diagnosed is approximately between 7-8 years. This significant delay from the onset of the first symptoms to the diagnosis is due to a lack of awareness on the part of women and by health professionals since the symptoms tend to normalize. [13]

According to the World Endometriosis Society (WES), it is estimated that 176 million women around the world have suffered some symptoms of endometriosis. However, despite the few advances that have been made over time, there is no exact prevalence figure. On the other hand, endometriosis is considered the third leading cause of gynecological hospitalization in the United States. Fundamentally, it is estimated that the disease affects 10% of the general population and women with a history of pelvic pain, establishing a prevalence of 28%, with an association of 21% in women with infertility problems. [14,15]

According to data from the European Endometriosis League, it is estimated that between 10-15% of European women between the ages of 15 and 45 suffer from this disease. As for our environment, in Spain, it is estimated that it is a disease that affects approximately two million women of reproductive age. [16 – 18]

As for the USA, according to the 2014 census, the number of women between the ages of 24 and 53, the age group where the symptoms manifest themselves most frequently, is 262,235. Using the figure of 10% incidence in this range, 32,000 women suffer from endometriosis in its different forms; of these, 6,300 would suffer from deep endometriosis, and 9,540 would suffer from infertility. [19 – 21]

Patients and methods

➤ Collected Data

The study lasted in Iraq's hospitals for 88 endometriosis diagnosed women, taking place in 2023; within these women, there were incident reports at the clinics concerning pathologies related to them or follow-up acts. The age criterion for all of the women involved was between thirty-six and fifty-two years old.

Study selection criteria included endometriosis in women patients aged 30–50 years old, concurrent conditions like hypertension, diabetes mellitus – obesity – anaemia, or those who smoke or not.

Illnesses such as some kinds of cancer or any other chronic diseases besides that mental problems and those who have been through an operation in the stomach (but excluding endometriosis-related operations) were not included in this research. Any age lower than thirty years or higher than fifty

years and being menstruation challenging female were also among the reasons excluded from participating in the study.

A standardized interview query used to gather data about the typicalities of respondents contains questions related to their age (average age was also indicated), education (below university”, “above university” or “postgraduate”), relationship status (married), perceived family income (rich, medium, and low) as well as BMI.

In terms of laparoscopy procedure, all patients were conducted into laparoscopy procedure, which include surgery time, bleeding amount, length of stay in hospital, postoperative complications, postoperative pain, and other factors.

Every single individual participator was made aware of the objective of this research and directed on how the questions should be answered. Nobody else assisted any of them as they all filled out their own questionnaire. A total of 88 surveys were given out with each one returning completed without any help whatsoever. It took around 30 minutes for an average person to complete the survey, which means that there is a zero percent chance of not receiving one back.

The general health reported by women with endometriosis is better than their overall QoL. Illness acceptance, BMI, adverse symptom effects on partner relations, and dyspareunia are most commonly associated with perceived QoL for women suffering from endometriosis. Therefore, social, emotional, and sexual aspects of care should be included in order to ameliorate their lives. These therapies would thus enhance comfort and quality of life amongst these women.

➤ **Measures**

The WHOQOL-BREF quality of life questionnaire, AIS, the VAS scale for pain assessment, and a standardized interview questionnaire that included data on the characteristics of women taking part in the study were utilized as research instruments.

The WHOQOL-BREF (World Health Organization Quality of Life-Bref) is an instrument for assessing QoL in four domains, including physical, psychological, social relationships and environment, along with an individual’s general view on his or her QoL and health. The instrument consists of 26 questions scored on a scale from 0 to 5. The domain score is calculated by finding the arithmetic mean of items within each domain. The overall perceived QoL and overall perceived health scores, as well as the domain scores values, are all positive meaning that greater values depict greater quality of life.

The Acceptance of Illness Scale (AIS) is intended to evaluate how well adults accept their illness, and it can be used for any illness. The AIS contains eight statements regarding the negative ramifications of illness, which are evaluated using a five-point scale, with 1 indicating strong agreement while 5 indicates strong disagreement. The illness acceptance level is represented by adding up the points obtained (between 8 and 40). With higher scores, patients manage their health restrictions better and experience less psychological distress related to such conditions. A score below 20 signifies a poor or inadequate acceptance and adjustment to the disease as well as serious emotional problems linked to it. While a total ranging from 20 to 30 signifies moderate acceptance towards the disease.

VAS scale is a tool made for subjective pain assessment. Being four questions, patients rated their pain intensity and frequency, the frequency of pain relief drugs uses, and physical activities limits. Each of these questions gets a score ranging from 0 – 10, where zero is indicating ‘no issue’ while 10 indicates ‘unbearable suffering’.

➤ **Statistical Analysis**

The assembled research material has been analyzed using SPSS version 22.0 from a statistical point of view. Mean values (M) standard deviations (SD) and were used to represent values of the quantitative parameters analyzed, while number or percentage values represented qualitative parameters. It quantifies qualitative variables in such a way that they mirror the traits of their original categories. Such quantified qualitative variables are then treated the same way as numbered ones. Non-linear transformations can be employed for analyzing variables at various levels with an aim to identify the

best-fitting model. Non-linear transformations allow different levels of variable analysis, which help to find the best-fitting model where $p < 0.05$ is used as a level to test significant differences in this ongoing study.

Results

Table 1: Participants data.

Characteristics	N = 88	%
Age		
30 – 40	56	63.64%
41 – 50	32	36.36%
BMI groups; kg/m^2		
< 18.5	2	2.27%
18.5 – 24.9	39	44.32%
25.0 – 29.9	30	34.09%
30.0 – 34.9	14	15.91%
≥ 35.0	3	3.41%
ASA categories		
I	65	73.86%
II	20	22.73%
III	3	3.41%
Smoking status		
Smokers	32	36.36%
Non - smokers	56	63.64%
Education status		
Lower than university	20	22.73%
University	32	36.36%
Postgraduate	36	40.91%
Relationship status		
Married	88	100%
Perceived family income, month, \$		
Poor, < 450	30	34.09%
Average, 450 - 900	38	43.18%
Rich, > 900	20	22.73%

Table 2: Diagnoses factors of patients with endometriosis.

Variables	N = 88	%
Comorbidities		
Yes	33	37.5%
No	55	62.5%
Hypertension	30	34.09%
Diabetes	14	15.91%
Obesity	32	36.36%
Anaemia	3	3.41%
Symptoms		
Pelvic pain	30	34.09%
Painful periods	18	20.45%
Pain during intercourse	13	14.77%
Heavy menstrual bleeding	8	9.09%
Infertility	4	4.55%
Fatigue	8	9.09%

Diarrhea/Constipation/Bloating	7	7.95%
Impact of the condition on the relationship with the partner		
Yes	75	85.23%
No	13	14.77%
Symptoms impact on daily function.		
Yes	59	67.05%
No	29	32.95%
Dyspareunia		
Yes	67	76.14%
No	21	23.86%
Menstrual cycle		
Regular	66	75.0%
Irregular	22	25.0%
Menstrual pain impact on daily functioning		
Yes	72	81.82%
No	16	18.18%
Previous surgery for endometriosis		
Yes	25	28.41%
No	63	71.59%

Table 3: Laparoscopy operative data.

Data	N = 88	%
Mode of hysterectomy		
Laparoscopy procedure	88	100%
Laparoscopy procedure, hrs	1 – 2 hours	
Hysterectomy type		
Total	73	82.95%
Subtotal	15	17.05%
Mode of anesthesia		
General anesthesia	80	90.91%
Spinal/epidural analgesia	6	6.82%
Local anesthesia	2	2.27%
Intraoperative bleeding		
Yes	2	2.27%
No	86	97.73%
Blood loss rate, mL	40.04 ± 3.10	
Length of stay in hospital, days	1 – 2 days	
Satisfaction rate		
Very satisfied	72	81.82%
Satisfied	8	9.09%
Average	5	5.68%
not - satisfied	3	3.41%
Postoperative complications	20	22.73%
Infection	5	5.68%
Nausea and vomiting	4	4.55%
Postoperative bleeding	2	2.27%

Damage to surrounding organs	0	0.00%
Scarring	4	4.55%
Persistent pain	3	3.41%
Intestinal issues	2	2.27%

Table 4: Enrolled clinical data of self-rate assessment and pain-related Endometriosis through VAS score.

Items	VAS score, Mean \pm SD
Noncyclic pain	3.02 \pm 0.66
Dysmenorrhea	4.72 \pm 1.15
Dyspareunia	3.20 \pm 1.17
GI symptom at the time of menstruation period	3.0 \pm 0.83
Urinary symptoms at the time of menstruation period	4.93 \pm 0.76

Table 5: Assessment of quality-life of women with endometriosis after laparoscopy operative by performing WHOQOL-BREF quality of life questionnaire.

QOL Items	Scores
General quality of life	3.35 \pm 0.88
General Health	2.30 \pm 0.91
Physical health	10.24 \pm 3.93
Psychological	11.54 \pm 2.14
Social relationships	11.95 \pm 3.16
Environment	12.60 \pm 2.50

Discussion

The growing number of women suffering from endometriosis makes it a chronic illness. According to the literature, this condition significantly affects various domains of life, including social, economic, and psychological aspects. Infertility and chronic pain in many women with endometriosis lead to poor health outcomes. [22]

American study [23] carried out investigating women's health revealed that the quality of life (QoL) among women diagnosed with endometriosis is lower compared to that of other women with similar symptoms but without a diagnosis of endometrial problems. Likewise, several researchers have reported poor QoL in females suffering from both endometriosis and for those who reported pelvic pain when grouped against patients showing no symptoms of the disease as well as the control group. [3,12,15,20,24]

In terms of some studies [25] they demonstrated a negative correlation between the severity, as well as the number and frequency of symptoms of endometriosis, on the one hand, and the HRQoL of women diagnosed with this disease, on the other hand. In this research, it was observed that women with endometriosis had lower physical domain quality of life scores. These findings indicate that the main issues faced by the respondents are pain, which necessitates regular use of medications so as to appear "normal," and overall dissatisfaction with daily functioning and productivity at work.

In this study, the acceptance of disease by the respondents with confirmed endometriosis was another important element investigated. Adaptation to a life with an illness is greatly influenced by acceptance of the disease which also affects the degree of adverse reactions that are caused by the illness. That is, the more a person is able to come to grips with his or her somatic condition, the better that person will cope with their disease and experience less pain, which in tangible terms implies higher self-regard and lower pressure on them. [26,27]

The findings concur with those of other individuals examining the degree of disease acceptance among individuals who suffer from long-term ailments. Moderate scores on the acceptance of illness could imply that the respondents are somehow accustomed to their diseases and the attendant adverse consequences. Patients with accepted illnesses hold a positive view on their situation and comprehend it well. Additionally, they have faith in their doctors, believe in the implemented treatment and also engage in the healing process more vigorously. Most patients suffering from endometriosis present with a constellation of symptoms, including chronic pelvic pain, dysmenorrhea, profound dyspareunia, dyschezia, and subfertility. Any of these symptoms can negatively affect a woman's physical, mental, and social well-being. In our study, we found 67 got dyspareunia, and 22 cases got irregular menstrual cycles. [28 – 31]

An investigation conducted in France reported devaluation of sexual life in case of having endometriosis, while such individuals and their partners report less happiness levels when contrasted to persons having other gynaecological ailments. Sexual dysfunction rates among women suffering from endometriosis were approximately 61%, as opposed to 35% for those facing other kinds of gynaecological disorders, according to another study (32). Pelvic pain was solely considered among the possible symptoms based on our research that incorporated a population of 34.09% of patients altogether.

Endometriosis is a painful condition that led to more complications in women who underwent surgical procedures when they were hospitalized and within one year after the surgery. This might happen because more complex and difficult surgeries have higher risks of delayed postoperative complications. There are different types of endometrioses, which may inflict varying levels of pain, with deep infiltrating endometriosis causing the most intense pain and having a tendency for recurrence. [26,27,33]

In addition, De Graaff et al. [34] say that it may lead to divorce. Low quality of life-related to physical and social relationships is linked with a difficult relationship with a partner. Other than simply exhibiting some form of symptomatology which affects various aspects of their everyday lives, some of the important factors affecting relationships between women with endometriosis and their partners include pain during sexual intercourse, leading them to avoid it frequently or else limit activities sexually.

Laparoscopy was bedewed with fresh insight; about 8% of endometriosis patients have pain during sex, and in their quality-of-life scores, they are lower in psychology and social relationships. Sexual discomfort affects the health for ladies having this ailment as a result of libido decline, the presence of pelvic aches, and also less strong and comfortable orgasms. In most cases, women suffering from endometriosis become more anxious than relaxed and completely unhappy after sexual contact. [35]

In addition, erectile dysfunction is one of the sexual partner functions that may also be affected by dyspareunia. Pain is a common complaint in patients with endometriosis. Participants report that pain felt on a daily basis is moderate. Many studies have shown that the effects of pain are worse in terms of functioning for women with endometriosis. To support any form of treatment, we must always focus on pain control since this is a major factor in QoL issues based on research conducted in Germany with cases involving diagnosed female individuals suffering from such a disease. [36 – 38]

Conclusion

Women who suffer from endometriosis usually rate their QoL higher than they rate their overall health. Mostly, the perceived QoL among women suffering from endometriosis is influenced by the acceptance of illness, body mass index (BMI), symptomatic impact on partner relations, and dyspareunia. These initiatives would lead to enhanced comfort and QoL for these ladies. Laparoscopy for diagnosis and ablation of endometriosis lesions represents an efficacious intervention for the enhancement of quality of life in women afflicted with the condition, as evidenced by the findings of the present study. Bettering these women's lives will see care addressing both social, emotional and sexual challenges brought about by this sickness.

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