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Original article

Awareness, Knowledge, and Daily Life Impact of Endometriosis Among Women in Libya: A Cross-Sectional Study

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Abstract
Endometriosis is a chronic gynecological condition that significantly affects women's quality of life, yet awareness and knowledge of the disease remain limited in many regions. This cross-sectional study was conducted among 200 women aged 18 years and above residing in Libya to evaluate awareness, knowledge, and the impact of menstrual pain on daily activities. Participants were recruited through convenience sampling, and data were collected using a structured, self-administered questionnaire disseminated electronically via social media platforms. Results showed that the majority of participants were young (60.3% aged 20–29 years), single, and university educated. Despite this, the mean knowledge score was low (1.95/4), with 39% demonstrating poor knowledge. Menstrual pain was highly prevalent, with 84.4% reporting interference with daily activities. Awareness of endometriosis was relatively high (77%), with social media identified as the primary source of information. However, knowledge of diagnostic methods and of the condition's definition was limited, indicating an uneven distribution of awareness across different aspects of the disease. These findings highlight a paradox of high general awareness but poor detailed knowledge, underscoring the need for targeted educational interventions and improved clinical pathways. The reliance on social media as a primary source of information presents both opportunities and risks, underscoring the importance of authoritative health communication. Overall, the study reveals significant gaps in knowledge and the functional burden of menstrual pain among Libyan women, calling for comprehensive awareness campaigns and enhanced reproductive health education to reduce diagnostic delays and improve outcomes.
Keywords. Awareness, Knowledge, Endometriosis, Women, Libya.

Introduction

Endometriosis is a chronic gynecological condition characterized by the presence of endometrial tissue outside the uterine cavity, leading to inflammation, pain, and infertility in many affected women. It is estimated to affect approximately 10% of women of reproductive age worldwide, making it a significant public health concern [1]. Despite its prevalence, endometriosis is often underdiagnosed or diagnosed late, with delays averaging several years between symptom onset and clinical confirmation [2]. Such delays contribute to prolonged suffering, reduced quality of life, and adverse reproductive outcomes.

Awareness and knowledge of endometriosis among women are critical factors influencing early recognition and timely medical consultation. Studies have shown that limited awareness of symptoms and diagnostic methods contributes to misconceptions and normalization of menstrual pain, thereby hindering appropriate health-seeking behavior [3]. Furthermore, the reliance on informal sources of information, such as social media, raises concerns about the accuracy and depth of knowledge acquired [4].

In regions such as Libya, where structured awareness campaigns and educational programs on women's health remain limited, understanding the level of awareness and knowledge about endometriosis is essential. Assessing these factors provides insight into existing gaps and informs strategies for targeted interventions. This study, therefore, aims to evaluate awareness, knowledge, and the impact of menstrual pain on daily activities among women in Libya, to identify areas for improvement in health education and clinical practice.

Methods

Study design and population

This study employed a cross-sectional questionnaire-based design targeting women aged 18 years and above residing in Libya. A total of 200 participants were included, a sample size deemed sufficient to provide meaningful descriptive insights into the level of awareness and knowledge within the population. The questionnaire was disseminated electronically through social media platforms, ensuring broad accessibility and engagement across different regions of the country.

Data collection

Data were collected using a structured, self-administered instrument developed to capture relevant information systematically. The questionnaire consisted of four sections: sociodemographic characteristics,

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including age, marital status, and educational level; menstrual pain and its impact on daily activities; awareness of endometriosis, encompassing general awareness, sources of information, and specific aspects such as symptoms and fertility implications; and knowledge assessment, focusing on the definition, symptoms, diagnostic methods, and fertility impact of endometriosis.

Data Analysis

Data were analyzed using SPSS software. Descriptive statistics were employed to summarize the findings, including frequencies, percentages, and mean scores. Graphical representations such as bar charts and pie charts were generated to illustrate key results.

Ethical Considerations

Participation in the study was voluntary and anonymous. Online informed consent was obtained from all participants prior to data collection. No personal identifying information was recorded, ensuring confidentiality and adherence to ethical research standards.

Results

Participants' demographics are presented in Table 1. The age distribution reveals that the majority of participants (60.3%) fall within the 20–29-year age group. The marital and education status overview shows that most respondents are single and possess university-level education. While higher education is typically associated with increased health literacy, the mean knowledge score of 1.95 out of 4 suggests a disconnect between general academic attainment and specific understanding of endometriosis.

Table 1. Participants' demographics

Category	Subcategory/Detail	Count	Percentage
Age Distribution	20–29 years	121	60.3%
	> 30 years	79	39.7%
Marital Status	Single	135	67.2%
	Married	65	32.8%
Education Level	Diploma level	42	20.9%
	University level	145	72.1%
	Others	13	6.5%
Mean Knowledge Score	—	—	1.95 / 4

The data on menstrual pain and its impact on daily activities are presented in Figure 1, with 84.4% of participants reporting interference.

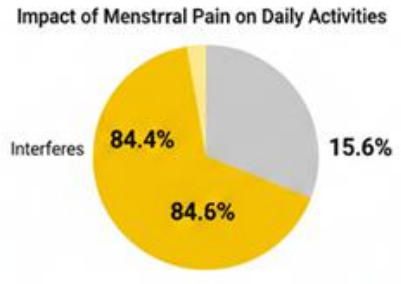

Figure 1. Impact of Menstrual pain on daily activities

In Table 2, knowledge levels about endometriosis reveal that 39% of participants have poor knowledge, while only 28.5% demonstrate good knowledge. Awareness of specific aspects of endometriosis varies considerably. While 86% of participants are aware of symptoms and 77.5% recognize its impact on fertility, awareness drops to 54.5% for diagnostic methods and 47.5% for the definition of the condition. The general awareness shows that 77% of participants have heard of endometriosis, with social media cited as the most common source of information (77%), followed by other sources (64.2%).

Table 2. Endometriosis Awareness (N = 200)

Category	Subcategory/Detail	Count	Percentage
Knowledge Level	Poor	78	39.0%
	Moderate	65	32.5%
	Good	57	28.5%
Awareness of Endometriosis Aspects	Symptoms	172	86.0%
	Fertility Impact (high)	155	77.5%
	Fertility Impact (low)	116	58.0%
	Diagnostic Methods	109	54.5%
	Definition	95	47.5%
General Awareness	Heard of Endometriosis	154	77.0%
	Social Media	154	77.0%
	Other Sources	128	64.2%

Discussion

The findings of this study provide important insights into the awareness, knowledge, and impact of endometriosis among women in Libya. Overall, the results highlight a paradoxical situation: while general awareness of endometriosis was relatively high, detailed knowledge of its definition, diagnostic methods, and clinical implications remained limited. This discrepancy underscores the gap between superficial recognition of the condition and the deeper understanding necessary for timely diagnosis and effective management.

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The age distribution of participants, with the majority being young women aged 20–29 years, reflects the demographic most vulnerable to endometriosis. This is consistent with global epidemiological data indicating that endometriosis primarily affects women of reproductive age [5]. The predominance of university-educated participants further emphasizes that higher educational attainment does not necessarily translate into adequate health literacy regarding gynecological conditions. The mean knowledge score of 1.95 out of 4 illustrates this gap, suggesting that formal education alone is insufficient to foster disease-specific awareness.

Menstrual pain emerged as a major burden, with more than four-fifths of participants reporting interference with daily activities. This finding aligns with international studies that document the profound impact of dysmenorrhea and endometriosis on quality of life, productivity, and psychosocial well-being [6,7]. The high prevalence of functional disruption in this cohort highlights the urgent need for improved clinical screening and culturally sensitive interventions to address menstrual health.

Knowledge levels about endometriosis were skewed toward poor and moderate categories, with only a minority demonstrating good knowledge. This pattern mirrors findings from other developing regions, where awareness remains limited despite the condition's prevalence [8]. Such gaps perpetuate diagnostic delays and reinforce the normalization of menstrual pain, a phenomenon widely reported in qualitative studies [9].

Awareness of specific aspects of endometriosis revealed uneven distribution. While symptoms and fertility implications were widely recognized, knowledge of diagnostic methods and the definition of the condition was comparatively low. This imbalance suggests that public discourse and informal information sources may emphasize fertility consequences while neglecting diagnostic pathways. Similar trends have been observed in other populations, where infertility is often the most salient association with endometriosis, overshadowing its broader clinical manifestations [10].

Finally, the reliance on social media as the primary source of information reflects both opportunities and risks. While social media platforms facilitate rapid dissemination of health information, they also expose women to misinformation and incomplete narratives. Previous studies have shown that online communities can provide support but often lack accuracy and depth [11]. This finding underscores the need for authoritative, accessible educational resources to complement informal channels and ensure that women receive reliable information. Taken together, these findings reveal significant gaps in knowledge and highlight the functional burden of menstrual pain among Libyan women. They call for targeted awareness campaigns, integration of endometriosis education into reproductive health programs, and improved clinical pathways to reduce diagnostic delays and enhance quality of life.

Conclusion

This study highlights the paradox between relatively high general awareness of endometriosis and limited detailed knowledge among women in Libya. Although the majority of participants were young and university educated, their mean knowledge score remained low, with most demonstrating poor or moderate understanding of the condition. Menstrual pain was found to be highly prevalent and significantly disruptive to daily activities, underscoring the functional burden of gynecological symptoms in this population. Awareness was unevenly distributed across different aspects of endometriosis, with symptoms and fertility implications more widely recognized than diagnostic methods or the definition of the disease. The reliance on social media as the primary source of information reflects both the accessibility of informal platforms and the risks of misinformation, emphasizing the need for authoritative, evidence-based health communication.

Conflict of interest. Nil

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