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Evaluation of Endometriosis–Associated Pain Symptoms and Their Management among Women of Reproductive Age at St. Theresa Kiirua Mission Hospital, Kenya

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Abstract

Endometriosis is a chronic gynecological issue during the reproductive age and is always associated with various symptoms, but severe pelvic pain is the hallmark among all. This study mainly aimed to evaluate the characteristics and management of endometriosis-associated pain among women of reproductive age. The study assessed 90 patient records by using a retrospective cross-sectional design from January 2020 to December 2024. Using systematic random sampling, data were abstracted using a well-structured, pretested abstraction form, and the resulting data were analyzed using descriptive statistics. Findings revealed that 33.3% (n=30) of patients were aged 45-49 years. Chronic pelvic pain was analyzed in 32% (n=29) of patients, and dysmenorrhea 26% (n=23) of patients. Non-steroidal anti-inflammatory drugs were the most commonly prescribed medications at 77.8% (n=70), while 22.2% (n=20) of the cases prescribed opioids to manage the pain. Additionally, hormonal therapies were the least prescribed, suggesting possible gaps in long-term medical management, although 71% of patients used oral contraceptives. 25.6% of patients reported receiving care through a multidisciplinary approach, a crucial component of comprehensive endometriosis management. The study highlights significant gaps in the timely diagnosis, holistic management, and access to specialist care for women suffering from endometriosis-associated pain.

Keywords: GnRH Agonists, Chronic Pelvic Pain, Non-Steroidal Anti-Inflammatory Drugs, Endometriosis

1. Introduction

Endometriosis is a long-term and often debilitating condition in which tissue resembling the uterine lining develops outside the uterus, causing various symptoms, mainly pelvic pain. It is one of the most common gynecological disorders, affecting an estimated 10% - 15% of women of reproductive age globally, yet its true prevalence remains unclear due to underreporting and misdiagnosis (Armour et al., 2019). Pain is the hallmark symptom of endometriosis, including dysmenorrhea (painful menstruation), dyspareunia (painful intercourse), chronic pelvic pain, and lower back pain. These symptoms were seen to severely impact a woman's quality of life, often leading to physical, emotional, and psychological distress (Kupec et al., 2025).

Many women experience symptoms of endometriosis for an average of 7 to 10 years before receiving a definitive diagnosis, so an early diagnosis is critically beneficial to treat the

condition. This prolonged delay can be attributed to the widespread perception that menstrual pain is normal, limited awareness among both patients and healthcare providers, and the challenges of diagnosing the condition without invasive methods like laparoscopy (Harzif et al., 2024).

The consequences of undiagnosed or poorly managed endometriosis are far-reaching, affecting not only the individual but also public health systems. Chronic pain can lead to absenteeism from work and school, relationship difficulty, and reduced fertility. Endometriosis is among the leading causes of infertility among women (Zullo et al., 2017). Additionally, the mismanagement of symptoms can lead to the prolonged use of pain medications, contributing to further complications (Nasir and Bope, 2004).

Although the relationship between pain symptoms and endometriosis is well documented, more studies are needed to establish the prevalence of these symptoms, particularly in diverse populations. This research aimed to provide a clearer picture of how common pain symptoms of endometriosis are among women of reproductive age, identify potential risk factors, and underscore the importance of early intervention and diagnosis. By investigating these aspects, the study sought to inform healthcare strategies and policies to manage endometriosis-related pain better and improve patient outcomes.

2. Materials And Methods

This study adopted a cross-sectional retrospective design to determine the pain symptoms associated with endometriosis among women of reproductive age and the management of the pain symptoms at St. Theresa Kiirua Mission Hospital, Kenya. The study involved collecting data from patients' medical records, mainly from the gynecology department. Files were obtained from a list of patient files for patients admitted between January 2020 and December 2024. Based on the inclusion criteria, only files of individuals aged 15-49 years (reproductive age), with symptoms of endometriosis, and receiving treatment for it were evaluated. Fisher's formula was used to calculate the sample size,

$n = z^2pq/d^2$

Where z is the standard normal deviation of 1.96 at a 95% confidence interval. The margin of error was set at 0.05, and the prevalence (p) of endometriosis according to previous studies is 6%. The calculated sample size was 91 files. A systematic sampling technique was used to select patients' files for medical record review.

The study variables identified were socio-demographic factors, types and duration of pain, prescribed drugs, the Multidisciplinary care model, symptoms of endometriosis, and their management. A structured abstraction form was developed and pretested for reliability and validity. Data were collected after ethical approval was obtained from the Kenya Methodist University Scientific Research and Ethical Review Committee and the Ethical Approval Committee of St. Kiirua Mission Hospital. Microsoft Excel 2019 was used to store the data, and descriptive statistics were used to analyze and present the data in a table, a pie chart, and a bar graph. All patient information was handled confidentially, and no outside party, except authorized researchers, was permitted access to it.

3. Results

A total of 90 respondents participated in the study, providing insight into the experiences and management of endometriosis-associated pain.

Socio-demographic characteristics

The majority of participants suffering from the endometriosis-associated pain fell within the reproductive age bracket (25-49 years). Table 1 shows that most women experiencing endometriosis pain were aged 45–49 years (33.3%, n=30), followed by 25–29 years and 35–39 years (each 18.9%, n=17). The majority had a tertiary (32.2%, n=29) or secondary (30%, n=27) level of education. Most participants were from the middle socioeconomic class (68.9%, n=62). In terms of physical activity, the majority (75.6%, n=69) were moderately active, 16.7% (n=15) were sedentary, and 7.8% (n=7) were highly active.

Table 1: Representation of Socio-demographic Factors

Socio-demographic Factors	Variable	Frequency (n)	Percentages (%)
Age	15-19	1	1.1%
	20-24	3	3.3%
	25-29	17	18.9%
	30-34	14	15.6%
	35-39	17	18.9%
	40-44	8	8.9%
	45-49	30	33.3%
Education level	Informal	15	16.7%
	Primary	19	21.1%
	Secondary	27	30%
	Tertiary	29	32.2%
Socioeconomic	Low	16	13.3%
	Middle	62	68.9%
	High	12	13.3%
Lifestyle	Sedentary	15	16.7%
	Moderately active	68	75.6%
	Highly active	7	7.8%

Characterization of Pain Symptomatology

Chronic pelvic pain and dysmenorrhea emerged as the most commonly reported types of endometriosis-related pain. Figure 1 illustrates the relative frequency of the five most commonly reported pain symptoms among women with endometriosis. Chronic pelvic pain

was the single most prevalent symptom, experienced by almost one-third of respondents (32 %, n=29). Dysmenorrhea followed at 26 % (n=23), making menstrual pain the second leading complaint. Lower back pain accounted for 23% (n=21) of all pain reports, ranking third in frequency. Dyspareunia was reported by 16 % of participants, indicating that pain during intercourse affects a significant minority. Painful urination was the least common complaint, cited by only 3 % of women in this sample.

Taken together, over half of the cohort (58 %, n=52) experienced either chronic pelvic pain or dysmenorrhea, underscoring these as the principal drivers of endometriosis-associated pain in everyday life.

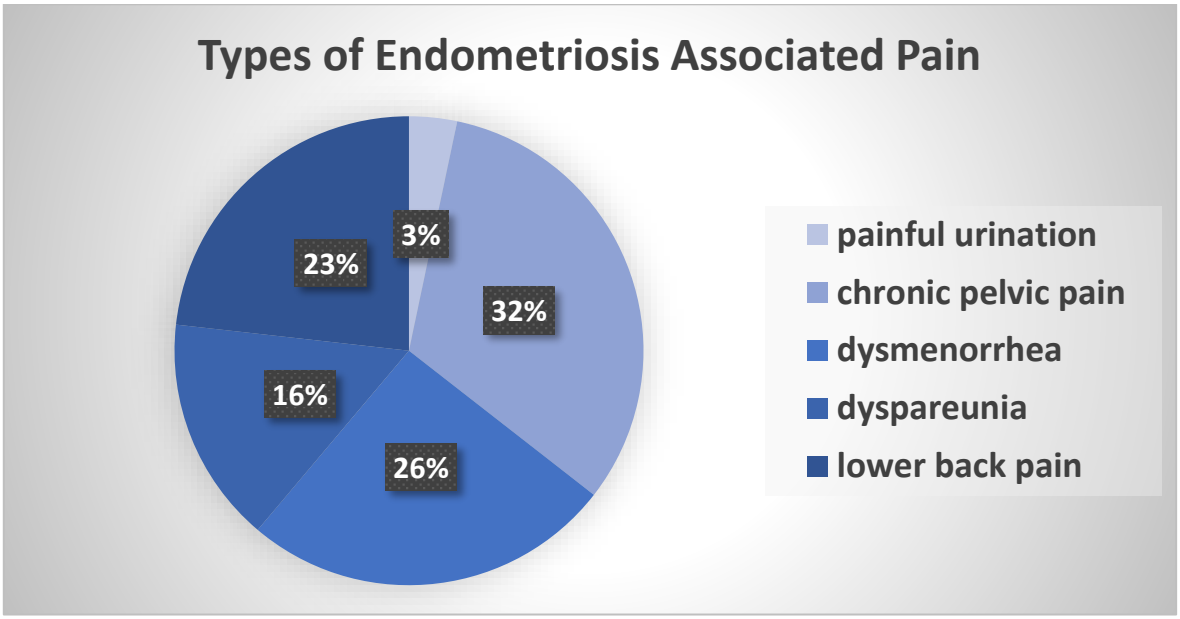

Figure 1: Endometriosis-Associated Pain Symptoms

Pharmacological Intervention for Endometriosis

Table 2 highlights that analgesics were the most common management strategy employed, with a percentage of 77.8% (n=70), with NSAIDs being the most predominant medication, compared to opioids, which accounted 22.2% (n=20). Hormonal therapy usage was less frequently reported, with only a minority indicating the use of Progestins such as norethindrone acetate, GnRH agonists, Aromatase inhibitors, SERMs, and Androgenic steroids.

Table 1: Summary of the Medications Used to Manage Endometriosis-Associated Pain

Pharmacological Management	Frequency (n)	Percentage (%)
Non-steroidal anti-inflammatory agents	70	77.8%
Opioids	20	22.2%
Progestins analogs	6	26.1%
Gonadotropins Releasing Hormones agonists	6	26.1%

Aromatase Inhibitors	3	13%
Selective Progesterone Receptor Modulators	8	72.7%
Synthetic Androgen And Anabolic Steroids	3	27.3%

Collaborative Care Models

A substantial number of respondents reported receiving care through a multidisciplinary team, most commonly involving a gynecologist and general practitioners. Table 3 presents respondents' experiences with multidisciplinary care for endometriosis-related pain, as well as the types of specialists they consulted. 25.6% of the 90 participants (n=23) reported that their pain management was delivered via a formally organized multidisciplinary team. 38.9% (n=35) reported not receiving care from a multidisciplinary team. 35.6% (n=32) were unsure whether the care they received qualified as "multidisciplinary."

Participants were also asked which healthcare providers they consulted for their pain. Gynecologists were by far the most frequently consulted specialists, with 86.7% (n=72) of respondents reporting at least one visit. General practitioners came next, with 41.0% (n=34) of participants seeking their help. Pain specialists (10.8%, n=9), physiotherapists (9.6%, n=8), and psychologists (6.0%, n=5) were less commonly involved. Only 1.2% (n=1) had seen a nutritionist, and 13.3% (n=11) indicated "other" providers (e.g., acupuncturists or complementary-medicine practitioners).

Taken together, these findings suggest that although most patients rely on a gynecologist (and, to a lesser extent, a general practitioner) for endometriosis-related pain, only about one quarter actually receive care from a structured multidisciplinary team. A substantial minority remain uncertain about whether their care is multidisciplinary, suggesting a potential lack of clarity regarding team-based pain management in routine practice.

Table 2: Multidisciplinary Care Models

	Variables	Frequency (n)	Percentages (%)
Involvement of Multidisciplinary care	Yes	23	25.6%
	No	35	38.9%
	Not Sure	32	35.6%
Specialists	Gynecologist	72	86.7%
	Pain Specialist	9	10.8%
	Psychologists	5	6%
	Physiotherapists	8	9.6%
	Nutrionist	1	1.2%
	General Practitioner	34	41%
	Others	11	13.3%

4. Discussion

The study at St. Theresa Kiirua Mission Hospital highlights the complex burden of endometriosis-related pain among women of reproductive age, with most participants aged 25–49 years, predominantly educated and from middle-income households, and reporting moderate physical activity (Vitonis et al., 2010; Nnoaham et al., 2011). These data indicate that women with higher levels of education and greater financial stability are more aware of the disease and have greater decision-making capacity for its management, as early diagnosis is key to reducing disease progression. Chronic pelvic pain and dysmenorrhea were the most common symptoms, consistent with global findings (Zondervan et al., 2018; Navarro, 2019; Cardoso et al., 2020), underscoring the disease's impact on quality of life and the need for early diagnosis. Management relied heavily on NSAIDs (77.8%) and opioids (22.2%), with limited use of hormonal therapies and minimal surgical intervention, reflecting challenges in availability, cost, and awareness (Navarro, 2019; Kalaitzopoulos et al., 2021). Additionally, a later study indicates that overuse of painkillers really hides the real symptoms of the disease, where more awareness is required in the diagnosis and management of endometriosis-related pain. Involvement of multidisciplinary care reduces the pill burden and increases the awareness and knowledge of disease control. Instead of limiting the services to gynecologists and general practitioners, contrasting with best practice bio-psychosocial models that integrate psychologists, physiotherapists, and dietitians (Allaire et al., 2020). These findings reveal significant gaps in long-term disease control and holistic management, calling for improved education, access, and policy support.

5. Conclusion

This study examined the nature of endometriosis-associated pain and the management strategies employed among women of reproductive age at St. Theresa Kiirua Mission Hospital. The findings reveal a high burden of pain symptoms, particularly chronic pelvic pain and dysmenorrhea, among women in their late reproductive years. Despite relatively high educational attainment and middle-income status, many respondents reported delayed or insufficient access to care. Pharmacological treatments, especially NSAIDs, were the main methods used, while a significant proportion also required opioids for pain relief, indicating severe or persistent symptoms with other drug induces side effects.

Contraceptive use, particularly oral pills, was common but not universal, highlighting gaps in therapeutic counseling. Surgical intervention—though a cornerstone in endometriosis care—was notably underutilized, and only a quarter of women reported receiving multidisciplinary care. These findings indicate substantial unmet clinical needs and inefficiencies in current care pathways, especially in rural or mission hospital settings. Greater awareness, early diagnosis, and an integrated approach to management are necessary to improve health outcomes for women with endometriosis.

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Conflict of Interest Statement

All the authors of this manuscript have declared that they have no conflict of interest in publishing this work.

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