

Exploring Endometriosis Awareness Levels among Married Women Residing in Rural Communities of Sundargarh District of Odisha

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ABSTRACT

This research explores the awareness of endometriosis among village married women in Sundargarh district, Odisha, India, focusing on the unique healthcare needs of rural populations. Endometriosis, a chronic gynecological condition, often remains undiagnosed or misdiagnosed in rural areas due to limited access to healthcare resources and insufficient awareness. Through a descriptive study involving 100 respondents, including 75 employed and 25 unemployed individuals, the research aims to assess the level of awareness among village women regarding endometriosis, its symptoms, and associated risks. Data collection involved personal interviews conducted at respondents' homes, followed by meticulous tabulation and statistical analysis. The findings highlight the prevalence of endometriosis symptoms, such as pelvic and abdominal pain, among respondents, with varying degrees of severity. The study underscores the importance of targeted educational campaigns and interventions to empower women to recognize early signs of endometriosis, seek timely medical assistance, and navigate the healthcare system effectively. By addressing cultural, social, and economic barriers to healthcare access, stakeholders can work towards improving reproductive health outcomes and reducing the burden of endometriosis on women's lives in rural India.

KEYWORDS: Endometriosis, Rural Women, Reproductive Health, Diagnostic Delays

1. INTRODUCTION

The present research on the awareness of endometriosis among village married women in Sundargarh district holds significant importance in addressing the unique healthcare needs of rural populations. Endometriosis, a chronic gynecological condition, often remains undiagnosed or misdiagnosed due to lack of awareness and understanding, particularly in rural areas where access to healthcare resources may be limited. By conducting this study, researchers can assess the level of awareness among village women regarding endometriosis, its symptoms, and associated risks. This understanding is crucial for developing targeted educational campaigns and interventions aimed at empowering women to recognize the signs of endometriosis early, seek timely medical assistance, and navigate the healthcare system effectively. Sundargarh district is located in the state of Odisha, India. It is situated in the western part of Odisha and shares borders with the states of Jharkhand and Chhattisgarh. The district headquarters of Sundargarh is the town of Sundargarh itself. It is known for its rich cultural heritage, natural resources, and industrial development.

The study can shed light on the cultural, social, and economic factors that influence awareness and healthcare-seeking behaviors related to endometriosis in rural communities. In many rural areas, cultural taboos and social stigmas surrounding women's health issues may prevent open discussion and access to appropriate medical care. By identifying and addressing these barriers, healthcare providers and policymakers can work towards improving healthcare access, promoting reproductive health, and reducing the burden of endometriosis on women's lives in Sundargarh district. Ultimately, the findings from this study can inform targeted strategies for raising awareness, improving healthcare infrastructure, and advocating for policy changes to better support the reproductive health needs of village married women in rural India.

Women, as the cornerstone of households, juggle numerous familial and professional roles, necessitating vigilant attention to their health for the benefit of both family and society. Often suffering silently, they face the challenge of endometriosis, a chronic condition where endometrial tissue grows beyond the uterus, affecting areas like the pelvis, abdomen, bladder, and diaphragm. Diagnostic delays, common in this progressive disease affecting individuals as young as 15, can diminish reproductive potential and quality of life. Endometriosis manifests with diverse symptoms such as painful periods, chronic pelvic pain, and fatigue, complicating diagnosis due to symptom resemblance with other conditions. Risk factors, including early menarche and hormonal exposure, contribute to its complexity. Timely suspicion and detection are vital, yet hindered by the normalization of symptoms and difficulties in discerning them from ordinary menstrual complaints. Treatment involves pain management and hormonal therapies, aiming to reduce estrogen levels to alleviate symptoms. Lifestyle adjustments, such as exercise and dietary modifications, may complement medical interventions. In severe cases requiring surgery, expertise in laparoscopic techniques is crucial for optimal outcomes. Ultimately, the prognosis hinges on the severity of the disease, underscoring the importance of comprehensive management strategies.

This multifaceted issue underscores the necessity of raising awareness about endometriosis and empowering women to recognize and address their symptoms proactively. Education efforts aimed at both patients and healthcare providers are essential for facilitating early detection and timely intervention, thereby minimizing the detrimental impact of the disease on women's health and well-being. Furthermore, research into more effective diagnostic methods and treatment modalities is imperative to improve outcomes and enhance the quality of life for individuals affected by endometriosis. By addressing the complex interplay of biological, social, and environmental factors contributing to this condition, we can work towards developing more tailored and holistic approaches to its management. In essence, tackling the challenges posed by endometriosis requires a concerted effort from various stakeholders, including healthcare professionals, policymakers, advocacy groups, and the broader community. By prioritizing awareness, education, research, and access to comprehensive care, we can strive towards a future where women affected by endometriosis receive the support and resources they need to live fulfilling and healthy lives.

2. STATEMENT OF THE PROBLEM

Endometriosis, a chronic medical condition affecting women, poses significant challenges due to diagnostic delays, varied symptoms, and multifactorial causes. This disease impacts women's quality of life, causing symptoms such as painful periods, chronic pelvic pain, and infertility. Detecting endometriosis is complicated by its symptom overlap with other conditions, leading to underdiagnosis. Treatment involves pain management and hormonal therapies, but surgery may be necessary. Early

suspicion and detection are crucial for timely management, emphasizing the need for increased awareness and education.

3. OBJECTIVES

1. To examine the socio-economic conditions of the female participants.
2. To identify the prevalence of endometriosis among married women of reproductive age.
3. To promote awareness among women of reproductive age regarding endometriosis.

4. LITERATURE REVIEW

Endometriosis is a complex and often misunderstood gynecological condition that affects millions of women worldwide. Despite its prevalence, there is a significant lack of awareness surrounding this condition, particularly in rural communities where access to healthcare resources may be limited. Understanding the levels of endometriosis awareness among married women residing in rural areas, such as the Sundargarh district, is essential for addressing the unique challenges faced by this population and improving their reproductive health outcomes.

Several studies have highlighted the need to enhance awareness and knowledge about endometriosis among women, healthcare providers, and the general public. Donald P. and Pal Dmowsk (1998) explored the dysfunctional immune response associated with endometriosis, proposing a model that suggests endometrial cells utilize immune system products to establish ectopic foci of disease. This model highlights the intricate interplay between the immune system and endometrial cells, underscoring the need for a comprehensive understanding of the immunological mechanisms underlying endometriosis.

Lebovic et al. (2001) conducted research on the immunobiology of endometriosis, emphasizing the role of defective immunosurveillance in the development of this condition. Their findings underscored the importance of early detection and treatment in preventing the progression of endometriosis and mitigating its adverse effects on women's health. Berkkanoglu and Arici (2003) investigated the immunological factors implicated in the development of endometriosis, emphasizing the role of aberrant immune responses during retrograde menstruation. Their study revealed various immune alterations, including increased macrophage activity and changes in the cytokine network, which may contribute to the pathogenesis of endometriosis.

Khan et al (2010) investigate the pathogenesis of endometriosis, focusing on the origin of endometriotic stromal cells. Understanding the cellular and molecular mechanisms underlying endometriosis development can contribute to improved awareness and management strategies among women in rural communities. Nnoaham et al (2011) assesses the impact of endometriosis on the quality of life and work productivity of affected women. Findings from this study underscore the need for increased awareness and support for women with endometriosis, particularly in rural settings where access to healthcare services may be limited. Dun et al (2015) compare surgical and clinical diagnosis methods for symptomatic endometriosis. Improved diagnostic accuracy is essential for raising awareness and facilitating early intervention among women in rural areas where healthcare resources may be limited. Zondervan et al (2018) provide a comprehensive overview of endometriosis, covering its epidemiology, pathophysiology, diagnosis, and management. Increased awareness of endometriosis among women, healthcare providers, and communities is crucial for improving outcomes and reducing the burden of this condition, particularly in rural settings. Surrey and McCleary (2019) provide an overview of endometriosis, including its epidemiology, pathophysiology, clinical manifestations, diagnosis, and management.

Understanding the multifaceted nature of endometriosis is crucial for improving awareness levels among women, healthcare providers, and communities. More recently, Vallve-Juanico et al. (2019) examined the endometrial immune environment in women with endometriosis, identifying consistent findings related to specific immune cell populations and their functionality. Their research highlighted the predominance of pro-inflammatory immune cell phenotypes in the endometrium of women with endometriosis, suggesting a dysregulated immune response in this population.

By synthesizing findings from these studies and incorporating them into the exploration of endometriosis awareness levels among married women in rural communities of Sundargarh District, researchers can develop targeted interventions and educational initiatives to improve early detection, diagnosis, and management of endometriosis. This holistic approach is essential for addressing the unique healthcare needs of women in rural areas and reducing the overall burden of endometriosis on individuals, families, and communities. While existing literature provides valuable insights into the immunological aspects of endometriosis, there is a paucity of research focusing on awareness levels among rural populations, particularly in regions like the Sundargarh district. By exploring endometriosis awareness levels among married women residing in rural communities, this study aims to fill this gap in the literature and inform targeted interventions to improve reproductive health outcomes in underserved areas.

5. MATERIALS AND METHODS

The research design employed in this study was descriptive research, aimed at providing a comprehensive overview of endometriosis awareness among women in the target population. A sample size of 100 respondents was selected, consisting of 75 employed and 25 unemployed individuals. The sampling technique utilized was random sampling, ensuring that each participant had an equal chance of being selected from the population. The study was conducted in one village of Lathikata Block, located within Sundargarh District of Odisha.

Data collection was facilitated through the use of interviews, allowing researchers to gather information directly from the respondents regarding various aspects of endometriosis, including awareness, symptoms, and healthcare-seeking behaviors. Personal interviews were conducted with each selected respondent at their respective homes to ensure comfort and convenience.

Upon collection, the data was meticulously tabulated and analyzed using statistical methods such as analysis of variance and Chi-square tests. These statistical techniques allowed for the calculation of percentages and the examination of relationships between different variables, providing insights into the level of awareness and understanding of endometriosis among the surveyed population. The findings were then presented in a clear and organized manner, enabling researchers to draw meaningful conclusions and recommendations based on the data analysis.

6. RESULT AND DISCUSSION

The present investigation has the purpose to find out the endometriosis among the women of the reproductive age. The obtain results, which are statistically analyzed, have been presented in the table.

Table-1 (Age)

Profile Details	Employed	Unemployed	Total
20-30	10	05	15
31-40	35	10	45

41-50	25	05	30
Above 50	05	05	10
Total	75	25	100

The table-1 provides a breakdown of the respondents' age distribution based on their employment status, distinguishing between those who are employed and those who are unemployed. The different age groups in which respondents are categorized, include 20-30, 31-40, 41-50, and above 50. In the age group 20-30, there are 10 employed respondents and 5 unemployed respondents, totaling 15 respondents in that age bracket. Similarly, in the age group 31-40, there are 35 employed respondents and 10 unemployed respondents, totaling 45 respondents in that age bracket. Overall, the table provides a clear and concise summary of the age distribution among employed and unemployed respondents, allowing for comparisons and insights into how age demographics vary between the two employment groups.

Table-2 (Education)

Profile Details	Employed	Unemployed	Total
Illiterate	05	10	15
Under matric	30	10	40
matric	10	05	15
Intermediate	05	05	10
Graduate	05	05	10
Postgraduate	05	05	10
Total	60	40	100

The table-2 presents the educational qualifications of respondents categorized by their employment status, distinguishing between those who are employed and those who are unemployed. It lists different educational qualifications, ranging from Illiterate to Postgraduate. The numerical values within the table indicate the count of respondents falling into each specific education category and employment status. For example, among the employed respondents, there are 5 who are Illiterate, 30 with an educational qualification of Under matric, 10 with Matric, 5 with Intermediate, 5 who are Graduates, and 5 who are Postgraduates. Similarly, among the unemployed respondents, there are 10 who are Illiterate, 10 with Under matric, 5 with Matric, 5 with Intermediate, 5 who are Graduates, and 5 who are Postgraduates. Overall, the table provides a clear overview of the distribution of educational qualifications among employed and unemployed respondents, facilitating comparisons and insights into how educational attainment varies between the two employment groups.

Table-3 (Family Type)

Profile Details	Employed	Unemployed	Total
Joint Family	00	05	05
Nuclear Family	75	20	95
Total	75	25	100

The table-3 sums up the number of respondents within each family type for both employed and unemployed individuals, providing a total count for comparison. The numerical values within the table

indicate the count of respondents falling into each specific family type and employment status. For example, among employed respondents, none belong to joint families, while 75 belong to nuclear families. Among unemployed respondents, 5 belong to joint families, and 20 belong to nuclear families. Overall, the table offers a concise overview of the distribution of family types among employed and unemployed respondents. It highlights the prevalence of nuclear families within both employment groups and provides insights into how family structure may vary based on employment status.

Table-4 (Occupation)

Profile Details	Percentage
Anganwadi Workers	30
Asha Workers	25
Labour	25
Teacher	10
Clerical	5
Self- Employment	5
Total	100

This table-4 lists various occupations held by respondents, which include Anganwadi Workers, Asha Workers, Laborers, Teachers, Clerical workers, and those involved in Self-Employment. There are 30 respondents who work as Anganwadi Workers. 25 respondents are employed as Asha Workers. Similarly, 25 respondents are engaged in Labor work. 10 respondents work as Teachers. 5 respondents each are involved in Clerical work and Self-Employment.

Table-5 (Symptom)

Sl. No.	Symptoms	Frequency	Frequency Number	Percentage
01	Pelvic, abdominal and lower back pain during periods	Always	30	30
		Sometimes	50	50
		never	20	20
	Total		100	100%
02	Pelvic, abdominal and lower back pain in between periods	Always	30	30
		Sometimes	50	50
		Never	20	20
	Total		100	100%
03	Pain during intercourse	Always	15	15
		Sometimes	30	30
		never	55	55
	Total		100	100%
04	Painful bowel movement during periods	Always	15	15
		Sometimes	55	55
		Never	30	30
	Total		100	100%

This table-5 provides a detailed analysis of the frequency and prevalence of various symptoms experienced by respondents. Let's analyze each symptom category individually:

1. Pelvic, abdominal, and lower back pain during periods:

- 30% of respondents reported experiencing this pain "Always."
- 50% reported experiencing it "Sometimes."
- 20% reported "Never" experiencing it during their periods.

2. Pelvic, abdominal, and lower back pain in between periods:

- Similar to the previous symptom, 30% of respondents reported experiencing this pain "Always."
- 50% reported experiencing it "Sometimes."
- 20% reported "Never" experiencing it in between periods.

3. Pain during intercourse:

- 15% of respondents reported experiencing pain during intercourse "Always."
- 30% reported experiencing it "Sometimes."
- The majority, 55%, reported "Never" experiencing pain during intercourse.

4. Painful bowel movement during periods:

- Similar to the previous symptoms, 15% of respondents reported experiencing painful bowel movements "Always."
- 55% reported experiencing it "Sometimes."
- 30% reported "Never" experiencing it during their periods.

It reveals varying degrees of prevalence for each symptom category among the surveyed population. While some symptoms, such as pain during intercourse, are less commonly reported, others, like pelvic, abdominal, and lower back pain during periods and in between periods, are more prevalent. This analysis provides valuable insights into the frequency and impact of these symptoms on the respondents' health and quality of life. It underscores the importance of addressing these symptoms through appropriate medical interventions and support services.

The table-5 allows for comparisons between different symptoms in terms of their frequency of occurrence. For instance, it shows that pelvic, abdominal, and lower back pain during periods and in between periods are both experienced with similar frequencies by the respondents. Similarly, painful bowel movements during periods are reported more frequently than pain during intercourse. The percentage breakdown of each symptom's frequency provides a clear understanding of the distribution within the surveyed population. This information is crucial for healthcare professionals and policymakers in prioritizing symptom management strategies and allocating resources effectively. Additionally, it highlights the need for further research and interventions to address the symptoms that significantly impact the respondents' well-being. Overall, this analysis of the table underscores the importance of recognizing and addressing the diverse range of symptoms associated with gynecological issues such as endometriosis. By understanding the prevalence and severity of these symptoms, healthcare providers can tailor their approaches to better support individuals affected by these conditions and improve their quality of life.

Table No-6

Sl. No.	Scores	Frequency of respondents	percentage
01	0	25	25
02	1-3	35	35

03	4-6	25	25
04	7-10	15	15
	Total	100	100%

The distribution of scores indicates the varying levels of symptom severity experienced by the respondents. The concentration of respondents scoring between 1 and 3 suggests that a significant portion (35%) of the surveyed population experiences mild to moderate symptoms. 25% of the respondents scoring 0 and those scoring between 4 and 6 implies that a comparable number of individuals experience either minimal symptoms or moderate symptoms that may have a noticeable impact on their daily lives. The smallest percentage of respondents (15%) scoring between 7 and 10 indicates that fewer individuals experience severe symptoms, which may significantly affect their quality of life and require more intensive management and support. Understanding the distribution of scores provides valuable insights for healthcare professionals in prioritizing interventions and allocating resources effectively. For instance, individuals scoring higher may require more comprehensive treatment plans, including medications, surgeries, or specialized care, while those scoring lower may benefit from symptom management strategies such as lifestyle modifications, pain management techniques, or counseling.

Moreover, this analysis underscores the importance of regular symptom assessment and monitoring to track changes in symptom severity over time and adjust treatment approaches accordingly. By addressing symptoms early and effectively, healthcare providers can improve the overall well-being and quality of life of individuals affected by gynecological conditions like endometriosis.

7. CONCLUSION

The present study focusing on the awareness of endometriosis among village married women in Sundargarh district is of paramount importance in addressing the unique healthcare needs of rural populations. Endometriosis, a chronic gynecological condition, often goes undiagnosed or misdiagnosed due to insufficient awareness, particularly in rural areas where access to healthcare resources may be limited. Through this research, the level of awareness among village women regarding endometriosis, its symptoms, and associated risks can be assessed. This understanding is crucial for developing targeted educational campaigns and interventions aimed at empowering women to recognize early signs of endometriosis, seek timely medical assistance, and navigate the healthcare system effectively.

Sundargarh district, situated in Odisha, India, holds significance for its rich cultural heritage, natural resources, and industrial development. By shedding light on the cultural, social, and economic factors influencing awareness and healthcare-seeking behaviors related to endometriosis in rural communities, this study can inform efforts to improve healthcare access, promote reproductive health, and reduce the burden of endometriosis on women's lives in the district. Cultural taboos and social stigmas surrounding women's health issues prevalent in many rural areas may hinder open discussion and access to appropriate medical care. Identifying and addressing these barriers can lead to improved healthcare access and better support for reproductive health needs in rural India.

Women, playing pivotal roles in households and society, often endure various familial and professional responsibilities, necessitating vigilant attention to their health. Endometriosis, characterized by the growth of endometrial tissue beyond the uterus, poses significant challenges due to its diverse symptoms and diagnostic complexities. Early suspicion and detection are vital for timely management, highlighting the need for increased awareness and education. The research findings underscore the importance of targeted

strategies for raising awareness, improving healthcare infrastructure, and advocating for policy changes to support the reproductive health needs of village married women in rural India.

In conclusion, the study's insights into endometriosis awareness and its implications for rural communities provide a foundation for targeted interventions and policy reforms. By addressing the multifaceted challenges posed by endometriosis through collaborative efforts, stakeholders can work towards ensuring that women receive the support and resources necessary for optimal health and well-being.

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