



RESEARCH ARTICLE

CORRELATION OF MENSTRUAL ABNORMALITIES IN WORKING VERSUS NON-WORKING WOMEN AND ITS IMPACT ON QUALITY OF LIFE AMONG MIDDLE AGE WOMEN OF ANAND DISTRICT

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ABSTRACT

Lophomonas blattarum infections are very rare in human. However, in the world the major infections of *L. blattarum* occurred in China, 94.4%. The differentiate between this infection and the other pulmonary infections are very difficult because of the similar symptoms. Here we reported a case of *L. blattarum* infection confirmed by bronchoalveolar lavage fluid smear on the microscopic observations. The patient was a 40-year-old male farmer was admitted via OPD in GMC and associated Hospital, Badaun (UP) on 29 September, 2024. We briefly reviewed on this infection which is reported in the world during the recent 15-20 years. On the basis of epidemiology, diagnostic, and treatment of this disease we discussed the case to provide a better understanding of recognition, diagnosis, and treatment of *L. blattarum* infection.

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INTRODUCTION

Menstrual abnormalities are recognized as a major health burden for women of reproductive age globally, negatively impacting their health status and quality of life. These disorders have a profound effect on both social and professional spheres, leading to societal and economic loss¹ Menstruation, a natural biological process in females, begins with menarche, typically occurring between 9 and 15 years of age. The normal menstrual cycle lasts 28 to 32 days, with menstruation lasting 3 to 7 days and blood loss generally not exceeding 80 ml. Menstrual disorders significantly affect women's daily activities and account for 1% of gynecological appointments. Common menstrual disorders include premenstrual syndrome (PMS), dysmenorrhea (painful menstruation), amenorrhea (absence of menstruation), hypomenorrhea (light menstruation), menorrhagia (heavy flow), metrorrhagia (intermenstrual bleeding), menometrorrhagia (prolonged, excessive, irregular, and frequent menstruation), polymenorrhagia (frequent menstruation), and oligomenorrhea (infrequent menstruation). Over 10% of young women experience discomfort or disruption from monthly menstrual disorders, with nearly 50% experiencing frequent painful menstruation. Abnormal uterine bleeding, a particularly dangerous condition, affects approximately 5–15% of women of reproductive age. Despite

the high prevalence, little attention has been given to the impact of menstrual disorders on women's health, especially in developing countries. The Global Burden of Disease (GBD) approach, which identifies health priorities based on morbidity and quality of life, has yet to address menstrual disorders or their societal impact⁷ Several factors contribute to menstrual irregularities, including age, ethnicity, physical activity, smoking, and diet. Stress is a particularly significant contributor, with documented associations between stress and menstrual abnormalities such as menorrhagia, oligomenorrhea, dysmenorrhea, and PMS. Women suffering from menstrual abnormalities often experience additional complications, such as polycystic ovary syndrome (PCOS), hirsutism, or infertility. More than 60% of women with PCOS are obese, which exacerbates the poor quality of life and psychological distress.⁹ Eating disorders, although less common, can lead to long-term health complications, significantly impacting quality of life and increasing mortality rates by two to six times.¹ Menstrual abnormalities not only affect women's physical health but also their emotional and social wellbeing. They can result in mental health problems, including anxiety, stress, depression, and insomnia, significantly impairing daily functioning. In today's competitive environment, women, especially working women, face multiple pressures from balancing work and home responsibilities. Tight deadlines, work pressure, and inadequate self-care often lead to the exacerbation of lifestyle ailments.² Working women, who are

employed outside the home, face significant psychological demands that can increase their risk for depression and anxiety disorders, with up to 75% affected by these conditions due to long hours and work-related stress. These psychological pressures are a common cause of menstrual disorders among working women, with the modern hectic lifestyle disrupting their biological clocks. Several factors contribute to menstrual disorders, including dietary habits, emotional stress, and physical exertion. Increased intake of sour, salty, hot, and fatty foods, alcohol consumption, and irregular eating patterns can all aggravate menstrual problems. Psychological factors such as grief, anxiety, and stress also play a key role in worsening menstrual health^{^2}

Common Menstrual Disorders

- **Dysmenorrhea:** Painful menstruation^{^9}
- **Oligomenorrhea:** Menstrual cycles occurring less frequently than every 35 days^{^9}
- **Polymenorrhagia:** Menstrual bleeding occurring more frequently than every 21 days^{^9}
- **Premenstrual Syndrome (PMS):** Symptoms include mood swings, irritability, anxiety, concentration issues, changes in appetite, and sleep disturbances^{^9}
- **Menorrhagia:** Heavy menstrual bleeding exceeding 80 ml of blood loss^{^9}

These disorders, prevalent among both working and non-working women, contribute significantly to reduced quality of life and present a substantial health burden.

Need of study: Menstrual abnormalities significantly affect the physical, emotional, and social wellbeing of women, yet there is limited research on how these issues differ between working and non-working women. The dual pressures of work and home life may increase stress and worsen menstrual health in working women, while non-working women face different stressors. There is a lack of studies, particularly in developing countries, addressing how these factors impact women's quality of life. This study aims to explore the correlation between menstrual disorders and quality of life in working versus non-working women, providing insights for better healthcare interventions.

Aim of the Study

The aim of the study is to examine the association between menstrual abnormalities and quality of life among middle-aged women and to analyze the correlation of menstrual abnormalities between working and non-working women.

Objectives of the Study

1. To screen for menstrual abnormalities in working and non-working women.
2. To assess the quality of life among middle-aged women.
3. To analyze the association of menstrual abnormalities between working and non-working women.
4. To examine the correlation of menstrual abnormalities with the quality of life among middle-aged women.

METHODS

- **Study Design:** Observational cross-sectional study
- **Study Method:** Convenient sampling

- **Sample Size:** 101 women
- **Target Population:** Working and non-working women
- **Study Setup:** Anand district
- **Study Duration:** 1 year

Materials Required

- Paper, Pen, Questionnaire

Inclusion Criteria

- Working and non-working women, age 31-45 years, menstruating

Exclusion Criteria

- Premenopausal or menopausal women, antenatal and postnatal women

Outcome Measures

- SF-36 Quality of Life Scale
- Menstrual abnormalities questionnaire

Data Collection: A cross-sectional study conducted in Anand district with 101 women (49 working, 52 non-working). Participants completed a menstrual history questionnaire and SF-36 for quality of life assessment. Informed consent was obtained. Statistical analysis was done using ANOVA (Tukey test) for the association of menstrual abnormalities and quality of life, and Spearman's correlation for assessing menstrual abnormalities.

Table 1. show baseline characteristics of Participants

Characteristics		
Age (years) (MEAN +SD)		37.64+4.49
Marital status	Married	96
	Unmarried	5
Occupation	Working	49
	Non-working	52
Menstrual cycle	<21 days	9
	21 to 35 days	87
	>35 days	4
Blood loss	>2 DAYS	56
	2 TO 5 DAYS	41
	>5 DAYS	4
Premenstrual symptoms	YES	83
	NO	18
Menorrhagia	YES	12
	NO	89
Dysmenorrhea	YES	74
	NO	27

Questionnaire: Demographics, menstrual cycle details (length, duration, regularity, blood loss, dysmenorrhea, amenorrhea, PMS), and SF-36. The SF-36 measures 8 health-

related domains, with scores ranging from 0 to 100, where higher scores indicate better health. Table 1 shows baseline data of all subjects. Table 1 shows further breakdown of the sample characteristics. Mean age of women was 37.64+4.49(range 30 to 45years). 94.1% women were married and 5.9% were unmarried. Most of the women (85.3%) reported their cycles to be between 21 to 35 days followed by 14.7% of them reporting the length of their cycles was >35 days or 2 days and while 3.9% had reported blood flow for >7 days.81.4% of the women reported having premenstrual pain whereas 22.5% had no premenstrual pain. 87.3% women reported.

Table 2. Shows statistical significance between menstrual abnormalities and quality of life

MENSTRUAL ABNORMALITY	COMPONENTS OF SF36	P VALUE	SIGNIFICANCE
MEAN + SD	MEAN + SD		
1.85 +0.84	PF: 60 + 23.45	0.01	YES
1.85 +0.84	RLPF :44.83 +24.20	0.01	YES
1.85 +0.84	RLEH :56.09 + 26.88	0.01	YES
1.85 +0.84	ENERGY: 55.31 + 12.98	0.01	YES
1.85 +0.84	EWB: 57.42 + 17.21	0.01	YES
1.85 +0.84	SF :52.18 + 20.55	0.01	YES
1.85 +0.84	PAIN: 71.13 + 16.26	0.01	YES
1.85 +0.84	GH :80.22 + 12.65	0.01	YES
1.85 +0.84	HC: 46.28 + 22.82	0.01	YES

Table 2 shows impact of menstrual abnormalities on quality of life in middle aged women. Table 2 shows mean and SD of menstrual abnormalities and component of SF36 quality of life. When there is statistically positive significant found between menstrual abnormalities score and components of SF36.

It includes physical functioning, role limitation due to physical health, role limitation due to emotional problem, energy/fatigue, emotional wellbeing, social functioning, pain, general health and health changes. Suggestive that those who had higher the menstrual abnormalities score, the chances of affection in quality of life are higher. Those who reported more menstrual abnormalities had negative correlation with components of SF36(P<0.001).

DISCUSSION

The study aimed to assess the association between menstrual abnormalities and quality of life among middle-aged working and non-working women. The participants' mean age was 37.64 (4.49). The most common menstrual symptoms were premenstrual pain (81.4%), dysmenorrhea (71.6%), abnormal blood loss (11.8%), and abnormal menstrual cycles (14.7%). These symptoms significantly impacted physical, emotional, social, and mental wellbeing. Previous studies, such as those by Priti Desai (2013) and Karthik Balajee Lakasham (2019), also reported high prevalence rates of dysmenorrhea and menorrhagia, with a notable effect on quality of life. This study found that menstrual abnormalities negatively impacted quality of life, as evidenced by a strong positive association between premenstrual symptoms and SF-36 components (P<0.001). The study aligns with findings from Kyoko Shimamoto (2021) and Alisha Timsina *et al.*, which indicated that menstrual symptoms worsen mental health, causing stress, anxiety, and depression. Hormonal fluctuations during menstruation can impair daily functioning and mental health, exacerbated by stress from work and home responsibilities. In terms of working vs non-working women, no significant correlation was found, suggesting that menstrual abnormalities equally affect both groups. The study underscores the importance of seeking timely healthcare for menstrual issues to improve overall quality of life.

CONCLUSION

I found that women with menstrual abnormalities, including premenstrual symptoms, dysmenorrhea, menorrhagia, and abnormal menstrual cycles, reported a poor quality of life. Additionally, there was no significant correlation between menstrual abnormalities in working and non-working women. I hope this study will highlight the challenges faced by middle-aged women and contribute valuable insights for improving their health and wellbeing.
