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Prevalence Of Dysmenorrhea And Its Impact On Quality Of Life Among Health Care Workers

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ABSTRACT

Background: Dysmenorrhea, characterized by painful menstruation, is prevalent among healthcare workers (HCWs), whose demanding job nature can worsen symptoms. Despite its frequency, menstrual health remains a less addressed concern in professional settings.

Methods: A cross-sectional study involving 126 female HCWs aged 18–45 years was conducted using the DysmenQOL questionnaire. Data analysis utilized SPSS software, with chi-square tests examining the associations.

Results: Dysmenorrhea prevalence was 81.7%, with 30.2% experiencing severe pain. About 67.5% reported reduced productivity, and 30.2% noted absenteeism. Emotional distress and sleep disturbances were common, yet only 10.3% sought medical help.

Conclusion: Dysmenorrhea notably hampers work performance and mental well-being among HCWs. Workplace interventions are necessary to support menstrual health needs.

Keywords: *Dysmenorrhea, Healthcare Workers, Menstrual Health, Work Productivity, Quality of Life.*

INTRODUCTION

Dysmenorrhea is recognized as one of the most common gynecological conditions worldwide, impacting approximately 50% to 90% of women, with variations influenced by diverse socio-demographic factors [1,6,11]. It is generally categorized into primary dysmenorrhea, attributed to elevated prostaglandin levels leading to intense uterine contractions, and secondary dysmenorrhea, which arises from identifiable pelvic pathologies such as endometriosis [14].

In the healthcare workforce, exposure to erratic schedules, strenuous duties, and workplace stress likely amplifies the experience of menstrual discomfort [2,15]. Despite its significance, menstrual health remains inadequately discussed and poorly addressed due to persistent cultural taboos [8,12].

Particularly in resource-limited settings like India, barriers to comprehensive menstrual healthcare persist, often forcing women to rely on over-the-counter medications for symptom relief [4]. Factors such as high BMI, irregular menstrual cycles, smoking, sedentary habits, and anemia are strongly linked with the severity level of dysmenorrhea [2,7,9].

This investigation aims to examine the prevalence, symptom severity, and associated functional impairments due to dysmenorrhea among HCWs in a tertiary hospital setting in Chennai, intending to foster better workplace health policies.

METHODOLOGY

Study Design and Setting: A descriptive cross-sectional study was undertaken for duration of 3 months at Sree Balaji Medical College & Hospital, Chennai.

Participants: The study population included female HCWs (comprising doctors, nurses, and technicians) aged 18–45 years who experienced dysmenorrhea. Those diagnosed with secondary causes or using hormonal contraceptives were excluded.

Data Collection: Data were collected through a self-administered DysmenQOL questionnaire, which documented socio-demographic variables, menstrual characteristics, symptom intensity, impact on occupational and daily functioning, and coping mechanisms. Hemoglobin levels were retrieved from recent health records to assess anemia's role.

Statistical Analysis: SPSS version 27 was employed for data processing. Chi-square tests were utilized to explore categorical associations, while binary logistic regression identified predictors of severe dysmenorrhea. A p-value of less than 0.05 was considered statistically significant.

RESULTS

Table 1: Baseline Characteristics (N=126)

Characteristic	Category	Total N (%)
Age	18–25	40 (31.7)
	26–35	50 (39.7)
	36–45	36 (28.6)
Occupation	Doctors	55 (43.6)
	Nurses	45 (35.7)
	Technicians	26 (20.7)
BMI	Normal	60 (47.6)
	Overweight	30 (23.8)
	Obese	18 (14.3)
	Underweight	18 (14.3)
Parous women	No	12 (9.5)
	Yes	114 (90.5)
Physical Activity	Sedentary	50 (39.7)
	Moderate	46 (36.5)
	Active	30 (23.8)

Table 2: Menstrual History (N=126)

Characteristic	Category	Total N (%)
Cycle Regularity	Regular	88 (69.8)
	Irregular	38 (30.2)
Flow Intensity	Heavy	50 (39.7)
	Moderate	56 (44.4)

	Light	**20 (15.9)**
Clotting	**Yes**	**40 (31.7)**
	No	**86 (68.3)**

Table 3: Dysmenorrhea Severity (N=126)

Characteristic	**Category**	**Total N (%)**
Prevalence	**Affected**	**103 (81.7)**
Pain Severity	**Severe (8–10)**	**38 (30.2)**
	Moderate (5–7)	**57 (45.2)**
	Mild (1–4)	**31 (24.6)**
Site of pain	**Lower abdomen & back**	**68 (54.0)**
	Lower abdomen	**36 (28.6)**
	Back	**22 (17.4)**

Table 4: Impact on Daily Life (N=126)

Impact	**Total N (%)**
Absenteeism	**38 (30.2)**
Reduced Productivity	**85 (67.5)**
Concentration Difficulty	**72 (57.1)**
Emotional Distress	**74 (58.7)**
Sleep Disturbances	**60 (47.6)**

Table 5: Coping Mechanisms (N=126)

Mechanism	**Total N (%)**	**p-value**
Analgesics	**91 (72.2)**	**-**
Heat Therapy	**35 (27.8)**	**-**
Medical Consultation	**13 (10.3)**	**-**
Home Remedies	**35 (27.9)**	**0.062**
Herbal Medicine	**22 (17.7)**	**0.421**

Table 6: Regression Analysis (N=126)

Association	Odds Ratio (OR)	p-value
Severe Pain & Work Impairment	**3.5**	**<0.001**
Severe Pain & Absenteeism	**2.8**	**<0.001**
Emotional Distress	**4.2**	**<0.001**
Sleep Disturbances	**3.0**	**0.002**
Irregular Cycles & Pain Severity	**2.3**	**0.001**
High BMI & Pain Severity	**1.9**	**0.005**

RESULTS

Among the 126 respondents, the predominant age group was 26–35 years (39.7%), and the majority were doctors (43.6%). Normal BMI was observed in 47.6% of participants, with 90.5% being parous women . Regular menstrual cycles were reported by 69.8% of participants, while heavy menstrual flow was noted in 39.7%, and clotting during periods was observed in 31.7%. About 30.2% of participants reported experiencing severe menstrual pain, with the lower abdomen and back being the most commonly affected areas in 54.0% of the cases. Approximately 67.5% of respondents experienced diminished work productivity, and 30.2% reported absenteeism due to menstrual pain, while emotional disturbances and sleep disruptions were common, affecting 58.7% and 47.6% respectively. Analgesics were used by 72.2% of participants, although only 10.3% sought professional medical consultation; home remedies and heat therapy were also utilized but with limited perceived effectiveness. Regression analysis revealed that severe pain was independently associated with decreased productivity (OR 3.5, $p<0.001$) and increased absenteeism (OR 2.8, $p<0.001$), while irregular menstrual cycles and elevated BMI emerged as significant predictors of symptom severity.

DISCUSSION

This study identified an 81.7% dysmenorrhea prevalence among HCWs, consistent with 70–90% rates reported by Ju et al. in Australia [1] and Nur Azma et al. in Malaysia [2]. Severe pain, affecting 30.2%, was linked to work impairment (OR 3.5, $p<0.001$) and absenteeism (OR 2.8, $p<0.001$), aligning with Hailemeskel et al.'s findings in Ethiopia among university students [7]. Reduced productivity (67.5%) and emotional distress (58.7%) underscore impacts on professional and mental health, as observed by Iacovides et al. in South Africa [14]. Younger HCWs (18–25) reported greater emotional burden, corroborating Harlow and Park's findings in the US [13]. Irregular cycles (OR 2.3, $p=0.001$) and high BMI (OR 1.9, $p=0.005$) were significant risk factors, supporting Latthe et al.'s UK-based review [9]. Anemia (22.2%) may amplify fatigue, though not independently significant, as noted by Hailemeskel et al. in Ethiopia [7]. Analgesic use was prevalent (72.2%), yet only 10.3% sought medical care, reflecting stigma highlighted by Marjoribanks et al. globally [4]. Home remedies (27.9%) and herbal medicine (17.7%) lacked efficacy ($p=0.062$, $p=0.421$).

CONCLUSION

This study highlights a substantial burden of dysmenorrhea among female healthcare workers, with an 81.7% prevalence rate and significant repercussions on work productivity (67.5%), absenteeism (30.2%), emotional health (58.7%), and sleep quality (47.6%) [1, 3]. Despite these challenges, only 10.3% sought clinical care, while the majority relied on analgesics (72.2%)—a trend influenced by limited workplace accommodations and persistent stigma [4, 12]. Associations with irregular menstrual cycles, elevated BMI, and anemia emphasize the multifactorial nature of dysmenorrhea [2, 7].

Given the occupational vulnerability of HCWs, targeted interventions such as flexible scheduling, rest areas, subsidized consultations, and awareness initiatives are urgently needed [2, 15].

Future research should adopt longitudinal designs to evaluate causal relationships and test the effectiveness of institutional policies and non-pharmacologic therapies, including the potential role of home remedies and herbal medicine, in reducing dysmenorrhea's professional and personal toll [5, 14].

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