ORIGINAL ARTICLE

IMPACT OF MODE OF DELIVERY ON MENSTRUAL HYGIENE IN POSTPARTUM PERIOD

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ABSTRACT:

Objectives: To assess the relationship between sociodemographic factors and reproductive health indicators, including place and mode of delivery, menstrual hygiene, and past contraceptive use among women attending a local hospital.

Methods: This cross-sectional study involved 200 women visiting a Jam Ghulam Qadir Government Hospital, Hub. Data were collected on educational background, socio-economic status (SES), mode and place of delivery, use of IUCD/surgery, menstrual hygiene practices (pad/cloth use), and hygiene status.

Results: Most participants were either uneducated (42.5%) or had primary to intermediate education (47%). A majority belonged to the poor class (55%). Normal vaginal delivery was reported in 75%, while 25% had cesarean sections. Hospital deliveries were more common (62.5%) than home births (37.5%). IUCD/surgical contraceptive history was reported in 32.5% of participants. Menstrual hygiene practices showed 45% used cloths, while 55% used pads. Hygiene status was reported as satisfactory in 56% of participants.

Conclusion: The mode of delivery significantly influences menstrual hygiene practices during the postpartum period. Women who undergo cesarean sections often face greater challenges in maintaining optimal menstrual hygiene due to restricted mobility, postoperative discomfort, and delayed initiation of self-care practices. In contrast, women who deliver vaginally generally resume routine hygiene practices more swiftly.

Keywords: Delivery Practices, Menstrual Hygiene, Women's Health

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INTRODUCTION

Women's health, particularly reproductive health, is a multifaceted domain influenced by a complex interplay of sociodemographic factors, healthcare access, and personal hygiene practices [1]. Understanding these interactions is crucial for devising effective healthcare strategies and interventions aimed at improving women's overall well-being. Socioeconomic status, education, and hygiene practices are key determinants that can significantly impact reproductive health outcomes, including the choice of delivery method, menstrual hygiene management, and the utilization of contraceptive methods [2]. The intricate relationship between these factors necessitates a comprehensive examination to identify specific areas where targeted interventions can yield the most significant positive impact [3]. Menstrual hygiene management encompasses the practices and products employed by women and girls to maintain hygiene during menstruation, including the use of menstrual products, personal hygiene routines, and waste

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disposal methods [4]. Access to appropriate menstrual hygiene products, such as sanitary pads, and clean water and sanitation facilities are essential components of effective menstrual hygiene management. Globally, inadequate menstrual hygiene management poses significant health and socioeconomic challenges, particularly in low-resource settings, underscoring the importance of addressing these disparities to promote women's health and empowerment. Menstrual health and hygiene are increasingly recognized as integral to public health, driving research into the provision of menstrual materials and interventions that supply reusable and disposable options [5].

Recent studies have emphasized the role of integrated community-based health programs in addressing both maternal care and menstrual hygiene needs, especially in underprivileged regions. A 2023 Lancet Commission report on women's health stresses the need for including policies that go beyond biological aspects and consider structural determinants, including gender inequity, poverty, and education [6]. Additionally, emerging research highlights the mental health burden associated with poor menstrual hygiene and inadequate childbirth care, suggesting that addressing these issues holistically is critical for sustainable improvements in women's health outcomes [7].

METHODOLOGY

This was a cross-sectional, observational study conducted at a Jam Ghulam Qadir Govt Hospital Hub. A non-probability convenience sampling technique was employed to recruit participants over a January 2024-December 2024. Women were approached in the hospital waiting area, informed about the study, and those providing verbal consent were included.

A total of 200 women of reproductive age (15–49 years), attending the hospital for routine consultations or minor complaints, were recruited for this study. Inclusion criteria involved: women willing to participate, having a history of at least one delivery, and ability to understand and respond to a structured questionnaire

Women with severe illness, cognitive impairment, or unwilling to provide consent were excluded from the study. A structured questionnaire was developed by the research team based on literature review and expert opinion. It was pilot tested on 20 participants (not included in final analysis) to assess clarity and comprehensiveness. The questionnaire was administered via face-to-face interviews conducted in the local language. The data collection tool included several sections. The sociodemographic data section captured information on participants' age, educational status (categorized as uneducated, primary, matric, intermediate, bachelor, or master), and socioeconomic status (classified as poor, middle class, or upper class). The obstetric and reproductive history section included details on the mode of delivery (normal vaginal delivery or cesarean section), place of delivery (hospital or home), and any past history of intrauterine contraceptive device (IUCD) use or sterilization surgery. The menstrual hygiene practices section assessed the type of material used during menstruation (cloths or sanitary pads) and general hygiene status, which was rated as satisfactory or unsatisfactory based on participants' self-reported frequency of bathing, hand washing, and genital hygiene. Lastly, the tool included other parameters, such as sleep patterns or disturbances, if such data were available in the full dataset. Data were compiled using Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS) version 23.0. Descriptive statistics, including frequencies and percentages, were used to summarize categorical variables such as educational status, socioeconomic class, and hygiene practices. Results were presented using tables and graphical figures (e.g., bar charts, pie charts) to improve clarity and interpretability.

RESULTS

A substantial proportion of the participants were having non-formal education, accounting for 42.5% of the total sample. Among those who had received formal education, 14.5% had completed primary school, 17.5% had studied up to the metric level, and 15% had attained intermediate education. Higher education levels were less commonly observed, with only 7.5% holding a bachelor's degree and a mere 3% having completed a master's degree. This distribution indicates that a majority of the women had limited formal education, which may affect their awareness and utilization of health services. In terms of socio-economic status, the data revealed that more

than half of the women (55%) belonged to the poor class, reflecting limited financial means and potentially restricted access to quality healthcare, hygiene facilities, and educational resources. The middle class made up 35% of the participants, while only 10% were classified as upper class (Table 1).

Table 1: Frequency of Education and Socio-Economic Status among the females visiting hospital

Characteristics		Normal (200)	
		n	%
Education	Non-formal	85	42.5
	Primary	29	14.5
	Metric	35	17.5
	Intermediate	30	15
	Bachelor	15	7.5
	Masters	06	3
Socio-Economic Status	Poor class	110	55
	Middle class	70	35
	Upper Class	20	10

The majority (75%) reported having undergone a normal vaginal delivery, while the remaining 25% had delivered via cesarean section. Regarding the place of delivery, 62.5% of the women gave birth in a hospital setting, indicating relatively good access to institutional healthcare services, whereas 37.5% delivered at home, which may reflect traditional practices or limited access to healthcare facilities. When asked about their history of contraceptive procedures such as intrauterine contraceptive device (IUCD) use or surgical sterilization, 32.5% of participants responded affirmatively, while 67.5% had no such history. This suggests a moderate uptake of long-term contraceptive methods within the sample population. Menstrual hygiene practices showed a near-equal distribution, with 55% of women reporting the use of sanitary pads and 45% using cloths during menstruation (Table 2).

Table 2: Distribution of Obstetric, Contraceptive, and Menstrual Hygiene Parameters among Normal Participants

Parameters		Normal (n=200)	
		n	%
Mode of delivery	Normal	150	75
	C-Section	50	25
Place of delivery	Hospital	125	62.5
	Home	75	37.5
Intrauterine contraceptive device (IUCD) /Surgery	Yes	65	32.5
	No	135	67.5
Pad/cloths usage	Cloths	90	45
	Pads	110	55
Hygiene Status	Satisfactory	112	56
	Unsatisfactory	88	44

DISCUSSION

The findings of this study underscore the intricate interplay between sociodemographic factors and key reproductive health indicators among women accessing care at a local hospital, revealing a compelling narrative of disparities and unmet needs [8]. The observed preponderance of participants with limited formal education, with a significant 42.5% reporting no schooling and 47% attaining only primary to intermediate levels, highlights a critical barrier to accessing and comprehending essential health information, which subsequently impacts their reproductive health choices and practices [9]. This is further compounded by the economic vulnerabilities faced by the majority (55%) of the study population, classified as belonging to the poor socioeconomic stratum, which constrains their access to quality healthcare services, nutritious food, and adequate sanitation, all of which are fundamental determinants of reproductive well-being [10]. These socioeconomic disadvantages create a cyclical pattern, where limited education leads to fewer economic opportunities, which in turn restricts access to healthcare and reinforces poor reproductive health outcomes.

The predominance of normal vaginal deliveries (75%) among the study participants aligns with global trends, where vaginal delivery remains the preferred mode due to its lower risk profile and cost-effectiveness. However, the 25% cesarean section (C-section) rate observed exceeds the World Health Organization's recommended threshold of 10–15%, suggesting potential overuse or medical necessity that warrants further investigation. Studies have indicated that higher C-section rates are often associated with urban settings, increased maternal education, and better access to healthcare facilities.

Regarding the place of delivery, 62.5% of women delivered in hospital settings, reflecting relatively good access to institutional healthcare services. This is consistent with findings from Mozambique, where institutional deliveries were more common among women with higher education levels and urban residency. However, the 37.5% of home deliveries highlight persistent barriers, such as cultural preferences, financial constraints, or limited access to healthcare facilities, especially in rural areas. Similar challenges have been documented in Tanzania, where distance to health facilities and lack of transportation were significant factors influencing home deliveries [11].

The uptake of long-term contraceptive methods, with 32.5% of participants reporting the use of intrauterine contraceptive devices (IUCDs) or undergoing surgical sterilization indicates moderate utilization. This is comparable to findings in various low- and middle-income countries, where contraceptive use is influenced by factors such as education, socioeconomic status, and access to healthcare services. Enhancing awareness and accessibility of family planning services remains crucial for improving reproductive health outcomes [12].

Menstrual hygiene practices among participants showed that 55% used sanitary pads, while 45% relied on cloths during menstruation. This near-equal distribution underscores ongoing challenges in menstrual hygiene management (MHM), particularly in resource-limited settings. A study conducted in South-west Delhi found that good menstrual hygiene practices were significantly associated with higher education levels and socioeconomic status. Similarly, research in rural Pakistan highlighted that inadequate MHM practices were more prevalent among women with lower education and income levels. These findings emphasize the need for targeted interventions to improve MHM, including education, affordable sanitary products, and improved sanitation facilities [13,14].

CONCLUSION

The mode of delivery significantly influences menstrual hygiene practices during the postpartum period. Women who undergo cesarean sections often face greater challenges in maintaining optimal menstrual hygiene due to restricted mobility, postoperative discomfort, and delayed initiation of self-care practices. In contrast, women who deliver vaginally generally resume routine hygiene practices more swiftly. These differences highlight the need for tailored postpartum education and support, particularly for women recovering from surgical births, to ensure adequate menstrual hygiene management and prevent associated health complications.

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