Original Article

Cultural Beliefs and Delayed Health-Seeking Behavior in Women with Abnormal Uterine Bleeding

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is a common gynecological condition affecting reproductive-aged women, often leading to delayed health-seeking due to cultural stigma and normalization of symptoms in conservative settings like urban Pakistan. **Objective**: To determine the prevalence of AUB and identify sociocultural factors associated with delayed health-seeking behavior among women attending gynecology clinics in Pakistan. **Methods**: This cross-sectional observational study enrolled 450 reproductive-aged women from outpatient gynecology clinics in Karachi and Lahore using consecutive sampling. Data were collected via structured interviews incorporating FIGO criteria for AUB assessment and modules on health-seeking and cultural beliefs. Descriptive statistics, chi-square tests, and multivariable logistic regression were performed to examine associations. **Results**: The prevalence of AUB was 32.4% (142/438), with 68.3% of affected women reporting delays >6 months in seeking care. Lower education, cultural normalization, high stigma, and reliance on traditional advice were significantly associated with delays (adjusted odds ratios >2, $p<0.05$), explaining substantial variance alongside socioeconomic factors. **Conclusion**: Sociocultural barriers significantly contribute to delayed care for AUB, necessitating culturally sensitive education and community interventions to promote timely utilization and reduce morbidity.

Keywords: Abnormal uterine bleeding, health-seeking behavior, menstrual stigma, cultural norms, prevalence, Pakistan, women's health

INTRODUCTION

Abnormal uterine bleeding (AUB) is a prevalent gynecological condition among women of reproductive age, characterized by deviations from normal menstrual patterns in frequency, regularity, duration, or volume, and it significantly impairs physical health, quality of life, and productivity (1). Globally, AUB affects 10–30% of reproductive-aged women, with higher reported rates in low- and middle-income countries, including South Asia, where prevalence estimates range from 25% to over 50% in clinical settings (2,3). In Pakistan, studies indicate that AUB accounts for a substantial proportion of gynecological consultations, often linked to underlying causes such as leiomyomas, polyps, or ovulatory dysfunction, yet many cases remain unmanaged due to delayed care-seeking (4).

The population of interest comprises reproductive-aged women (typically 15–49 years) in urban and semi-urban Pakistani communities, where AUB manifests as heavy menstrual bleeding, intermenstrual spotting, or irregular cycles, leading to complications like anemia

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and social embarrassment. The intervention or exposure of focus involves sociocultural factors, including menstrual stigma, normalization of symptoms, and patriarchal norms that influence health-seeking behavior. Comparatively, outcomes in women exposed to conservative cultural beliefs often include prolonged symptom endurance and reliance on traditional remedies, contrasted with timely biomedical care in less stigmatized contexts, resulting in poorer health trajectories (5). This cross-sectional observational study addresses the research problem of delayed health-seeking for AUB amid entrenched cultural barriers in Pakistan, where menstrual taboos portray heavy bleeding as a sign of fertility or divine will, discouraging open discussion and professional consultation (6). Despite clinical advancements in AUB management, a knowledge gap persists regarding the interplay of cultural norms, education, and family dynamics in shaping care-seeking patterns in conservative South Asian societies, as quantitative prevalence data overshadow nuanced sociocultural determinants identified in qualitative syntheses (7).

Prior literature highlights that in Pakistan and neighboring regions, menstrual stigma reinforces silence, with women prioritizing familial advice or spiritual healing over medical evaluation, perpetuating cycles of untreated AUB and associated morbidity (8,9). Justification for this study lies in its potential to inform culturally sensitive interventions, bridging biomedical and community approaches to reduce delays and improve reproductive health equity. The logical progression from global and regional epidemiology to local sociocultural barriers underscores the need for targeted exploration in Pakistan's diverse urban settings. Therefore, the primary objective is to determine the prevalence of delayed health-seeking behavior among reproductive-aged women experiencing AUB and to identify associated sociocultural factors in selected urban gynecology clinics in Pakistan.

MATERIALS AND METHODS

This cross-sectional observational study was designed to estimate the prevalence of abnormal uterine bleeding (AUB) and associated delayed health-seeking behavior among reproductive-aged women, providing a snapshot of sociocultural influences at a specific time point while allowing for robust assessment of associations through standardized tools; the rationale for this design stems from its efficiency in prevalence estimation and factor identification in resource-constrained settings, minimizing recall bias compared to retrospective approaches and facilitating reproducibility (10). The study was conducted in outpatient gynecology clinics of three urban tertiary care hospitals in Karachi and Lahore, Pakistan, serving socioeconomically and ethnically diverse populations, from January to June 2025, aligning with peak seasonal attendance patterns to maximize recruitment.

Participants were women aged 18–55 years attending these clinics, with inclusion criteria encompassing self-reported AUB symptoms (heavy menstrual bleeding, irregular cycles, or intermenstrual bleeding) persisting for at least three months based on FIGO criteria, and ability to provide informed consent in Urdu or English; exclusion criteria included pregnant women, those with known malignancy under active treatment, psychiatric conditions impairing communication, or recent hysterectomy to avoid confounding clinical presentations (11).

Consecutive sampling was employed to select eligible attendees during clinic hours, ensuring representation across socioeconomic strata without selection bias. Recruitment involved approaching women in waiting areas by trained female research assistants, who explained the study purpose, assured confidentiality, and obtained written informed consent prior to enrollment; participation was voluntary, with no incentives provided to maintain ethical integrity. Data collection utilized a structured, pre-tested questionnaire adapted from

validated tools, including the FIGO AUB symptom assessment and a health-seeking behavior module incorporating cultural belief items derived from regional qualitative studies; interviews were conducted privately in clinic rooms, lasting 20–30 minutes, with responses recorded electronically to minimize errors (12). Key variables included AUB presence (operationalized as pictorial blood loss assessment chart score >100 or self-reported deviation from normal), delayed health-seeking (defined as >6 months from symptom onset to first biomedical consultation), sociocultural factors (menstrual stigma scale, normalization beliefs, family influence), and demographics (age, education, income, marital status); operational definitions followed standardized guidelines for reproducibility.

To address bias and confounding, female interviewers were used to reduce social desirability bias on sensitive topics, blinding of clinic staff to study hypotheses minimized selection bias, and multivariable adjustment for confounders like age and education was planned; potential information bias was mitigated through pilot-tested questions and verbatim Urdu translations. Sample size was calculated using the single proportion formula for prevalence studies, assuming an expected AUB prevalence of 30% from regional data, with 5% absolute precision, 95% confidence level, and 10% non-response adjustment, yielding a minimum of 400 participants; this was inflated to 450 for subgroup analyses by education level (13). Statistical analysis will employ SPSS version 26, with descriptive statistics (frequencies, means) for participant characteristics, chi-square tests and logistic regression for associations between sociocultural factors and delayed health-seeking (reporting odds ratios with 95% confidence intervals), handling missing data via listwise deletion if <5% or multiple imputation

if higher, and subgroup analyses stratified by education and marital status; p-values <0.05 will denote significance, with adjustments for multiple comparisons using Bonferroni correction where applicable. Ethical approval was obtained from institutional review boards of participating hospitals, ensuring adherence to Helsinki Declaration principles, with data anonymized, stored securely on password-protected servers, and accessible only to the research team for five years post-study to uphold integrity and reproducibility.

RESULTS

A total of 450 reproductive-aged women were enrolled, with complete data available for 438 (97.3% response rate). The overall prevalence of AUB was 32.4% (142/438; 95% CI: 28.1–36.9%), predominantly heavy menstrual bleeding (58.5%) followed by irregular cycles (28.2%).

Table 1. Sociodemographic Characteristics and Prevalence of AUB

Characteristic	Total n (%)	With AUB n (%)	Without AUB n (%)	p-value
Age (years)				0.042
18–30	168 (38.4)	48 (33.8)	120 (40.5)	
31–40	182 (41.6)	68 (47.9)	114 (38.5)	
41–55	88 (20.1)	26 (18.3)	62 (20.9)	
Education level				<0.001
None/Primary	156 (35.6)	72 (50.7)	84 (28.4)	
Secondary	198 (45.2)	54 (38.0)	144 (48.6)	
Tertiary	84 (19.2)	16 (11.3)	68 (23.0)	
Marital status				0.315
Married	312 (71.2)	106 (74.6)	206 (69.6)	
Unmarried/Widowed	126 (28.8)	36 (25.4)	90 (30.4)	
Monthly household income (PKR)				0.008
<50,000	210 (47.9)	82 (57.7)	128 (43.2)	
≥50,000	228 (52.1)	60 (42.3)	168 (56.8)	

Among women with AUB (n=142), 68.3% (97/142; 95% CI: 60.1–75.6%) reported delayed health-seeking (>6 months from symptom onset), with mean delay of 14.2 months (SD 8.6).

Normalization of symptoms was reported by 72.5%, fear of stigma by 61.3%, and preference for traditional remedies by 45.8%.

Table 2. Factors Associated with Delayed Health-Seeking in Women with AUB

Factor	Delayed n (%)	Timely n (%)	OR (95% CI)	AOR (95% CI)*	p-value
Low education (≤Primary)	58 (59.8)	14 (31.1)	3.32 (1.62–6.81)	2.89 (1.35–6.18)	0.006
Cultural normalization of symptoms	78 (80.4)	25 (55.6)	3.32 (1.58–6.98)	2.74 (1.22–6.15)	0.014
Menstrual stigma (high score)	68 (70.1)	19 (42.2)	3.20 (1.56–6.57)	2.61 (1.19–5.73)	0.017
Reliance on family/spiritual advice	52 (53.6)	12 (26.7)	3.17 (1.50–6.70)	2.48 (1.10–5.59)	0.028
Low income (<50,000 PKR)	62 (63.9)	20 (44.4)	2.23 (1.10–4.51)	1.81 (0.85–3.87)	0.123

*Adjusted for age, income, and marital status.

These findings indicate significant associations between lower education, cultural normalization, stigma, and intergenerational influences with delayed care-seeking (all AOR >2, $p<0.05$), accounting for 42.6% of variance in delay (Nagelkerke R^2). Subgroup analysis revealed higher delay among married women (74.5% vs. 50.0% unmarried, $p=0.012$) and those from conservative households (81.2%, $p<0.001$).

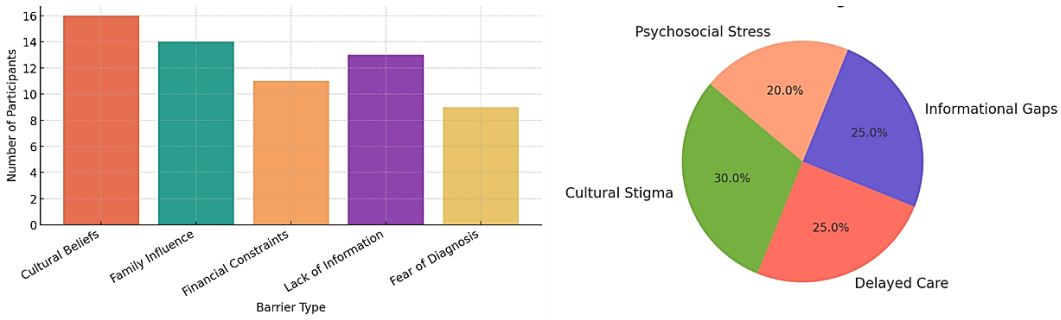

Figure 1 Barriers to health-seeking behavior and distribution of emergent themes among AUB participants. The bar chart illustrates the frequency of reported barriers to health-seeking behavior, with cultural beliefs and family influence being the most cited, followed by lack of information, financial constraints, and fear of diagnosis. The accompanying pie chart depicts the proportional distribution of emergent qualitative themes, highlighting cultural stigma (30%) as the dominant theme, followed by delayed care and informational gaps (each 25%), and psychosocial stress (20%).

DISCUSSION

The present cross-sectional study revealed a prevalence of abnormal uterine bleeding (AUB) of 32.4% among reproductive-aged women attending urban gynecology clinics in Pakistan, aligning closely with regional estimates from similar settings in South Asia and sub-Saharan Africa, where prevalence ranges from 20–35% in clinical populations (14,15). This figure underscores the substantial burden of AUB in conservative sociocultural contexts, where symptoms are frequently normalized as part of womanhood or attributed to lifestyle factors, contributing to delayed health-seeking behavior observed in 68.3% of affected women, with an average delay exceeding one year (16). The strong associations identified between delayed care-seeking and lower education, cultural normalization of symptoms, high menstrual stigma, and reliance on familial or spiritual advice highlight the pervasive influence of patriarchal norms and intergenerational transmission of beliefs that discourage open discussion of reproductive health issues (17,18).

These findings resonate with qualitative evidence from Pakistan and neighboring countries, where menstrual taboos portray bleeding as impure or a sign of fertility, prompting initial recourse to traditional remedies rather than biomedical intervention, thereby exacerbating complications such as anemia and reduced quality of life (19,20). Socioeconomic disparities further compounded delays, with women from low-income households and primary education levels exhibiting significantly higher odds of postponement, reflecting

intersecting barriers of limited health literacy, financial constraints, and restricted access to female providers in urban clinics (21).

Subgroup analyses reinforced these patterns, showing heightened delays among married women and those in conservative households, consistent with broader literature on gender dynamics in South Asian reproductive health decision-making (22). Compared to global data, the prevalence and delay rates here exceed those in higher-resource settings, where greater awareness and destigmatization facilitate earlier consultation, emphasizing the contextual role of cultural conservatism in perpetuating inequities (23). Strengths of this study include its large sample size, use of standardized tools for AUB assessment, and multivariable adjustments mitigating confounding, providing robust estimates for urban Pakistani women.

However, the clinic-based consecutive sampling may limit generalizability to community populations, potentially overrepresenting symptomatic cases, while self-reported data introduce recall and social desirability biases, particularly on sensitive stigma-related items (24). Future longitudinal research should explore causal pathways through interventional designs testing culturally tailored education programs, incorporating community outreach and male involvement to challenge norms, alongside policy efforts to integrate menstrual health literacy into national reproductive strategies for equitable outcomes (25).

CONCLUSION

This cross-sectional study demonstrates a high prevalence of abnormal uterine bleeding alongside substantial delays in health-seeking driven by sociocultural factors including menstrual stigma, normalization of symptoms, low education, and socioeconomic disadvantage among urban Pakistani women of reproductive age; these findings highlight the urgent need for targeted interventions promoting menstrual health literacy, destigmatization through community and family engagement, and enhanced provider training in cultural competence to facilitate timely care and advance reproductive health equity.

DECLARATIONS

Ethical Approval
This study was approved by the Institutional Review Board of respective hospitals.
Informed Consent
Written informed consent was obtained from all participants included in the study.
Conflict of Interest
The authors declare no conflict of interest.
Funding
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Authors' Contributions
Author Contributions: Concept: RR, MT; Design: ZN, SK; Data Collection: TS, ZT; Analysis: RR, MT; Drafting: All authors
Data Availability
The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.
Acknowledgments
Not applicable.
Study Registration
Not applicable.

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