



Knowledge, attitude, and perception of women towards medical versus surgical management of abnormal uterine bleeding: A cross-sectional descriptive study.

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Abstract

Background: Abnormal uterine bleeding (AUB) significantly affects the quality of life in reproductive-age women. Despite the availability of both medical and surgical treatments, decision-making is often influenced by inadequate awareness and socio-cultural perceptions.

Objectives: To assess the knowledge, attitudes, and perceptions of women diagnosed with AUB regarding its medical and surgical management, and to evaluate their treatment preferences, concerns, and adherence.

Methods: A cross-sectional descriptive study was conducted at the gynecology outpatient department of KIMS & RF, Amalapuram, Andhra Pradesh, from November 2024 to February 2025. A total of 136 women with diagnosed AUB were enrolled. Data were collected using a structured and validated questionnaire covering sociodemographic characteristics, awareness levels, treatment attitudes, and decision-making behavior. Statistical analysis was performed using SPSS, with significance assessed via chi-square tests.

Results: Of the 136 participants, the majority (66.2%) were aged 31–50 years and predominantly married (77.2%). Awareness of AUB was high (94.1%), but only 66.2% were aware of both medical and surgical options. While 89.7% had a favorable view of surgical management, 66.2% preferred medical treatment, and 29.4% chose a combination approach. Treatment refusal was reported by 29.4%, primarily due to fear of surgery. Education was significantly associated with treatment preference ($p = 0.044$), and diagnosis with AUB was significantly associated with adherence ($p < 0.001$). Occupation influenced refusal of recommended management ($p = 0.0165$).

Conclusion: Despite high awareness of AUB, significant gaps exist in understanding treatment modalities. Cultural fears and misconceptions continue to influence patient decisions. Patient-specific counseling is imperative to improve informed decision-making and treatment compliance.

Recommendations: Integrate routine counseling addressing both treatment options, dispel misconceptions, enhance shared decision-making, and prioritize health education interventions during gynecological consultations for AUB.

Keywords: Abnormal uterine bleeding, treatment preference, patient perception, medical management, surgical intervention, women's health

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Introduction

Abnormal uterine bleeding (AUB) is among the most common gynecological issues encountered in reproductive

and perimenopausal women, with profound effects on their physical, psychological, and social well-being [1]. According to the International Federation of Gynecology



and Obstetrics (FIGO), AUB is defined as uterine bleeding that deviates in volume, frequency, duration, or regularity in non-pregnant women [1]. The global prevalence of AUB is estimated to range between 10% and 30%, though variations are seen based on population characteristics, healthcare access, and reporting practices [2].

Management strategies for AUB broadly encompass medical and surgical options. Medical therapies include hormonal agents, antifibrinolytics, and nonsteroidal anti-inflammatory drugs (NSAIDs), while surgical modalities may involve hysteroscopy, endometrial ablation, or hysterectomy depending on the underlying etiology and severity [3,4]. Selecting an appropriate treatment approach must consider multiple patient-specific factors such as symptom burden, desire for fertility preservation, presence of comorbidities, and uterine pathology [3,5].

Despite these available evidence-based interventions, patients' understanding of treatment options is frequently suboptimal. Misconceptions, fear of surgical procedures, mistrust of medications, and cultural stigmas surrounding gynecological disorders often influence treatment preferences and delay decision-making [2,4]. In low- and middle-income settings, socio-economic barriers and limited health literacy further hinder informed participation in care [4].

Therefore, while clinicians may recommend guideline-driven options, optimal AUB management is highly dependent on patients' knowledge, attitude, and perception regarding their condition and its treatments. This study was undertaken to evaluate these aspects among women diagnosed with AUB, with the goal of identifying gaps and informing future patient-centered strategies to enhance shared decision-making and therapeutic compliance.

Materials and Methods

Study Design and Setting

This was a cross-sectional descriptive study conducted at the Department of Obstetrics and Gynecology, KIMS & RF, Amalapuram, Andhra Pradesh.

Study Duration

The study was carried out over four months from **November 2024 to February 2025**.

Study Population

A total of **136 women** aged 18 years and above, previously diagnosed with abnormal uterine bleeding (AUB), who attended the gynecology outpatient department during the study period, were enrolled.

Sample Size Determination

The sample size of 136 participants was determined based on the outpatient attendance of women with abnormal uterine bleeding (AUB) at the gynecology department during the study period. Using an expected prevalence of awareness regarding treatment options of approximately 50% (to ensure maximum variability), a 95% confidence level, and a 10% margin of error, the minimum required sample size was calculated as 96. To account for potential non-response and incomplete questionnaires, an additional 40 participants were included, bringing the final sample size to 136.

Inclusion Criteria

Women aged ≥ 18 years

Confirmed diagnosis of AUB

Non-medical background (not employed in healthcare or related fields)

Provided written informed consent

Exclusion Criteria

Women with pregnancy-related bleeding

Individuals with known psychiatric illness

Healthcare professionals or students of medical/allied sciences

Data Collection Tool

A structured and pre-validated questionnaire was used to collect data. It covered four domains:

Sociodemographic characteristics

Knowledge and awareness of AUB

Attitudes and perceptions toward treatment options

Treatment preferences, adherence, and reasons for refusal

Ethical Approval

Ethical clearance was obtained from the Institutional Ethics Committee (IEC) of KIMS & RF before study commencement. Informed written consent was obtained from each participant.

Bias Control

To minimize potential sources of bias, several measures were undertaken. Consecutive sampling was employed to reduce selection bias. A structured, pre-validated questionnaire was used to ensure uniformity and reduce information bias. The questionnaire was administered in the local language to avoid misinterpretation. Interviewers were trained to follow standardized procedures and avoid leading questions. Confidentiality of responses was assured to minimize social desirability bias. Data entry and analysis

were cross-checked by two investigators to reduce observer and analytical bias.

Statistical Analysis

Data were compiled in Microsoft Excel and analyzed using IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics such as frequencies and percentages were used to summarize data. Associations between categorical variables were assessed using the Chi-square test. A p-value <0.05 was considered statistically significant.

RESULTS

Participant Flow

A total of 158 women presenting with symptoms of abnormal uterine bleeding (AUB) were screened during the study period. Of these, 12 were excluded for not meeting the inclusion criteria (7 were healthcare workers, 3 had pregnancy-related bleeding, and 2 had known psychiatric illness). Ten women declined participation due to personal reasons or unwillingness to provide consent. Finally, 136 eligible participants were enrolled and completed the questionnaire. All enrolled participants were included in the final analysis, with no losses to follow-up or incomplete responses.

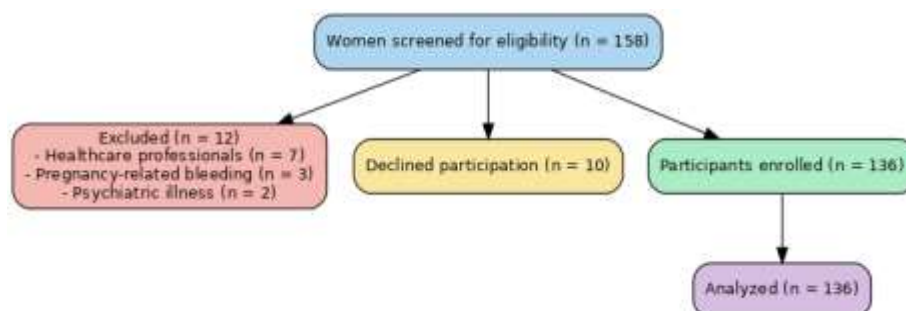


Figure 1. Patient Flow Diagram

A total of 136 women diagnosed with abnormal uterine bleeding (AUB) participated in this cross-sectional study. The majority of respondents were aged between 31 and 50 years (66.2%), followed by the 18–30 age group (21.3%)

and those above 50 years (12.5%). Most participants were married (77.2%), with nearly 40% having completed college education, and the predominant occupational status was housewife/unemployed (63.2%) (Table 1).

Table 1: Demographic Characteristics of the Participants (N = 136)

Characteristic	Category	Frequency (n)	Percentage (%)
Age Group (years)	18–30	29	21.3
	31–50	90	66.2
	>50	17	12.5
Marital Status	Married	105	77.2
	Unmarried/Widowed	31	22.8
Education Level	High School	44	32.4
	College Graduate	54	39.7
	Illiterate/Primary	38	27.9
Occupation	Housewives/Unemployed	86	63.2
	Employed/Self-employed	50	36.8

Regarding awareness, a substantial proportion (94.1%) had heard of AUB, and 85.3% were aware of available treatment modalities. However, only 66.2% of the women were

familiar with both medical and surgical treatment options, indicating a notable knowledge gap (Table 2).

Table 2: Awareness and Knowledge about AUB and Its Management (N = 136)

Awareness Variable	Response	Frequency (n)	Percentage (%)
Heard of AUB	Yes	128	94.1
	No	8	5.9
Aware of Treatment Options	Yes	116	85.3
	No	20	14.7
Know both Medical and Surgical Treatments	Yes	90	66.2
	No/Don't know	46	33.8

Despite 89.7% of participants expressing a favorable attitude toward surgical management, only a minority (4.4%) preferred it as a treatment option. The majority (66.2%) opted for medical management, and 29.4% favored a

combination of both approaches. Interestingly, 29.4% of participants reported having refused a suggested treatment, most commonly due to concerns regarding surgical intervention (Table 3).

Table 3: Attitudes and Preferences Regarding Management of AUB (N = 136)

Variable	Response	Frequency (n)	Percentage (%)
Positive Attitude towards Surgical Treatment	Yes	122	89.7
	No	14	10.3
Preferred Treatment Method	Medical	90	66.2
	Surgical	6	4.4
	Combined	40	29.4
Refused Suggested Treatment	Yes	40	29.4
	No	96	70.6

Statistical analysis using Chi-square tests revealed that education level was significantly associated with preference for a particular management option ($\chi^2 = 21.47$, $p = 0.044$). Additionally, there was a highly significant association between being diagnosed with AUB and treatment adherence ($\chi^2 = 16.376$, $p = 0.00028$). Refusal of the

suggested treatment was also significantly associated with occupation ($\chi^2 = 15.53$, $p = 0.0165$). Other variables such as age, parity, and marital status did not show statistically significant associations with awareness or preference (Table 4).

Table 4: Cross-tabulation and Association Between Variables (Chi-square Test Results)

Variable Pair	Chi-square (χ^2)	p-value	Statistical Significance
Marital Status vs Awareness of AUB	0.85	0.654	Not significant
Education vs Awareness of Management	2.123	0.713	Not significant
Parity vs Preferred Management	9.815	0.366	Not significant
Age vs Awareness of Management	1.18	0.757	Not significant
Diagnosis vs Preferred Management	1.983	0.576	Not significant

Education vs Preferred Management	21.47	0.044	Significant
Diagnosis vs Management Adherence	16.376	0.00028	Highly significant
Occupation vs Refusal of Management	15.53	0.0165	Significant

Discussion

This study assessed the knowledge, attitudes, and perceptions of women diagnosed with abnormal uterine bleeding (AUB) regarding available medical and surgical management options. While a high proportion (94.1%) were aware of the term AUB, only 66.2% demonstrated knowledge of both medical and surgical treatments, highlighting a critical gap between awareness and informed understanding. This is consistent with earlier studies indicating that general awareness does not necessarily translate into accurate or actionable knowledge regarding clinical choices [6,7].

Despite 89.7% of participants expressing a favorable view of surgical treatment, only 4.4% preferred surgery as a first-line option, with 66.2% opting for medical management. This disparity underscores the influence of fear, anticipated surgical complications, and socioeconomic concerns on health behavior. Deligeoroglou et al. emphasized similar findings in adolescents, where non-compliance and hesitation stemmed largely from limited health literacy and fear of invasive procedures [7].

Nearly one-third (29.4%) of participants reported refusal of a suggested treatment, most commonly due to apprehension regarding surgery or concerns about long-term medication side effects. These findings are echoed in earlier literature that highlights the role of emotional, cultural, and social barriers in undermining treatment acceptance despite adequate physician counseling [8]. The presence of chronic anxiety surrounding invasive interventions may also contribute to non-compliance and treatment delay.

Significant associations were found between education and treatment preference ($p = 0.044$), suggesting that higher educational status enables more informed decision-making. Additionally, prior diagnosis was significantly associated with treatment adherence ($p < 0.001$), suggesting that familiarity with the condition can improve compliance. Occupation was also significantly linked with treatment refusal ($p = 0.0165$), which may reflect disparities in access, autonomy, and socioeconomic support. These findings align with the PALM-COEIN framework, which advocates for individualizing management based on both clinical and contextual parameters [9].

Furthermore, systematic reviews have emphasized that improving access to care for abnormal uterine bleeding

(AUB) requires addressing both informational and structural barriers, including transportation, stigma, and lack of trust in healthcare systems [10,11]. Cultural norms and institutional inefficiencies continue to contribute to delays in help-seeking and inconsistent follow-up, particularly in resource-constrained settings. Diagnostic studies employing imaging and histopathology have also reinforced the value of accurate categorization based on the FIGO classification system in guiding appropriate therapy [12]. Nevertheless, even with diagnostic clarity, treatment uptake remains suboptimal when patients are inadequately informed or emotionally unprepared to proceed with recommended interventions.

Generalizability

The findings of this study are most applicable to women attending gynecology outpatient departments in tertiary care hospitals, particularly within similar socio-cultural and healthcare settings. Since the study was conducted in a single center, its generalizability to other regions, rural populations, or different healthcare systems may be limited. However, the demographic and clinical profile of the participants reflects the typical case mix seen in many Indian tertiary hospitals, suggesting that the results are reasonably representative of comparable patient populations.

Conclusion

This study highlights that although awareness of abnormal uterine bleeding (AUB) is high among women, there remains a substantial gap in understanding treatment modalities, particularly the distinctions between medical and surgical options. Fear of surgery, misconceptions about long-term drug use, and socio-cultural influences significantly shape treatment preferences and adherence. Educational status and prior diagnosis were positively associated with informed decision-making and compliance. Addressing these knowledge gaps through structured counseling, shared decision-making, and culturally sensitive communication can empower women to make better treatment choices. Strengthening health education at the outpatient level is essential to improve outcomes and enhance patient satisfaction in AUB management.



Limitations

The cross-sectional design restricts assessment of long-term treatment outcomes or changes in perception over time. Self-reported data may introduce recall or response bias. Additionally, the exclusion of healthcare professionals limits comparative insights. Despite these constraints, the study provides valuable information on knowledge and perception patterns among women with AUB in a real-world clinical setting.

Recommendations

To improve outcomes in the management of abnormal uterine bleeding (AUB), patient education should be integrated into routine outpatient consultations. Tailored counseling sessions using simple, culturally appropriate language should address treatment options, side effects, and misconceptions. Visual aids and decision-support tools may enhance understanding and shared decision-making. Involving family members in counseling may reduce fear and improve adherence. Healthcare providers should receive training in patient-centered communication. Community-based awareness campaigns and structured follow-up can further reinforce treatment adherence. Future studies should evaluate the long-term impact of educational interventions on treatment choices and patient satisfaction in AUB care.

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Abbreviations

AUB – Abnormal Uterine Bleeding
KAP – Knowledge, Attitude, and Perception
OPD – Outpatient Department
IEC – Institutional Ethics Committee
SPSS – Statistical Package for the Social Sciences
FIGO – International Federation of Gynecology and Obstetrics
LNG-IUS – Levonorgestrel Intrauterine System

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Conflict of interest

The authors declare no conflict of interest.

Author contributions

VPPC-Concept and design of the study, results interpretation, review of literature, and preparation of the first draft of the manuscript. Statistical analysis and interpretation, revision of manuscript. **TM**-Concept and design of the study, results interpretation, review of literature, preparing the first draft of the manuscript, and revision of the manuscript. **VAH**-Concept and design of the study, results interpretation, review of literature, and preparing the first draft of the manuscript. Statistical analysis and interpretation,

Data availability

Data is available on request from the Corresponding Author

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