



“Experiences, Barriers, and Support Needs of Women with Ovarian Cancer in Bangladesh- a Cross-Sectional Study”

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Abstract

Background: Ovarian cancer remains a major health concern in Bangladesh, where late diagnosis, limited awareness, and financial barriers continue to affect patient outcomes.

Objective: The aim was to explore sociodemographic characteristics, diagnostic pathways, treatment experiences, and support needs among women with ovarian cancer receiving care at a national cancer hospital.

Method: A cross-sectional design was used, and 57 women aged 18 years or older with confirmed ovarian cancer were interviewed through a structured questionnaire consisting of 58 items. Descriptive statistics summarized sociodemographic factors, symptom experiences, healthcare interactions, treatment decisions, and emotional and practical support needs.

Result: Findings showed that most participants had secondary-level or lower education and belonged to low- or average-income households. Travel to the hospital required 2–5 hours for the majority, highlighting significant geographic barriers. Awareness of ovarian cancer was limited, with many women unable to recognize early symptoms. Delays in seeking care were common, and multiple healthcare visits were often required before diagnosis. Treatment decisions were largely influenced by physicians, followed by financial considerations. Nausea, vomiting, hair loss, and fatigue were the most challenging treatment-related side effects.

Conclusion: Although many women received emotional support from family members, considerable practical and financial needs persisted, including treatment expenses, income loss, and reliance on loans or asset sales. The findings point to the need for improved community awareness, more efficient referral systems, decentralized oncology services, and strengthened psychosocial and financial support mechanisms to enhance care for women with ovarian cancer in Bangladesh.

Keywords: Ovarian cancer, Diagnostic delay, Treatment experiences, Financial burden, Support needs, Bangladesh

Introduction:

Ovarian cancer remains one of the most lethal gynecological malignancies worldwide, largely due to its insidious onset, non-specific symptoms, and high likelihood of late-stage diagnosis. Global estimates indicate that more than 300,000 new cases are diagnosed annually, with the majority occurring in low- and middle-income countries (LMICs) where health system constraints further exacerbate diagnostic delays and treatment challenges [1,2]. In South

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Asia, including Bangladesh, the burden of ovarian cancer has been steadily rising, yet the pathways to diagnosis, access to care, and patient support systems remain underexamined [3,4]. Understanding the sociocultural, economic, and health system dynamics influencing women's experiences is therefore critical for addressing gaps in early detection and comprehensive care.

Sociodemographic factors—such as education level, household income, marital status, and caregiving responsibilities—have been shown to significantly shape health-seeking behavior and cancer outcomes [5-7]. In LMIC settings, women with lower socioeconomic status often face multiple barriers, including limited cancer awareness, constrained financial resources, and long distances to tertiary care facilities [8]. These structural and social determinants influence not only the timing of diagnosis but also treatment decisions, adherence, and overall quality of life [9]. Bangladesh, like many resource-constrained countries, lacks organized screening programs and standardized referral pathways for ovarian cancer, further contributing to delayed presentations and advanced-stage disease at diagnosis [10].

Diagnostic delays are well documented in ovarian cancer literature, with symptom misattribution, inadequate provider responsiveness, and fragmented referral systems frequently reported [11,12]. In Bangladesh, the interplay between limited symptom awareness, geographic barriers, and overcrowded public hospitals aggravates these delays. Women often undergo multiple consultations before receiving a definitive diagnosis, reflecting gaps in symptom recognition among both patients and primary-level providers. Such delays have substantial clinical consequences, as earlier diagnosis is strongly associated with improved survival and treatment outcomes [13].

Beyond clinical management, the support needs of women with ovarian cancer—particularly emotional, informational, and practical support—are increasingly recognized as essential components of comprehensive cancer care. Studies show that women commonly experience psychological distress, fear of recurrence, uncertainty about treatment, and significant financial toxicity due to the high cost of cancer therapy [14-16]. In Bangladesh, where formal psychosocial and financial support systems remain limited, families often serve as the primary source of assistance, though the adequacy and accessibility of such support vary widely (17). Understanding patients' support needs is therefore fundamental for improving patient-centered care and addressing disparities within the cancer care continuum.

Given the scarcity of research in Bangladesh, examining the sociodemographic determinants, diagnostic trajectories, and support needs of women with ovarian cancer is essential for informing policy, improving clinical pathways,

and designing context-specific interventions. This study explores these interconnected dimensions within a cohort of Bangladeshi women, offering insights into how social, economic, and systemic factors shape their cancer journey—from initial symptoms to treatment and survivorship. By highlighting key gaps and unmet needs, the study aims to contribute to national efforts toward strengthening ovarian cancer care within the broader landscape of women's health.

Methods:

Study Design

A cross-sectional descriptive study design was used to conduct a study occurred in National Institute of cancer research and hospital (NICRH) from April 2023 to September 2023 to examine the sociodemographic characteristics, diagnostic experiences, treatment pathways, and support needs of women diagnosed with ovarian cancer in Bangladesh. This design allowed the research team to capture a broad range of patient-reported experiences at a single point in time.

Study Setting and Participants

The study was conducted at NICRH in Bangladesh that serves women from both rural and urban regions. A total of 57 participants were recruited using purposive sampling. Women were eligible if they:

1. were aged 18 years or older;
2. had a confirmed diagnosis of ovarian cancer;
3. had initiated or completed treatment at the study hospital; and
4. provided informed consent.

No participants meeting the inclusion criteria declined participation, resulting in a final sample size of 57 women.

Women were excluded from the study if patients too unwell to participate, or women without a confirmed diagnosis of ovarian cancer, including those with suspected cases not yet verified by a clinician.

Data Collection Instrument

Data were collected using a structured, interviewer-administered questionnaire developed specifically for this study. The instrument included 58 questions, covering:

- Sociodemographic and background characteristics (Q1–Q10)
- Family cancer history (Q11–Q13)
- Symptom recognition and diagnostic pathway (Q14–Q27)
- Treatment timing, decision-making, and toxicities (Q28–Q36)
- Emotional support needs (Q37–Q43)

- Practical support needs (Q44–Q48)
- Information needs (Q49–Q53)
- Quality of life, health system perceptions, and policy views (Q54–Q58)

The questionnaire was piloted among a small group of patients (n=5, not included in the final sample) to assess clarity and cultural relevance.

Operational Definition:

1. Ovarian Cancer

For this study, ovarian cancer refers to any clinically confirmed malignant tumour arising from ovarian tissue, diagnosed through histopathology, imaging, or clinician assessment according to standard gynecologic oncology criteria [18,19].

2. Diagnostic Delay

Diagnostic delay is defined as the time interval between the onset of first symptoms and the date of confirmed ovarian cancer diagnosis. A delay exceeding 3 months was considered prolonged, consistent with published diagnostic pathway literature [20,21].

3. Treatment Decision-Making

Treatment decision-making refers to the patient's perceived role and level of involvement in selecting treatment options (surgery, chemotherapy, or combined modalities) in consultation with healthcare professionals. This includes shared decision-making and clinician-driven decisions [22].

4. Treatment Side Effects

Treatment side effects are defined as physical or physiological symptoms experienced by participants as a result of chemotherapy or surgical treatment, including nausea, fatigue, hair loss, neuropathy, and pain. Only patient-reported symptoms were included in the analysis [23].

5. Emotional Support Needs

Emotional support needs refer to the psychological assistance required by participants in coping with diagnosis, treatment, and fear of recurrence. This includes support from family, healthcare professionals, religious/community networks, or peer groups (24,25).

6. Quality of Life (QOL)

Quality of life is defined as the patient's perceived physical, emotional, and social well-being after diagnosis and during treatment. In this study, it was captured through patient-reported perceptions rather than standardized scales.

Data Collection Procedure

Data were collected over the study period by trained

female interviewers experienced in working with oncology patients. Interviews were conducted in private rooms within the outpatient and inpatient departments to ensure confidentiality. Each session lasted approximately 20–30 minutes. All 57 women completed the interview in full. Participants were informed that participation was voluntary and would not influence their medical care.

Ethical Considerations

Ethical approval was obtained from the institutional ethics review committee of the participating hospital. All participants provided verbal or written informed consent prior to the interview. Confidentiality was strictly maintained by removing personal identifiers and storing all data in a secure, password-protected system. The study adhered to the ethical principles outlined in the Declaration of Helsinki.

Data analysis

Statistical analyses were carried out by using the Statistical Package for Social Sciences version 25.0 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated for continuous variables. The qualitative observations were indicated by frequencies and percentages. Chi-Square test with Yates correction was used to analyze the categorical variables, shown with cross tabulation. Student t-test was used for continuous variables. P values <0.05 was considered as statistically significant.

Result

Table 1. Sociodemographic characteristics of participants (n = 57)

Table 1 resembles sociodemographic characteristics of participants. It is evident that, most of the participants (52.6%) passed secondary division of education whereas, only 12.3% participants did not have any formal education. Majority of the participants were married (56.1%) having average income before diagnosis (50.9%).

Variable	Category	Frequency (%)
Education	Secondary	30 (52.6)
	Primary	8 (14.0)
	Higher secondary	6 (10.5)
	University	6 (10.5)
	No formal education	7 (12.3)
Marital status	Married/living with partner	32 (56.1)
	Widowed	14 (24.6)
	Single	6 (10.5)
Income before diagnosis	Average	29 (50.9)
	Below average	23 (40.4)
	Above average	4 (7.0)

Table 2. Diagnostic pathway and healthcare interactions (n=57)

Table 2 shows that awareness of ovarian cancer was low, with 42% of women having never heard of the disease. Abdominal or pelvic pain was the most common first symptom, yet many experienced delays in seeking care—31.6% waited more than three months—and required multiple healthcare visits before diagnosis, indicating significant diagnostic delays.

Variable	Response	Frequency (%)
Awareness of ovarian cancer	Never heard	24 (42.1)
	Heard but knew little	7 (12.3)
First symptom	Abdominal/pelvic pain	18 (31.6)
	Bloating/increased size	14 (24.6)
First doctor visit	Within 3 months	26 (45.6)
	After >3 months	18 (31.6)
No. of visits before diagnosis	1 visit	14 (24.6)
	2–3 visits	17 (29.8)
	≥4 visits	13 (22.8)

Table 3. Decision-making and treatment experiences (n=57)

Table 3 shows that treatment decisions were mainly driven by doctors' recommendations (47.4%), while financial constraints also played a major role. The best chance of cure was the most important treatment consideration, and although many women felt fully involved in decisions, a meaningful proportion reported only partial or no involvement, indicating gaps in shared decision-making.

Variable	Response	Frequency (%)
Influence on treatment choice	Doctor recommendation	27 (47.4)
	Financial constraints	13 (22.8)
	Family influence	8 (14.0)
Most important factor	Best chance of cure	21 (36.8)
	Fewer side effects	12 (21.1)
	Least expensive	10 (17.5)
Involvement in decisions	Fully involved	25 (43.9)
	Somewhat	19 (33.3)
	Not involved	7 (12.3)

Table 4. Support needs and financial impact (n=57)

Table 4 shows that while most women received some emotional support, financial strain remained substantial, with 42% reporting severe economic impact. The most

common burdens were high treatment costs, income loss, and borrowing money, highlighting significant practical and financial challenges during cancer care.

Variable	Response	Frequency (%)
Emotional support received	Yes	35 (61.4)
	Partially	12 (21.1)
Practical support needed	Financial support	21 (36.8)
	Transport assistance	12 (21.1)
Financial impact	Severely affected	24 (42.1)
	Moderately affected	15 (26.3)
Ways finances were impacted	Treatment cost	20 (35.1)
	Loss of income	12 (21.1)
	Borrowed money	10 (17.5)
	Sold assets	6 (10.5)

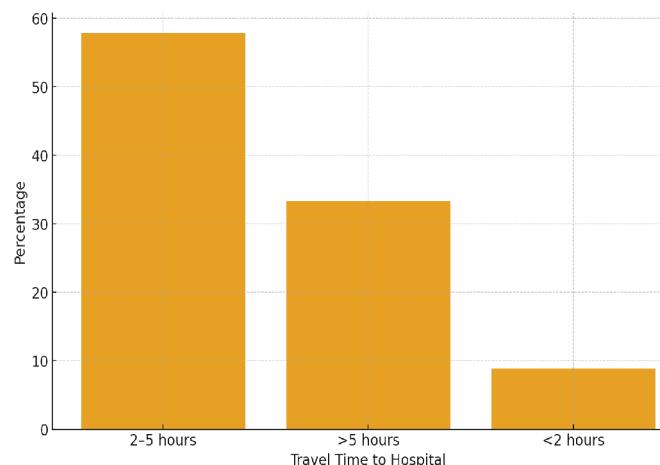


Figure 1: Travel Time to Hospital (n=57)

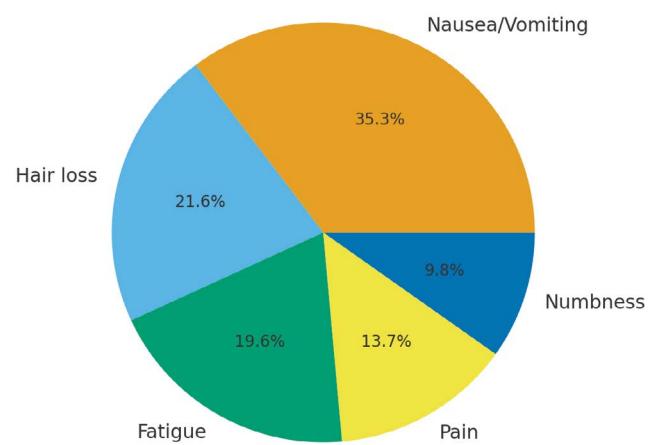


Figure 2: Most Difficult Treatment Side Effects (n=57).

Figure 1 illustrates that more than half of the participants (57.9%) required 2–5 hours to reach the hospital, indicating substantial geographic barriers to accessing care. An additional 33.3% needed over 5 hours, while only 8.8% reported travel times of less than 2 hours. These findings highlight significant travel-related delays that may contribute to late presentation and diagnostic challenges.

Figure 2 shows that nausea and vomiting were the most difficult treatment side effects, reported by 35.3% of participants. This was followed by hair loss (21.6%), fatigue (19.6%), and pain (13.7%), while numbness or tingling was reported by 9.8%. These results indicate that gastrointestinal and appearance-related toxicities were the most burdensome during treatment.

Discussion

This cross-sectional descriptive study highlights significant diagnostic, treatment-related, and support challenges faced by women with ovarian cancer in Bangladesh. The findings show that limited awareness, long travel distances, financial hardship, and constrained decision-making all contribute to delays and unmet needs across the care pathway. These patterns are consistent with observations from other South Asian and LMIC settings.

Low awareness of ovarian cancer was a prominent finding, with many women unable to recognize early symptoms. Similar trends have been documented in LMICs, where inadequate health literacy and cultural barriers contribute to delayed help-seeking [26]. Studies from India and Nepal reinforce this, reporting that women often attribute abdominal symptoms to benign conditions or ignore them until they worsen [27,28]. In contrast, studies in high-income countries report higher baseline awareness, although diagnosis is still frequently delayed due to the disease's vague symptom profile [29].

Diagnostic delays in this study were also substantial, with many women waiting more than three months before their first medical consultation and requiring multiple healthcare visits prior to diagnosis. These delays are comparable to those reported by Wiggins et al., who found that primary clinicians often struggle to recognize ovarian cancer early due to its non-specific presentation [30]. Geographic barriers likely intensified delays, as most participants required long travel times to reach specialized care—a challenge also noted in rural cancer studies in South Asia [31].

Treatment decision-making was heavily influenced by physician recommendations, while financial constraints shaped what options were realistically accessible. This mirrors findings from regional studies showing that South Asian women often rely on clinician authority due to hierarchical cultural norms and limited treatment literacy [32]. Although

many participants felt involved in their care decisions, a notable minority reported limited involvement, suggesting that shared decision-making still needs strengthening—an issue emphasized in global oncology literature [33].

Side effects reported by participants—especially nausea, vomiting, hair loss, and fatigue—align with patterns previously identified in gynecologic oncology populations. Studies by Lawrence et al. and Donovan et al. similarly highlight that chemotherapy-related symptoms significantly affect daily functioning and emotional well-being [34,35].

Financial hardship emerged as one of the most burdensome challenges. Many women were severely affected economically, often needing to borrow money, sell assets, or rely heavily on family support. These findings reflect broader research in LMICs showing that cancer care often results in catastrophic expenditure due to limited insurance coverage and high out-of-pocket costs [26,31]. The emotional and practical support needs identified in this study further underscore the absence of structured psychosocial services, an issue commonly reported across South Asian oncology settings [27,32].

However, this study adds important local insight into the severity of travel barriers, financial strain, and reliance on physician-driven decisions among Bangladeshi women. These results point to the need for greater awareness initiatives, improved referral pathways, decentralized oncology services, and expanded financial and psychosocial support systems to improve outcomes in this population.

Conclusion

Findings highlight substantial delays in diagnosis, limited awareness of ovarian cancer symptoms, and major financial pressures affecting access to care. Many women relied heavily on physician guidance during treatment decisions, while emotional and practical support needs remained significant. Strengthening early detection efforts, reducing travel and cost barriers, and improving psychosocial support services may enhance the experiences and outcomes of women facing ovarian cancer in Bangladesh.

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