International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Healthcare Accessibility and Challenges of Women in the Sundarbans Region of North 24 Parganas

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Abstract:
The Sundarbans area represents one of the most ecologically sensitive and socially disadvantaged regions in India, where women encounter significant obstacles in obtaining healthcare facilities. This research examines the availability of healthcare services and the various challenges experienced by women in the isolated islands of the Sundarbans, emphasizing on socio-economic vulnerability and patriarchal social framework. The study applied both quantitative and qualitative methods to collect data from women representing Hingalganj and Hasnabad blocks through survey and focus group discussions. It sought to examine how poor transportation, long distance to have health care facilities, irregular and insufficient medical staff at centres with frequent shortages of essential medicines severely limit women's access to timely and quality healthcare. It also examines how socio-economic barriers, including poverty, gender inequality, and limited decision-making power further hinder their ability to seek medical help.
From a sociological standpoint, these findings highlight healthcare issues faced by women in the Sundarbans are not solely logistical in nature, but are deeply rooted in structural inequalities, social hierarchies, and power dynamics that influence access to resources. This paper attempts to look at what could be a comprehensive and gender-sensitive strategy to ensure equitable accessibility to healthcare facilities for women that integrates strong rural health infrastructure, women's empowerment, innovative approaches such as telemedicine and mobile healthcare to accomplish remote access. How these interconnected social and structural barriers can be addressed to build a resilient, inclusive, and socially equitable healthcare system in the Sundarbans becomes a central theme.

Keywords: Accessibility to Healthcare, Inadequate Structural facilities, Gender Inequality, Social hierarchy, Power dynamics.

Introduction

A healthy life is a human basic need and achieving this require regular, good facilities and unrestricted access to quality healthcare services. Good health depends on adequate nutrition, sanitation, education, social security, and essential services that promote overall well-being. The healthcare centre offers a variety of services, which includes preventative, promotional, curative, and rehabilitative aimed at maintaining and improving health. Effective healthcare systems provide availability, affordability, quality, and timely delivery of services to all individuals (Gessert et al., 2015). However, access to healthcare, which means the obtain appropriate and timely medical care, remains a significant challenge

in remote and environmentally vulnerable regions. Healthcare delivery faces major problems due to physical remoteness, dispersed island settlements, poor transportation, and frequent natural disasters in the Sundarbans of North 24 Parganas (Chakraborty & Ghosh, 2019). These issues are exacerbated by a shortage of health clinics, inconsistent medical staff, inadequate diagnostic services, and frequent shortages of necessary medications (Hazra et al., 2015).

The Sundarbans region demonstrates how environmental fragility, geographical isolation, and continuous underdevelopment significantly affect health and healthcare services in North 24 Parganas. This area often suffers from storms, tidal flooding, salinity, embankment breaches, and seasonal river erosion. These challenges disrupt transportation networks and limit access to essential services. Especially, women are vulnerable due to restricted mobility, long distances to health facilities, and unreliable access to medical staff and essential medications (Ghosh, 2020). These barriers severely affect their ability to maintain good health and negatively impact their overall health status.

Women, face major barriers due to long travel times to health facilities, poor transportation, and a shortage of qualified medical professionals in North 24 Parganas, particularly in isolated blocks like Hingalganj and some parts of Hasnabad. The inconsistent availability of medical supplies, diagnostic services, and emergency treatment deprives them of timely and effective medical care (Bhattacharya, 2019). According to Gopalakrishnan, L. Ayadi, and Diamond-Smith (2024), these structural barriers are intimately associated with patriarchal pattern that restrict women's freedom, decision-making, and dependence on male family members for medical care. Consequently, many women delay necessary medical care, especially during pregnancy, illness, or reproductive health issues.

Therefore, women's healthcare issues are the consequence of an array of social inequalities, infrastructure constraints, and environmental vulnerability in the Sundarbans. To address these problems, gender-sensitive programs must be implemented for improve healthcare access, boost women's empowerment, and build resilient medical systems capable of functioning. This paper considers following objectives- a) To understand about accessibility and obtainability to the services of healthcare for women of Hingalganj and Hasnabad blocks in the Sundarbans, North 24 Parganas. b) To identify the major challenges faced by women in obtaining access to healthcare services. c) To find out practical and gender sensitive measures for improving healthcare accessibility in the both regions. This study investigates the barriers to healthcare access for those women. Our purpose is to contribute a deeper understanding of how geographic, social, and gendered factors together shape women’s health outcomes in two blocks of Sundarbans.

Literature Review

Arun and Prabhu (2023) explored the social factors that are indicative of health of rural women. The study highlights the value of education, family size, and support in determining health outcomes. It discovers that structural barriers that are exacerbated by embedded patriarchal views on gender and health, which restrict women's advancement, capacity to make decisions, and access to reproductive and maternity healthcare.

The impact of involvement in Self-Help Groups (SHGs) on rural women's ability to obtain healthcare facilities in the Sundarbans region of West Bengal. The study used a mixed-method approach and a structured interview technique to collect data from 234 members of the sampled SHGs, distinguishing functional and non-functional groupings. The study found that women in effective self-help groups are approximately 35 times less likely to have experienced violence, however this association was not statistically significant (at 0.5%) (Mullick & Khanna, 2021).

In their article (Chakraborty & Ghosh, 2019) analyses rural health research to improve healthcare access in ecologically fragile regions. This study consistently shows that in remote areas such as the Sundarbans, geographical isolation, poor transportation, and limited infrastructure severely limit women's access to timely healthcare services.
Sengupta (2012) explores women's participation in maternal health care, with an emphasis on the role of knowledge and literacy based on findings from the Indian Sundarbans. It emphasizes the necessity to redefine literacy in the context of maternal health to incorporate practical knowledge and its practical use. According to the report, reproductive health problems disproportionately affect women, accounting for 33% of the total disease burden, which is much higher than 12.3% for men.
Regmi (2012) examines the meaning of Effective Health Services (EHS) via interviews with healthcare professionals and those who receive the service. The study uses a mixed-methods for using analysis qualitative data thematically as well as quantitative data using SPSS. The findings indicate that EHS is critical for improving care quality, as both users and practitioners agree. The study underlines the importance of creating an enabling environment to promote the delivery of appropriate and productive services of health.
This study explores women's participation in maternal health care, emphasizing the role of knowledge and literacy, utilizing data from the Indian Sundarbans. It used the Enhanced two-step Floating Catchment Area method (E2SFCA) to evaluate access to maternal health facilities, highlighting differences between deltaic and non-deltaic regions. It underlines the necessity for redefining literacy in the context of maternal health to bring together practical knowledge and its application (Vadrevu & Kanjilal, 2016).
Al-Mamun et al. (2025) analyse the hurdles experienced by working women in southwestern coastal Bangladesh in obtaining antenatal care (ANC) services, stressing the problems created due to inadequate healthcare facilities and cultural attitudes. A structured questionnaire was used to collect data from 220 working mothers aged 16–45. The findings underline the importance of focused interventions to enhance maternal health outcomes in such vulnerable communities. It is also highlighted that improving maternal health is essential for public health and ANC services are necessary for positive pregnancy outcomes, especially in disadvantaged populations.

Research Methodology

This study followed a mixed methods approach, which included both quantitative and qualitative techniques and collected data through purposive sampling to investigate healthcare accessibility and challenges of women in the Sundarbans region of North 24 Parganas. In this study, two blocks of North 24 Parganas have been selected purposively and Primary data gathered from 50 women, with 25 respondents from Hingalganj block and 25 from Hasnabad block. Additionally, four focus group discussions (FGDs) have been conducted in both blocks. For this research, Primary data has been gathered from the respondents using a semi-structured schedule with both open and close questions. The primary purpose of this study to thoroughly investigate structural, socio- economic issues influencing women's access to healthcare facilities in this ecologically sensitive and socially disadvantaged region.

Analysis and Discussion:

The Present study cross-sectional survey was done on fifty women respondents residing in the two blocks of Sundarbans region under the district of North 24 parganas, West Bengal. The respondents age varies

between 18 to 60 years. In this region, most of the respondents age in between 36 to 45 years and they are married.

Table-1: Healthcare Facilities Accessible and Obtainable to Women in the Sundarbans of North 24 Parganas

Indicators (Available facilities)	Number of Women Respondents					
	Hingalganj (n=25)			Hasnabad (n=25)		
	High	Medium	Low	High	Medium	Low
Within 4-7km Healthcare facilities	4(16%)	6(24%)	15(60%)	6(24%)	8(32%)	11(44%)
The Availability of medical staff	5(20%)	8(32%)	12(48%)	6(24%)	9(36%)	10(40%)
Accessibility of necessary Medicines	4(16%)	7(28%)	14(56%)	7(28%)	8(32%)	10(40%)
Facilities for transportation	1(4%)	4(16%)	20(80%)	3(12%)	7(28%)	15(60%)
Time to get to the nearest Healthcare centres	3(12%)	7(28%)	15(60%)	7(28%)	8(32%)	10(40%)
Emergency services in healthcare centres	4(16%)	7(28%)	14(56%)	6(24%)	7(28%)	12(48%)
Women's decision-making autonomy	2(8%)	6(24%)	17(68%)	8(32%)	8(32%)	9(36%)
Availability of overall healthcare facilities	4(16%)	8(32%)	13(52%)	6(24%)	9(36%)	10(40%)

Source: Based on field data

The above table shows that the block-wise data analysis with following information: The Hingalganj block shows that most of the respondents (60%) expressed getting healthcare facilities after traveling 4-7 km, whereas it is positive (44%) in the case of the Hasnabad block. In case of availability of medical staff, most of the respondents 48% and 40% respectively in both blocks, have a low level of responses. It also depicts that Hasnabad has better accessibility of necessary medicines (40%) than Hingalganj (56%). In Hingalganj block, facilities for transportation have lower levels (80%) than Hasnabad block (60%). The majority of the respondents showed their negative attitude towards available transportation facilities (80%) and (60%), distance to healthcare centres (60%) and (40%), Emergency services (56%) and (48%), Women's decision-making autonomy (68%) and (36%) and overall healthcare facilities (52%) and (40%).

Table-2: Block-wise Distribution of Women Reporting Challenges of Healthcare Accessibility (N = 50)

Sl. No.	Challenges	Hingalganj (n = 25)	Hasnabad (n = 25)	Total (N = 50)	% of Respondents
1	Long distance to healthcare facilities	20	18	38	76.00

2	Inadequate transportation facilities	21	19	40	80.00
3	High cost of transport and treatment	17	16	33	66.00
4	Irregular availability of doctors	15	14	29	58.00
5	Shortage of essential medicines	16	15	31	62.00
6	Weak emergency referral services	22	20	42	84.00
7	Limited decision-making autonomy	19	17	36	72.00
8	Heavy household responsibilities	21	20	41	82.00
9	Low awareness of health services	14	13	27	54.00
10	Cultural norms and social stigma	16	15	31	62.00

Source: Field survey data

Based on the above data, it is clear that researchers have taken the two blocks together, Hingalganj and Hasnabad, where women face serious and multifaceted barriers to accessing healthcare. According to the majority of women (80%), inadequate transportation is a major obstacle to receiving healthcare services, the majority of respondents (82%) reported restricting their time to healthcare services due to heavy family responsibilities and a large percentage of respondents (84%) identified 'weak emergency referral services' as a serious concern.

It is evident from both blocks that the majority of women (76%) were facing challenges to access healthcare facilities due to long distance and most of the respondents (72%) opined that they had limited decision-making autonomy to access healthcare facilities. It is seen that most of the women (66%) reported limited healthcare accessibility due to the high cost of transport and treatment. It has also been observed that 62% of women believe the shortage of essential medicines may be a factor, cultural norms and social stigma (62%) and the irregular availability of doctors (58%), often forcing women to face more challenges to get healthcare services and 54% of women expressed a low level of awareness regarding the accessibility and availability of health services.

Table-3: Opinion of Respondents about Gender Sensitive Measures to Improve Healthcare Accessibility (N = 50)

Sl. No.	Gender Sensitive Measures	Hingalganj (n = 25)	Hasnabad (n = 25)	Total (N =50)	Percentage (%)	Level of Priority
1	Emergency boat/ambulance services for women	23	22	45	90.00	High

2	Improved transportation connectivity	22	21	43	86.00	High
3	Regular availability of doctors & staff	21	20	41	82.00	High
4	Telemedicine/boat clinics	20	19	39	78.00	High
5	Availability of essential medicines	20	18	38	76.00	High
6	More female healthcare providers	15	10	25	50.00	Medium
7	Flexible OPD hours for women	14	10	24	48.00	Low
8	Strengthening ASHA/ANM outreach services	13	12	25	50.00	Medium
9	Financial support for transport/healthcare	18	17	35	70.00	High
10	Health awareness & gender-sensitisation programs	14	11	25	50.00	Medium

Source: Survey data

It is clearly indicated from the above given table (3) that gender-sensitive measures are based on the percentage of the interviewed respondents to improve healthcare accessibility in the Sundarbans regions of both blocks. It has been seen that the majority of women (90%) reported emergency boat/ambulance services for women are highly desired. With 86% of women highlighting improved transportation connectivity, there is a high-level priority for reliable and affordable transport. It is also observed that the regular availability of doctors & staff (82%), telemedicine/boat clinics (78%), and availability of essential medicines (76%) and financial support for transport/ healthcare (70%) are identified as high-level priorities to access healthcare facilities.

Nevertheless, it is significant to note that a medium percentage of women (50%) thinks more female healthcare providers are necessary to improve healthcare services. It is also note that a medium percentage of women (50%) believe strengthening ASHA/ANM outreach services and 50% of women viewed health awareness & gender-sensitization programs as needing a medium-level priority for accessibility and availability of healthcare services. A low level of respondents (48%) opined for their view that they face problems to access healthcare services due to flexible OPD hours for women.

Focus Group Discussions in Hingalganj and Hasnabad Blocks

In this study, narrative analysis was used for collecting data from the women respondents. In order to understand how women in the Sundarbans experience healthcare accessibility and how they interpret healthcare access through their everyday lives. This method focused on women's stories, the sequence of events, and the meanings associated with their healthcare-seeking experiences. The study has conducted four focus group discussions from both blocks. There were two focus group discussions from Hingalganj and two focus group discussions from Hasnabad. For this research, to illustrate how structural barriers and gender norms shape these experiences.

Throughout the focus group discussions, the first group of Hingalganj women narrated experiences about how long and difficult travel by boat and poorly connected roads is to reach the health centre. Additionally, women experienced the frequent lack of doctors and medicines and repeated referrals that frequently compromised regular care from the centres. The 2nd group of Hingalganj women mainly focused on emergency treatments, especially during pregnancy or sudden illness. The narrative suggests that women relied heavily on male family members for permission, money, and transportation, often resulting in long delays in treatment.

First group of Hasnabad block women discussed about how difficult it is to reach the health centre by boat and poorly connected roads during focus group discussions. They said to reach the healthcare centre it takes 4-7 km. The women also experienced a shortage of doctors and medicines and repeated referrals that frequently compromised regular care from the centres. A second group of Hasnabad women concentrated mainly on emergency treatments, especially during pregnancy or when they become ill suddenly. As well, women mostly rely on male family members for permission, money, and transportation, resulting in prolonged treatment delays.

These narratives collected from experienced women in the Sundarbans regions of both blocks, 24 Parganas (North). These narratives expressed deep patterns of gendered sacrifice, where women prioritized household responsibilities over their own health and faced suffering until it became severe. In the response to these barriers, women described coping through informal healthcare providers and home remedies, not by choice but due to necessity. These challenges are noticed from the four FGDs, it is understood from their narratives that it requires improvement in healthcare facilities- regular availability of doctors and medicines, and more female supportive healthcare providers, Telemedicine etc. For this, it is also extremely necessary to create collective awareness, need for emergency ambulance services and well transportation services in two blocks of Sundarbans.

Findings of the Study:

This study observed, after analysing primary survey data and focus group discussions, that women in the Sundarbans face multifaceted challenges in accessing healthcare services; even timely access for women remains severely neglected in both blocks of North 24 Parganas. It is also observed that physical accessibility is a major challenge, with a large proportion of women reporting long distances to healthcare facilities (76%) and inadequate transportation (80%) as primary obstacles. These results highlight the physical isolation of the Sundarbans, where women's movement and access to timely medical care are severely hampered by reliance on toto, auto, and boats, inadequate road connectivity, high travel time and seasonal disturbances. Emergency referral services (84%) were identified as the most critical problem, especially for pregnant women at high risk during medical emergencies. A majority of respondents reported irregular availability of doctors (58%), shortages of essential medicines (62%), and high cost of transport and treatment (66%) to access to health services. It is also found that 72% of women reported limited decision-making autonomy, 82% of respondents reported heavy family responsibilities, 54% of women reported low awareness of health services and 62% of women reported cultural taboos and dependence on traditional healers lead many women to avoid institutional care.

From the analysis of FGDs, it is observed that women’s healthcare decisions are often mediated by male family members, with little autonomy to seek care freely. They always delay in treatment because they have to handle heavy household responsibilities and caregiving roles and more than that, they prioritize

family needs over their own health. The study also comes to know that cultural norms and stigma surrounding reproductive and gynaecological issues deeply discourage seeking treatment timely.
Furthermore, the study found out that availability and accessibility of overall healthcare facilities for women were facing more challenges in the Hingalganj block (52%) than in Hasnabad (40%) due to more vulnerable and severely disadvantaged regions. Moreover, the data show that enhancing healthcare access for women in the Sundarbans requires increased physical access and emergency services. There is also a need for regional healthcare improvements and community-based initiatives for the betterment of women's healthcare. From the responses of the women of both blocks of North 24 Parganas, it is suggested that these requirements are universal and structural instead of regional in nature.

Conclusion:
This study concludes that a complex interaction of environmental fragility, structural weaknesses, financial challenges and gender based social structures shape these regions, namely in the two blocks of the Sundarbans of North 24 Parganas. Although public healthcare facilities formally exist in these regions, physical isolation caused by riverine land, dependence on irregular boat transport, and poor road connectivity significantly deprived women to access timely healthcare, especially during emergencies. These geographical obstacles further complicate and weaken the healthcare system of the areas. Unavailability of adequate physician, lack of necessary medications, lack of diagnostic services, and insufficient referral systems-all are responsible for weakening the credibility and trustworthiness of public healthcare institutions.
Furthermore, the study finds that accessibility of women to healthcare is deeply gendered biased because decision making is often dominated by male family members. This is also affected by cultural norms and social stigma surrounding women's mobility and reproductive health. The need of women to take care for their health as quickly as possible is further hindered due to heavy domestic responsibilities and caregiving roles. Economic challenges in transportation and private care disproportionately affect women from low-income households. At the same time, the results show women's resiliency and crucial awareness for urgent transportation services, telemedicine, regular availability of medical staff and medicines, and increased presence of female healthcare providers. Present study indicates that improving women's healthcare access needs an integrated, gender-sensitive, and local policy approach. Simultaneously, it addresses infrastructural barriers, boosts health-care delivery, increases women's autonomy and decision-making authority to promote equal and sustainable healthcare outcomes.

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