



Understanding the dynamics of decision- making for maternal health care services in selected rural and urban areas of Bangladesh

August 2023



Background

The decision-making process for choosing and using maternal health care is multi-dimensional that is affected by various factors at the individual, community and health-system levels. Thus, a comprehensive understanding of the decision-making process for seeking maternal health services is crucial. Existing evidence on maternal health seeking behavior is mostly based on cross-sectional studies which provide information at one point in time. In order to fill this gap, a cohort study was conducted in one urban and another rural setting of Bangladesh, for exploring the complex hierarchy and interaction among the numerous factors in the decision-making process for maternal health care seeking behavior.

Methodology

The purpose of this study was to understand how the decision-making dynamics for maternal healthcare works when a woman becomes pregnant and to identify the factors that influence the decision making around maternal healthcare seeking over the course of a women's pregnancy. The study was conducted in two settings – one, a poor urban setting in Dhaka Metropolitan City and two, a rural setting in Rajbari district. In the urban setting, the study focused on households with poor living facilities from selected wards in 5 north-western regions of Dhaka City, covering Mohammadpur, Adabar, Darussalam, Sher-e-Bangla Nagar, and a small part of Hazaribagh. A number of government, NGO, and private health facilities with an extensive network of basic and comprehensive maternal healthcare services were located in and around the study area. For the rural setting, the study was conducted in the Health and Demographic Surveillance System (HDSS) area of icddr,b situated at Baliakandi upazila of Rajbari District.

An urban cohort of 1320 women and a rural cohort of 1239 women, who were all below 27 weeks of gestation, were followed-up until 8 weeks after delivery. The study applied quantitative and qualitative research methods supplemented by facility observation. Interviews were conducted with all women 3-4 times over their pregnancy which were 4 weeks apart and 2 times after delivery – the first one being within 1-2 weeks and the final one between 6-8 weeks after delivery.

Moreover, 70 in-depth qualitative assessments were conducted in the urban settings and 46 in the rural study area with selected women, their mothers-in-law and husbands. Finally, health facility observations were undertaken in 9 public, private and NGO (Non-governmental organization) facilities in urban study areas, and in 6 public and private facilities in rural settings to record maternity service availability and provision of care.

Key Findings

Among the 1522 enrolled women in the urban setting, we could follow-up completely 1382 women, excluding one maternal death, and 62 miscarriages. Regarding our rural cohort, amongst 1263 enrolled women, we could follow-up 1239 pregnant women until delivery and postpartum. In each urban and rural setting of our study, two-thirds of the enrolled women belonged to the 20-34 years age group and two fifths were first time mothers. Nonetheless, there were significant differences in terms of educational background and involvement in income generating activities. Ninety percent of the women from rural areas had primary or higher education, compared to 62% in the urban setting. However, involvement with the income generating activities of the urban women was approximately 2.5 times higher than their rural counterparts. Key findings on their decision-making process for maternal healthcare seeking is presented below:

Decision Making for Overall Health Care

Our rural study revealed that participatory decision-making was commonly practiced in planning the use of maternal health care services. About 56% of the women reported that usually the husband and wife jointly participated in the decision-making process for health care, while in 31% of the cases decisions were taken solely by the husbands. Discussion with in-laws, relatives and friends who were familiar with the health system was also common when choosing the provider and place of care seeking (9%), and only 4% of the women could make their own healthcare decisions. Similarly, in the urban setting, 39% of the women's decision for their overall healthcare was made jointly by husband and wife.

In 36% of the cases, healthcare decisions were made solely by their husbands, while family members made the decisions for 15% of women. Only 10% of the women themselves could make their healthcare decisions.

Antenatal Care (ANC)

- **Number of ANC visits**

In both urban and rural settings, over 90% of the women had received at least one ANC from a health facility and had done, on average, 2 ultrasonography (USGs). Moreover, 42% women in the urban area had received at least 4 ANC sessions compared to 33% in the rural study area. These figures were similar to the corresponding findings from the Bangladesh Demographic and Health Survey (BDHS) 2022, except for the rates of women having at least 4 ANC in the urban area, which might result from selecting the sample from a poor urban population.

- **Place of ANC visits**

In poor urban areas, 38% of women visited NGO facilities, 37% relied on public facilities and only 25% used private facilities, where qualified doctor's chambers and private hospitals/clinics were mostly used. This is attributable to the availability of reputed public facilities and the large number of NGO facilities providing ANC services in the urban study area. These facilities offer low cost or discounted services for the poor, while also offering specialist providers and conducting home visits that promote NGO services. On the other hand, among the facility ANCs, 78% of women in rural areas relied on private facilities, and only 22% used public services. While many private facilities are available at Upazila and district levels with specialist providers, public facilities generally showed a lack of readiness and in services available for ANC visits.

- **Pattern of Switching Place of ANC**

Respondents in both urban and rural settings had a similar pattern of switching for ANC. Among those with at least 2 ANCs, 27% of women in urban areas and 25% in rural settings stayed with the same facility type, 38% and 42% switched once, 20% and 22% switched twice and the rest switched thrice or more. Among urban women who did not switch, 12% stayed in public facilities, 10% in NGOs and 5% in the private sector.

Similarly, in the rural area, of those who stayed with the same type of facility, 23% remained in private facilities and only 2% stayed in the public sector. Poor urban women changed facilities mainly due to expense (26%) and distance (26%). Migration was the third reported reason, given that a considerable proportion of women moved to their village homes during pregnancy. Distance was also commonly reported by rural women (40%), together with a lack of ultrasonography (34%) and lack of skilled staff (28%). Moreover, poor service quality was one of the five most commonly reported reasons in both the settings.

- **Quality of ANC**

We had used the BDHS definition for assessing the quality of ANC, considering 4 or more ANC visits, at least one of which was from a medically trained provider, and having received at least once over the pregnancy all the basic components (weight and blood pressure measurements, urine, and blood tests, and information on signs of possible complications). Our analysis shows that only 28% of the women in our urban setting had received quality ANC, while the corresponding figure in the rural setting was only 8%. Our estimated level of quality ANC was also lower than the respective figures from the BDHS 2022. The reason for low use rate of quality ANC in the rural area is attributable to low use of the 5 basic components, specially counseling on the pregnancy danger signs.

Delivery

- **Place of delivery**

About a quarter (26%) of the women in our urban cohort moved to their village home for delivery. Among the 74% (n=973) women who stayed in the urban area during their delivery, 66% delivered at a facility (32% at public, 22% at NGO, and 12% at private facilities) and 34% at home. On the other hand, among the 26% (n=347) of women who migrated to a rural area for delivery, 52% delivered at home and 48% at a facility (6% at public, and 42% at private facilities). Those who went to public facilities were motivated by the lower costs of normal vaginal delivery (NVD) and caesarean section (CS) compared to private facilities, availability of one-stop services and of specialist providers. They were usually influenced by their doctors for NVD, or by the positive experience of friends and relatives.

On the other hand, in our rural cohort, more than half (58%) of the women delivered in private facilities, 16% in public facilities and 26% at home. Preference for private facilities resulted from round the clock availability of skilled providers, strong promotional activities, discounted services for the poor, lack of readiness of public facilities and a high tendency of referral from public to private settings.

Finally, both women in rural and urban areas who delivered at home were encouraged by the fact that it was easy and comfortable, entailed lower costs, and that they could rely on Traditional birth attendants (TBAs) and Community health workers (CHWs) for the service. Moreover, some women had previous experience of home delivery and were also motivated by religious beliefs and the fear of having a CS or episiotomy when attending a facility.

• **Switching place of last ANC to delivery**

A substantial proportion of women in the urban study who sought ANC at any public, NGO or private sector facility, opted for home delivery, though an equal proportion stayed with the respective type of facility. In particular, of the women who went to public facilities for their last ANC visit, around 40% delivered at the same facility, 27% in other facilities (12% at private, 10% at another public, and 5% at NGO facilities), and 33% at home. Similarly, of those who went to NGO facilities for their last ANC visit, approximately 29% delivered at the same facility, 34% at other facilities (14% at public, 13% at private, and 7% at other NGO facilities), and 37% at home. Finally, among the women who took their last ANC from private facilities, 20% delivered at the same private facility, 41% in other facilities (19% at other private, 16% at public, and 6% at NGO facilities), and the remaining women (39%) delivered at home. Half of the women who had received their last ANC at home, also delivered at home, while among the rest, 29% delivered at NGO facilities, 14% at public and 7% at private facilities.

The same analysis in the rural setting reveals a different picture, with a higher tendency to select the private sector for delivery. Of the women who had their last ANC at a public facility (15%), more than half (55%) delivered at private facilities. Among those who received their last ANC at a private facility, nearly two-thirds (60%) also delivered there. Finally, 62% of women who never received ANC delivered at home and 21% went to private facilities for delivery.

• **Changes in plans for delivery**

In both urban and rural settings, most women had planned for home delivery, although a substantial proportion ended up delivering at a facility. In the urban setting, 64% of women had planned for home delivery and yet 27% ultimately gave birth at a facility. Thirty-six percent had planned facility delivery most of whom followed through with their plan. In the rural setting, 44% of women had planned for facility delivery and 56% wished to deliver at home. The study found that 31% of the women who had planned for home delivery ultimately gave birth at a facility, with a substantial proportion (23%) delivering at a private facility. Changes in plans for delivery places were mostly due to development of complications, fear of fatal risk, referral, previous good experience with some health facilities, and influence of trusted individuals with strong connections to specific health facilities.

• **Facility Switching during delivery**

Before reaching the ultimate place of delivery, 13% of the women in our urban study and 11% of women in the rural area switched to different facilities. Regarding our urban cohort, the major (19%) switching was from public facilities and 11% of them ultimately chose a different public facility for delivery. Fourteen percent switched from NGO facilities, of which 8% went to public facilities for delivery. Overall three percent of women switched from private facilities, and 2% ultimately delivered at a different private facility. Major reasons for switching included referral, and health systems factors (lack of experienced staff, poor quality of service, no diagnostic facilities, long waiting hours etc.).

Most of the women (8%) who shifted to other health facilities for delivery in the rural area were from public facilities. Still, most of the women who shifted either from public or private facilities went to private clinics, 77% and 68% respectively. Referral and unavailability of specialists were the major reasons for switching. In public facilities, unavailability of emergency services (both for maternal and neonatal) particularly at evening and night shifts was a major driver.

• **Mode of Delivery**

In urban areas, 33% of women had a CS delivery in private (14%), public (12%), and NGO (7%) facilities, yet only 15% had planned for this mode of delivery. Major reasons included: rupture of membrane (32%), previous cesarean section (30%), and fetal complication (20%). In 85% of the cases, this change was suggested by the doctor to avoid maternal or fetal complications.

On the other hand, the CS rate was much higher in rural areas (57%), most of them being in private facilities (53%), although CS delivery was only planned in 32% of the cases. Of the 1239 women, overall, 66% (n=823) had planned for NVD and of them 37% (n=305) had shifted from their original plan and had C/S delivery. While most of the time, doctors suggested the change in mode of delivery (80%), in 20% of the rural cases it was proposed by the women or their family members. Among the women who changed the mode of delivery by the doctor's suggestions, the key reasons for changing from NVD to CS included: failure to progress in labor (34%), to avoid risks (29%), maternal complications (65%) comprising 29% delivery, 27% pregnancy, and 9% mal-presentation related, and fetal complications (22%). Further examination of the characteristics of the women who had planned a CS reveals that, in rural settings, the likelihood of planning a CS delivery in the first time mothers was two times higher compared to the urban area.

Complications

Thirty-seven percent of the women in the urban area reported at least one complication during any stage of their pregnancy, delivery, and/or postpartum period, while this rate was much higher amongst rural women (64%). Commonly reported complications included, obstructed/prolonged labor, severe/heavy/excessive bleeding, retained placenta, and convulsion/fits. Overall, 84% of the urban women sought care for complications mostly from private facilities (50%), followed by public (43%) and NGO health facilities (40%), while only 14% sought care at home. Regarding the rural cohort, 67% of women sought care and most of them from private facilities (50%). In both urban and rural settings, common reasons for not seeking care for complications included no perceived need (65% and 37% respectively), cost (27% and 11%), health system factors (8% and 7%).

In the rural cohort, a significant proportion of women (22%) did not understand the severity of the complications.

Postnatal Care (PNC) and Postpartum family planning (PPFP)

In urban settings, 46% of the women had their first PNC within the first 2 days of delivery, compared to 59% in rural areas. In both cases, only a small group sought PNC between 2-42 days of delivery - 5% in urban and 4% in rural study areas. Nonetheless, while in the urban area women sought PNC from public (17%), private (16%) and NGO facilities (11%), in rural settings most women sought PNC from the private sector (46%). Moreover, in the urban setting, the proportion of women who received PNC varied greatly by the mode of delivery – 85% of women with C/S received PNC compared to 27% of women with NVD. This trend is similar to that for our rural cohort, where most of the women who had NVD with TBA at home (81%) did not receive any PNC.

Finally, regarding Postpartum family planning (PPFP), use of contraceptive methods varied significantly between the urban and rural cohorts. While 38% of women in the urban study received any modern contraceptive method during their postpartum period regardless of the outcome of their current pregnancy, only 14% of women in the rural area had used PPFP. Among the PPFP users, in both urban and rural areas, pill was the most commonly used method (46% and 58%, respectively). This was followed by Injectables (23%), Implant (15%) and Condoms (10%) in the urban area. On the other hand, in the rural setting, the use of condoms was more frequent (20%), and a smaller rate of women used Injectables (5%) and ligation (5%).

• **Pattern of Switching Place from delivery to PNC**

In the urban setting, most of the women who delivered at home did not receive PNC1, while a substantial proportion of those delivering at public, private and NGO facilities also missed this service. Moreover, 96% of women did not receive PNC2, while those in PNC2 group were likely to be those missing the PNC1 within the defined 2 to 42 days after delivery. As such, actual PNC2 was likely to be almost absent in the study. The situation in rural areas is similar: 41% of women missed PNC1 and 96% of all women did not receive PNC2. The rural setting showed a higher use of the private sector for PNC1 (46%) compared to urban (16%). The contribution of the NGO sector in provision of PNC is almost non-existent in both settings.

Post Abortion Care

Among the 62 women in the urban study area who had miscarriages, 60% received post-abortion care (PAC): 38% from public, 35% from NGO, 35% from private facilities, and 3% from home. Since the women sought post abortion care from multiple facilities, these percentages do not add up to 100%. Reasons for not seeking care included: did not deem necessary (64%), cost (20%), taking medicine from the pharmacy (12%), and having no one to accompany (4%). Forty-eight percent of the women with miscarriages started to use contraceptives; most commonly used methods were pill (57%) followed by condom (23%), injectable (17%), and implant (3%).

Conclusion

The aim of this cohort study was to understand the decision-making process of rural and urban women around maternal healthcare seeking and the factors influencing their decision-making over the course of the pregnancy up until PNC. In both urban and rural settings, women and their families prefer to go to facilities with one-stop-services (trained providers, lab-tests, USGs, 24/7 delivery care). Findings in our urban study area indicate that use of the private sector is less among the low-income population in urban areas. These pregnant women and their families choose to not go to private facilities if adequate and effective care can be offered at public health facilities. On the other hand, for each ANC, delivery care and PNC, the majority of the rural women in our study preferred private clinics.

For ANC, large groups of women from both public and NGO facilities start switching to private facilities from the 2nd trimester in both settings, mainly influenced by availability of specialist providers and one stop services. In both urban and rural settings, low prevalence of quality ANC is due to inadequate provision of two services - urine tests and counseling on the danger signs. Moreover, despite having the last ANC at a facility irrespective of type (public/private/NGO) a large group of women delivered at home in both settings. In fact, the majority of the women in the our urban and rural study areas had planned for home delivery, mainly driven by convenience, comfort and costs, although a substantial proportion of them delivered at facilities mainly due to complications and to avoid taking risks. Moreover, rural women who had planned NVD were more likely to deliver by CS compared to the urban group. The first time mothers in rural settings are more likely to plan for CS compared to those in urban areas. This high CS rate in rural areas is attributable to high utilization of private facilities.

Furthermore, in poor urban settings, NGO facilities fill the gaps in service delivery for maternity care, while in rural settings, the lack of readiness of the public facilities is the primary reason driving women and families to choose private facilities for pregnancy and delivery care. Furthermore, in the rural study area, private facilities bring patients from the community and public facilities using aggressive marketing strategies such as engaging informal providers and brokers. Finally, in both the settings, of the women who delivered at home, only a small proportion (2-4%) received the first PNC and overall only about 5% had received PNC after 2 days of delivery.

Key Recommendations

Based on the research findings, the study proposes the following recommendations:

1) Expanding and strengthening of public facilities to increase utilization of maternity care:

In urban areas, establish dedicated public maternity hospitals such as Mohammadpur Fertility Services and Training Centre (MFSTC) to help promote one-stop pregnancy and delivery services. Furthermore, 24/7 delivery care services along with diagnostic facilities (USG & Lab test) should be ensured at Upazila health complex (UHC) and above public level facilities by providing required manpower and logistics.

2) Supporting NGOs for continuation of maternity care services in urban areas with service gaps:

In the urban setting, NGO led services should be continued and expanded in areas with service gaps by innovative public-private-partnership (PPP) model.

3) Systematic recording and reporting of data for controlling rate of CS:

A system should be developed for mandatory recording of each delivery event including indications of CS in all public and private facilities along with reporting to DHIS2 for periodic expert review for evidence-based decision making to control the current high CS rate.

4) Promoting NVD in private facilities providing obstetric care services:

A policy is needed for mandatory appointment of at least three graduate midwives at each private facility to promote normal delivery backed up by comprehensive emergency obstetric care.

5) Regulating private sector for good clinical practice for maternity care:

Private facilities should be brought under regulations to ensure accountability for evidence based maternity care services.

The detailed rural and urban reports may be found as Part 1 and Part 2 (Part 1- Rural Cohort and Part 2-Urban Cohort) in the following sections of this report.

Disclaimer This study was produced with the support of the United States Agency for International Development (USAID) under the terms of USAID's Research for Decision Makers (RDM) Activity cooperative agreement no. AID-388-A-17-00006. Views expressed herein do not necessarily reflect the views of the U.S. Government or USAID

