# Exploring Gender-Biased Sex Selection in Bangladesh:

## Causes and Consequences

**Department of Population Sciences**
**University of Dhaka**

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# RESEARCH TEAM

**Team Leader**          **AKM Nurun Nabi, PhD**

**Team Members**         **Md Aminul Haque, PhD**

                         **Mohammad Mainul Islam, PhD**

                         **Mohammad Bellal Hossain, PhD**

                         **Md Mehedi Hasan Khan**

                         **Sanjit Roy**

                         **Shafayat Sultan**

                         **Md Zakiul Alam**

# Message

The Department of Population Sciences, University of Dhaka (DPSDU), in partnership with the United Nations Population Fund and the European Union, has successfully completed this important study on gender-biased sex selection (GBSS) in Bangladesh, which explores the causes and consequences of this practice. The study generates evidence that helps to bridge the gaps in existing knowledge of GBSS and will help to equip policymakers to intensify their efforts to highlight the public health and human rights dimensions and implications of this issue.

The study explores couples' preference for small families and, more importantly, their preference for sons, particularly as the first child, which is expressed by both men and women. This clearly reflects the more valued position of sons in society.

Sex detection technologies are available in many health care service centres, which when combined with the strong presence of son preference and other preconditions of GBSS, suggests that Bangladesh is at great risk of having a potential rise of this harmful practice. Hence, robust implementations and modifications of existing laws and policies to prevent the risk emphasized by this study are a necessity.

I congratulate the DPSDU for conducting this important research. I would also like to acknowledge our development partners – UNFPA and the European Union – for their financial and technical support. I hope this study will serve as an evidential tool for the effective planning and coordination of policy development and action to minimize the risk of spreading GBSS in Bangladesh.

**Md Sohorab Hossain**
Senior Secretary
Secondary and Higher Education Division
Ministry of Education
Government of the People's Republic of Bangladesh

# Message

It is with immense pleasure that I introduce this research report, *Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences*, which is based on primary data collected from the field and prepared by the Department of Population Sciences at the University of Dhaka (DPSDU). In 2018, the Department published its first research report, which was based on secondary data and titled *Exploring Gender-Biased Sex Selection in Bangladesh: A Review of the Situation*.

We know that, globally, GBSS has become a key concern among policymakers and development partners due to its socio-economic and demographic implications. The existence of GBSS has been observed across the world, with substantial variation in incidence depending on the country context.

Although a significant amount of research on different gender-related issues has been conducted in Bangladesh, little research on GBSS has been undertaken. I am very happy that our development partners, UNFPA and the European Union, have come forward with technical and financial support to facilitate research on exploring this important manifestation of gender discrimination.

This research on exploring GBSS in Bangladesh bears greater significance for its emphasis on the importance of eliminating discrimination against women and ensuring women's empowerment in the context of achieving the Sustainable Development Goals. China, India and several Asian countries are now facing severe demographic as well as socioeconomic consequences due to the practice of GBSS. The findings of this study confirm that all preconditions that might promote GBSS are strongly evident in Bangladesh.

As part of achieving the Sustainable Development Goals, the Government of Bangladesh is very committed to eliminating many kinds of discrimination against women, as well as to facilitating their empowerment. To this end, various initiatives have been undertaken, including free education and stipend programmes for girls, and generating employment for women. I hope that the findings of this study will help to understand the extent of GBSS in Bangladesh and identify factors that promote its use, and thereby contribute to the design of effective policy interventions to prevent GBSS.

I would like to express my gratitude to UNFPA and the European Union for providing the financial and technical support to conduct this study. I sincerely hope that their commitment to the Department of Population Sciences in supporting population- and development-related activities will continue over the long term. Congratulations as well to the Department of Population Sciences for the successful completion of these two important studies.

**Professor Dr Md Akhtaruzzaman**
Vice-Chancellor
University of Dhaka

# Message

I am pleased to be part of the publication of this research report, *Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences*, an analysis of various dimensions of GBSS in Bangladesh. This report contributes greatly, I believe, to our knowledge about the practice of GBSS. This exploration is an important part of achieving the Sustainable Development Goals in general and in particular Goal 5: Achieve gender equality and empower all women, which entails eliminating all forms of discrimination against women and girls.

I believe that this study will help readers to gain important insights into GBSS, particularly its dynamics and preconditions/drivers, as well as the direction of future research and policy recommendations on the issue in Bangladesh. In addition to grappling with the challenge of GBSS across Asia and around the world, this study gives us a new and clear direction for conducting future research on GBSS in Bangladesh. Moreover, it will be an important reference work for researchers in other countries. Its findings will contribute to the design of effective policy interventions to prevent GBSS. In addition to enhancing capacity at DPSDU, this publication will contribute to scholarship in the field of population science.

As we continue to gain expertise in conducting high-quality research, more and more challenges will be seen. To keep up with the pace of change and increasing expectations, we need to plug the gaps, and to check and recheck. Since GBSS research involves a significant amount of documentation, lessons learned from this report should be addressed in future studies. Although we have made significant progress towards gender equality, we still need to recognize that there is more work, considerable work, on the horizon to be done. I hope that DPSDU will join this effort, by conducting more evidence-based research in future.

I wish to thank the many individuals, organizations and agencies that have invested their time and resources in our work; their commitment has been both remarkable and humbling. My sincere thanks as well to the research team, colleagues and staffs of DPSDU who helped to make this publication a reality.

I would also like to acknowledge the support of Dr. Mahmuda Khatun, Consultant, UNFPA Bangladesh, and Professor, Department of Sociology, University of Dhaka, for her frequent advice and suggestions. I would also like to acknowledge the cordial support given by Mr. Mahboob E Alam, National Programme Officer and Chief a.i. (Population Planning & Research), UNFPA Bangladesh; and Ms. Shamima Pervin, Programme Specialist–Gender, UNFPA Bangladesh.

Lastly, I would like to express my sincere gratitude to UNFPA Bangladesh and the European Union for providing financial and technical support to conduct this important study. I hope their generous support to the DPSDU will help us continue to address population and development issues in Bangladesh.

**Professor Dr Mohammad Mainul Islam**
Chairman
Department of Population Sciences
University of Dhaka

# Message

Gender-biased sex selection (GBSS) is a harmful practice that represents a denial of the dignity and integrity of the individual and a violation of human rights. GBSS is a manifestation of extensive gender discrimination and the preference for sons, and is a reflection of how Bangladeshi society undervalues girls and women. It legitimizes serious gender-based discrimination, violates girls' human rights and devalues their potential.

An imbalanced sex ratio at birth (SRB) results in severe demographic imbalances between males and females, culminating in a large number of "missing women" in several countries around the world. Recent studies indicate that 126 million women and girls were missing in 2010 due to GBSS, which can include, for example, excess female mortality and prenatal sex selection. Projections estimate that more than 142 million women will be missing by 2020.

The UNFPA Global Programme to Prevent Son Preference and the Undervaluing of Girls (2017–2019) was launched with funding from the European Union and implemented in Azerbaijan, Armenia, Bangladesh, Georgia, Nepal and Viet Nam to gather data about imbalanced sex ratios at birth and design human rights-based and gender-equality focused interventions. The UNFPA Country Office in Bangladesh has focused on research and knowledge generation in this phase of the Global Programme.

In Bangladesh, UNFPA has collaborated with DPSDU to implement the programme, commissioning two major studies. The data gathered in this study established the fact that the preconditions of GBSS are present in Bangladesh; in addition, a few cases of sex-selective abortion were found in some instances. The study has gathered a significant amount of evidence on the preconditions of GBSS, which may escalate the situation and spread GBSS in Bangladesh in the near future. The study strongly recommends that governments undertake programme interventions to address the preference for sons and the undervaluing of girls so that GBSS does not become a more significant issue in Bangladesh.

UNFPA remains committed to encouraging and supporting efforts by states, international and national organizations, civil society and communities to uphold the rights of girls and women and to address the multiple manifestations of gender discrimination, including the problem of imbalanced sex ratios caused by sex selection and son preference. UNFPA will continue to support the Government of Bangladesh to intensify its efforts to uphold the rights of girls and women and to address the multiple manifestations of gender discrimination, including the problem of imbalanced sex ratios caused by sex selection.

I would like to thank the research team of DPSDU and the technical team of experts, academics, demographers, development actors and United Nations agencies for their contribution to this unique study. I would also like to acknowledge the technical support of the UNFPA Regional Office in making this study a success. Finally, my thanks go out to the European Union for their financial support for the Global Programme in Asia and the Caucasus.

**Dr Asa Torkelsson**
Representative
UNFPA Bangladesh

# Message

The European Union is pleased to collaborate with UNFPA in the creation of this report, *Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences*. Preceded by a study exploring the overview of the situation in the country, this report takes a deeper look at the determinants and drivers of GBSS in Bangladesh.

Led by the Department of Population Sciences of the University of Dhaka (DPSDU), the study explores GBSS in Bangladesh, weaving in significant preconditions and underlying factors, and points the way forward on action needed at the policy, academic and programmatic levels.

The study also reveals the strong presence of preconditions of GBSS in Bangladesh: the preference for sons, the use of sex-detection technology, the desire for smaller families and a low fertility rate. The possibility of a rise in the practice of GBSS cannot be ruled out given the prevailing patriarchal social norms and practices in Bangladesh as well as the recent dynamics in fertility transition. The declining fertility rate, coupled with patriarchal and authoritative sociocultural structures, reinforces son preference and ultimately may culminate in a skewed sex ratio at birth (SRB) in Bangladesh, as global evidence shows. This study is therefore integral to the gathering of information on GBSS around the world, as it has collected a significant amount of data on the underlying preconditions of GBSS.

I believe that this report will serve as an evidential tool for the effective planning and coordination of policy development and preventive actions to address the issue of son preference and undervaluing girls in Bangladesh. More importantly, I hope it will provide a basis for methodical discussion and debate within academia and with other relevant stakeholders, and provide a path forward for creating solutions to prevent the causes of GBSS and gender inequality overall.

I would like to take the opportunity to thank the research team at DPSDU and extend my gratitude to UNFPA for its assistance in developing a knowledge base on GBSS situation in Bangladesh and to addressing the repercussions of this harmful practice.

**Ms Rensje Teerink**
Ambassador/Head
Delegation of the European Union to Bangladesh

# Foreword

Gender-biased sex selection (GBSS) is a state of affairs created by an imbalanced sex ratio at birth in favour of boys against girls; it is measured using sex ratio at birth, a comparison of the number of boys born versus the number of girls born in a society. GBSS is essentially a violation of human rights as an extreme form of discrimination against girls; also, it carries the risk of unsafe abortion or menstrual regulation (MR) performed at facilities that are not legally allowed to do so. The existence of GBSS is a symptom of "a terrible story of inequality and neglect leading to the excess mortality of women" concluded Amartya Sen when he estimated that globally over 100 million women were "missing".

Biologically average sex ratio at birth (SRB) ranges from 102 to 105 or 106 males per 100 females. If the SRB rises above 107, it may be a sign of son preference and a sign that prenatal sex selection could be taking place. Since the 1980s, an unusual SRB as high as 130 has been observed in some South Asian, East Asian and Central Asian countries. Prenatal sex selection occurs due to the existence of deeply rooted socio-cultural values and norms within a traditional patriarchal society where son preference predominately prevails, and where women are undervalued and discriminated against.

The Department of Population Sciences of the University of Dhaka (DPSDU), in partnership with the United Nations Population Fund (UNFPA) and European Union (EU), has conducted a study to explore the causes and consequences of GBSS to recommend effective policies and strategies to alleviate its causes and avert its negative consequences in Bangladesh. The study findings establish that all preconditions/drivers (such as patriarchy, stereotyped attitudes towards traditional gender roles, small family values, agrarian economic relations, lack of adequate social safety net protection for future security of older parents, and availability of sex selection technology) required for GBSS to take place strongly exist in Bangladesh society. New emerging economics and small family size norms have added some extra impetus in the context. Availability of and access to different modern technologies to detect the sex of the fetus prenatally has facilitated the preconditions in places where it could not happen earlier easily. A large number of pregnancies are terminated by means of MR, especially through MR using medication (MRM).

We hope that this research contributes to an understanding of the issues related to GBSS, and to achieving the Sustainable Development Goals, specifically the targets related to achieving gender equality, women's empowerment and ending all forms of discrimination against women and girls.

We would like to express our gratitude to UNFPA and the European Union for providing generous financial and technical support to conduct the research. Special mention is due to Ms. Shamima Pervin, Programme Specialist–Gender, UNFPA Bangladesh; Mr. Mahboob E Alam, National Programme Officer and Chief a.i. (Population Planning & Research), UNFPA Bangladesh; and Prof. Dr. Mahmuda Khatun, Consultant to UNFPA, for their support and feedback to make this research a success. We appreciate highly of the contributions made by the members of the Research Team. Also heartfelt thanks to all other members of the Academic Committee of the department, members of the technical committee, staffs of DPSDU, authorities of BBS and NIPORT, and the Dhaka University administration for providing necessary supports and assistance to complete the research.

**Professor Dr AKM Nurun Nabi**
Team Leader
GBSS in Bangladesh: Exploring Causes and Consequences

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# Acronyms

| | |
|---|---|
| ANC | Antenatal Care |
| BBS | Bangladesh Bureau of Statistics |
| BDHS | Bangladesh Demographic and Health Survey |
| D&C | Dilation and Curettage |
| DGFP | Directorate General of Family Planning |
| DPSDU | Department of Population Sciences, University of Dhaka |
| EA | Enumeration Area |
| EU | European Union |
| EVA | Electric Vacuum Aaspiration |
| FWA | Family Welfare Assistant |
| FWV | Family Welfare Visitor |
| GBSS | Gender-Biased Sex Selection |
| IMPS | Integrated Multi-Purpose Sample |
| INGO | International Non-Governmental Organization |
| IP | Implementing Partner |
| IPS | Instant Power Supply |
| IRB | Institutional Review Board |
| KII | Key Informant Interview |
| MBBS | Bachelor of Medicine and Bachelor of Surgery (undergraduate course) |
| MCWCs | Maternal and Child Welfare Centres |
| MD | Doctor of Medicine (postgraduate course) |
| MICS | Multiple Indicator Cluster Survey |
| MOMCH | Medical Officer – Maternal and Child Health |
| MR | Menstrual Regulation |
| MRM | Menstrual Regulation Performed with Medication |
| MVA | Manual Vacuum Aspiration |
| NGO | Non-Governmental Organization |
| PCA | Principal Component Analysis |
| PNC | Post-Natal Care |
| PSU | Primary Sampling Unit |
| SACMO | Sub-Assistant Community Medical Officer |
| SBA | Skilled Birth Attendant |
| SDT | Sex-Detection Technology |
| SRB | Sex Ratio at Birth |
| SVRS | Sample Vital Registration System |
| TBA | Traditional Birth Attendant |
| TFR | Total Fertility Rate |
| UFPO | Upazila Family Planning Officer |
| UHFWC | Union Health and Family Welfare Center |
| UN | United Nations |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children's Fund |
| WHO | World Health Organization |

# Executive Summary

Gender-biased sex selection (GBSS) is a harmful practice, a form of discrimination against girls, and a human rights violation. It is alarming as it reflects the persistent low status of women and girls. The resulting gender imbalance can have a damaging effect on societies. In Bangladesh, the preconditions that can promote GBSS exist throughout society, including widespread preference for sons. At play are interactions among deeply rooted socio-economic, religious and cultural values, and social norms of the traditional patriarchal society where son preference prevails (DPSDU, 2018). Cultural norms that reinforce the value of a male child can contribute to GBSS when individuals are willing to consider sex selection to ensure they have one or more sons without exceeding their desired family size. Data clearly show that more people want boys than girls, especially around first births.The data we have gathered in this study do not clearly indicate that GBSS is taking place in Bangladesh. However, the study has gathered a significant amount of information on the preconditions of GBSS.

A key sign of GBSS is a skewed sex ratio at birth (SRB). SRB is the ratio of male to female births, generally expressed as the number of boys born for every 100 girls born. The natural SRB is often considered to be around 105 males per 100 females (WHO, 2011; Kashyap & Villavicencio, 2017). When the SRB rises above 107, it may be a sign of son preference and a sign that sex selection could be taking place (DPSDU, 2018).

Researchers have examined various aspects of GBSS, including determinants and consequences (Jiang et al., 2016; Bongaarts, 2013; Bharadwaj and Lakdawala, 2013; Mukherjee, 2013; UNICEF, 2011; Chung and Gupta, 2011; Fuse, 2010; Guilmoto 2009; 2015; 2017, 2018; UNICEF, 2014; UNFPA, 2012). These studies identify the existence of various elements of GBSS across the world, with substantive variations by country. The socio-cultural context of Bangladesh is such that women are dependent on men in every stage of their life cycle. This dependence has been institutionalized through the patriarchal, patrilineal and patrilocal structure of the society. In most cases, women in Bangladesh experience lower educational attainment, occupational status and income attainment. Not only is patriarchy predominant, but fertility rates are on the decline. These factors, plus son preference, explain why the existence of GBSS can not be ruled out in Bangladesh.

The present study, "Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences" is the result of UNFPA's long-standing partnership with the European Union Delegation in Bangladesh. As an extension of that collaboration, the partners selected the Department of Population Sciences at the University of Dhaka as an implementing partner under the 9th Country Programme between UNFPA and the Government of Bangladesh. The objective of this study is to explore the dynamics of gender-biased sex selection and to recommend effective policies and strategies to alleviate the causes of GBSS and avert its negative consequences in Bangladesh.

This study attempts to identify the preconditions of GBSS in Bangladesh and, if GBSS is found, the potential consequences of GBSS in the country. It examines the availability of and access to sex-detection technologies (SDTs) and the extent to which they may be used in conjunction with menstrual regulation (MR). It also attempts to identify the extent of abortion (induced/clandestine), which is illegal in Bangladesh except to save a woman's life, and mechanisms through which it may be contributing to GBSS.

This study employs a mixed-methods research design. Data were collected from four types of respondents using face-to-face interviews by structured questionnaire and topic guide. The respondents

of the quantitative study were ever-married women aged 15–49 with at least one child aged less than or equal to five years and health facilities at district, sub-district and union level. A total of 2,610 randomly selected ever-married women were interviewed. Selection of the study areas were determined by their relative SRB. Three out of seven divisions of Bangladesh were selected based on their SRBs as high, medium and low: Sylhet (107.1), Dhaka (106.6) and Rangpur (105.5). Qualitative data was collected from women who have used MR or abortion services, husbands of women who have used MR or abortion services, and programme managers and services providers including the following: gynecologists, sonologists, medical officers, Upazila family planning officers, sub-assistant community medical officers, family welfare visitors, family welfare assistants, counsellors and skilled birth attendants.

Overall, 64 out of 2,610 ever-married women (2.5 per cent) in this study reported that they had terminated a pregnancy after three months of conception (after 12 weeks), which varied according to study areas. The three most common reasons were complications due to accident (36.5 per cent), physical complications (33.3 per cent) and unintended pregnancy (28.6 per cent).

Three preconditions are considered conducive to sex-imbalance at birth, giving rise to the potential occurrence of GBSS in a society: son preference, low fertility and access to sex-detection technology (Guilmoto, 2009; 2015; 2018).

The first precondition of GBSS is son preference.The study finds about 28 per cent of women had a son preference for their first child while this rate was 24 per cent among men. Most of the women desired a son as their first child because a son: is more acceptable in the society (43.8 per cent), source of future security (43.0 per cent), can secure the asset of the family (42.6 per cent), source of future economic security for family (22.9 per cent), can continue a line of descent (22.4 per cent), and source of mental strength for parents (22.3 per cent).

The second precondition of GBSS is low fertility, according to Guilmoto (2009; 2015; 2018). Ninety-one per cent of currently married women preferred small families while the rest preferred large families. The preference for small families varied with women's age, division, place of residence and education. The total fertility rate (TFR) in Bangladesh has declined dramatically from as high as 6.3 births per woman in the mid-1970s to 2.3 children in 2017–2018 (NIPORT et. al., 2019).

The third precondition is access to sex-detection technology (SDT). Eighty-two per cent of the women said SDT was available in their areas or their neighbouring areas. Ultrasound technology was available in 23 out of 34 facilities, as found by the health facility survey. Overall, 40 per cent of women used ultrasonography to detect the sex of the fetus. The qualitative data found several motives behind utilization of SDT: to learn the overall health status and position of the fetus, to detect complications in patients with post-MR health issues, for antenatal care, to learn the sex of the fetus, due to doctor's advice and for caesarean delivery.

Menstrual regulation (MR) in Bangladesh is one of the official family planning methods and is legal up to 12 weeks (GoB, n.d.). The study finds that MR services were provided in 19 out of 34 health facilities. About 9 per cent of women ever used MR. Of women who had used MR services, the most prevalent method (44.1 per cent) used is MR performed with medication (MRM) followed by manual vacuum aspiration methods (33.1 per cent). Close to 17 per cent of women had performed MR after 10 weeks from the last date of menstruation. About 27 per cent of women used last MR services from the private hospitals/clinics, while 9.5 per cent of women obtained treatment from persons unqualified, underqualified or unlicensed to provide medical care. The predominant reason for using MR services was to terminate

the unintended pregnancy (58.8 per cent), followed by physical complications (17.6 per cent) and fetus damaged by accident (17.6 per cent).

This study provides strong evidence that the preconditions of GBSS exist in Bangladesh. This study reemphasizes the need for implementing existing laws, policies and programmes to enhance the status of women and girls and reduce harmful practices rooted in discrimination, as part of efforts to prevent the risk of spreading GBSS in Bangladesh. MR-related services at the closest health care facilities such as Union health and family welfare centres (UH&FWC) should be ensured and strengthened. Strong advocacy and awareness-raising activities should be ensured to stimulate conversation, discussion and debate within communities to strengthen and expand consensus around the concept of the equal value of girls and boys. Follow-up and monitoring of MR policy guidelines should be employed by service providers by the relevant Ministry to address emerging health risks. Provision of MR services such as MRM should be practised under strong monitoring and supervision to prevent abuse.

The study found only four cases out of 64 abortions (after 12 weeks), where women deliberately discontinued the pregnancy for purposes of sex selection. Few cases of such kind may occur in the community; the magnitude of such incidence could be very low; and the SRB remains balanced. However, the strong presence of GBSS preconditions may escalate the situation and spread GBSS in Bangladesh.

**Three future scenarios could arise:**

One scenario could be that GBSS may take place in Bangladesh in the near future as SDT reaches the doorsteps of more couples and the society advances economically and socially. A demographic masculinization process (Guilmoto et al., 2018) has taken place in neighbouring countries of India and Nepal, and Bangladesh could join this group in the future, as it takes time for the consequences of GBSS to fully develop statistically (Guilmoto, 2009; Guilmoto et al., 2018).

The second scenario could come from using MR, which is one of the official family planning methods and is legal up to 12 weeks. This study finds ever-married women went through MR to terminate a fetus. If advanced technology to detect the sex of the fetus (even before 12 weeks) becomes available in the country, the GBSS situation may change in Bangladesh.

The third scenario could be that GBSS may never gain momentum in Bangladesh, as the governmental, non-governmental and social institutions have been very active in enhancing the status of women in society. Since evidence shows few cases of GBSS, unless reliable census or other large-scale quantitative data is obtained, it is hard to know for certain. Thus, the government and other stakeholders should carefully monitor the SRB and measure demographic sex ratios accurately through large-scale surveys in future. The government with all stakeholders, including United Nations agencies, international NGOs and national non-governmental organizations should work hand in hand to make Bangladesh a safe place that values girls.

Chapter

1

Introduction

# Chapter 1
## Introduction

Gender-biased sex selection (GBSS) in favour of boys against girls is a symptom of "a terrible story of inequality and neglect leading to the excess mortality of women" concluded Amartya Sen when he estimated that globally over 100 million women were missing (Sen, 1990). Both prenatal and post-natal sex selection against girls have contributed to "missing" women around the world (Bongaarts & Guilmoto, 2015). Post-natal selection includes infanticide and neglect. Prenatal sex selection essentially comprises parents making informed choices about keeping their fertility low, having their desired type of children (in this case sons), and having access to sex-detection technology (SDT) (Guilmoto, 2009). Prenatal sex selection involves financial costs and technology to attain a goal of having the desired number of sons with a small family size.

The sex ratio at birth is the ratio of male to female births, generally expressed as the number of boys born for every 100 girls born. Biologically, a sex ratio at birth of 105-106 is considered normal, meaning there are 105 or 106 males born for every 100 female births. The rate goes up when more sons than daughters are born. There is no evidence supporting a conclusion of natural masculization above an SRB of 107 and at this point a deliberate choice of gender-biased sex selection against the girl child is the most likely reason. GBSS has implications on the family, marriage, dowry system, social expectations, violence, anti-social behaviour and many more social factors (Guilmoto, 2018; Hesketh, Lu, & Xing, 2011). Women do terminate fetus of both sexes if they have more sons or daughters than their desired levels. Both of these options constitute GBSS. However, the underlying theme of most studies regarding GBSS (Rahm, 2020; Becquet & Guilmoto, 2018, Guilmoto, Dudwick, Gjouca, & Rahm, 2018) is to focus on the number of women missing globally from the numbers which would be predicted through calculation of world population by gender using naturally expected SRBs. Documentation of this deficit captures and depicts in data the important issue of discrimination against women and girls.

What is our understanding of GBSS, our main concerns, and what can be done to prevent it? In collaboration with the United Nations Population Fund (UNFPA) and the European Union, the Department of Population Sciences of the University of Dhaka conducted this study to explore the dynamics of GBSS in Bangladesh.

### 1.1 Understanding the dynamics of gender-biased sex selection

GBSS that makes prenatal use of modern technology is a **process** (finding out the sex of the fetus), an **event** (deciding whether or not to continue or terminate the pregnancy) and an **outcome** (a skewed sex ratio at birth). With some numbers, we can establish GBSS as a combination of a process, an event and an outcome. However, understanding the dynamics of gender-biased sex selection is far more complex, encompassing not only the personal choice and action of an individual, but also the collective social impact of the aggregation of such individual choices on a society. To comprehend the dynamics or mechanisms at work behind GBSS, we require many personal stories in addition to hard numbers. These stories have been told very eloquently and efficiently by Guilmoto (2009; 2012; 2015; 2017; 2018), who argues that the key element in understanding GBSS in favour of boys is the sex ratio at birth, or, where data on SRB is lacking, the child sex ratio (2009).

Researchers (e.g. Jiang , Li, & Sanchez-Barricarte, 2016; Bongaarts, 2013; Bharadwaj & Lakdawala, 2013; Mukherjee, 2013; UNICEF, 2011; 2014; Chung & Gupta, 2011; Fuse, 2010; UNFPA, 2012) have examined various aspects of GBSS, including determinants and consequences. These studies identify elements of GBSS across the world, with substantive variations by countries. Guilmoto (2009; 2012; 2015) has presented a framework for understanding the basic factors, such as son preference, low fertility and use of sex-detection technology, that contribute to skewed SRB. He grouped these factors under the umbrella term "three competing hypotheses":

- **Adaptive behaviour:** While progress in technology has brought many positive changes, it has also provided a means for people to skew births in favour of boys (DPSDU, 2018).

- **Economic crisis and conflict:** During economic crisis and conflict, parents become more dependent on sons in particular for financial, emotional and other kinds of support, along with the traditional intergenerational flow of wealth. The perception of required support may motivate parents to prefer sons instead of daughters, which may eventually lead to GBSS.

- **Specific set of local factors:** The existence of certain local factors sets the stage for GBSS, such as strong patriarchal mind-set, rigid gender roles, patriarchal systems of inheritance, patrilocal living arrangements, culture, exogamy and hypergamy. These factors create unequal power relations between men and women.

The practice of GBSS from the perspective of an individual person can be seen as the outcome of certain preconditions being met. Guilmoto (2009) examined the technology-driven progress in GBSS through the use of contraceptives to stop childbearing once the desired family composition and sex ratio has been achieved; the use of pharmaceutical drugs to induce abortion; and the advent of modern technology (e.g. ultrasonography) that has enabled parents to choose the particular sex of a child efficiently.

## 1.2 Gender-biased sex selection in the global scene

Worldwide, the biologically normal SRB can range from 102 to 105 or 106 males per 100 females  (United Nations, 2011; Kashyap & Villavicencio, 2017). GBSS became visible in the 1980s and has shifted geographically over time:  in some Asian countries, such as China, India and the Republic of Korea in the 1980s; in some  Caucasus countries, such as Azerbaijan, Armenia and Georgia in the 1990s; and more recently, in Albania, Montenegro and Viet Nam in 2000 (UNFPA, 2012).

In 2017, China had the highest skewed SRB (115 males to 100 females), followed by Armenia (113), Azerbaijan (113), India (111), Georgia (110), Viet Nam (110), Pakistan (109) and Maldives (108) (World Population Review, 2017). The reason behind this unwarranted sex ratio is the tendency to select the sex of the child before birth. Among the South Asian countries, India had the highest skewed SRB (110.6), followed by Pakistan (108.7) and Maldives (108.4) and Nepal (106.5), with other countries somewhat lower: Afghanistan (106), Bangladesh (104.3), Sri Lanka (104.3) and Bhutan (104) (World Population Review, 2017).

## 1.3 Exploring the preconditions for GBSS in Bangladesh

The socio-cultural context of Bangladesh is such that women are dependent on men in every stage of their life cycles. This dependency has been institutionalized through the patriarchal, patrilineal and patrilocal structure of the society. The patriarchal and authoritative socio-cultural structures along with demand for male labour in the economy reinforcing son preference ultimately may create a skewed SRB. The combinations of son preference, declining fertility and rapid developments in technologies that allow parents to know the sex of the fetus before birth have set the stage for sex selection (UNFPA, 2012).

UNFPA, the United Nations Population Fund, and the European Union (EU) initiated a collaborative effort to understand much more about skewed SRB and GBSS. The UNFPA Global Programme to Prevent Son

Preference and the Undervaluing of Girls implemented during the period 2016–2019 and was funded by the European Union. The programme was implemented in Armenia, Azerbaijan, Bangladesh, Georgia, Nepal and Viet Nam. It had the following interconnected objectives: 1) expand the existing knowledge base on GBSS; 2) strengthen national and regional capacity to implement and monitor policies and programmes that address GBSS; and 3) establish an inter-regional mechanism to strengthen national capacity and South-South collaboration.

In Bangladesh, the implementing partner of this joint collaborative effort of UNFPA and the European Union is the Department of Population Sciences of the University of Dhaka (DPSDU). In the first phase, the DPSDU conducted a study titled "Exploring Gender-Biased Sex Selection in Bangladesh: A Review of the Situation"(DPSDU, 2018) through a critical review of literature, and examination and analyses of major data sets such as the Bangladesh Demographic and Health Survey (BDHS) 1993-2014; Multiple Indicator Cluster Survey (MICS) 2012-2013; Sample Vital Registration System (SVRS) 1981-2016; and Bangladesh Population and Housing Census 2011.

The review found that although a large number of studies have investigated many aspects of gender inequality in Bangladesh, only a few studies (e.g. Talukder, Rob & Noor, 2014; UNICEF, 2011; Bairagi, 2001) have attempted to study the dynamics of GBSS across its levels, patterns and trends, differentials, determinants and consequences. A firm conclusion about the existence of GBSS from the situation review was difficult to draw, as different data sets vary in their objectives, methodology, respondent types and timing of data collection.

## 1.4 Determinants of gender-biased sex selection at birth in Bangladesh

The determinants of GBSS are diverse yet interconnected, so that when one issue emerges for the betterment of humanity, it gets connected to another issue, and as society progresses, that connection creates a composite issue that could have either positive or negative implications depending on many circumstances. GBSS varies regionally between and within countries. Scholars have tried to put these experiences in theoretical frameworks, and researchers test these frameworks in different contexts. As noted above, Guilmoto (2009; 2015; 2018) presented his "three competing hypotheses" framework for understanding the basic factors such as son preference, low fertility and sex selection technologies, which contribute to skewed SRB.

**The first factor is son preference.** Preference for sons is the important factor behind highly skewed SRB, as argued by Guilmoto and others (Guilmoto, 2015; Talukder et al., 2014; Bongaarts, 2013; Huq, Kabeer & Mahmud, 2012; Fuse, 2010). Three major reasons for son preference among couples include: sons have higher wage-earning capacity particularly in an agricultural society; sons continue the family line; and sons are generally the recipients of inheritance (Hesketh & Xing, 2006). Daughters move to their new husband's home after marriage in these societies. Raising a daughter is regarded as "watering the neighbour's garden" (Attané & Guilmoto, 2007; Sattar, Ahmad, Zakar & Maqsood, 2018).

**The second factor is low fertility**. GBSS limits the number of girls in the family, enabling parents to have one or more sons without exceeding their desired family size. As fertility falls, the pressure to sex-select can rise unless there is a concomitant decline in the number of boys desired. Fertility decline may exert pressure on couples to resort to sex-selective abortion. The purpose of this is to make sure to have a son, variously termed an "intensification" or a "squeeze" effect (Gupta & Bhat 1997; Guilmoto, 2009).

The total fertility rate (TFR) in Bangladesh has declined dramatically from as high as 6.3 births per woman in the mid-1970s to 2.3 children in 2017-2018– a sharp decline by 4.0 children, which is double the global rate (NIPORT et. al., 2019). This represents a very fast in changing reproductive behaviour.

**The third driving force behind GBSS is access to sex-detection technology**. Ultrasonography is available for prenatal sex-detection in Bangladesh both in government hospitals and in private sector

health facilities, but was not widely used for sex-detection in Bangladesh in the past (Huq et al., 2012). Disclosure of the sex of the fetus as determined through ultrasonography has increased (Population Council & CREHPA, 2015).

Unintended pregnancies account for as many as 48 per cent of pregnancies in Bangladesh. In many cases, unintended pregnancies result in either in induced/clandestine abortion, and unsafe abortion in unsafe conditions or by untrained providers remains a public health problem. Abortion is illegal except to save a woman's life. However, when menstruation is absent for up to 12 weeks, the procedure of **menstrual regulation** (MR) is legal in Bangladesh as a method of family planning.[1] The combination of the availability of drugs over-the-counter for MR with medication (MRM) and the access to ultrasonography widens the scope for terminating pregnancies for sex selection purposes.

There are also other factors. Some interpretations of religious obligations do not allow many women to go through a process that involves ending a pregnancy, such as Muslims of different countries (Ekmekci, 2017) and some Christian communities (Guilmoto, 2009). Differences in religious rites and rituals are also important in determining the attitude towards sex preferences, especially for Hindus (Pearce, Brauner-Otto, & Ji, 2015). As noted above, during times of economic crisis and conflict, parents become more dependent on their children in general, and sons in particular. It was also observed in India and Pakistan that sons contributed towards meeting the economic, social and emotional needs of parents in their old-age (Hussain, Fikree, & Berendes. 2000). All these factors from technology to the desire for small families have been determined significant in many parts of the world (China, India and Viet Nam and some Eastern European countries) in explaining GBSS (Becquet & Guilmoto, 2018; Hesketh et al., 2011). This report examines whether or not these driving factors have a significant effect on GBSS in Bangladesh.

## 1.5 Consequences of gender-biased sex selection

Though the causes of skewed sex ratios are fairly identifiable, the consequences of **skewed sex ratios at birth** – which is the primary manifestation of GBSS – are less explicitly known.

As a result of the very high SRB in China, there could be a greater rate of crime and disorder as the unbalanced cohorts enter adulthood, since young men are more likely to engage in violent behaviour (Smil, 2005; Hesketh & Xing, 2006). Drug use and sexual behaviour among the country's surplus men may become a major risk group for sexually transmitted diseases (Tucker et al., 2005). Moreover, large numbers of elderly, poor and never-married Chinese men may face particular economic difficulties (Gupta et al., 2010).

Under the condition of unusually high sex ratios, there will be shortages of women of marriageable age (Tuljapurkar, Nou & Feldman, 1995; Jiang, Attane', Li & Feldman, 2007). Marriage migration in Asia is a phenomenon that has been increasingly commoditized, involving intermediaries and big payments by farmers (Hesketh & Xing, 2006; Graeme & Nguyen, 2007; and Gupta et al., 2010). Within China, criminal gangs are said to kidnap women in remote rural areas to sell them into forced marriages in towns (Plafker, 2002; Smil,2005; Kaur, 2013). Movement of women has also increased into India in response to shortages (Graeme & Nguyen, 2007).

In China, a consequence of cross-border migration is that men in rural, poor areas are left without brides. These men, in turn, may acquire brides from poorer countries such as Viet Nam (Belanger, 2010). Women from across national borders, for example from Bangladesh and Nepal, are also "sold into marriage" (Blanchet, 2005; Kaur, 2012; 2013).

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[1] The Government of Bangladesh has defined MR as the procedure of regulating the menstrual cycle when menstruation is absent for up to 12 weeks (GoB, n.d.).

## 1.6 Rationale of the study

GBSS has become an important global concern for policymakers and development partners due to its wide range of socio-economic and demographic implications. While there are distinct variations in SRB across countries, wealth quintiles and religio-cultural groups (DPSDU, 2018), Bangladesh society as a whole is vulnerable to GBSS.

Independent primary research is required in order to better understand this vulnerability and provide a basis for response. Evidence gained through primary research will assist policymakers to intensify efforts to highlight the public health and human rights dimensions and implications of GBSS; to uphold the rights of girls and women; to address the multiple manifestations of gender discrimination including the problem of imbalanced SRB caused by sex selection; and to formulate strong advocacy and awareness-raising activities.

In this second phase of research, a sample survey with a mixed-methods research design was conducted. This follows a situation analysis of GBSS in Bangladesh in the first phase (available at http://dpsdu.edu.bd/images/GBSSReport.pdf). Considering the sensitivity of the issue and the psyche of the society, specific well-designed and focused in-depth and intensive interviews were conducted with selected respondents to explore the real mechanism of the occurrence and dynamics of sex selection.

## 1.7 Research questions

This study aims to explore the dynamics of GBSS with a view to recommending effective policies and strategies to alleviate the drivers of GBSS and avert its negative consequences in Bangladesh. The research questions that this study attempts to answer are as follows:

- What is the extent of availability and access to sex-detection technologies in Bangladesh?
- Is induced/clandestine abortion contributing to GBSS in Bangladesh, and to what extent and through which mechanisms?
- Is MR used for sex selection purposes?
- What are the determining factors that could be responsible for GBSS in Bangladesh?
- What are the consequences of GBSS if practised in Bangladesh?

## 1.8 The conceptual model for understanding the dynamics of gender-biased sex selection in Bangladesh

Based on review of the context of Bangladesh society, major national data sets, and the literature available on the issue, a conceptual model has been presented below. The proposed conceptual framework is basically centred on the hypotheses proposed by Guilmoto (2009 and 2015), which are operationalized into five components of social structure that lead to gender-biased sex selection: **demographics** (such as age at marriage, duration of marriage, sex of the child, birth order, child mortality and life expectancy); **socio-economic** (poverty with unequal hierarchical agrarian economic relations, low-income occupational structure, wealth flows from children to parents, lack of adequate social safety net protection and insecurity during older ages); **cultural** (patriarchy, patrilocality and patrilineality, male-dominated household system, family names and property inheritance maintained through men, desire for sons over daughters, religiosity, religious rites and rituals); **spatial** (variations across divisions, regions and place of residence); and **technological** (modern contraceptive methods, availability and use of ultrasound to detect sex of the fetus, menstrual regulation, use of over-the-counter drugs, abortion) factors.

**Figure 1.1: Conceptual model for understanding the dynamics of gender-biased sex selection in Bangladesh**

**Social Structure**

**Demographic Factors**
- Age
- Age at marriage, duration of marriage
- Birth order
- Sex of the child
- Number of children
- Neonatal, infant and child mortality
- Life expectancy

**Socioeconomic Factors**
- Agrarian economy, education
- Employment, wealth, safety net programmes
- Intergenerational flow of wealth
- Nutritional status of children

**Cultural Factors**
- Religiosity, preference for son
- Gender-biased mind set of society
- Social insecurity, patriarchal, patrilineal, and patrilocal
- Dowry

**Spatial Factors**
- Residence: rural-urban
- Division
- Region

**Technological Factors**
- Availability of ultrasound
- Prevalence of abortion/MR
- Knowledge and attitudes towards technology
- Prevalence of contraceptive methods

**Gender –Biased Sex Selection**

# Methodology

# Chapter 2
## Methodology

This study aims to explore the dynamics of GBSS to recommend effective policies and strategies to alleviate the causes of GBSS and avert its negative consequences in Bangladesh. The research questions of this study suggest adoption of a mixed-methods strategy because of the nature and delicacy of the issues under consideration.

### 2.1 Methodological approach

The study uses a cross-sectional survey design to find answers to the research questions posed in Chapter One. Both quantitative and qualitative data were collected under this cross-sectional survey design. A survey was conducted and data collected from the following types of respondents:

1. Ever-married women aged 15-49 years with at least one child aged five years or less;

2. Husbands of the ever-married women aged 15-49 years with at least one child aged five years or less who experienced abortion and MR after three months of conception;

3. Health administrators at government, non-governmental and private hospitals and health centres where MR and abortion services are provided; and

4. Different types of MR and abortion service providers and programme managers as key informants, e.g. gynecologist, family planning officer (FPO), family welfare visitor (FWV) from public, private and non-governmental organization (NGO) health facilities.

Both quantitative and qualitative data were collected simultaneously for concurrent triangulation of the findings of this study. In-depth and intensive dialogues were held and interviews were conducted with selected respondents to explore the dynamics of terminating pregnancy. A specific, well-designed and focused in-depth interview schedule was used to explore the mechanism of occurrence of abortion.

Answering the research question pertaining to availability and accessibility of SDTs was approached by collecting information from three sources:

- recorded information from government organizations, NGOs and private institutions related to performing reproductive health and family planning activities;

- respondents who have used ultrasonography technology; and

- key informants regarding unauthorized facilities/institutions/individuals.

It was assumed that responses retrieved from these sources would also provide information regarding how the use of SDTs influences decisions regarding terminating female fetuses. In order to do that, data were collected on the availability of SDTs from health clinics and other health services centres in the study area. During the survey, research assistants visited all the clinics (public, private and NGO regulated) in the districts and checked whether or not they have SDTs on site. The study also explored the purposes for which the SDTs are being used. A data collection instrument was designed to establish whether use of the SDTs influences the extent of GBSS. The number of, and reasons for, induced/clandestine abortion or the use of MR for sex-selection purposes was also intended to be ascertained through this same data collection.

By establishing linkage between the use of SDTs and the termination of female fetuses through induced/clandestine abortion, the answer of the second research question was expected to be obtained. It was also assumed that if it was found from women's interview that husbands play a key role in determining GBSS, husbands of women respondents who have obtained an abortion would also be included in the sample for the exclusive interviews to reveal the mechanism through which abortion took place.

Both quantitative and qualitative methods of data collection were employed. Quantitative data were collected from ever-married women aged 15-49 years with at least one child aged less than or equal to five years. Qualitative data were collected from the ever-married women who had already participated in the survey and who had ever performed abortion or been exposed to any GBSS related activities.

## Table 2.1: Types of respondents and data collection methods used in this study

| Respondent type | Types of data collected |
|---|---|
| Ever-married women aged 15–49 years with at least one child aged 5 years or younger | Survey and in-depth interviews (IDIs) |
| Health facilities at the union, sub-district and district level | Survey and observation |
| Husbands of women who have used MR and abortion services | IDIs |
| Professionals and para-professionals, e.g. gynecologists, sonologists, medical officers, Upazila family planning officers (UFPO), sub-assistant community medical officers (SACMO), family welfare visitors (FWV), family welfare assistants (FWA) and skilled birth attendants (SBA) | Key informant interviews (KII) |

## 2.2 Selection of study areas

Selection of the study areas for this research was determined by SRB. Three out of seven divisions of Bangladesh were selected based on their SRBs as high, low and medium. According to BDHS (2014), of the divisions where SRBs was above 105, the highest observed SRB in Bangladesh was found in Sylhet division (107.1), the medium observed SRB was found in Chattogram division (106.4) and the lowest observed SRB was in Rangpur division (105.5). However, Dhaka division had an observed SRB of 106.6, which was slightly higher than that of Chattogram division. As Dhaka division contains the capital city of the country and had greater availability of SDT than Chattogram, Dhaka division was considered to be selected over Chattogram as the medium division. Therefore, Sylhet, Rangpur and Dhaka divisions were selected as study areas. Four districts were randomly selected from each division. From Dhaka division, Dhaka, Manikganj, Faridpur and Gazipur districts; from Rangpur divisions, Rangpur, Dinajpur, Gaibandha and Thakurgaon districts; and all four districts of Sylhet division, namely Habiganj, Sunamganj, Moulvibazar and Sylhet were selected as the study areas.

## 2.3 Determination of sample size and selection

The following formula was adopted to generate a representative sample for a division as a domain.

$$\frac{Z^2 p(1-p) \times deff}{e^2 \times m \times r}$$

Where,

n       is the sample size;

Z       is the standard normal deviation (1.96 is the critical value of Z at 95 per cent confidence interval);

p       is the parameter of prevalence concerning ever-married women aged 15-49 years with at least one child aged less than or equal to five years (the assumption of sample proportion has been considered 50 per cent (p=0.5);

deff   is design effect (the design effect has been considered as 2.0);

e       is the margin of error (the value for margin of error has been considered as 0.05);

m      is the eligible number of respondents in each household (the value has been considered as 1); and

r        is the response rate (the value has been assumed as 90 per cent).

Thus, this formula resulted in a sample size of 854 for each division. However, this sample size was increased to 870 due to rounding the cluster-wise sample size.

### 2.3.1 Sample selection for quantitative survey

The study employed multi-stage cluster sampling. At the first stage, four districts were selected randomly from each division of the study areas. In the second stage, enumeration areas (EAs) were selected randomly from each of the districts. The Integrated Multi-Purpose Sample (IMPS) design prepared by Bangladesh Bureau of Statistics (BBS) was used to select EAs from each district. These EAs were the primary sampling units (PSUs) of this research. After selecting the PSUs, households with ever-married women aged 15-49 years with at least one child aged less than or equal to five years were listed. The average size of households in each PSU was about 120 (BDHS, 2014) from which one-fourth of the households (BDHS, 2014) was selected randomly. In the third stage, 30 households were selected by using systematic random sampling from the total households of the selected PSU.

This number of 30 households per PSU produced 28.47 (rounded to 29) PSUs for each division to accommodate the total number of sample (854/30 households). That is why the sample size was rounded up to 870 (29 PSUs*30 respondents from each PSU) for each division from the calculated sample size of 854. So, 870 respondents were selected from each division. These 29 PSUs were distributed in the following way among the four districts of each division: 8 PSUs for the divisional district, and 7 PSUs for each other districts. To address the differentials between urban and rural areas, an adequate number of PSUs from each district was selected based on the national proportion of rural and urban areas. The total sample size of ever-married women aged 15-49 with at least one child with less than five years of age for three divisions became 2610.

### Table 2.2: Distribution of study area, PSUs and sample size

| Study areas | PSUs | | | Sample from each PSU | Total sample |
|---|---|---|---|---|---|
| | Urban | Rural | Total | | |
| **High-SRB division (Sylhet)** | Urban | Rural | Total | | |
| Sylhet | 3 | 6 | 8 | 30 | 240 |
| Moulvibazar | 2 | 5 | 7 | 30 | 210 |
| Sunamganj | 2 | 5 | 7 | 30 | 210 |
| Habiganj | 2 | 5 | 7 | 30 | 210 |
| Total | 9 | 20 | 29 | 30 | 870 |
| **Medium-SRB division (Dhaka)** | | | | | |
| Dhaka | 3 | 5 | 8 | 30 | 240 |
| Gazipur | 2 | 5 | 7 | 30 | 210 |
| Manikganj | 2 | 5 | 7 | 30 | 210 |
| Faridpur | 2 | 5 | 7 | 30 | 210 |
| Total | 9 | 20 | 29 | 30 | 870 |

| Study areas | PSUs | | | Sample from each PSU | Total sample |
|---|---|---|---|---|---|
| | Urban | Rural | Total | | |
| **Low-SRB division (Rangpur)** | Urban | Rural | Total | | |
| Rangpur | 3 | 5 | 8 | 30 | 240 |
| Gaibandha | 2 | 5 | 7 | 30 | 210 |
| Dinajpur | 2 | 5 | 7 | 30 | 210 |
| Thakurgaon | 2 | 5 | 7 | 30 | 210 |
| Total | 9 | 20 | 29 | 30 | 870 |
| **Total** | 27 | 60 | 87 | 30 | 2610 |

## 2.3.2 Determination of sample size and selection for facility assessment for availability of technologies used for sex detection

Considering the time and resource constraints and availability of the SDTs, assessing the facilities for availability and accessibility of SDTs only divisional headquarter level districts were selected. Thus, availability and accessibility of SDTs were assessed in Rangpur, Dhaka and Sylhet districts. In each district, there were three different levels where we assumed that SDT services were available. These three levels were: Union, Upazila and District levels. Three different types of SDT service providers available in each of these levels: government, non-government and private service providers.

Thus, from each district, data were planned to be collected from nine facilities (three types of providers from three different levels) as part of assessing the availability and accessibility of SDTs. That means, a total of 27 facilities would be assessed from three districts. In actuality, 11 facilities from Rangpur, nine from Sylhet, and 14 from Dhaka district were assessed, producing a total of 34 facilities in three divisions.

## 2.3.3 Determination of sample size and sample selection for qualitative data

This study collected two types of qualitative data to triangulate findings. In-depth interviews were conducted among ever-married women aged 15-49 years with at least one child aged five year or less, and their husbands, who had performed MR or abortion after knowing the sex of the fetus. Key informant interviews (KIIs) were conducted among different types of MR or abortion service providers and programme managers from the districts at the divisional headquarters. Each divisional headquarter level district contained three different levels where it was assumed SDT services were available: Union, Upazila and District levels. There were three different types of SDT service providers available in each of these levels: government, non-government and private service providers.

Thus, from each district at the divisional headquarter level, nine key informant interviews (KIIs) were planned to be conducted; a total of 27 KIIs were to be conducted from three districts at the divisional head-quarter level for this research. The respondents for KIIs included gynecologist and obstetrician, medical officer, family planning officer, family welfare visitor, sub-assistant community medical officer, family planning inspector, family welfare assistant, skilled birth attendants and traditional birth attendants, etc. But due to availability, this number increased to 40, of which 22 came from Dhaka, nine from Rangpur and nine from Sylhet districts. The following table summarizes the sample size of each respondent type.

**Table 2.3: Summary of the final sample size for the study**

| SL. No. | Respondent type | Sylhet (high SRB) | Dhaka (medium SRB) | Rangpur (low SRB) | Total |
|---|---|---|---|---|---|
| 1. | Ever -married women aged 15–49 years with at least one child aged less than or equal to 5 years | 869 | 870 | 871 | 2610 |
| 2. | Health facilities assessed | 9 | 14 | 11 | 34 |
| 3. | Ever-married women who have used MR and abortion services | 4 | 3 | 14 | 21 |
| 4. | Husbands of women who have used MR and abortion services | 1 | 0 | 4 | 5 |
| 5. | Programme managers and service providers (professionals and para-professionals) of sexual and reproductive health services | 9 | 22 | 9 | 40 |

## 2.4 Development of data collection instruments

A structured questionnaire was developed for surveying the ever-married women from the selected households. In addition, a structured questionnaire and observation checklist were prepared for assessing facilities for availability and accessibility of SDTs. Separate topic-based guides were developed for in-depth interviewing of each type of respondents (wives, husbands, gynecologists and obstetricians, medical officers, family planning officers, family welfare visitors, sub-assistant community medical officers, family planning inspectors, family welfare assistants, skilled birth attendants and traditional birth attendants). Copies of the instruments are provided in Appendix A.

## 2.5 Data entry, processing and analysis plan

The entry process of quantitative data started right after receiving the first lot of the completed questionnaires. The data entry template for CSPro was developed and cross-checked by the core members in consultation with UNFPA. After getting feedback and approval of the data entry template, a double-entry system was followed in entering the data. A pool of experienced data entry operators was selected and trained in data entry. The trained data entry operators entered the data and the core team members randomly checked the data to ensure accuracy and reliability of the data set. The tasks of editing, coding and data entry were done under the close supervision of the core team. Audio-recorded qualitative data were transcribed then word-processed for analysis. After completion of data entry, the team started analysing the data based on the analysis plan which was detailed out a priori. The research questions and the conceptual model were the principal premises of the data analysis plan.

At the beginning of the data reduction process, a univariate descriptive statistical procedure was employed for the household survey data. As part of the process of creating a pool of independent variables, some scales (wealth quintile, empowerment and religiosity) were also constructed at this stage. Then, a bivariate analysis was carried out with some selected variables – preconditions of GBSS – including fertility decline, son preference, utilization of SDT, and knowledge and practice of MR, among others. To test the statistical significance of the relationship between these variables, the Chi-square test was performed. Based on statistical significance, the final set of variables was selected for use in the logistic regression models which were run to generate explanations in the expected directions. Frequency analysis was performed for the facility assessment data. For qualitative data, thematic analysis was performed. The themes and sub-themes were presented with verbatim statements.

# Background characteristics
# of the study population

# Chapter 3
# Background characteristics of the study population

This chapter presents the background characteristics of the study population, which contains three different sub-sections: household characteristics, individual characteristics of ever-married women and their husbands, and the characteristics of health facilities surveyed.

## 3.1 Household characteristics

Household characteristics are classified into two parts: ownership of household assets and ownership of lands.

## 3.1.1 Ownership of household assets

Table 3.1 presents the percentage distribution of household possessions by divisions. Among different types of assets, a vast majority of households had mobile phones, electricity and electric fan, television, and almirah/wardrobe. A small percentage of households have  solar electricity, IPS/generator, AC, private cars and other vehicles. There is substantial variation in assets across different divisions. The highest percentages of households with majority assets are found in the medium SRB division (Dhaka) compared with low SRB division (Rangpur) and high SRB division (Sylhet). For example, in the medium SRB division, about 95 per cent of households have access to electricity, followed by high SRB division (89.2 per cent) and low SRB division (87.1 per cent).

### Table 3.1: Ownership of household assets by divisions (percentage)

| Household assets | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| Electricity | 89.2 | 95.5 | 87.1 | 90.6 |
| Solar electricity | 17.0 | 9.0 | 14.9 | 13.6 |
| IPS/generator | 2.0 | 4.9 | 1.8 | 2.9 |
| Almirah/wardrobe | 51.0 | 53.6 | 33.1 | 45.9 |
| Radio | 7.4 | 2.4 | 1.1 | 3.6 |
| TV | 49.5 | 62.3 | 53.4 | 55.1 |
| Mobile phone | 93.3 | 96.3 | 94.8 | 94.8 |
| Telephone | 0.6 | 1.0 | 0.7 | 0.8 |
| Computer/laptop | 6.4 | 7.9 | 3.6 | 6.0 |
| Refrigerator | 29.7 | 53.7 | 16.9 | 33.4 |
| DVD/VCD player | 3.7 | 3.7 | 1.3 | 2.9 |
| Electric fan | 82.2 | 93.7 | 85.8 | 87.2 |
| AC | 1.4 | 1.3 | 0.5 | 1.0 |
| Water pump/motor | 11.6 | 22.0 | 13.8 | 15.8 |
| Private car/truck/microbus/bus | 1.0 | 1.0 | 0.6 | 0.9 |
| Auto-rickshaw/auto-bike/automated human hauler/CNG/easy-bike/scooter/Nosimon, etc. | 2.0 | 2.0 | 2.4 | 2.1 |
| Rickshaw/van | 3.6 | 4.4 | 8.4 | 5.4 |
| Bicycle | 9.6 | 17.6 | 45.7 | 24.3 |
| Motorcycle | 8.2 | 12.4 | 17.8 | 12.8 |
| Boat/engine boat | 3.2 | 2.5 | 0.2 | 2.0 |
| Power tiller | 1.0 | 1.8 | 1.8 | 1.6 |

Source: Data analysis of household survey. AC = air conditioner; CNG = three-wheeler run by Compressed Natural Gas; IPS = Instant Power Supply.

The household wealth index is calculated based on the ownership of the household assets (mentioned in Table 3.1) by using the first component of the principal component analysis[2] (PCA). The percentage distribution of wealth quintiles of the household is described in Figure 3.1. The medium SRB division has a higher percentage of the richest household (27 per cent) compared with the low SRB division (15 per cent) and high SRB division (18 per cent). In contrast, the higher percentage of the poorest household is found in high SRB division (26 per cent), followed by low SRB division (23 per cent) and medium SRB division (13 per cent).

**Figure 3.1: Percentage distribution of wealth quintiles of household by divisions**
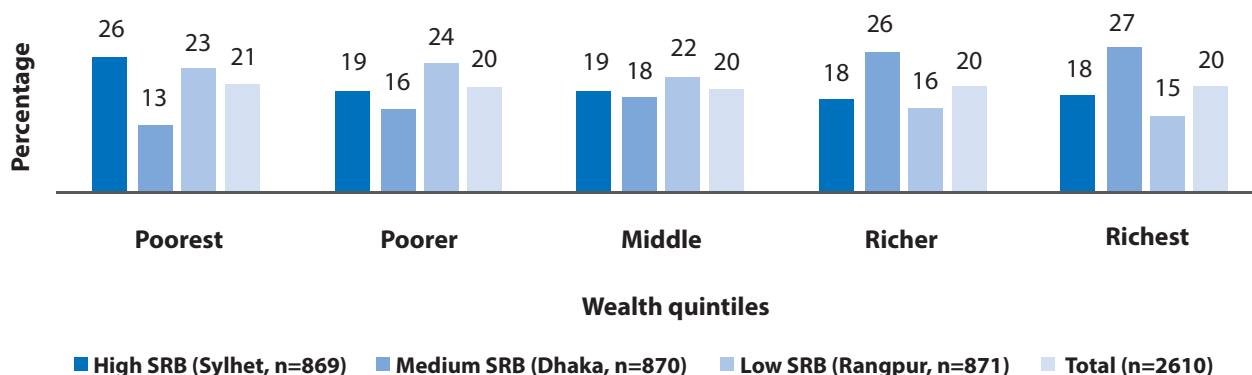


### 3.1.2 Ownership of land

About half of the respondents (48.4 per cent) reside in their own home, whereas only 18.7 per cent of respondents live in a rented house, and the rest of them reside in other houses (Table 3.2). There are substantial variations in terms of ownership of houses across three administrative divisions. In response to the question regarding the ownership of homestead land, about 64 per cent of respondents report that they had homestead land, which also varies by division. About one-third of respondents (29.7 per cent) report that they have the ownership of land other than homestead, with some variations across divisions.

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[2] We used the first component of PCA as in other studies (Filmer & Pritchett, 2001; Tareque, Begum, & Saito, 2014) and the component explained 14% variation (the largest) of the total item with an eigenvalue of 3.06. We also conducted reliability analysis of the items used in PCA; the Cronbach's alpha was 0.58.

**Table 3.2: Ownership of house, homestead and other lands, by divisions (percentage)**

| Variables | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| Ownership of House | | | | |
| Self-owned | 48.1 | 46.1 | 51.1 | 48.4 |
| Rent house | 22.7 | 28.7 | 4.5 | 18.7 |
| Father's/father-in-law's house | 12.3 | 12.8 | 21.1 | 15.4 |
| Others | 17.0 | 12.4 | 23.4 | 17.6 |
| Ownership of homestead land | 64.2 | 62.8 | 64.6 | 63.9 |
| Homestead amount in decimal, mean (STD) | 14.1(47.1) | 14.2 (15.7) | 10.9 (42.9) | 13.1 (37.9) |
| Land ownership | 24.3 | 31.8 | 33.1 | 29.7 |
| Land amount in decimal, mean (STD) | 158.6 (302.7) | 90.9 (175.9) | 105.2 (152.3) | 114.6 (212.7) |

Source: Data analysis of household survey

## 3.2 Individual characteristics

Individual characteristics are presented in two sub-sections: characteristics of women, and characteristics of husbands. In both cases, characteristics are described by using different variables including age, years of schooling, marital status, current educational status, types of institution, current working status and birth registration.

### 3.2.1 Characteristics of the ever-married women

The characteristics of ever-married women include demographic characteristics, socio-economic characteristics, religion and religiosity, exposure to mass media and women empowerment.

### 3.2.1.1 Demographic characteristics

The demographic characteristics of the ever-married women are presented in Table 3.3. The average age of the respondents was 26.3 years, and the highest average age had been observed in high SRB division (27.2), followed by low SRB division (25.9) and medium SRB division (25.8). The majority of respondents (48.5 per cent) belonged to the age group 25-34, followed by age group 15-24 (42.3 per cent) and 35-49 (9.2 per cent). Almost all the respondents (99.8 per cent) were currently married and in medium SRB and low SRB divisions, all respondents are reported that they were currently married, whereas, in high SRB division, this percentage is 99.5 per cent. The mean age difference between spouses was 7.7 years. About 60 per cent of women married before reaching the age of 18 years, while about 38 per cent had become pregnant before the age of 18 years. The mean number of pregnancies and births of ever-married women were 2.5 and 2.1, respectively.

## Table 3.3: Demographic characteristics, ever-married women (%)

| Demographic characteristics | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| **Age of woman** | | | | |
| 15-24 | 35.6 | 46.4 | 44.8 | 42.3 |
| 25-34 | 52.6 | 45.9 | 47.1 | 48.5 |
| 35-49 | 11.9 | 7.7 | 8.2 | 9.2 |
| Mean (STD) | 27.2 (5.5) | 25.8 (5.5) | 25.9 (5.6) | 26.3 (5.6) |
| **Age difference between husband and wife** | | | | |
| 0-6 years | 46.5 | 41.9 | 49.1 | 45.9 |
| More than 6 years | 53.5 | 58.1 | 50.9 | 54.1 |
| Mean (STD) | 7.8 (4.9) | 7.9 (4.5) | 7.3 (4.2) | 7.7 (4.6) |
| **Age at marriage** | | | | |
| Below 18 | 42.6 | 67.1 | 67.2 | 59.0 |
| 18 and above | 57.4 | 32.9 | 32.8 | 41.0 |
| Mean (STD) | 17.9 (2.8) | 16.7 (2.8) | 16.5 (2.7) | 17.0 (2.8) |
| **Age at first pregnancy** | | | | |
| Below 18 | 25.8 | 43.3 | 44.7 | 37.9 |
| 18 and above | 74.2 | 56.7 | 55.3 | 62.1 |
| Mean (STD) | 19.2 (2.9) | 18.6 (3.2) | 18.2 (3.0) | 18.6 (3.1) |
| **Marital status** | | | | |
| Currently married | 99.5 | 100.0 | 100.0 | 99.8 |
| Divorced/Separated/Widow | 0.5 | | | 0.2 |
| **Number of pregnancies** | | | | |
| 1-2 | 49.8 | 65.7 | 62.1 | 59.2 |
| 3 and above | 50.2 | 34.3 | 37.9 | 40.8 |
| Mean (STD) | 2.8 (1.7) | 2.3 (1.3) | 2.3 (1.2) | 2.5 (1.4) |
| **Number of births** | | | | |
| 1-2 | 60.8 | 76.0 | 72.8 | 69.8 |
| 3 and above | 39.2 | 24.0 | 27.2 | 30.2 |
| Mean (STD) | 2.4 (1.4) | 2.0 (1.1) | 2.0 (1.0) | 2.1 (1.2) |

Source: Data analysis of women's questionnaire

## 3.2.1.2 Socio-economic characteristics

Table 3.4 presents the socio-economic characteristics of ever-married women. About 90 per cent of women had ever studied, and the mean years of schooling were 7.1 years. Overall, 11.7 per cent reported that they were working currently, and the percentage of currently working respondents was higher in the low SRB division (17.2 per cent). About 78 per cent said that they had their birth certificate, and the percentage having a birth certificate was lower in the medium SRB division, and higher in the high SRB division. More than 32 per cent of women were residing in urban areas. About 91 per cent reported that they attended general educational institutions.

**Table 3.4: Socio-economic characteristics, ever-married women (%)**

| Socio-economic characteristics | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| **Place of residence** | | | | |
| Rural | 65.6 | 69.0 | 69.0 | 67.9 |
| Urban | 34.4 | 31.0 | 31.0 | 32.1 |
| **Currently working (yes)** | 9.4 | 8.4 | 17.2 | 11.7 |
| **Have birth certificate (yes)** | 81.5 | 76.1 | 79.2 | 78.9 |
| **Ever studied (yes)** | 86.7 | 95.3 | 90.8 | 90.9 |
| **Level of education** | | | | |
| No education | 13.3 | 4.7 | 9.2 | 9.1 |
| Primary | 37.6 | 24.9 | 23.0 | 28.5 |
| Secondary | 43.8 | 63.0 | 60.4 | 55.7 |
| Higher than secondary | 5.2 | 7.4 | 7.5 | 6.7 |
| Mean (STD) | 6.2 (4.0) | 7.7 (3.7) | 7.4 (4.0) | 7.1 (4.0) |
| **Educational institution** | | | | |
| General | 91.5 | 91.8 | 90.0 | 91.1 |
| Madrasa (Dakhil, Alim, Fazil, Kamil) | 7.2 | 7.1 | 8.5 | 7.6 |
| Specialized education (Agriculture/medical/engineering) | 0.0 | 0.0 | 0.1 | 0.1 |
| Technical | 0.0 | 0.0 | 0.3 | 0.1 |
| NGO/community school | 1.1 | 0.8 | 1.1 | 1.1 |
| Qawmi/Hafeji | 0.3 | 0.2 | 0.0 | 0.2 |

Source: Data analysis of women's questionnaire

### 3.2.1.3 Religion and religiosity

Table 3.5 depicts the religious affiliation, frequency of prayer and the importance of religion in the respondent's life. About 86 per cent of respondents were Muslims. The majority of women reported that they prayed sometimes (44.8 per cent), while 37.1 per cent of women prayed regularly. About 82 per cent of women reported that religion is significant in their lives, while 81.5 per cent of women reported that religion was very important in their family life. Four questions related to frequency and importance of religion in respondents and their family life were used to construct a religiosity scale. The reliability analysis of the items included in religiosity scale was performed; the Cronbach's alpha of this scale was 0.63. The religiosity scale was then distributed with three categories: not important; moderately important; and highly important. The religiosity scale shows that 33.9 per cent of women consider religion as very important, while 52.1 per cent consider it moderately important.

**Table 3.5: Religious affiliation and religiosity, ever-married women (%)**

| Religious affiliation and religiosity | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| **Religious affiliation** | | | | |
| Muslim | 82.3 | 93.1 | 84.1 | 86.5 |
| Hindu | 17.3 | 4.9 | 15.8 | 12.7 |
| Buddhist | 0.0 | 0.1 | 0.0 | 0.0 |
| Christian | 0.5 | 1.8 | 0.1 | 0.8 |
| **Frequency of prayer** | | | | |
| Not at all | 0.8 | 4.6 | 7.3 | 4.3 |
| Very few | 7.1 | 18.5 | 15.8 | 13.8 |
| Sometimes | 45.1 | 47.4 | 42.1 | 44.8 |
| Regularly | 47.1 | 29.5 | 34.8 | 37.1 |
| **Importance of religion in life** | | | | |
| Not at all important | 0.8 | 0.1 | 0.6 | 0.5 |
| Not much important | 0.8 | 4.6 | 2.3 | 2.6 |
| Moderately important | 20.7 | 10.1 | 14.4 | 15.1 |
| Very important | 77.7 | 85.3 | 82.8 | 81.9 |
| **Importance of religion in family** | | | | |
| Not at all important | 0.9 | 0.1 | 0.3 | 0.5 |
| Not much important | 1.3 | 2.2 | 1.8 | 1.8 |
| Moderately important | 22.8 | 10.5 | 15.5 | 16.2 |
| Very important | 75.1 | 87.2 | 82.3 | 81.5 |
| **Religiosity scale (Scale alpha: 0.63)** | | | | |
| Not important | 17.3 | 10.9 | 13.8 | 14.0 |
| Moderately important | 42.8 | 60.3 | 53.3 | 52.1 |
| Highly important | 39.9 | 28.7 | 33.0 | 33.9 |

Source: Data analysis of women's questionnaire

### 3.2.1.4 Mass media exposure

Ever-married women's exposure to mass media has been presented in Table 3.6. Only 2.3 per cent of women regularly read newspapers or magazines, while only 1.2 per cent of women listen to the radio regularly. About 55 per cent of women regularly watch television. About 11 per cent of women regularly use the Internet. Among the four media, exposure to the Internet was second in position. We computed a new variable as 'access to any media' if the respondents had exposure to any of these media. The findings show that one-fourth of the women have no access to any media.

**Table 3.6: Media exposure, ever-married women (%)**

| Media exposure | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| **Read newspaper/magazine** | | | | |
| Never/not at all | 91.6 | 92.9 | 93.0 | 92.5 |
| At least once or more than once a week | 4.7 | 4.9 | 5.9 | 5.2 |
| Everyday | 3.7 | 2.2 | 1.1 | 2.3 |
| **Listened to radio** | | | | |
| Never/not at all | 94.9 | 94.9 | 93.8 | 94.6 |
| At least once or more than once a week | 3.5 | 4.4 | 4.8 | 4.2 |
| Everyday | 1.6 | 0.7 | 1.4 | 1.2 |
| **Watched television** | | | | |
| Never/not at all | 36.4 | 24.3 | 25.9 | 28.9 |
| At least once or more than once a week | 17.1 | 14.1 | 17.9 | 16.4 |
| Everyday | 46.5 | 61.6 | 56.1 | 54.8 |
| **Used  Internet** | | | | |
| Never/not at all | 81.4 | 74.4 | 93.0 | 82.9 |
| At least once or more than once a week | 6.0 | 8.2 | 4.2 | 6.1 |
| Everyday | 12.7 | 17.5 | 2.8 | 11.0 |
| **Access to any media** | | | | |
| No | 31.6 | 19.1 | 24.3 | 25.0 |
| Yes | 68.4 | 80.9 | 75.7 | 75.0 |

Source: Data analysis of women's questionnaire

## 3.2.1.5 Level of women's empowerment

This study asked seven questions to the ever-married women related to their decision-making ability on health, family planning and household-related issues. Table 3.7 presents the findings of these seven questions. The findings show that 84.9 per cent of women reported that their family members gave importance to their opinion, while 85.6 per cent of women stated that their opinion regarding the use of family planning methods was given importance. On the other hand, 84.4 per cent of women reported that they could give their opinion regarding decision-making for having children, while 84.8 per cent of women could give an opinion to determine the number of children. These questions were then used to measure women empowerment. The reliability analysis was conducted by using these seven questions to construct an empowerment scale. The Cronbach's alpha of this empowerment scale was 0.83, meaning the items used in constructing this scale were highly consistent. The women empowerment scale was then classified into three categories based on the computed value of these seven questions. The findings show that 68.8 per cent were highly empowered, followed by medium empowered (17.9 per cent) and low empowerment (13.4 per cent).

**Table 3.7: Level of empowerment, ever-married women (%)**

| Statement of empowerment | High-SRB division (Sylhet, n=869) | Medium-SRB division (Dhaka, n=870) | Low-SRB division (Rangpur, n=871) | Total (n=2610) |
|---|---|---|---|---|
| Family members give importance to your opinion | 88.4 | 82.9 | 83.6 | 84.9 |
| You can decide for yourself about movement, spending time with people, etc. | 77.4 | 72.2 | 71.1 | 73.6 |
| You can decide for yourself about child raising issues (e.g. eating and drinking, dressing, education, treatment, etc.) | 76.4 | 71.6 | 74.9 | 74.3 |
| Your opinion is given importance in using family planning methods | 81.9 | 84.5 | 90.2 | 85.6 |
| Your opinion is given importance in the decision to have a child | 81.6 | 83.1 | 88.6 | 84.4 |
| You can give an opinion on determining the number of children you want to have | 82.9 | 82.6 | 89.0 | 84.8 |
| You can give an opinion on antenatal care | 80.3 | 87.1 | 92.1 | 86.5 |
| **Level of women empowerment (Scale alpha: 0.83)** | | | | |
| Low | 16.6 | 14.3 | 9.3 | 13.4 |
| Medium | 13.7 | 19.0 | 20.9 | 17.9 |
| High | 69.7 | 66.8 | 69.8 | 68.8 |

Source: Data analysis of women's questionnaire

### 3.2.2 Characteristics of husbands

Table 3.8 presents the background characteristics of women's husbands. The average age of the respondents' husbands was 33.3 years. About 84 per cent of women reported that their husbands had ever studied, and the mean years of schooling among husbands who had ever studied was 7.9 years. About 92 per cent reported that their husbands went to general educational institutions while 5.3 per cent went to Madrasa. Overall, 97.8 per cent of women reported that their husbands were working at the time of the survey.

## Table 3.8: Respondents' husband's background

| Characteristics of husband | High-SRB division (Sylhet, n=868) | Medium-SRB division (Dhaka, n=852) | Low-SRB division (Rangpur, n=871) | Total (n=2591) |
|---|---|---|---|---|
| **Age of husband** | | | | |
|     18-30 | 21.7 | 24.8 | 21.7 | 25.6 |
|     31-35 | 39.4 | 44.7 | 38.6 | 40.9 |
|     36 and above | 38.9 | 30.5 | 31.0 | 33.5 |
|     Mean age | 35.0 (7.4) | 33.6 (6.7) | 33.2 (7.1) | 33.9 (7.1) |
| **Currently working (yes)** | 96.7 | 98.2 | 98.4 | 97.8 |
| **Ever studied (yes)** | 80.3 | 88.7 | 83.7 | 84.2 |
| **Level of education** | | | | |
|     No education | 19.7 | 11.3 | 16.3 | 15.8 |
|     Primary | 37.0 | 30.2 | 32.8 | 33.3 |
|     Secondary | 35.3 | 48.2 | 41.8 | 41.7 |
|     Higher than secondary | 8.1 | 10.3 | 9.1 | 9.1 |
|     Mean | 7.4 (3.9) | 8.2 (4.0) | 7.9 (3.9) | 7.9 (4.0) |
| **Educational Institution** | **(n=697)** | **(n=756)** | **(n=729)** | **(n=2182)** |
|     General | 93.3 | 93.1 | 90.9 | 92.4 |
|     Madrasa (Dakhil,Alim, Fazil, Qawmi) | 5.6 | 4.1 | 6.3 | 5.3 |
|     Specialized education (Agriculture/medical/engineering) | 0.0 | 0.0 | 0.1 | 0.0 |
|     Technical | 0.1 | 0.4 | 0.5 | 0.4 |
|     NGO/Community school | 0.1 | 0.5 | 1.6 | 0.8 |
|     Qawmi/Hafeji | 0.9 | 2.1 | 0.4 | 1.1 |

Source: Data analysis of women's questionnaire

## 3.3 Characteristics of surveyed health facilities

This study surveyed 34 health facilities. Types of health facilities surveyed are presented in Table 3.9. Seven comprised NGO and private clinics. Six health facilities were government medical college hospitals, followed by four maternal and child welfare centres (MCWCs) and three Union health and family welfare centres (UH&FWC) and private medical college hospitals.

## Table 3.9: Characteristics of surveyed health facilities

| Type of surveyed health facility | District level | Upazila level | Union level | Total |
|---|---|---|---|---|
| Government medical college hospitals | 6 | - | - | 6 |
| Private medical college hospitals | 3 | - | - | 3 |
| District hospitals | 1 | - | - | 1 |
| Maternal and child welfare centres | 4 | - | - | 4 |
| Upazila health complexes | - | 3 | - | 3 |
| Union health and family welfare centres | - | - | 3 | 3 |
| NGO clinics | 5 | 1 | 1 | 7 |
| Private clinics | 3 | 2 | 2 | 7 |
| **Total** | 22 | 6 | 6 | 34 |

Source: Data analysis of health facility assessment

The surveyed health facilities' available number (mean) of human resources are presented in Table 3.10. The average number of gynecologists (specialists) and MBBS doctors (generalists) were 4.7 per cent and 17.2 per cent, respectively. A mean number of available ultrasound technologist was 1, while the mean number of family welfare assistant was 2.6. The list of health services provided by the facilities is given in Table 3.11. All the facilities provided antenatal care services. Two of six facilities at the Union level had ultrasound technology services.

## Table 3.10: Human resources available in health facilities, by specialty

| Mean number of human resources available in the facility | Location of health facility | | | |
|---|---|---|---|---|
| | District level n=22 | Upazila level n=6 | Union level n=6 | Total n=34 |
| Gynecologist | 6.5 | 2.5 | 0.2 | 4.7 |
| MBBS doctor | 24.6 | 5.7 | 1.5 | 17.2 |
| Surgeon | 5.4 | 0.5 | 0.2 | 3.6 |
| Consultant | 5.5 | 4.5 | 1.2 | 4.6 |
| Counsellor | 1.0 | 1.3 | 0.3 | 1.0 |
| Paramedic | 1.4 | 4.5 | 1.8 | 2.0 |
| Radiologist | 2.5 | 1.0 | 0.2 | 1.8 |
| Anaesthetist | 2.5 | 1.3 | 0.3 | 1.9 |
| Pathologist | 1.4 | 1.8 | 0.2 | 1.3 |
| Ultrasound technologist | 0.9 | 2.0 | 0.3 | 1.0 |
| Medical technologist | 3.3 | 3.8 | 0.3 | 2.9 |
| Nurse | 50.4 | 12.0 | 1.5 | 35.0 |
| Health assistant | 0.0 | 23.5 | 0.8 | 4.3 |
| Family welfare assistant | 0.2 | 13.8 | 0.2 | 2.6 |
| Family welfare visitor | 0.9 | 1.8 | 0.5 | 1.0 |
| Midwife | 0.2 | 1.5 | 0.7 | 0.5 |
| Sub-assistant community medical officer | 0.6 | 3.3 | 0.7 | 1.1 |
| Ayah | 10.5 | 5.0 | 2.3 | 8.1 |
| Cleaner | 8.0 | 3.3 | 1.7 | 6.1 |

Source: Data analysis of health facility assessment

## Table 3.11: Services provided in health facilities

| Service | District level (n=22) | Upazila level (n=6) | Union level (n=6) | Total (n=34) |
|---|---|---|---|---|
| Modern family planning service | 16 | 4 | 6 | 26 |
| Antenatal care | 22 | 6 | 6 | 34 |
| Normal delivery | 16 | 5 | 6 | 27 |
| Caesarean delivery | 17 | 3 | 3 | 23 |
| Post-natal care | 20 | 6 | 6 | 32 |
| Ultrasound technology | 17 | 4 | 2 | 23 |
| Amniocentesis | 1 | - | - | 1 |
| X-ray | 7 | 4 | 1 | 12 |
| Surgery (except C-section) | 6 | 2 | 2 | 10 |

Source: Data analysis of health facility assessment

## 3.4 Key findings of Chapter Three

Discussion of the background characteristics in this chapter has provided understanding of the demographic and social characteristics of the study population. Different important characteristics such as mean age of the study population, age of entry into marriage, educational and employment status of the study population, religious identity, exposure to mass media, position of women in the demographic and household decision-making process, etc. have been discussed throughout the chapter, which helps to conceptualize the context of the study population. Discussion of these demographic and social contexts is expected to bridge a link between the study population and the exploration of extent of GBSS and the presence of different preconditions of GBSS in Bangladesh.

### Household characteristics

- The majority of households had mobile phones, electricity, television, and Almira/wardrobe. About 33 per cent of households had a refrigerator, while about 6 per cent possessed a computer.
- About 64 per cent women had their homestead land. On the other hand, only 29.7 per cent had ownership of other than homestead land with having some variations across divisions.
- About half of the women (48.4 per cent) resided in their own home, whereas only 18.7 per cent lived in a rented house, and the rest of them resided in other houses.

### Individual characteristics: women and husbands

- The average age of the women was 26.3 years. Almost all the respondents (99.8 per cent) were currently married. The mean age difference between spouses was 7.7 years. About 59 per cent of women married before reaching the age of 18 years, while about 38 per cent had become pregnant before the age of 18 years. The mean number of pregnancy and birth of ever-married women were 2.5 and 2.1, respectively.
- About 91 per cent of the women said that they had ever gone to school, and the mean years of schooling were 7.1 years. Overall, 11.7 per cent reported that they were currently working, and the percentage of currently working respondents was higher in the Rangpur division (17.2 per cent).
- Overwhelming majority (86.5 per cent) of the respondents were found to be Muslims. Almost half the women (44.8 per cent) prayed sometimes, while 37.1 per cent of women prayed regularly. About 82 per cent of women reported that religion was significant in their lives.
- Only 2.3 per cent women regularly read the newspaper or magazines while only 1.2 per cent of women listened to the radio regularly. About 55 per cent of women regularly watched television. About 11 per cent of women were regularly using the Internet. Overall, 25 per cent women had no access to any media.
- About 69 per cent of women were highly empowered in the household and demographic decision-making processes.
- The average age of the husbands of the respondents was 33.3 years. About 84 per cent women reported that their husbands had ever went to school, and the mean years of schooling were 7.9 years among the husbands who had ever studied.

### Characteristics of facilities surveyed

- Three private medical college hospitals, seven NGO and seven private clinics were surveyed. Among the public health facilities, six government medical college hospitals, four MCWCs and three UH&FWCs were surveyed.
- The average number of gynecologist and MBBS doctors available in the facilities were 4.7 and 17.2, respectively. A mean number of ultrasound technologist available was 1, while the mean number of family welfare assistant was 2.6. All facilities provided antenatal care services. Two of six facilities at the Union level had ultrasound technology services.

**Chapter 4**

# Gender-biased sex selection and its preconditions

## Chapter 4
## Gender-biased sex selection and its preconditions

This chapter aims to explore the preconditions of GBSS in Bangladesh. The chapter begins with a brief discussion of the reasons given by respondents for not keeping a fetus, and tie these answers to the known preconditions of GBSS in favor of boys. The results of multiple regression analyses on the preconditions of GBSS at birth like preference for small families, son preference, availability and use of SDT are presented next. The chapter ends with the findings regarding knowledge about and use of MR services by the participants of this research.

### 4.1 Gender-biased sex selection in Bangladesh

Overall, 2.5 per cent (64 out of 2,610) women of this study had aborted a fetus after three months of conception; this percentage varied according to the high to low SRB divisions (Figure 4.1). The women of the high SRB division (Sylhet) had the highest abortion rate (3.1 per cent) while the medium SRB division (Dhaka) had the lowest abortion rate (1.7 per cent).

### Figure 4.1: Women who have aborted fetus after three months of conception (%)
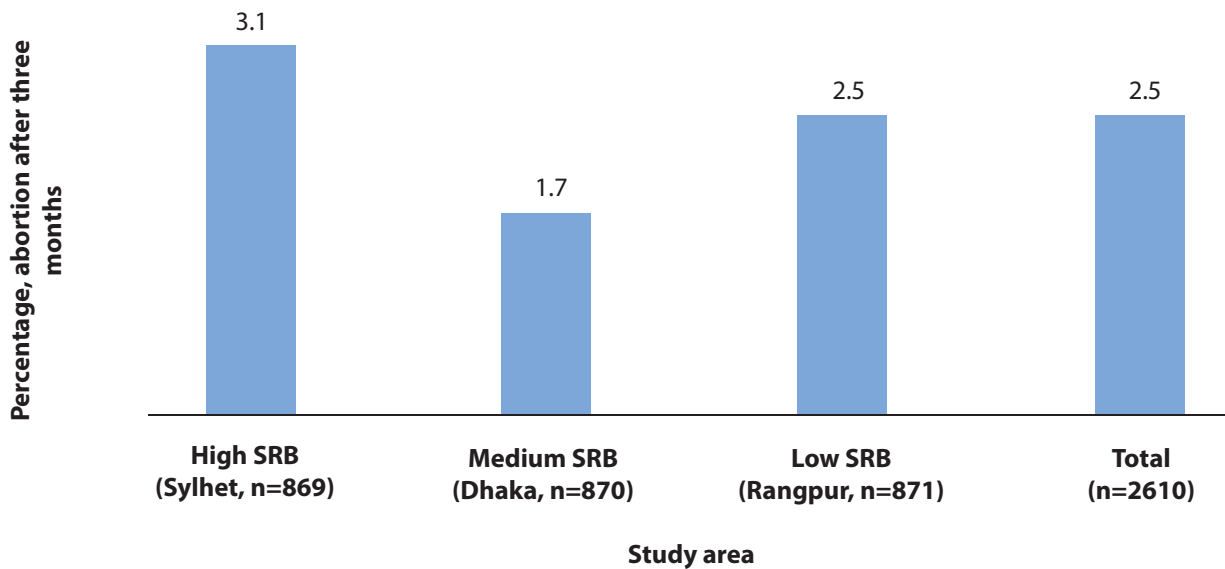


Source: Data analysis of women's questionnaire

The three main reasons for aborting a fetus, as stated by the respondents, were complications due to accident (36.5 per cent), physical complications (33.3 per cent), unintended pregnancy (28.6 per cent) (Figure 4.2). However, as per the household survey data, only four women who aborted their fetuses (two males and two females) did so based on gussed assumptions, not using any technology to detect the sex of the fetus.

## Figure 4.2: Reasons for aborting fetus after three months of conception (%)

| Reason | Total (n=63) | Low SRB (Rangpur, n=21) | Medium SRB (Dhaka, n=15) | High SRB (Sylhet, n=27) |
|---|---|---|---|---|
| Others | 23.8 | 23.8 | 23.8 | 23.8 |
| For accidental reason | 23.8 | 23.8 | 23.8 | 23.8 |
| To terminate the pregnancy as the fetus was male | 23.8 | 23.8 | 23.8 | 23.8 |
| To terminate the pregnancy as the fetus was female | 23.8 | 23.8 | 23.8 | 23.8 |
| To terminate the unintended pregnancy | 23.8 | 23.8 | 23.8 | 23.8 |
| Due to physical complications | 33.3 | 46.7 | 23.8 | 33.3 |

■ Total (n=63)  ■ Low SRB (Rangpur, n=21)  ■ Medium SRB (Dhaka, n=15)  ■ High SRB (Sylhet, n=27)

Source: Data analysis of women's questionnaire

In addition to the quantitative data, the dynamics of gender-biased sex selection was attempted to capture by collecting qualitative data from those women who aborted after three months after conception, irrespective of the fact that they have done so without using any sex-detection technology; rather, they gussed that the fetus was not of their desired gender. For example, in one case, as fetus was kicking in the womb, the couple thought the sex was male and they did not want to have another boy as they already had boys.

During qualitative exploration, these women confirmed that they did not use any sex-detection technology to detect the sex of the fetus; rather they presumed the sex of the fetus based on traditional strategies of imagination and assumptions. In one case, a woman suspecting the fetus was female (which it was), and not wanting any more daughters that she already had, ended her pregnancy. Wanting a boy child after the consecutive births of daughters, a female participation from Bhanga Upazila in Faridpur District explained her decision to terminate a pregnancy though she did not know the sex at that time:

*"I had two boys earlier. Everyone was really happy at the time of their births. But when I conceived with the third one, because of the similar internal movement, I guessed it will be a boy again. At that time, all family members were eager to have a girl in the family. And we also didn't want to increase the number of family members with a boy child. That is why I aborted." —Female participant, Harirampur Upazila, Manikganj District*

*"I have three alive children now. All of them are girls. After the birth of my first daughter, everyone was very happy. But when I was pregnant for the second time, everyone was wishing for a boy. But I gave birth to a daughter again. It made them upset. When I became pregnant for the third time, I had this fear that it will be a girl again. Because of this fear, I aborted the child."*

The presence of preference to a particular gender has been reported in the qualitative study. One sub-assistant community medical officer (SACMO) from Rangpur Sadar Upazila, Rangpur District stated:

*"There are incidents when couples are not willing to have a girl child. But if they ultimately find out that the child will be a girl, even if they don't want the child, they are keeping the child. They are keeping faith in Allah and because of His fear, they don't abort it."*

*"It is true that the availability of technology is on the rise. These are becoming widely accessible. So, there is a risk that the practice of gender-biased sex selection might take place in future in a greater scale." —Consultant, obstetrics and gynecology in Sylhet M A G Osmani Medical College and Hospital*

Similar opinions have been provided by other participants too in this regard. A family welfare visitor from South Surma Upazila, Sylhet District said:

> "In our society, male children are obviously more valued. Female children are always devalued and neglected. There are many examples where a husband divorced his wife because she gave birth to three to four daughters consecutively. Everyone eagerly wants to know the sex of the fetus after doing ultrasonography. But that doesn't necessarily mean that they are opting for abortions if they find out that the sex of the child is not what they are wishing for."

This study has also found some key informants who have mentioned that they have heard about few cases of abortions where women had decided to abort after knowing the sex of the fetus. These key informants reported that termination of a fetus is taking place because of unwanted conception while being unmarried, unplanned pregnancy, being victims of sexual assault, method failures, etc. A high-level official from the Directorate General of Family Planning (DGFP) has reported the reasons behind making the decision of going through an MR or an abortion (see box).

> "I don't think MR can be linked to or triggered by the information of sex-detection. The abortion itself is highly prohibited in the country. Even if it is true (the occurrence of sex-selective abortions), the rate is so negligible that it cannot be considered as a wide phenomenon. Rather, I can say that unintended or unplanned pregnancy, illegal affairs, sexual assault, [contraceptive] method failures — these are the reasons why people are choosing MR presently."
> —High-level official, DGFP, Rangpur District

The data we have gathered in this study do not indicate that GBSS is taking place in Bangladesh. However, the study has gathered a significant amount of information on the preconditions of GBSS, as mentioned by Guilmoto (2009 and 2015). Thus, we will explore the existence of the preconditions of GBSS in the following sections.

## 4.2 Preconditions of gender-biased sex selection at birth

According to Guilmoto (2009 and 2015), there are three preconditions of GBSS: fertility decline, son preference and availability of SDT. The following sections will explore the situation of these three preconditions of GBSS in the present study.

### 4.2.1 Preference for small families

Fertility decline is usually measured by the total fertility rate (TFR). This study considered preference for small families as a proxy indicator of fertility decline which has been also used in other contexts (Puri & Tamang, 2015). Ever-married women (aged 15-49 years old with one child less than or equal to 5 years old) were asked how many children they wanted to have in their reproductive age. The responses were coded as "small family preference" if they wanted two or fewer children while it was coded as "large family preference" if they wanted more than two children. The findings show that 91 per cent of currently married women preferred small family while the rest preferred large families (Figure 4.3).

**Figure 4.3: Preference for small families among married women (%)**
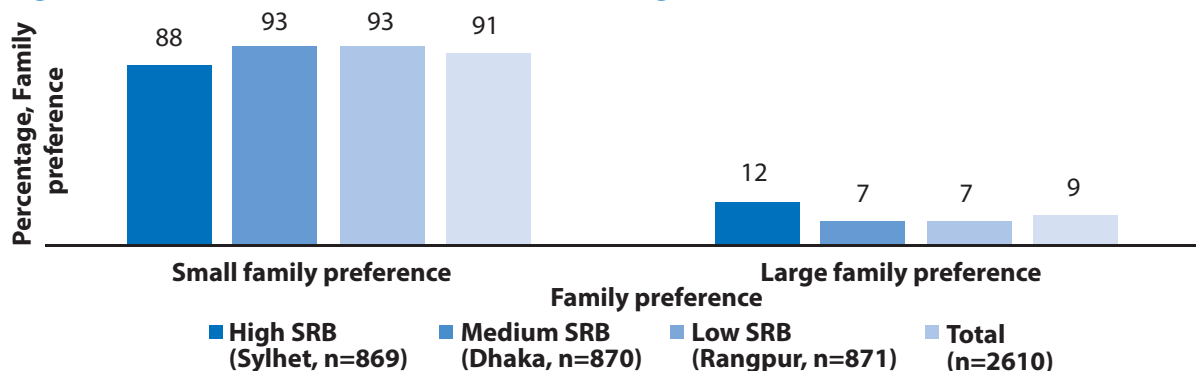


Source: Data analysis of women's questionnaire

### 4.2.1.1 Predictors of preference for small families

The preference for small families varies with the women's socio-economic, demographic and cultural contexts. The findings show that the preference for small family decreases significantly with age (Table 4.1). The preference for small families is lower in the high SRB division than it is in the medium SRB division and low SRB division. Urban women had a higher preference for small families than rural women. The findings also show that the higher the education of women as well as their husbands, the higher the preference for small families. Women who have more access to any mass media have higher preference for small families. Household wealth quintile is also associated with preference for small families. The association of women's preference for small families with their demographic and cultural contexts-related variables were examined by using the Chi-square test and the findings have been presented in Table 4.1.

### Table 4.1: Factors associated with preference for small family, background characteristics (%)

| Background characteristics | Family-size preference | | P-value |
|---|---|---|---|
| | Small family (n=2378) | Large family (n=232) | |
| **Age of women** | | | 0.000 |
| 15-24 | 94.8 | 5.2 | |
| 25-34 | 90.0 | 10.0 | |
| 35-49 | 79.7 | 20.3 | |
| **Age difference between husband and wife** | | | 0.533 |
| Up to 6 years | 90.7 | 9.3 | |
| More than 6 years | 91.4 | 8.6 | |
| **Age at marriage** | | | 0.386 |
| Below 18 | 90.7 | 9.3 | |
| 18 and above | 91.7 | 8.3 | |
| **Age at first pregnancy** | | | 0.321 |
| Below 18 | 90.4 | 9.6 | |
| 18 and above | 91.5 | 8.5 | |
| **Division** | | | 0.000 |
| High SRB | 87.6 | 12.4 | |
| Medium SRB | 92.8 | 7.2 | |
| Low SRB | 93.0 | 7.0 | |
| **Place of residence** | | | 0.022 |
| Rural | 90.2 | 9.8 | |
| Urban | 93.0 | 7.0 | |
| **Religion of women** | | | 0.059 |
| Muslim | 90.7 | 9.3 | |
| Others | 93.8 | 6.2 | |
| **Importance of religion** | | | 0.089 |
| Not important | 88.8 | 11.2 | |
| Moderately important | 90.8 | 9.2 | |
| Highly important | 92.5 | 7.5 | |
| **Education of women** | | | 0.000 |
| No education | 88.2 | 11.8 | |
| Primary | 87.5 | 12.5 | |
| Secondary | 92.9 | 7.1 | |
| Higher than secondary | 95.4 | 4.6 | |

| Background characteristics | Family-size preference | | P-value |
| --- | --- | --- | --- |
| | Small family (n=2378) | Large family (n=232) | |
| **Education of husband** | | | 0.002 |
| No education | 87.6 | 12.4 | |
| Primary | 89.8 | 10.2 | |
| Secondary | 92.9 | 7.1 | |
| Higher than secondary | 94.1 | 5.9 | |
| **Working status of women** | | | 0.057 |
| No | 91.5 | 8.5 | |
| Yes | 88.2 | 11.8 | |
| **Women empowerment** | | | 0.599 |
| Low | 89.7 | 10.3 | |
| Medium | 91.2 | 8.8 | |
| High | 91.4 | 8.6 | |
| **Communication with spouse about sex of child** | | | 0.445 |
| No | 90.5 | 9.5 | |
| Yes | 91.4 | 8.6 | |
| **Access to any media** | | | 0.003 |
| No | 88.2 | 11.8 | |
| Yes | 92.1 | 7.9 | |
| **Wealth quintile of the household** | | | 0.024 |
| Poorest | 89.6 | 10.4 | |
| Poorer | 91.1 | 8.9 | |
| Middle | 88.7 | 11.3 | |
| Richer | 92.4 | 7.6 | |
| Richest | 93.9 | 6.1 | |
| **Total** | **91.1** | **8.9** | |

Source: Data analysis of women's questionnaire

Table 4.1 shows that the following variables were significantly (p ≤ 0.05) associated with the preference for small family at the bivariate level: age of women, division, place of residence, education of women, education of husband, access to any media and wealth quintile. The variables were then entered into the multiple logistic regression analysis to predict the preference for small family. The multiple logistic regression was conducted as the dependent variable 'preference for small families' was a dichotomous categorical variable. The findings of the multiple logistic regression have been presented in Table 4.2.

The findings show that (Table 4.2) women aged 15 to 24 years have the highest likelihood (OR = 4.23) of having a small family preference compared with women aged 35 to 49 years old. In terms of low to high SRB study division, the findings show that the low SRB division has the highest chance of having a small family preference compared with the high SRB division. Similarly, women who were living in urban area had the highest odds of having preference for small family. Finally, women with higher secondary education had the highest likelihood of having preference for small family compared with the women who had no education. All other variables did not show any significant effect on preference for a small family.

**Table 4.2: Predictors of the preference for small family**

| Background characteristics | Odds Ratio (OR) | 95 per cent C.I. for OR | | P-value |
| --- | --- | --- | --- | --- |
| | | Lower | Upper | |
| **Age of women** | | | | 0.000 |
| 15-24 | 4.23 | 2.80 | 6.56 | 0.000 |
| 25-34 | 2.24 | 1.54 | 3.25 | 0.000 |
| 35-49 | Reference | | | |
| **Division** | | | | 0.006 |
| High SRB | Reference | | | |
| Medium SRB | 1.55 | 1.10 | 2.17 | 0.011 |
| Low SRB | 1.62 | 1.15 | 2.27 | 0.005 |
| **Place of Residence** | | | | |
| Rural | Reference | | | |
| Urban | 1.31 | 0.95 | 1.81 | 0.095 |
| **Education of women** | | | | 0.010 |
| No education | Reference | | | |
| Primary | 0.73 | 0.46 | 1.17 | 0.193 |
| Secondary | 1.15 | 0.72 | 1.83 | 0.569 |
| Higher than secondary | 1.87 | 0.81 | 4.32 | 0.142 |
| **Constant** | 2.88 | | | 0.000 |
| Model Summary: Chi-Square = 84.36 (p = 0.000), -2Loglikelihood = 1481.43, n = 2610 | | | | |

Source: Data analysis of women's questionnaire

## 4.2.2 Son preference

This study asked how many boys and girls a woman wanted. The response was considered as "son preference" if the women desired a greater number of boys over girls (DPSDU, 2018; Nag, 1991; Flatø, 2018). The findings show that 6.4 per cent ever-married women had son preference (Table 4.3). The son preference was almost double among the women aged 35-49 women than that of women aged 15-24. It was quite interesting that son preference was higher among currently working women. The findings show that women having no access to any mass media had higher son preference. Son preference was also higher among the women who had three and more pregnancy and birth.

**Table 4.3: Son preference among women by background characteristics (%)**

| Background characteristics | Son preference | | |
|---|---|---|---|
| | No (n=2443) | Yes (n=167) | P-value |
| **Age of women** | | | 0.015 |
| 15-24 | 95.2 | 4.8 | |
| 25-34 | 92.6 | 7.4 | |
| 35-49 | 91.7 | 8.3 | |
| **Age difference between husband and wife** | | | 0.612 |
| Up to 6 years | 93.9 | 6.1 | |
| More than 6 years | 93.4 | 6.6 | |
| **Age at marriage** | | | 0.289 |
| Below 18 | 93.2 | 6.8 | |
| 18 and above | 94.2 | 5.8 | |
| **Age at first pregnancy** | | | 0.547 |
| Below 18 | 93.2 | 6.8 | |
| 18 and above | 93.8 | 6.2 | |
| **Division** | | | 0.151 |
| High SRB | 92.3 | 7.7 | |
| Medium SRB | 94.4 | 5.6 | |
| Low SRB | 94.1 | 5.9 | |
| **Place of residence** | | | 0.252 |
| Rural | 93.2 | 6.8 | |
| Urban | 94.4 | 5.6 | |
| **Religion of women** | | | 0.923 |
| Muslim | 93.6 | 6.4 | |
| Others | 93.5 | 6.5 | |
| **Importance of religion** | | | 0.211 |
| Not important | 91.5 | 8.5 | |
| Moderately important | 94.0 | 6.0 | |
| Highly important | 93.9 | 6.1 | |
| **Education of women** | | | 0.182 |
| No education | 94.9 | 5.1 | |
| Primary | 92.1 | 7.9 | |
| Secondary | 94.0 | 6.0 | |
| Higher than secondary | 95.4 | 4.6 | |
| **Education of husband** | | | 0.183 |
| No education | 91.9 | 8.1 | |
| Primary | 93.1 | 6.9 | |
| Secondary | 94.2 | 5.8 | |
| Higher than secondary | 95.8 | 4.2 | |
| **Working status of women** | | | 0.035 |
| No | 94.0 | 6.0 | |
| Yes | 90.8 | 9.2 | |

| Background characteristics | Son preference | | |
|---|---|---|---|
| | No (n=2443) | Yes (n=167) | P-value |
| **Women empowerment** | | | 0.030 |
| Low | 91.1 | 8.9 | |
| Medium | 92.3 | 7.7 | |
| High | 94.4 | 5.6 | |
| **Communication with spouse about sex of child** | | | 0.491 |
| No | 94.1 | 5.9 | |
| Yes | 93.4 | 6.6 | |
| **Access to any media** | | | 0.251 |
| No | 92.6 | 7.4 | |
| Yes | 93.9 | 6.1 | |
| **Wealth quintile of the household** | | | 0.147 |
| Poorest | 92.9 | 7.1 | |
| Poorer | 93.0 | 7.0 | |
| Middle | 92.2 | 7.8 | |
| Richer | 95.8 | 4.2 | |
| Richest | 94.1 | 5.9 | |
| **Number of pregnancies** | | | 0.000 |
| 1-2 | 95.1 | 4.9 | |
| 3 and above | 91.4 | 8.6 | |
| **Number of births** | | | 0.000 |
| 1-2 | 94.9 | 5.1 | |
| 3 and above | 90.6 | 9.4 | |
| **Total** | **93.6** | **6.4** | |

Source: Data analysis of women's questionnaire

It appears from the above table that the following variables were significantly (p ≤ 0.05) associated with the son preference at the bivariate level: age, working status of women, women empowerment, number of pregnancies and number of births. These variables were planned to include in the multiple logistic regression model to predict son preference among women. However, it was found that women's age and number of births were highly correlated (r = 0.68, p = 0.000) at the bivariate level and thus the age variable was removed from the regression model and number of births were considered for the model as it was more strongly associated with son preference than age of women. On the other hand, the number of pregnancies and number of births was also highly correlated (r = 0.896, p = 0.000) at the bivariate level and thus number of pregnancies was not considered for the model.

Thus, women's working status, empowerment level and number of births were entered into the multiple logistic regression model and the findings of this multiple logistic regression have been presented in Table 4.4. The findings show that the women who are working have more (1.56 times higher) son preference than that of women who are not working. The findings also show that women who were highly empowered had less son preference than those whose level of empowerment was low. Finally, the women who had three or more numbers of births had more son preference (1.9 times higher) than those who had one to two births.

## Table 4.4: Predictors of son preference among women

| Background characteristics | Odds Ratio (OR) | 95 per cent C.I. for OR | | P-value |
| --- | --- | --- | --- | --- |
| | | Lower | Upper | |
| **Working status of women** | | | | |
| No | Reference | | | |
| Yes | 1.56 | 1.02 | 2.40 | 0.042 |
| **Women empowerment** | | | | 0.027 |
| Low | Reference | | | |
| Medium | 0.91 | 0.55 | 1.51 | 0.710 |
| High | 0.61 | 0.40 | 0.94 | 0.023 |
| **Number of births** | | | | |
| 1-2 | Reference | | | |
| 3 and above | 1.90 | 1.38 | 2.61 | 0.000 |
| **Constant** | 0.071 | | | 0.000 |
| Model summary: Chi-Square = 26.24 (p = 0.000), -2 Loglikelihood = 1215.04, n = 2610 | | | | |

Source: Data analysis of women's questionnaire

This study also explored the preference for specific sex among men and women for their first child. The findings show that 28 per cent of women had a son preference for their first child while this rate was 24 per cent among men (data is not presented in the table). On the other hand, 12 per cent women had a daughter preference for their first child while 10.4 per cent men preferred to have a daughter for their first child.

Table 4.5 shows the differentials of son preference among the women for their first child. The findings show that women who married before they were 18 years old (child marriage) had more son preference for their first child than those who married as an adult or 18 years and above. Son preference among women also varied by high to low SRB areas, place of residence and religion. It shows that low SRB division has the highest (37.1 per cent) son preference followed by medium (27.4 per cent) and high (19.6 per cent) SRB divisions. The findings also show that working women and the women who had communication with their spouses about sex of the child had more son preference.

**Table 4.5: Son preference among women for their first child, by background characteristics (%)**

| Background characteristics | Son preference as first child | | P-value |
|---|---|---|---|
| | No (n=1879) | Yes (n=731) | |
| **Age of women** | | | 0.531 |
| 15-24 | 71.2 | 28.8 | |
| 25-34 | 72.2 | 27.8 | |
| 35-49 | 74.7 | 25.3 | |
| **Age difference between husband and wife** | | | 0.970 |
| Up to 6 years | 72.0 | 28.0 | |
| More than 6 years | 72.1 | 27.9 | |
| **Age at marriage** | | | 0.003 |
| Below 18 | 69.9 | 30.1 | |
| 18 and above | 75.1 | 24.9 | |
| **Age at first pregnancy** | | | 0.186 |
| Below 18 | 70.5 | 29.5 | |
| 18 and above | 72.9 | 27.1 | |
| **Division** | | | 0.000 |
| High SRB | 80.4 | 19.6 | |
| Medium SRB | 72.6 | 27.4 | |
| Low SRB | 62.9 | 37.1 | |
| **Place of residence** | | | 0.009 |
| Rural | 70.4 | 29.6 | |
| Urban | 75.3 | 24.7 | |
| **Religion of women** | | | 0.000 |
| Muslim | 73.8 | 26.2 | |
| Others | 60.6 | 39.4 | |
| **Importance of religion** | | | 0.934 |
| Not important | 71.8 | 28.2 | |
| Moderately important | 72.3 | 27.7 | |
| Highly important | 71.6 | 28.4 | |
| **Education of women** | | | 0.904 |
| No education | 73.4 | 26.6 | |
| Primary | 71.1 | 28.9 | |
| Secondary | 72.2 | 27.8 | |
| Higher than secondary | 72.4 | 27.6 | |
| **Education of husband** | | | 0.277 |
| No education | 71.9 | 28.1 | |
| Primary | 69.7 | 30.3 | |
| Secondary | 73.6 | 26.4 | |
| Higher than secondary | 73.4 | 26.6 | |
| **Working status of women** | | | 0.005 |
| No | 72.9 | 27.1 | |
| Yes | 71.4 | 28.6 | |

| Background characteristics | Son preference as first child | | P-value |
|---|---|---|---|
| | No (n=1879) | Yes (n=731) | |
| **Women empowerment** | | | 0.099 |
| Low | 69.6 | 30.4 | |
| Medium | 68.9 | 31.1 | |
| High | 73.3 | 26.7 | |
| **Communication with spouse about sex of child** | | | 0.000 |
| No | 82.9 | 17.1 | |
| Yes | 66.2 | 33.8 | |
| **Access to any media** | | | 0.273 |
| Yes | 65.2 | 34.8 | |
| No | 73.7 | 26.3 | |
| **Wealth quintile of the household** | | | 0.128 |
| Poorest | 71.3 | 28.7 | |
| Poorer | 70.7 | 29.3 | |
| Middle | 68.6 | 31.4 | |
| Richer | 74.6 | 25.4 | |
| Richest | 74.7 | 25.3 | |
| **Number of pregnancies** | | | 0.156 |
| 1-2 | 71.0 | 29.0 | |
| 3 and above | 73.5 | 26.5 | |
| **Number of births** | | | 0.818 |
| 1-2 | 71.9 | 28.1 | |
| 3 and above | 72.3 | 27.7 | |
| **Total** | **72.0** | **28.0** | |

Source: Data analysis of women's questionnaire

The findings of the logistic regression are presented in Table 4.6 to see whether women who prefer a son as their first child is varied based on different characteristics. The finding shows that women from the low SRB division have 2.49 times higher chance of having a son preference for the first child than women from high SRB division. It also shows that rural women have more (1.32 times) son preference for the first child than urban women while the women who were working had 1.3 times higher likelihood of son preference for their first child compared to the women who were not working. Finally, those women who had communication with their spouse about the sex of the child had 2.57 times higher chance of preference for a son compared to those women who did not communicate with their spouse.

**Table 4.6: Predictors of son preference among women for their first child**

| Background characteristics | Odds Ratio (OR) | 95 per cent C.I. for OR | | P-value |
|---|---|---|---|---|
| | | Lower | Upper | |
| **Division** | | | | 0.000 |
| High SRB | Reference | | | |
| Medium SRB | 1.71 | 1.36 | 2.16 | 0.000 |
| Low SRB | 2.49 | 1.99 | 3.11 | 0.000 |
| **Place of residence** | | | | |
| Rural | 1.32 | 1.09 | 1.60 | 0.005 |
| Urban | Reference | | | |
| **Religion of women** | | | | |
| Muslim | Reference | | | |
| Others | 1.90 | 1.49 | 2.43 | 0.000 |
| **Working status of women** | | | | |
| No | Reference | | | |
| Yes | 1.30 | 1.00 | 1.70 | 0.052 |
| **Communication with spouse about sex of child** | | | | |
| No | Reference | | | |
| Yes | 2.57 | 2.09 | 3.15 | 0.000 |
| **Constant** | 0.88 | | | 0.000 |
| Model summary: Chi-Square = 193.17 (p = 0.000), -2Loglikelihood = 2902.43, n = 2610 | | | | |

Source: Data analysis of women's questionnaire

## 4.2.2.1 Reasons for son preference

The reasons wanting the first child to be a son are presented in Table 4.7. Most of the women desired son as a first child because: sons are more acceptable in the society (43.8 per cent), a source of future security (43.0 per cent); can secure the asset of the family (42.6 per cent), are a source of future economic security (22.9 per cent), can continue a line of descent (22.4 per cent), and are a source of mental strength for parents (22.3). Some 6 per cent of women thought that son could look after them at older ages.

**Table 4.7: Reasons for son preference as first child (%)**

| Reasons for wanting first child as son | High-SRB division (Sylhet, n=169) | Medium-SRB division (Dhaka, n=237) | Low-SRB division (Rangpur, n=322) | Total (n=728) |
|---|---|---|---|---|
| More acceptable in the society | 53.3 | 40.9 | 41.0 | 43.8 |
| Source of future security | 40.8 | 45.1 | 42.5 | 43.0 |
| Can secure the asset/wealth of family | 49.7 | 42.2 | 39.1 | 42.6 |
| Need to think about more security for rearing the children | 49.7 | 37.1 | 30.7 | 37.2 |
| Do not need to think about more security for rearing the children | 18.9 | 24.5 | 40.4 | 30.2 |
| Source of future economic security for family | 17.2 | 23.2 | 25.8 | 22.9 |
| To continue a line of descent | 30.2 | 21.5 | 18.9 | 22.4 |
| Source of mental strength of parents | 35.5 | 24.1 | 14.0 | 22.3 |
| Can help in household chores | 14.8 | 7.6 | 20.2 | 14.8 |
| Have the honour in the society | 6.5 | 7.2 | 9.6 | 8.1 |
| Have to work less for rearing children | 14.2 | 4.2 | 6.8 | 7.7 |
| Other members of family like more son | 7.7 | 6.3 | 6.2 | 6.6 |
| Can look after the parent at old-age | 4.1 | 5.5 | 7.8 | 6.2 |
| Son is yours | 4.1 | 2.5 | 2.5 | 2.9 |
| Daughter is for others | 3.0 | 1.7 | 3.7 | 2.9 |
| Can get dowry | 3.0 | 0.4 | 1.6 | 1.5 |
| Increase honour in the family | 0.0 | 0.4 | 1.2 | 0.7 |
| Others | 7.7 | 9.7 | 5.3 | 7.3 |

Source: Data analysis of women's questionnaire

The reasons for having preference for specific sex among the men and women for their first child were also explored in the **qualitative** data. The participants in surveys and interviews to obtain the qualitative data have mentioned a number of reasons for son preference, e.g. boys can assist in much of the household's works, can look after their parents when they are aged, can be involved more in income-generating activities, can provide a source of dowry at the time of marriage, maintain the line of descent, can be helping hands for their fathers, do not leave parents, ensure the flow of future income, can take on their own responsibilities and provide their parents with hope, and it take less effort to educate a boy child.

The advantages of having a boy child have emerged as a dominant theme among the reasons for having preference for sons. Parents have considered sons to be more responsible than daughters. A female participant from Chirirbandar Upazila in Dinajpur District stated:

> "There are so many advantages of having a male child. They can contribute more financially and can take all sorts of responsibilities. A son, even if he doesn't feed you, is always special."

The particular preference for sons is not only influenced by the perceived advantages of having a boy child, but also triggered by the perceived disadvantages or problems associated with having a girl child. Participants mentioned a number of different problems or disadvantages associated with having a girl child. These are: girls are more victimized by sexual harassment, easier to be convinced to do any illegal

works, threatened by the risk of acid throwing, victims of physical violence at in-law's house because of the inability to provide dowry, often face domestic violence caused by the failure to maintain good relationships with in-law's family members, cannot raise their voice in family matters, safety cannot be assured, society does not value girls, arranging dowry for daughter's marriage is a very hard task especially for the poor parents, girls tend to be involved in romantic relationships which often brings embarrassment in the family, arranging marriage is a hassle for the girls with dark complexion and expensive, providing proper education for daughters is very tough for poor parents, neighbours gossip about girls and they are subject to criticism if they are not married off early. Even mothers cannot accept the way daughters have been considered by the in-laws. One mother from Sunamganj Sadar Upazila, Sunamgunj District said:

> "My father-in-law and mother-in-law do not want to know anything about my daughters while we speak with them over phone. They don't even want to visit our home just because they don't have any grandson, rather, they have two granddaughters. My neighbours and in-laws criticize a lot because I have two daughters and no son."

The perceived advantages of having a son in the family are compared with these types of perceived disadvantages and problems related to having a daughter in the family are major issues that influence couples to prefer sons over daughters.

### 4.2.2.2 Women's feelings and family members' responses after birth of a specific sex

Figure 4.4 presents the feelings of women after giving birth to children. It shows that more women felt happy after giving birth to a son than a daughter. Overall, 97 per cent women felt happy after giving birth to a son while 89 per cent women felt happy after giving birth of a daughter. However, women's feelings vary in the context of their divisions.

**Figure 4.4: Women's feelings after giving birth son and daughter (%)**
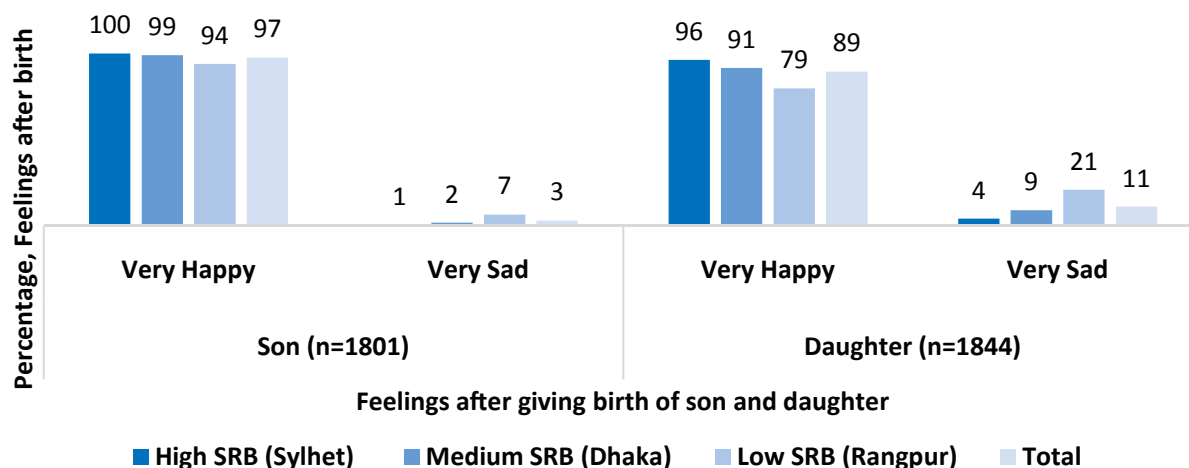


Source: Data analysis of women's questionnaire

The reactions of family members after the birth of female and male children are presented in Table 4.8. It can be seen from the table that about 87 per cent of women reported that their husband was happy after the birth of a daughter, but this rate was about 96 per cent for son. More than half (56.6 per cent) said their mother-in-law was happy after the birth of a daughter, which rose to 74.5 for a son. Only 38.1 per cent of women reported that their father-in-law was happy after the birth of a daughter, which rose to 48.8 per cent for the son. More than half (51.1 per cent) of the women reported that their family members became happy after the birth of a daughter, which rose to 63 per cent for a son.

**Table 4.8: Reaction of family members after the birth of female and male child (%)**

| Reactions of family members after birth | Family members' reaction after daughter's birth | | | | Family members' reaction after son's birth | | | |
|---|---|---|---|---|---|---|---|---|
| | High-SRB division (Sylhet, n=648) | Medium-SRB division (Dhaka, n=598) | Low-SRB division (Rangpur, n=598) | Total (n=1844) | High-SRB division (Sylhet, n=605) | Medium-SRB division (Dhaka, n=582) | Low-SRB division (Rangpur, n=610) | Total (n=1797) |
| My husband was happy | 91.7 | 89.6 | 78.3 | 86.7 | 96.0 | 97.4 | 94.1 | 95.8 |
| My mother-in-law was happy | 53.9 | 62.0 | 54.2 | 56.6 | 62.5 | 74.1 | 77.9 | 71.5 |
| My father-in-law was happy | 28.5 | 48.5 | 38.1 | 38.1 | 35.2 | 55.7 | 55.7 | 48.8 |
| My sister-in-law was happy | 18.5 | 23.6 | 10.9 | 17.6 | 21.0 | 28.4 | 20.0 | 23.1 |
| My husband was not happy | 3.5 | 8.9 | 13.5 | 8.5 | 0.8 | 1.0 | 4.5 | 2.1 |
| My mother-in-law was not happy | 5.1 | 10.5 | 12.7 | 9.3 | 0.8 | 0.9 | 1.5 | 1.1 |
| My father-in-law was not happy | 1.5 | 6.7 | 5.4 | 4.5 | 0.3 | 0.9 | 1.0 | 0.7 |
| Many family members were very happy | 55.1 | 44.6 | 53.2 | 51.1 | 63.0 | 54.1 | 71.6 | 63.0 |
| Many family members celebrated | 18.4 | 10.0 | 6.2 | 11.7 | 23.5 | 14.6 | 13.8 | 17.3 |
| Many family members were sad | 3.2 | 7.1 | 14.4 | 8.1 | 1.3 | 0.9 | 2.8 | 1.7 |
| Many people took care of me | 12.5 | 2.5 | 2.8 | 6.1 | 18.8 | 5.7 | 5.7 | 10.1 |
| Abused and Insulted me | 2.3 | 1.2 | 2.6 | 2.1 | 0.2 | 0.0 | 0.0 | 0.1 |
| I got respect in the family | 2.5 | 1.5 | 0.7 | 1.8 | 11.7 | 2.7 | 3.1 | 5.9 |
| Told that daughter enlightened family | 16.4 | 8.2 | 7.5 | 5.4 | | | | |
| Applauded that son can continue a line of descent | | | | | 17.5 | 10.1 | 7.2 | 11.6 |
| Told that son was the source of income in the family | | | | | 24.1 | 5.2 | 6.7 | 12.1 |
| Others | 0.6 | 1.5 | 1.8 | 1.3 | 0.7 | 0.5 | 0.3 | 0.50 |

Source: Data analysis of women's questionnaire

The reaction of family members after the birth of a female child was explored in qualitative data. Their reactions varied from context to context and included positive, negative and neutral reactions (see box).

After the birth of a girl, family members…

- Family member become happy and delighted
- In-laws become very upset and annoyed because of the upcoming hassles
- Families decline to arrange any celebration
- Mothers get humiliated at times
- Husband become unhappy and cause violence
- Daughter's mother faces discriminatory behaviours
- Mother-in-law avoids communication with the new-born's mother
- Humiliation of the members of in-law's house
- Mental trauma caused by the humiliation

Positive and negative experiences of reactions regarding the birth of a female child have been derived from the responses. In particular instances it was explored that family members become very happy getting a daughter in the family. These findings address the issue that even though not enough cases were found to conclude that prenatal sex selection against girl fetus is common among women, some interviewees show clear interest of having sons for varied reasons against the disadvantages of having daughters. This could lead to an assumption that since sex-detection technology is within the reach of majority women, it is highly likely that women could go through an MR or use MRM to make sure that they will not keep an undesired fetus, in this case female. However, within the realm of this study with such a small sample size, it is not surprising to find sporadic cases of GBSS through the survey results.

This study also finds reactions contrary to the popular perception of preferring to have a son instead of a daughter. One female participant from Chirirbandar Upazila in Dinajpur District stated in this regard:

> "My mother-in-law's joy knew no bound after she got to know that I gave birth to a daughter. She had this fear that she would not live for a long. That is why she told me that 'you will get a mother replacing a mother if you give birth to a daughter.' That is why she used to like daughters a lot."

But there are ranges of negative reactions too which were derived from the responses of the participants reporting that their in-laws and relatives became upset after they gave birth to a daughter; at times these include experiences of humiliation. Another female participant from Sadar Upazila in Dinajpur District has provided her opinion where she expressed the position of society and family towards the consecutive birth of daughters in a family:

> "If your first child is a daughter, it upsets people. If the first two children are daughters, then it is far upsetting. The family without any son is in the risk of discontinuation of a generation. Because daughters are meant to be a member of another family after their marriage. Then who will protect her own family?"

One gynecologist from a hospital in the Dhaka City Corporation area stated her experience in this regard:

> "I observed this painful experience. A pregnant woman got admitted here with critical health condition. In spite of giving huge efforts, we could not save the life of the newborn who was a girl. We informed her relative about this, they asked us, what was the sex of the child? We informed that it was a girl. And then they said, 'all praises to Almighty!' They got delighted! Can you believe this? What a shame! What a humiliation it is to that mother!

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Responses from participants also revealed that the people from lower wealth quintile are found to be most reactive when a woman gave birth to a daughter. People from lower-middle-income families tend to be more negatively reactive after the birth of a girl. The associated financial challenges of having a daughter in the family is mostly felt by the people of the lower wealth quintile of the society according to the participants. The reasons found in this qualitative study behind the people from the lower wealth quintile being most reactive to the birth of sons or daughters are:

- They are financially and socially more insecure
- They face more challenges in arranging expensive marriage for daughters
- They cannot afford the means to provide safety to the girls
- They discriminate more between son and daughters

The family member's reaction after the birth of a male child was also explored in the qualitative data. The participants provided a range of reactions after the birth of a male child which were mostly delightful reactions. The family member's reactions derived from the responses of the participants after the birth of a male child are as follows:

- Family members become delighted after knowing the news of the birth of a son
- Consecutive birth of boys is a big source of happiness for the family
- Lower- and middle-income families are more delighted after the birth of a boy child
- Family members arrange festive occasion after the birth of a son in a family
- They provide foods and sweets to the neighbour after the birth of a son
- They arrange special religious rituals for the newborn child
- They provide special gifts to the mother of the son

There are a range of reasons for such reactions to the birth of a male child in the present society, which were also addressed in interviews with the participants. Those are:

- Birth of a boy after consecutive birth of daughters in many families
- Boys are always considered as good luck for the family
- Boys are considered as the hope for the future (financially, socially), especially for poor families

One female participant from Gaibandha Sadar Upazila, Gaibandha District has shared her joyful experience after the birth of her first son. *"Each and every family member of our house was very much happy seeing it's a boy. They started loving me more. They said that boy is the hope of a family,"* she said. The joy of having a son is more in poor families according to the participants. The perception that a boy can ensure social and financial security of a family triggers such reactions, according to the participants.

These findings impelled a conclusion that the signs of son preference, a precondition of GBSS, prevails across Bangladesh.

### 4.2.3 Knowledge, availability, access and use of sex-detection technology

**4.2.3.1 Knowledge about sex-detection technology**

Women's knowledge about modern sex-detection technology (SDT) is provided in Figure 4.5. It shows that knowledge about SDT was almost universal among the respondents, with 99.5 per cent in medium and low SRB divisions and 97.6 per cent in high SRB division. Also, it has been reported by the participants of the qualitative study that availability of SDT is increasing in Bangladesh.

## Figure 4.5: Women's knowledge regarding sex-detection technology (%)
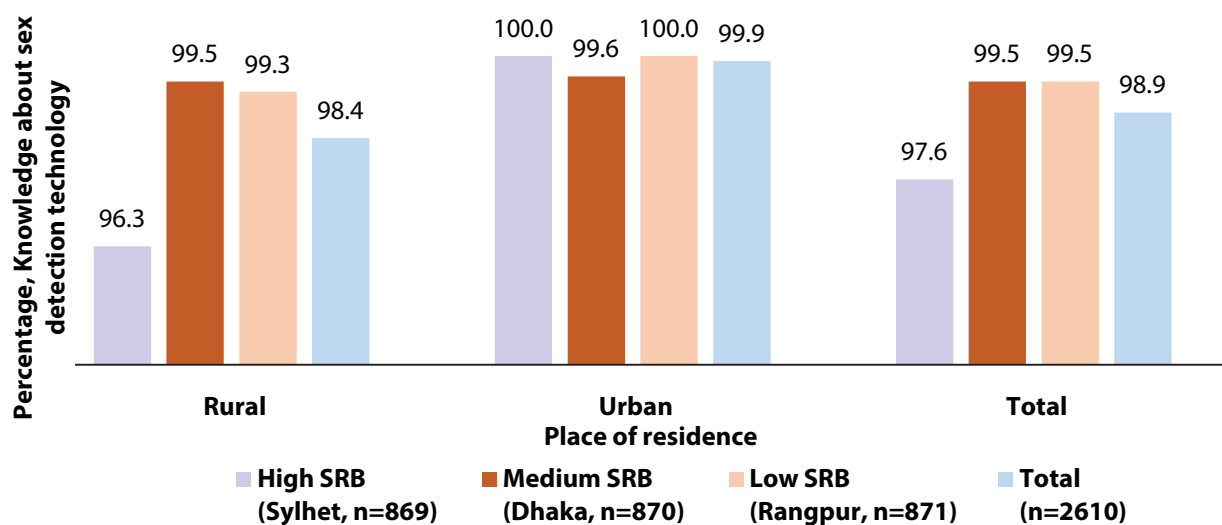


Source: Data analysis of women's questionnaire

### 4.2.3.2 Availability of sex-detection technology

Women's knowledge about the places from where the modern SDT is available was ascertained. Places where modern SDT is available were classified into three broad categories: government sectors (including medical college hospitals, specialized medical college hospitals, District hospitals, maternal and child welfare centres, Upazila health complexes, and Union health and family welfare centres), NGO sectors including static NGO clinics and private sector facilities that included clinics, hospitals and skilled doctors' chambers. About 90 per cent of respondents knew that SDT was available in non-government hospitals or clinics (Table 4.9). One out of every four respondents said that SDT was available in the medical college hospitals. Almost 50 per cent of respondents said that it was available in a District hospital. About 28 per cent were aware that SDT was available in the NGO static clinic.

### Table 4.9: Women's knowledge about where sex-detection technology is available (%)

| Availability of sex-detection technology | Division | | | Total (n=2579 ) |
|---|---|---|---|---|
| | High -SRB division (Sylhet, n=848 ) | Medium-SRB division (Dhaka, n=865 ) | Low -SRB division (Rangpur, n=848 ) | |
| Medical college hospitals | 22.4 | 29.8 | 24.2 | 25.5 |
| Specialized medical college hospitals | 6.6 | 3.8 | 1.8 | 4.1 |
| District hospitals | 49.1 | 50.2 | 44.1 | 47.8 |
| Maternal and child welfare centres | 10.0 | 11.1 | 5.0 | 8.7 |
| Upazila health complexes | 28.1 | 24.5 | 28.3 | 26.9 |
| Union health and family welfare centres | 0.9 | 1.4 | 1.6 | 1.3 |
| Static NGO clinics | 32.9 | 23.8 | 27.9 | 28.2 |
| Non-government hospital/clinics | 88.3 | 96.1 | 85.1 | 89.8 |
| Skilled doctor's chambers | 13.0 | 7.9 | 5.8 | 8.8 |
| Others | 1.1 | 0.1 | 0.3 | 0.5 |

Source: Data analysis of women's questionnaire

The respondents of this study were also asked whether SDT is available in their areas or neighbouring areas. Eighty-two per cent of women said that SDT is available in their areas or their neighbouring areas (Figure 4.6). It was 93 and 78 per cent in urban and rural areas, respectively. The availability of SDT is 15 per cent higher in urban areas than that of rural areas. Overall, the lowest availability of SDT was both in urban and rural areas of low SRB division.

**Figure 4.6: Availability of sex-detection technology in respondents' own or neighbours' areas (%)**
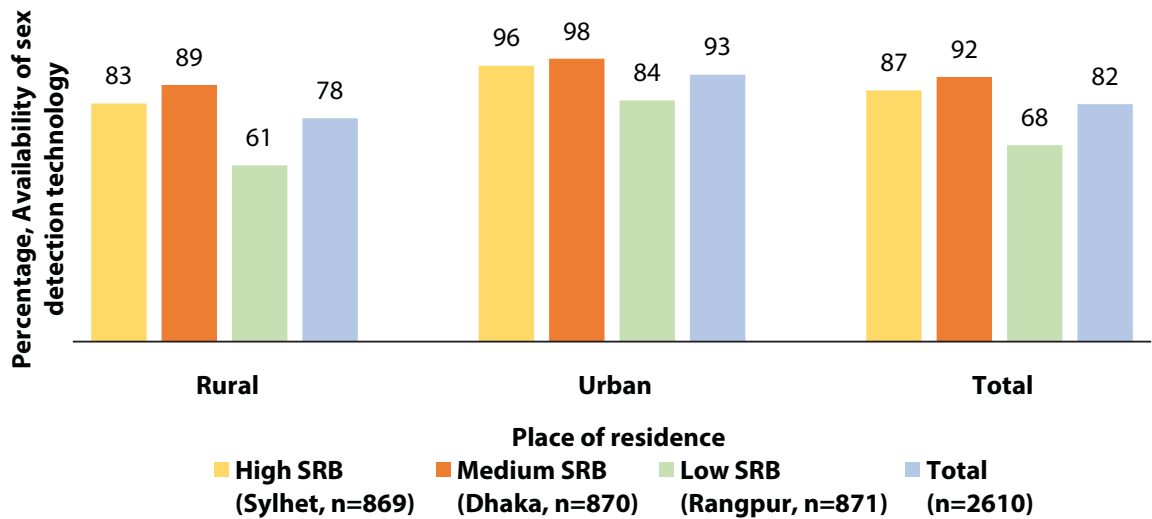


Source: Data analysis of women's questionnaire

This study included a health facility assessment to determine availability of SDT. The facility assessment survey was carried out in 34 facilities of which 14 were from the medium SRB division, 11 from the high SRB division, and nine from the low SRB division. The highest availability of ultrasound technology (86 per cent) was in facilities located in the medium SRB division (Figure 4.7) followed by the facilities of low SRB division and high SRB division (55 per cent in each division). On the other hand, Amniocentesis (another SDT which may be used for multiple purposes e.g. to find out defects of the fetus, fetal infection) was only available in high SRB division and medium SRB division but not in low SRB division.

**Figure 4.7: Availability of sex-detection technology in surveyed facilities (%)**
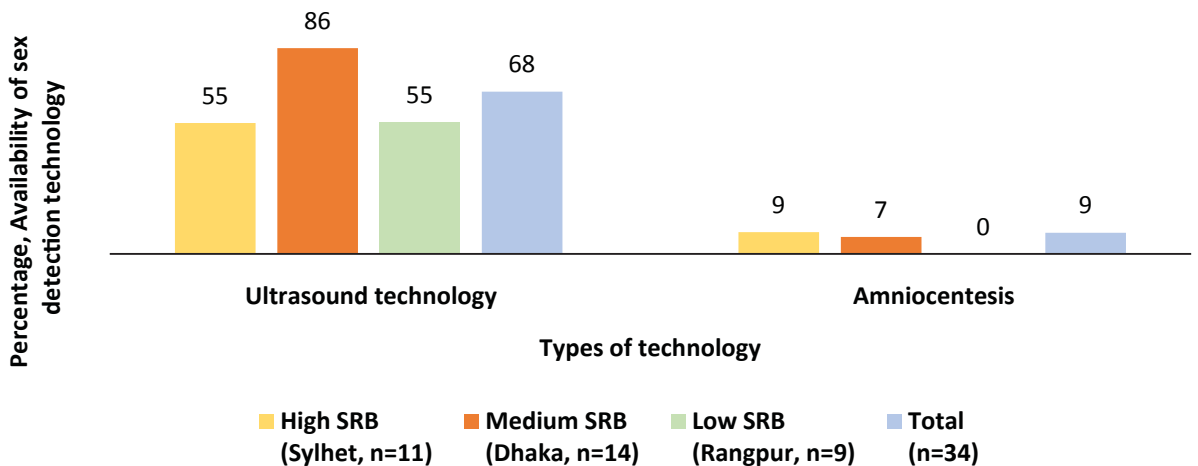


Source: Data analysis of facility assessment

The gynecologists and medical technologists of ultrasound technology (named as sonologist) play major roles in detecting the sex of a fetus during pregnancy. As provided in Figure 4.8, the mean number of gynecologists was 9.1 in the facilities of Dhaka, while it was 2.2 and 1.2 in the facilities located in low and high SRB division, respectively. On the other hand, the facilities of medium and low SRB division had more than one ultrasound technologist per facility while high SRB division had less than one ultrasound technologist per facility.

## Figure 4.8: Availability of mean numbers of gynecologist and sonologists in surveyed facilities
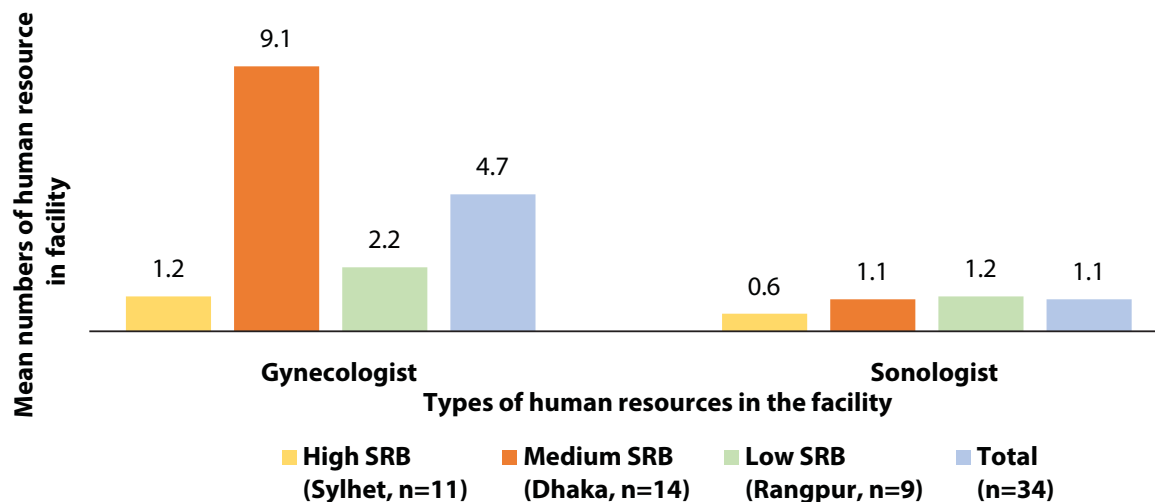


Source: Data analysis of facility assessment

### 4.2.3.3 Utilization of sex-detection technology

Couples use sex-detection technology (ultrasonography) for many reasons. As shown in Figure 4.9, they do so mostly to know the overall health status and position of the fetus (73 per cent), to avoid complications (51 per cent), to know the sex of the fetus (40 per cent), for antenatal care (37 per cent), due to doctor's advice (32 per cent) and for caesarean delivery (11 per cent).

## Figure 4.9: Reasons for using ultrasonography in Bangladesh (%)
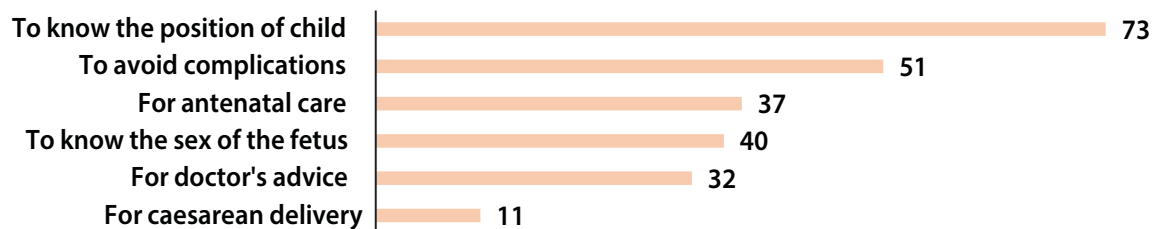


Source: Data analysis of women's questionnaire

The following figure (Figure 4.10) shows that overall 40 per cent of women used ultrasonography to detect the sex of the fetus. However, the use of SDT was higher in the low SRB division (45 per cent) followed by the high SRB division (43 per cent) and the medium SRB division (31 per cent). Table 4.10 shows the stated reasons for using STD. It shows that 83.7 per cent women were willing to know the sex of the fetus. However, it also shows that though 26.6 per cent women did not ask the sonologist about the sex of the fetus, the sonologist informed the women about the sex of the fetus.

**Figure 4.10: Utilization of ultrasonography by ever-married women for sex-detection (%)**
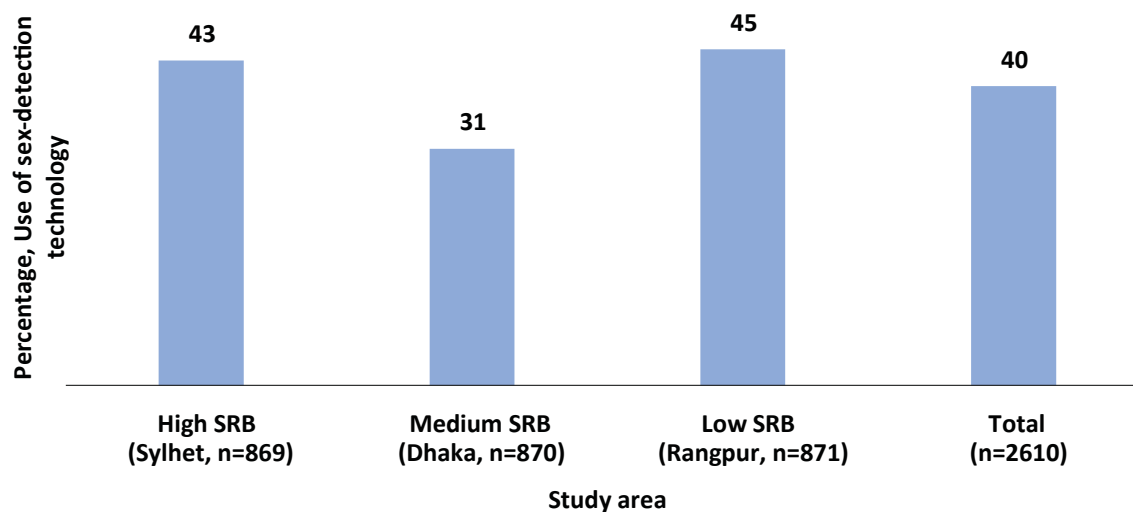


Source: Data analysis of women's questionnaire

**Table 4.10: Reasons for using sex-detection technology (ultrasonography) (%)**

| Reasons for using ultrasonography to know the sex of the fetus | Division | | | Total (n=1033) |
|---|---|---|---|---|
| | High-SRB division (Sylhet, n=374) | Medium-SRB division (Dhaka, n=272) | Low-SRB division (Rangpur, n=387) | |
| I was willing to know the sex of my child | 77.3 | 92.6 | 83.7 | 83.7 |
| Though I did not ask, the doctor told me about the sex | 35.6 | 14.1 | 26.9 | 26.6 |
| My husband pressurized me | 12.6 | 9.2 | 6.2 | 9.3 |
| My relatives were keen to know the sex of my child | 15.1 | 19.1 | 23.1 | 19.1 |
| Everyone does that, that is why I did that | 8.1 | 15.1 | 7.5 | 9.7 |
| My intention was to abort the child if it was girl | 0.0 | 1.5 | 0.3 | 0.5 |
| My intention was to abort the child if it was boy | 0.3 | 0.0 | 0.8 | 0.4 |
| Others | 2.4 | 2.9 | 1.1 | 2.0 |

Source: Data analysis of women's questionnaire

The utilization of SDT such as ultrasonography has been found in the responses of participants of the qualitative study to be predicated by different motives. The three main motives of using ultrasonography, as derived from the responses, are to know the sex of the fetus, to know the physiological conditions of the fetus and to detect the complicacies of the clients with post-MR health issues.

"Everyone actually wants to know the sex of the child after ultrasonography. There are cases among my clients who wanted to know the sex of the fetus from other health care facilities and were declined, after that they come to us. We also declined to inform them about the sex of the fetus. Because it is not allowed." —Counsellor and manager of an NGO clinic, Dhaka City Corporation area

The interest in knowing the sex of the fetus has been mentioned frequently by participants as a crucial motive of using ultrasonography. Though in many health care facilities clients are not allowed to know the sex of the fetus through ultrasonography, their interests in this regard make them visit other health care centres where they can get to know the sex of the fetus through ultrasonography.

As providing information regarding the sex of the fetus is prohibited, health care service providers described their communication strategies to discourage the clients from seeking information about the sex of the child. A sonologist working in the Dhaka City Corporation area has shared her experience:

> "I always ask patients about the number of her children at first. Couples who already have two girls or two boys always tend to ask about the sex of the fetus. I actually don't inform them about the sex of the fetus. I inform them about the physical condition of the child. Then I try to guess their preferences and wish, if it matches with the result of the ultrasonography, only at that time I tell them about the sex of the fetus. In other cases, I avoid the question."

On the other hand, reluctance of clients to use ultrasonography even after the suggestions of health care providers also has been reported in the qualitative study. The fear of knowing the sex of the child (as it may show the sex which is undesired) is also playing a role of barrier towards the utilization of the ultrasonography according to the participants. One Family Welfare Visitor (FWV) of Keraniganj Upazila, Dhaka District has reported:

> "Once I had a client who was a mother of two girls. She became pregnant and somehow had this fear that she will have another girl. I requested her to go through an ultrasound to know the status of the child, but she denied doing that. She said that if it came out to be a girl again, she will face violence from her husband and her in-law's family. That is why she was in denial to go through an ultrasound. Then I asked her not to take the report with her and if it comes out to be a girl again then I myself will keep the baby. After that, she accepted and went through an ultrasound."

Apart from finding out the sex of the fetus, some also go through an ultrasound to find out the physiological condition of the fetus. A gynecologist from Dhaka medical college and hospital said:

> "We do not investigate to detect the sex at the earlier stage. We do it for the safety of the baby. In the limited cases, where we detect the sex, we do it just to be ensured whether the fetus is male or female and whether the fetus has any chromosomal abnormality."

Detection of the complicacies of post-MR cases has also come as another reason behind the utilization of the ultrasonography services. The successful completion of the MR is often investigated by doing ultrasonography according to the participants, like this gynecologist from Rangpur medical college and hospital:

> "We have to do ultrasonography for the cases where we become confused. The ultrasonography ensures the proper completion of the MR process. In other cases, where we see patients to bleed or parts of the fetus being still inside, we know that there are complicacies even without doing ultrasonography."

### 4.2.3.4 Differentials and predictors of utilization of sex-detection technology

The use of SDT is significantly varied by the current age of women. Younger women are more likely to use SDT (Table 4.11). Age at first marriage and first pregnancy were significantly associated with the use of SDT. The women who got married and have their first pregnancy after the age of 18 years were more likely to use SDT. Women's place of residence, division, religion, education, husband's education, communication with spouse about sex of child, access to any media and wealth quintile were associated with the use of SDT. Women's total number of births, overall son preference and son preference for the first child were also significantly associated with the use of SDT.

**Table 4.11: Utilization of sex-detection technology by women, background characteristics (%)**

| Background characteristics | Used sex-detection technology | | P-value |
|---|---|---|---|
| | No (n=1576) | Yes (n=1034) | |
| **Age of women** | | | 0.001 |
| 15-24 | 56.3 | 43.7 | |
| 25-34 | 63.3 | 36.7 | |
| 35-49 | 63.5 | 36.5 | |
| **Age difference between husband and wife** | | | 0.226 |
| Up to 6 years | 61.6 | 38.4 | |
| More than 6 years | 59.2 | 40.8 | |
| **Age at marriage** | | | 0.001 |
| Below 18 | 63.1 | 36.9 | |
| 18 and above | 56.5 | 43.5 | |
| **Age at first pregnancy** | | | 0.025 |
| Below 18 | 63.1 | 36.9 | |
| 18 and above | 58.7 | 41.3 | |
| **Division** | | | 0.000 |
| High SRB | 57.0 | 43.0 | |
| Medium SRB | 68.7 | 31.3 | |
| Low SRB | 55.5 | 44.5 | |
| **Place of residence** | | | 0.007 |
| Rural | 62.2 | 37.8 | |
| Urban | 56.6 | 43.4 | |
| **Religion of women** | | | 0.000 |
| Muslim | 61.9 | 38.1 | |
| Others | 51.0 | 49.0 | |
| **Importance of religion** | | | 0.872 |
| Not important | 59.2 | 40.8 | |
| Moderately important | 60.5 | 39.5 | |
| Highly important | 60.7 | 39.3 | |
| **Education of women** | | | 0.000 |
| No education | 70.9 | 29.1 | |
| Primary | 66.4 | 33.6 | |
| Secondary | 56.1 | 43.9 | |
| Higher than secondary | 56.3 | 43.7 | |
| **Education of husband** | | | 0.000 |
| No education | 73.1 | 26.9 | |
| Primary | 60.7 | 39.3 | |
| Secondary | 55.7 | 44.3 | |
| Higher than secondary | 57.8 | 42.2 | |

| Background characteristics | Used sex-detection technology | | P-value |
|---|---|---|---|
| | No (n=1576) | Yes (n=1034) | |
| **Working status of women** | | | 0.547 |
| No | 60.2 | 39.8 | |
| Yes | 62.0 | 38.0 | |
| **Women empowerment** | | | 0.237 |
| Low | 64.5 | 35.5 | |
| Medium | 59.2 | 40.8 | |
| High | 59.9 | 40.1 | |
| **Communication with spouse about sex of child** | | | 0.000 |
| No | 66.1 | 33.9 | |
| Yes | 57.3 | 42.7 | |
| **Access to any media** | | | 0.000 |
| No | 66.9 | 33.1 | |
| Yes | 58.2 | 41.8 | |
| **Wealth quintile of the household** | | | 0.000 |
| Poorest | 67.6 | 32.4 | |
| Poorer | 63.0 | 37.0 | |
| Middle | 59.6 | 40.4 | |
| Richer | 58.1 | 41.9 | |
| Richest | 53.4 | 46.6 | |
| **Number of pregnancies** | | | 0.131 |
| 1-2 | 59.2 | 40.8 | |
| 3 and above | 62.1 | 37.9 | |
| **Number of births** | | | 0.004 |
| 1-2 | 58.6 | 41.4 | |
| 3 and above | 64.5 | 35.5 | |
| **Son preference** | | | 0.010 |
| No | 61.0 | 39.0 | |
| Yes | 50.9 | 49.1 | |
| **Son preference as first child** | | | 0.000 |
| No | 62.5 | 37.5 | |
| Yes | 55.0 | 45.0 | |
| **Total** | **60.4** | **39.6** | |

Source: Data analysis of women's questionnaire

The variables which were significantly (p ≤ 0.05) associated with the use of SDT at the bivariate level were planned to enter into the multiple logistic regression model as the dependent variable was dichotomous categorical variable. However, the diagnosis shows that education of women and education of husband

was highly correlated (r = 0.641, p = 0.000) and thus education of women was used in the model than husband's education. Women's age of marriage and age at first pregnancy was also highly correlated (r = 0.828, p = 0.000) and thus age at first pregnancy was dropped from the regression model. The diagnosis also revealed that women's age and number of births were highly correlated (r = 0.682, p = 0.000) and thus we dropped number of births as age was more significantly associated with the use of SDT at bivariate analysis.

The logistic regression analysis was then performed to predict the utilization of SDT among the women of this study by using the following variables: age of women, women's age at first marriage, division, place of residence, religion, education of women, communication with spouse about sex of child, access to any media, wealth quintile, son preference and son preference as first child. The findings of the final regression model have been presented in Table 4.12.

The findings show that young women were more likely to use sex-detection technology than older women. It can be seen from the table that women aged 15 to 24 years had 1.28 times higher probability of using SDT than women aged 35 to 49 years old. It also shows that women of low SRB and high SRB divisions had almost same chance of using SDT while the women from medium SRB division had the less chance of using SDT compared with women of high SRB division. The findings show that women with more education had more chance of using SDT. For example, women with secondary education had 1.61 times higher chance of using SDT than the women who had no education. Similarly, the women who were from richest wealth quintile had more chance of using SDT compared with the women from the poorest wealth quintile. The findings also show that women who had son preference had more chance of using SDT than women who had no son preference.

**Table 4.12: Predictors of the use of sex-detection technology (using multiple logistic regression)**

| Background characteristics | Odds ratio (OR) | 95 per cent C.I. for OR | | P-value |
|---|---|---|---|---|
| | | Lower | Upper | |
| **Age of women** | | | | 0.000 |
| 15-24 | 1.40 | 1.03 | 1.91 | 0.030 |
| 25-34 | 0.97 | 0.72 | 1.31 | 0.848 |
| 35-49 | Reference | | | |
| **Age at marriage** | | | | |
| Below 18 | Reference | | | |
| 18 and above | 1.20 | 1.00 | 1.43 | 0.050 |
| **Division** | | | | 0.000 |
| High SRB | Reference | | | |
| Medium SRB | 0.52 | 0.42 | 0.65 | 0.000 |
| Low SRB | 0.99 | 0.81 | 1.22 | 0.950 |
| **Religion of women** | | | | |
| Muslim | Reference | | | |
| Others | 1.43 | 1.13 | 1.82 | 0.003 |
| **Education of women** | | | | 0.003 |
| No education | Reference | | | |
| Primary | 1.17 | 0.84 | 1.62 | 0.365 |
| Secondary | 1.61 | 1.16 | 2.24 | 0.005 |
| Higher than  secondary | 1.36 | 0.85 | 2.16 | 0.199 |

| Background characteristics | Odds ratio (OR) | 95 per cent C.I. for OR | | P-value |
| | | Lower | Upper | |
|---|---|---|---|---|
| **Communication with spouse about sex of child** | | | | |
| No | Reference | | | |
| Yes | 1.30 | 1.09 | 1.55 | 0.004 |
| **Wealth quintile of the household** | | | | 0.001 |
| Poorest | Reference | | | |
| Poorer | 1.25 | 0.96 | 1.62 | 0.100 |
| Middle | 1.39 | 1.06 | 1.81 | 0.016 |
| Richer | 1.54 | 1.17 | 2.02 | 0.002 |
| Richest | 1.84 | 1.38 | 2.45 | 0.009 |
| **Son preference** | | | | |
| No | Reference | | | |
| Yes | 1.53 | 1.10 | 2.13 | 0.011 |
| **Son preference as first child** | | | | |
| No | Reference | | | |
| Yes | 1.27 | 1.05 | 1.53 | 0.013 |
| **Constant** | 0.249 | | | 0.000 |
| Model summary: Chi-Square = 157.95 (p = 0.000), -2Loglikelihood = 3346.90, n = 2610 | | | | |

Source: Data analysis of women's questionnaire

## 4.3 Knowledge about, and availability and use of menstrual regulation services

### 4.3.1 Knowledge about MR services

This study asked ever-married women if they have ever heard about MR services. The response to this question was considered knowledge about MR services. The findings show that about 84 per cent of women ever heard about MR (Table 4.13). This knowledge about MR was also explored in qualitative study and the findings show that women have knowledge about different methods/process of terminating pregnancies. Those are:

- Through taking herbal medicines
- Through consuming allopathic medicines
- Through consuming homeopathic medicines
- By going through the process of menstrual regulation (MR)
- By using different surgical tools and surgery
- By going through different religious rituals
- By taking injections from the nearby hospitals
- Setting up tablets in the face of vagina
- D&C (Dilation and Curettage)
- Using tree leaves and roots
- By taking medication by mouth

According to the participants of the qualitative study, the processes of performing MR are taking place in different places or with the help of different skilled and unskilled or even religious personnel, such as: MBBS doctors, gynecologists and nurses assisting MBBS doctors who belong to the skilled category compared with health assistants, *kabiraz*, village doctors, pharmacy staff, skilled birth attendants, spiritual healers and experienced women of the village belong to the unskilled category.

Clients seek MR-related services from these practitioners based on their respective contexts and situations, according to the participants of the qualitative study. Women respondents say they intended to terminate their pregnancy by using MR services. However, women may seek care from different kinds of health care facilities, based on their position in the wealth quintile. A male participant from Srimangal Upazila, Maulvibazar District noted the impact of economic status:

> *"Couples from the middle- or lower-income group tend to go to Kabiraz and Quack doctors for terminating the pregnancy. But people from the higher income group visit big clinics for the same reason. They get the service from those places very easily."*

MR services and other ways of terminating pregnancies are sought mostly by women who are frequently encountering violence in the family, reported the respondents. A female participant from Saltha Upazila in Faridpur District said:

> *"The women who are victims of violence caused by her husband for not being able to provide him the desired child are often visiting different places to terminate their pregnancies."*

Unaware and uneducated clients are more likely to visit the unskilled service providers who donot have any professional knowledge on the termination of pregnancies according to the participants. One female participant from Gaibandha Sadar Upazila in Gaibandha District has shared her experience:

> *"I think, uneducated and unaware mothers are more likely to visit Kabiraz and spiritual healers. Rural women also visit these types of practitioners. On the other hand, females from rich family and urban areas go to the gynecologist of hospitals and clinics as they are more aware."*

It has also been frequently reported by ever-married women in this study that women who already have three or four girls or boys consecutively are more likely to go to different sources for terminating their pregnancies after being informed or guessing that the fetus will also be of the same sex. In addition, limiting the number of children after the birth of three or four children is a reason couples visit these places.

### 4.3.1.1 Differentials and predictors of knowledge about MR services

The differentials of knowledge about MR services are provided in Table 4.13. It shows that women currently aged between 35 to 49 years have more knowledge about MR services than women who were aged 15-24 years. Women's age at first marriage and age at first pregnancy were also associated with knowledge about MR services. The findings show that women who married and become pregnant after the age of 18 years have more knowledge about MR services. Women's knowledge about MR services also varies significantly by high to low SRB division, place of residence, religion, importance of religion, education of women, education of women's husband, communication with spouse about sex of child, access to any media and wealth quintile of the household.

## Table 4.13: Knowledge about MR services by background characteristics (%)

| Background characteristics | Ever heard about MR | | P-value |
| --- | --- | --- | --- |
| | No (n=419) | Yes (n=2191) | |
| **Age of women** | | | 0.046 |
| 15-24 | 18.0 | 82.0 | |
| 25-34 | 15.1 | 84.9 | |
| 35-49 | 12.4 | 87.6 | |
| **Age difference between husband and wife** | | | 0.054 |
| Up to 6 years | 14.5 | 85.5 | |
| More than 6 years | 17.2 | 82.8 | |
| **Age at marriage** | | | 0.001 |
| Below 18 | 18.0 | 82.0 | |
| 18 and above | 13.3 | 86.7 | |
| **Age at first pregnancy** | | | 0.003 |
| Below 18 | 18.8 | 81.2 | |
| 18 and above | 14.4 | 85.6 | |
| **Division** | | | 0.000 |
| High SRB | 19.8 | 80.2 | |
| Medium SRB | 19.0 | 81.0 | |
| Low SRB | 9.4 | 90.6 | |
| **Place of residence** | | | 0.000 |
| Rural | 18.4 | 81.6 | |
| Urban | 11.2 | 88.8 | |
| **Religion of women** | | | 0.000 |
| Muslim | 15.5 | 84.5 | |
| Others | 19.8 | 80.2 | |
| **Importance of religion** | | | 0.000 |
| Not important | 23.8 | 76.2 | |
| Moderately important | 15.7 | 84.3 | |
| Highly important | 13.3 | 86.7 | |
| **Education of women** | | | 0.000 |
| No education | 28.3 | 71.7 | |
| Primary | 19.9 | 80.1 | |
| Secondary | 13.3 | 86.7 | |
| Higher than secondary | 6.3 | 93.7 | |
| **Education of husband** | | | 0.000 |
| No education | 19.0 | 81.0 | |
| Primary | 19.2 | 80.8 | |
| Secondary | 14.1 | 85.9 | |
| Higher than secondary | 8.0 | 92.0 | |

| Background characteristics | Ever heard about MR | | P-value |
| --- | --- | --- | --- |
| | No (n=419 ) | Yes (n=2191 ) | |
| **Working status of women** | | | 0.098 |
| No | 16.5 | 83.5 | |
| Yes | 12.8 | 87.2 | |
| **Women empowerment** | | | 0.771 |
| Low | 16.6 | 83.4 | |
| Medium | 17.0 | 83.0 | |
| High | 15.7 | 84.3 | |
| **Communication with spouse about sex of child** | | | 0.000 |
| No | 20.7 | 79.3 | |
| Yes | 13.6 | 86.4 | |
| **Access to any media** | | | 0.000 |
| No | 23.7 | 76.3 | |
| Yes | 13.5 | 86.5 | |
| **Wealth quintile of the household** | | | 0.000 |
| Poorest | 23.8 | 76.2 | |
| Poorer | 16.1 | 83.9 | |
| Middle | 14.8 | 85.2 | |
| Richer | 14.5 | 85.5 | |
| Richest | 10.7 | 89.3 | |
| **Number of pregnancies** | | | 0.068 |
| 1-2 | 17.1 | 82.9 | |
| 3 and above | 14.5 | 85.5 | |
| **Number of births** | | | 0.847 |
| 1-2 | 16.0 | 84.0 | |
| 3 and above | 16.3 | 83.7 | |
| **Total** | **16.1** | **83.9** | |

Source: Data analysis of women's questionnaire

Table 4.13 shows that the following variables were significantly (p ≤ 0.05) associated with knowledge about MR services at the bivariate level: age of women, age at first marriage, age at first pregnancy, division, place of residence, religion, importance of religion, education of women, education of husband, communication with spouse about sex of child, access to any media and wealth quintile. These variables were entered into the multiple logistic regression model, although some variables were dropped from the model due to high correlations and interaction. The findings of the multivariable logistic regression have been presented in Table 4.14.

The findings show that women aged 35 to 49 years old have 2.08 times higher knowledge about MR services compared with women aged 15 to 24 years. The women of low SRB divisions have 2.53 times higher knowledge about MR services compared with women from high SRB divisions. Similarly, certain groups have more knowledge about MR services than others, notably urban women compared with rural women, women who consider religion as moderately or highly important in their life compared with women who consider religion is not at all important in their life, women who have secondary and higher secondary level education compared with no education, and women who have communication with their spouse about the sex of the child compared with those who do not .

## Table 4.14: Predictors of women's knowledge about MR services (using multiple logistic regression)

| Background characteristics | Odds ratio (OR) | 95 per cent C.I. for OR | | P-value |
|---|---|---|---|---|
| | | Lower | Upper | |
| **Age of women** | | | | 0.002 |
| 15-24 | Reference | | | |
| 25-34 | 1.34 | 1.06 | 1.69 | 0.013 |
| 35-49 | 2.08 | 1.34 | 3.24 | 0.001 |
| **Age at marriage** | | | | |
| Below 18 | Reference | | | |
| 18 and above | 1.36 | 1.07 | 1.74 | 0.013 |
| **Division** | | | | 0.000 |
| High SRB | Reference | | | |
| Medium SRB | 0.96 | 0.76 | 1.28 | 0.909 |
| Low SRB | 2.53 | 1.87 | 3.41 | 0.000 |
| **Place of residence** | | | | |
| Rural | Reference | | | |
| Urban | 1.70 | 1.31 | 2.19 | 0.000 |
| **Religion of women** | | | | |
| Muslim | Reference | | | |
| Others | 0.59 | 0.43 | 0.82 | 0.001 |
| **Importance of religion** | | | | 0.001 |
| Not important | Reference | | | |
| Moderately important | 1.60 | 1.19 | 2.16 | 0.002 |
| Highly important | 1.90 | 1.36 | 2.66 | 0.000 |
| **Education of women** | | | | 0.000 |
| No education | Reference | | | |
| Primary | 1.74 | 1.22 | 2.49 | 0.002 |
| Secondary | 2.45 | 1.71 | 3.49 | 0.000 |
| Higher than secondary | 3.63 | 1.78 | 7.41 | 0.000 |
| **Communication with spouse about sex of child** | | | | |
| No | Reference | | | |
| Yes | 1.67 | 1.33 | 2.08 | 0.000 |
| **Constant** | 0.642 | | | 0.054 |
| Model summary: Chi-Square = 174.03 (p = 0.000), -2 Loglikelihood = 2125.69), n = 2610 | | | | |

Source: Data analysis of women's questionnaire

Availability of MR services was assessed through the health facility survey. The availability of MR services based on the health facility is provided in Figure 4.8. The figure shows that 56 per cent health facilities had MR services, which significantly varied by divisions based on SRB.

## Figure 4.11: Availability of MR Services in health facilities
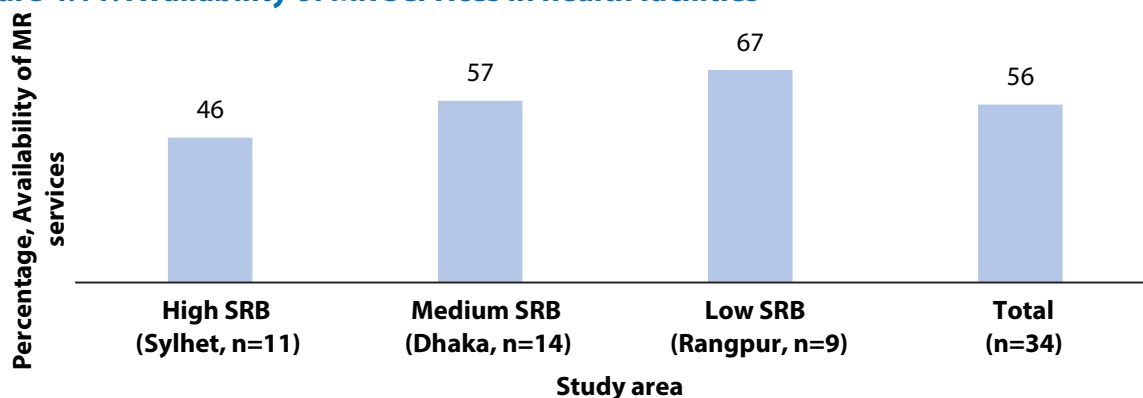


Source: Data analysis of facility assessment

### 4.3.2 Ever use of MR services

Table 4.15 presents the ever use of MR services and its differentials. It shows that 9.1 per cent of women ever used MR services. The table shows that the rate of ever using MR services is higher among older women than younger women. About 15 per cent women aged 35 to 49 years have ever used MR services while only 6.1 per cent women aged 15 to 24 years have ever used MR services. The ever use of MR services significantly varied in the context of division and place of residence. Importance of religion, access to any media and number of pregnancies were also significantly associated with the ever use of MR services.

### Table 4.15: Ever use of MR services by background characteristics (%)

| Background characteristics | Ever use of MR services | | P-value |
|---|---|---|---|
| | No (n=2372) | Yes (n=238) | |
| **Age of women** | | | 0.000 |
| 15-24 | 93.9 | 6.1 | |
| 25-34 | 89.4 | 10.6 | |
| 35-49 | 84.6 | 15.4 | |
| **Age difference between husband and wife** | | | 0.182 |
| Up to 6 years | 90.1 | 9.9 | |
| More than 6 years | 91.6 | 8.4 | |
| **Age at marriage** | | | 0.549 |
| Below 18 | 91.2 | 8.8 | |
| 18 and above | 90.5 | 9.5 | |
| **Age at first pregnancy** | | | 0.246 |
| Below 18 | 91.7 | 8.3 | |
| 18 and above | 90.4 | 9.6 | |
| **Division** | | | 0.041 |
| High SRB | 92.4 | 7.6 | |
| Medium SRB | 91.3 | 8.7 | |
| Low SRB | 89.0 | 11.0 | |
| **Place of residence** | | | 0.001 |
| Rural | 92.2 | 7.8 | |
| Urban | 88.1 | 11.9 | |
| **Religion of women** | | | 0.663 |
| Muslim | 90.8 | 9.2 | |
| Others | 91.5 | 8.5 | |

| Background characteristics | Ever use of MR services | | P-value |
|---|---|---|---|
| | No (n=2372) | Yes (n=238) | |
| **Importance of religion** | | | 0.024 |
| Not important | 93.7 | 6.3 | |
| Moderately important | 91.3 | 8.7 | |
| Highly important | 89.0 | 11.0 | |
| **Education of women** | | | 0.553 |
| No education | 91.6 | 8.4 | |
| Primary | 91.3 | 8.7 | |
| Secondary | 90.9 | 9.1 | |
| Higher than secondary | 87.9 | 12.1 | |
| **Education of husband** | | | 0.101 |
| No education | 92.9 | 7.1 | |
| Primary | 91.8 | 8.2 | |
| Secondary | 89.9 | 10.1 | |
| Higher than secondary | 88.2 | 11.8 | |
| **Working status of women** | | | 0.128 |
| No | 91.2 | 8.8 | |
| Yes | 88.5 | 11.5 | |
| **Women empowerment** | | | 0.620 |
| Low | 90.5 | 9.5 | |
| Medium | 92.1 | 7.9 | |
| High | 90.6 | 9.4 | |
| **Communication with spouse about sex of child** | | | 0.588 |
| No | 91.3 | 8.7 | |
| Yes | 90.7 | 9.3 | |
| **Access to any media** | | | 0.180 |
| No | 92.2 | 7.8 | |
| Yes | 90.4 | 9.6 | |
| **Wealth quintile of the household** | | | 0.119 |
| Poorest | 92.4 | 7.6 | |
| Poorer | 92.4 | 7.6 | |
| Middle | 91.4 | 8.6 | |
| Richer | 89.5 | 10.5 | |
| Richest | 88.7 | 11.3 | |
| **Number of pregnancies** | | | 0.000 |
| 1 | 99.0 | 1.0 | |
| 2 | 95.4 | 4.6 | |
| 3 | 85.9 | 14.1 | |
| 4 and above | 77.3 | 22.7 | |
| **Number of births** | | | 0.096 |
| 1-2 | 91.5 | 8.5 | |
| 3 and above | 89.5 | 10.5 | |
| **Total** | **90.9** | **9.1** | |

Source: Data analysis of women's questionnaire

Table 4.16 presented the logistics regression model of the variables which were significantly (p ≤ 0.05) associated with the ever use of MR services. The findings show that all the variables which were significant at the bivariate level have also appeared to be significant at the multivariate level. It shows that women aged 15 to 24 years had used MR services 3.55 times higher compared to the women aged 35 to 49 years. Women from low SRB division had used MR services 2.25 times higher compared to high SRB division. Women living in urban areas used MR services 2.26 times higher than women living in rural areas.

**Table 4.16: Predictors of the ever use of MR services (using multiple logistic regression)**

| Background characteristics | Odds ratio (OR) | 95 per cent C.I. for OR | | P-value |
| --- | --- | --- | --- | --- |
| | | Lower | Upper | |
| **Age of women** | | | | 0.000 |
| 15-24 | 3.55 | 2.07 | 6.08 | 0.000 |
| 25-34 | 1.28 | 0.84 | 1.96 | 0.253 |
| 35-49 | Reference | | | |
| **Division** | | | | 0.000 |
| High SRB | Reference | | | |
| Medium SRB | 1.80 | 1.24 | 2.61 | 0.002 |
| Low SRB | 2.25 | 1.57 | 3.22 | 0.000 |
| **Place of Residence** | | | | |
| Rural | Reference | | | |
| Urban | 2.26 | 1.68 | 3.05 | 0.000 |
| **Importance of religion** | | | | 0.007 |
| Not important | Reference | | | |
| Moderately important | 1.67 | 1.02 | 2.73 | 0.040 |
| Highly important | 2.19 | 1.32 | 3.61 | 0.002 |
| **Number of pregnancies** | | | | 0.000 |
| 1 | Reference | | | |
| 2 | 7.10 | 3.12 | 16.19 | 0.000 |
| 3 | 38.72 | 16.95 | 88.46 | 0.000 |
| 4 and above | 100.54 | 42.75 | 236.49 | 0.000 |
| **Constant** | 0.001 | | | 0.000 |
| Model summary: Chi-Square = 300.54 (p = 0.000), -2Loglikelihood = 1293.01, n = 2610 | | | | |

Source: Data analysis of women's questionnaire

Table 4.15 demonstrates that 9.1 per cent (n=238) women ever received the MR services. The following table (4.17) shows that among women who had used MR services, the highest 44.1 per cent used MR performed with medication (MRM) followed by manual vacuum aspiration (MVA) methods (33.1 per cent). On the other hand, 1.7 per cent women have performed MR by using a traditional method. The table also shows that 16.8 per cent women had performed MR after 10 weeks from the last date of menstruation.

**Table 4.17: Methods and timing when women used MR services (%)**

| | High-SRB division (Sylhet, n=66) | Medium-SRB division (Dhaka, n=76) | Low-SRB division (Rangpur, n=96) | Total (n=238) |
|---|---|---|---|---|
| **Methods of conducting MR** | | | | |
| MRM | 31.8 | 50.0 | 47.9 | 44.1 |
| MVA | 31.8 | 42.1 | 27.1 | 33.2 |
| EVA | 7.6 | 1.3 | 8.3 | 5.9 |
| Operation (D&C) | 18.2 | 5.3 | 13.5 | 12.2 |
| Traditional method | 1.5 | 0.0 | 3.1 | 1.7 |
| Others | 9.1 | 1.3 | 0.0 | 2.9 |
| **Time of performing MR** | | | | |
| Up to 10 weeks after stopping menstruation | 60.6 | 93.4 | 90.6 | 83.2 |
| More than 10 weeks after stopping menstruation | 39.4 | 6.6 | 9.4 | 16.8 |

Source: Data analysis of women's questionnaire

Table 4.18 shows that among women who had used MR services, 26.8 per cent used their last MR services from the private hospitals/clinics. About 17 per cent of women used MR at home. About 9 per cent women went to a village doctor's chamber for the MR services, 10.4 per cent performed their last MR from the Upazila health complex, and only 2.6 per cent performed their last MR from the Union health and family welfare centre (UH&FWC) though MR is supposed to be available in almost every UH&FWC.

**Table 4.18: Distribution of places where women conducted their last MR (%)**

| Place of conducting last MR | High-SRB division (Sylhet, n=65) | Medium-SRB division (Dhaka, n=74) | Low-SRB division (Rangpur, n=92) | Total (n=231) |
|---|---|---|---|---|
| Medical college hospital | 4.6 | 4.1 | 1.1 | 3.0 |
| District hospital | 6.2 | 1.4 | 5.4 | 4.3 |
| Maternal and child welfare centre | 3.1 | 5.4 | 4.3 | 4.3 |
| Upazila health complex | 18.5 | 6.8 | 7.6 | 10.4 |
| Union health and family welfare centre | 0.0 | 2.7 | 4.3 | 2.6 |
| Static NGO clinic | 6.2 | 6.8 | 6.5 | 6.5 |
| Private hospital/clinic | 23.1 | 40.5 | 18.5 | 26.8 |
| Skilled doctor's chamber | 9.2 | 1.4 | 14.1 | 8.7 |
| Village doctor's chamber | 6.2 | 4.1 | 16.3 | 9.5 |
| At home | 13.8 | 20.3 | 16.3 | 16.9 |
| Others | 3.1 | 6.8 | 4.3 | 4.8 |
| Do not know | 6.2 | 0.0 | 2.2 | 2.6 |

Source: Data analysis of women's questionnaire

Table 4.19 shows that among women who had used MR services, the highest 36.1 per cent received the services from the MBBS doctor followed by nurses (29.4 per cent) and village doctor (16 per cent).

**Table 4.19: Providers of MR services (%)**

| Provider | High -SRB division (Sylhet, n=66) | Medium -SRB division (Dhaka, n=76) | Low -SRB division (Rangpur, n=96) | Total (n= 238 ) |
|---|---|---|---|---|
| MBBS doctor | 40.9 | 36.8 | 32.3 | 36.1 |
| Village doctor | 10.6 | 19.7 | 16.7 | 16.0 |
| Nurse | 31.8 | 27.6 | 29.2 | 29.4 |
| Family welfare visitor | 1.5 | 2.6 | 4.2 | 2.9 |
| Skilled midwife | 1.5 | 3.9 | 1.0 | 2.1 |
| Unskilled midwife | 1.5 | 0.0 | 1.0 | 0.8 |
| Paramedics/SACMO | 0.0 | 0.0 | 6.3 | 2.5 |
| Other | 12.1 | 9.2 | 9.4 | 10.1 |

Source: Data analysis of women's questionnaire

Table 4.20 shows the reported reasons for using MR services. Among women who had used MR services, 58.8 per cent did so to terminate an unintended pregnancy; 17.6 per cent due to physical complications, and 17.6 per cent where the fetus was damaged by an accident.

**Table 4.20: Reasons for using MR services (%)**

| Reasons for using MR | High -SRB division (Sylhet, n=66) | Medium - SRB division (Dhaka, n=76) | Low -SRB division (Rangpur, n=96) | Total (n=238 ) |
|---|---|---|---|---|
| Due to physical complications | 16.7 | 25.0 | 12.5 | 17.6 |
| To terminate the unintended pregnancy | 36.4 | 61.8 | 71.9 | 58.8 |
| To terminate the pregnancy if the fetus is female | 0.0 | 0.0 | 1.0 | 0.4 |
| To terminate the pregnancy if the fetus is male | 1.5 | 0.0 | 0.0 | 0.4 |
| To abort the fetus as it was damaged by accident | 40.9 | 11.8 | 6.3 | 17.6 |
| Others | 4.5 | 1.3 | 8.3 | 5.0 |

Source: Data analysis of women's questionnaire

Women who had performed MR were asked during an in-depth interview about reasons for using MR. Unintended pregnancy has been reported most frequently in this qualitative study as the reason behind doing MR. Unintended pregnancies occurred due to method failures or non-utilization of family planning methods. A high-level official from the DGFP in Rangpur District shared his insights:

*"This situation (going through an MR) is common for women who become pregnant unintentionally. Suppose a woman is taking pills as a contraceptive method but she somehow forgot to take pills for consecutive two days. For this, if she became pregnant, she finds the MR as the easiest way to get rid of that pregnancy. Again, there are some couples who are using family planning methods like IUDs, but somehow remove it for some days. For this, she falls in the risk of accidental pregnancy. If she finds herself positive in the pregnancy test, she will obviously go for an MR as it's the easiest way."*

Particular cases of such unintended pregnancies leading to the decision of having MR were also reported in the qualitative study. Married females who are still studying or engaged in jobs are reported to be more likely to go for an MR because of unintended pregnancy. A consultant of gynecology and obstetrics in Sylhet MAG Osmani medical college and hospital offered this opinion:

*"Some women are more likely to go through an MR now a days. Women who are married and still studying or have any job, will encounter a lot of struggle if she has to maintain both her career and family equally well. On top of that, a child at that moment can even add to the struggle. So, the fear of this struggle leads them to have an MR just after she found positive result on the pregnancy test. And this is a bit common now a days."*

It was reported by study participants that although people from all wealth quintile utilize MR due to unintended pregnancy, it is very common among people from lower wealth quintile. For poor people, under-utilization of family planning methods has been reported as the reason behind unintended pregnancy. These lower wealth quintile people are performing MR from the traditional and non-conventional sources. A consultant at the Department of Gynecology and Obstetrics in Sylhet MAG Osmani medical college and hospital expressed his views as follows:

*"I think the utilization of family planning methods among poor people is not sufficient at all. They also don't know the proper uses of these methods. That is why they find themselves with unplanned pregnancy leading them to make the decision to go through an MR. As they cannot afford it from good hospitals or clinics, they are often seeking it from cheaper sources such as unskilled nurse or birth attendants or even from traditional healers. This ultimately results in an unsafe MR."*

Unsupportive attitude of husbands regarding use of any contraceptive method has been reported in the qualitative study to be considered by participants as a crucial reason behind utilizing MR. One family welfare visitor from South Surma Upazila, Sylhet District shared her experience:

*"Many women told me that their husbands were not supportive enough to use family planning methods. They didn't want to use any contraceptive. These lead to the pregnancies which are unintended and at the end of the day they (couples who didn't use contraceptives) didn't want to keep that child."*

It was also reported that people from the higher wealth quintile use MR as a result of intended or unintended discontinuation of family planning methods resulting into unintentional pregnancy. Reluctance to use permanent or long-acting methods and failures of short-acting family planning methods have been reported as reasons behind unintended pregnancy.

Participants in this study also reported performing MR when they had very short interval between two pregnancies. Some women perceive that rearing another child within a very short interval of the last pregnancy will be a struggle for them, which influenced their decision to perform MR. A female participant of Srimangal Upazila of Maulvibazar District has shared her situation:

*"I have gone through an MR because I became pregnant of right after the birth of my last child. I didn't have any family members to support me to look after my child. It was just my husband and me, and to me, rearing up a child all by myself is difficult."*

Lack of assistance from family members as well as struggles to maintain the household and look after the children was also frequently mentioned by the women as an influencing factor of making their decision to perform MR. One female participant from Parbatipur Upazila in Dinajpur District stated:

*"I was already having a child. When I became pregnant for the second time, I realized that it was impossible for me to rear up another child at that moment. My husband is a rickshaw puller. He could not give much time. I had to take care of my mother-in-law who is sick. No one was there to help me. I now understand, deciding to have another child at that moment was not a good decision for me."*

The tendency of unacceptance of the parents regarding the consecutive birth of daughters has also been reported in the qualitative study as the reason behind the decision to use MR services. According to participants in the qualitative study, existing son preference in the society leads parents to decide to go for MR after consecutive births of daughters (two or three in a row). One FWV of Keraniganj Upazila, Dhaka District shared her opinion about how they feel about participants who wanted to go through an MR:

*"There are many people who doesn't want to hear even a word of counselling from us if they had two or three daughters. After conceiving again, they decide not to keep it and to go for MR from secret places or even from traditional sources."*

A similar experience is shared by another skilled birth attendant of an UH&FWC in Rangpur Sadar Upazila, Rangpur District:

*"The couples who already have three or four daughters do not want to take any more children. If the wife becomes pregnant somehow, they decide to go for an MR at once. I have seen many cases like this."*

Some women decide to use MR after knowing the sex of the fetus through ultrasonography. An FWV of an NGO clinic from Dhaka City Corporation area shared her experience:

*"There are few cases where the couple had three to four daughters already. After the lady became pregnant, they went through ultrasonography. After knowing that this will be again a female child, they decide not to keep the pregnancy."*

This study found that child brides were the most vulnerable group regarding health risks of pregnancy. In the qualitative study, cases were found where women conceived at a very early age and were asked by the doctors to terminate the pregnancy because of the associated health risks. A woman from Pirganj Upazila, Rangpur District explained:

*"I married at a very young age. And I also conceived very early because of the wish of my husband and my mother-in-law. But I could not take the physical pressure. I visited doctors and they asked me to abort immediately. That's why I decided to go for an MR."*

## 4.4 Key findings of Chapter Four

Overall, 64 out of 2610 ever-married women (2.5 per cent) of this study aborted after three months of conception (after 12 weeks), which varied according to high to low SRB divisions. For GBSS to occur in a society, three preconditions which are considered conducive to sex-imbalance at birth were son preference, low fertility and access to sex selection/detection technology (Guilmoto, 2009; 2015; 2018). The findings of this study show that: i) there is son preference; ii) there is widespread use of ultrasound technology to detect the sex of the fetus; and iii) there is widespread use of MR as means to terminate pregnancy including from private providers and using medication. More specifically, the findings of this study show that: i) 28 per cent of women said they would prefer to have son for their first child; ii) 40 per cent of women used of ultrasound technology to detect the sex of the fetus; and iii) 9.1 per cent of ever married women used MR services among which 58.8 per cent used MR to terminate unintended pregnancy.

**Precondition of sex-imbalance for GBSS to occur: Son preference**

- The findings show that the women who are working have more (1.56 times higher) son preference than that of women who are not working. The findings also show that women who are highly empowered have less son preference than those whose level of empowerment is low.

- The study results show that women who have three or more numbers of births have more son preference (1.9 times higher) than those who have one or two births.

- The findings show that women who married before they were 18 years old (child marriage) have more son preference for their first child than those who married as an adult or 18 years and above.

- Rural women have more (1.32 times) son preference for the first child than urban women while the women who are working have 1.3 times higher likelihood of preferring a son for their first child compared with the women who are not working.

**Precondition of sex-imbalance for GBSS to occur: Low fertility**

- Small family norm is used as a proxy of low fertility. Women living in urban areas have the highest odds of having a preference for a small family.

- The findings also show that the higher the education of women as well as their husbands, the higher the preference for small families. Women with higher secondary education have the highest likelihood of having preference for small family compared with the women who have no education.

- The preference for small families is lower in the high SRB division than that in medium and low SRB division.

- The women who have more access to any mass media have higher preference for small families. Household wealth quintile is also associated with preference for small families.

**Knowledge and practice of MR when abortion is not legal in the country**

- The women of low SRB division have 2.53 times higher knowledge about MR services compared with women from high SRB division.

- Women aged 35 to 49 years old have 2.08 times higher knowledge about MR services compared with women aged 15 to 24 years.

- Women living in urban areas use MR services 2.26 times more than women living in rural areas.

- Women between 15 to 24 years old use MR services 3.55 times more compared with women aged 35 to 49 years.

- Among women who had used MR services, the highest 26.8 per cent used their last MR services from the private hospitals/clinics. About 17 per cent of women used MR at home. About 9 per cent women went to a village doctor's chamber for the MR services, while 10.4 per cent women had their last MR at the Upazila health complex.

# Discussion, conclusions and policy implications

# Chapter 5
# Discussion, conclusions and policy implications

## 5.1 Discussion

The objective of this study was to explore the dynamics of gender-biased sex selection at birth, in order to recommend effective policies and strategies to alleviate drivers of GBSS and avert its negative consequences in Bangladesh. Against this backdrop, studies were attempted in phases by the Department of Population Sciences, University of Dhaka, in partnership with UNFPA and European Union Delegates. In the first phase, the situation of GBSS in Bangladesh was examined through a critical review of literature, and a critical examination and analyses of the existing major data sets. At the aggregate level, the observed SRB ranges from 104.8 to 107.3 with 95 per cent confidence interval. After analysing the different data sets, the situation review finds that all of the ingredients that drive GBSS in other countries also exist in Bangladesh. Since the situation analysis used different data sets with different objectives, methodology, respondent types and timing of data collection, the existing data did not establish clear evidence for the prevalence of GBSS in favour of boys.

In the second phase, a mixed-methods research strategy was applied to achieve the objectives of this research where data were collected from three divisions with SRB high to low (Sylhet, Dhaka, and Rangpur) of Bangladesh. The study findings show that 2.5 per cent of women (64 cases out of 2610) aborted the fetus after 3 months of conceptions. The study found only two cases where female fetus was aborted, but in those cases, sex of the fetus was not detected by using technology. Although this study could not find that women are aborting their fetus after detecting the sex of the fetus by using technology, the study has gathered a significant amount of information on the preconditions of GBSS in Bangladesh.

One precondition of GBSS is low fertility which has been measured through desired small family norms. Ninety-one per cent of currently married women preferred small families. The findings show that preference for small families varied with women's age, division, place of residence and education. The odds ratio of preferring small family is high among low SRB division which implies that small family norm is practised with no strong preference for sons, otherwise SRB would have been skewed in a manner that would ensure birth of a son even if it requires to terminate a female fetus. Some may argue that establishing small family norms sometimes encourage imbalance between male and female children in the family which often brought preference for one type of child over the other (Shahvisi, 2018). For many Asian countries, this has always been a preference for sons over daughters (Eklund, 2018).

Work status, education and high birth order are the three most important factors associated with son preference. The findings show that women who are working have more (1.56 times higher) son preference than that of women who are not working. The findings also show that women who were highly empowered had less son preference than those whose level of empowerment was low. The study results show that women who had three or more numbers of births had more son preference (1.9 times higher) than those who had 1 to 2 numbers of births. The findings of this study is consistent with studies conducted elsewhere where son preference determines couples' fertility behaviour (Becquet & Guilmoto, 2018).

After disaggregating the issue of son preference into specific preference for first child as a son, rural women, working women and women who had better communication with husbands reported having high preference for first child as a son (Table 4.6). Rural women have more (1.32 times) son preference for the first child than urban women while the women who were working had 1.3 times higher likelihood of preferring a son for their first child compared to the women who were not working. The majority of respondents reported that having a son is more advantageous than having a daughter, and couples tend to show strong preference for sons. Both quantitative and qualitative data indicate strongly that birth of a son brings joy in the family. Overall 90 per cent women felt happy after giving birth to a son, whereas, 87 per cent husbands were happy to have a son. The findings of this study are consistent with the claim that gender preference towards a certain sex can be result of individual experiences, family dynamics, and societal expectations or combinations of all three factors (Rahm, 2020).

The third precondition of GBSS is access to SDT. This study found a high prevalence of availability of SDT in the study area. Ninety-three per cent of women reported that ultrasound technology is available in their areas or neighbouring areas. The findings also show that 40 per cent women used ultrasound technology of whom 83.7 per cent used it to know the sex of the fetus. Relatively young, educated and rich women used more SDT than their counterparts. In addition, women who had son preference were more likely to use SDT (Table 4.11) which is consistent with the findings of other researches (Guilmoto, 2015; Becquet & Guilmoto, 2018).

In Bangladesh, sex-detection of a fetus is possible only after 14 weeks of conception due to unavailability of advanced technology. A significant number of pregnancies are being terminated before this period without the use of SDT. An estimated 430,000 MR procedures were performed in 2014 according to Guttmacher Institute. The findings of this study show that 9.1 per cent women had ever used MR services. Among the women who used MR services, the highest proportion (44.1 per cent) used MRM, followed by MVA (33.1 per cent). Younger women, urban women and women who have three and more pregnancies were more likely to use MR services. The major reason for performing an MR was unintended pregnancy (58 per cent) which is consistent with other research (Guttmacher Institute, 2017).

The findings of this study revealed that the three preconditions of sex-imbalance at birth are very much in existence in Bangladesh. Preferences for small families, existing preference for sons to a large extent, wide availability of SDT, and a notable share of people using SDT and use of MR and MRM may promote GBSS at birth in Bangladesh. The themes of qualitative study corroborate the results of the survey. Presence of all these preconditions may indicate a situation where evidence of GBSS in favour of boys is masked under other issues such as unintended pregnancy, consecutive birth of daughters, health risk, short intervals between births and many more. These issues do not challenge the norms and values of the society along with the legality of MR. To delve deep, there is a need to unmask hidden issues with further research, use instruments that could effectively allow women to respond on sensitive issues which often considered as violation of societal expectations, and a wider coverage of data involving census or strong vital registration system and continue discussions with the professionals, grassroots workers and clients.

## 5.2 Research limitations

The sample size of this study was small for accurate determination of the levels of key variables of this study. The design of this study has also affected the findings of this study through generating responses. This study adopted a cross-sectional survey design which collect data based on the subject's memory-recall.

In the quantitative and qualitative study, female participants answered different questions about the beliefs, intentions and desires of their husbands. This may have led to response bias which can impact the quality of the data collected. There is room for more in-depth exploration of the qualitative study which was performed in the context of time and budget constraints. Due to cultural, religious and legal sensitivity of abortion in the context of Bangladesh, the exploration of dynamics of gender-biased sex selection at birth was significantly challenging.

## 5.3 Direction for future research

The extent of GBSS should be explored through further in-depth understanding of the socio-cultural mechanism behind the existence of son preference and its consequences in the context of Bangladesh. Further research should be conducted on this topic by adopting the longitudinal study design with creating a partnership with agencies who are providing MR and abortion related services. The practice of MRM, its operation, availability and uses and abuses should be explored further for the safety of mothers' lives.

Variation in son preference should be explored in families (focusing on wealth quintiles, place of residence, educational level, etc.) to find areas and issues to maintain a balance between sexes. Standardized measurement of sex ratio across the national surveys should be ensured. Data regarding GBSS should be collected from different sources such as national census and surveys, population surveys, different qualitative and quantitative surveys.

## 5.4 Policy recommendations

Disclosure of sex of the fetus through ultrasonography is not legally permitted in Bangladesh, yet the respondents have reported that some service providers disclose the sex of the fetus. Initiatives should be taken to strengthen the implementation process of this legally binding proscription through proper monitoring. Strong advocacy and awareness-raising activities should be undertaken to stimulate conversation, discussion and debate within communities to strengthen and expand consensus around the concept of the equal value of girls and boys. Intensifying efforts to be taken to uphold the rights of girls and women, and to address the multiple manifestations of gender discrimination including the problem of imbalanced sex ratios caused by sex selection.

Multi-sectoral interventions need to be taken to highlight the public health and human rights dimensions and implications of the GBSS problem, in addition to sensitizing policymakers to understand the existence and dangers of GBSS. Further engagement with the government and other stakeholders is necessary. Policy advocacy on equitable patterns of valuing the girl child, and measures such as direct subsidies at the time of a girl's birth, scholarship programmes, gender-based school quotas or financial incentives should be expanded in the support networks.

Decreasing access to MR services of good quality by trained health care providers may push women towards dangerous unsafe abortion. The findings show that the number of UH&FWCs providing MR services, the nearest health centres to the women's household, is on the decline. This is creating a barrier to receiving timely MR services which is pushing women to seek an abortion from traditional health care providers. MR service provisions should be ensured and strengthened in the closest health care facilities such as UH&FWCs so that clients can get easier access to the services rather than seeking it from other unreliable and risky sources. Guttmacher institute (2014) finds that fewer than half (42 per cent) of public- and private-sector facilities permitted to provide MR services actually did so in 2014 (down from 57 per cent in 2010). This proportion was particularly low among private facilities, of which only 20 per cent reported providing MR in 2014 (down from 36 per cent in 2010).

Among women using MR to terminate a pregnancy, most use medication (MRM). Since this study did not enquire about the sources from which MRM services were obtained, this study cannot definitely claim that the women received the MRM services mostly from the pharmacies as an over the counter drug. But it is a public knowledge that most MRM users get it from the pharmacy. Monitoring and supervision through application of state regulations should be in place. MRM is one of the easiest ways of terminating pregnancies, and in combination with advanced technologies offering even earlier sex-detection, could promote GBSS.

Follow-up and monitoring of MR policy guidelines among service providers by the relevant Ministry to address emerging health risks should be employed. Proper interventions for MR service providers should be developed and systems be put in place to check the excess of MR abuses that put women at risk.

Strong implementation of the Child Marriage Restraint Act, 2017 and Dowry Prohibition Act, 2018 should be ensured. Availability of necessary medical equipment and tools which are needed to provide safe MR services in authorized health care centres should be ensured. Better education and information for women about the timing (12 weeks), location of service providers and facts for a thorough understanding regarding MR services should be provided, along with counselling on a choice of modern methods of family planning.

## 5.5 Conclusions

The findings of this study found evidence of strong presence of the preconditions considered responsible for promoting GBSS in favour of boys. Preferences for small families, son preference, wide availability of sex-detection technologies, a notable share of the people utilizing SDT to determine the sex of the fetus-all of these factors provide a clear indication of a risk that GBSS may spread in Bangladesh in the future. Three future scenarios could be thought of under the circumstances:

- In the first scenario, GBSS may take place in Bangladesh in near future when the sex-detection technologies reach the doorsteps of couples and society advances more economically and socially.

- The second scenario combines both access to more advanced technology (that can detect the sex of the fetus earlier, even before 12 weeks) and access to MR services (that are legal and available in the country)- a combination that might accelerate the practice of GBSS in Bangladesh.

- The third scenario could be that GBSS may never gain momentum in Bangladesh, as governmental, non-governmental and social institutions have been very active in enhancing the status of women in society. The study finds evidence of a few cases of GBSS, but unless reliable census or other large-scale quantitative data is obtained, it is hard to know for certain. Thus, the government and other stakeholders should carefully monitor the sex ratio at birth and should try to measure it accurately through large-scale surveys in the future. The government with all stakeholders, including United Nations agencies, international NGOs and national NGOs should work hand-in-hand to make Bangladesh a safe place that values women and girls.

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## INTERVIEWER VISITS

DATE    \|__\|__\|__\|__\|__\|__\|__\|

INTERVIEWER'S NAME    ——————————————————————————————————

INTERVIEWER'S CODE    ☐☐

RESULT*    ☐☐

*RESULT CODES:
01 COMPLETED
02 REFUSED
03 INCOMPLETED
04 NOT AT HOME
88 OTHERS _____
(SPECIFY)

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| DATE _____ | DATE _____ | | |

### INFORMED CONSENT

Assalamualaikum/*Adab*,

My name is...................................I have come from the Department of Population Sciences, University of Dhaka. The Department of Population Sciences is conducting a research study titled 'Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences'. If you agree, then I would like to talk with you a few times. I am confirming to you that all the answers you give will be confidential and will only be used for research. Your participation in the survey is fully voluntary. If you want, you may avoid answering any question. Since your views are very important, I hope that you will participate in this survey. The information you provide will help the government to take different steps in reducing gender inequality.

Do you have any more questions about the survey? May I begin the interview now?

**Respondent agrees to be interviewed 1→ Start interview**

**Respondent does not agree to be interviewed 2→ Thank the respondent and end interview**

**Signature of interviewer based on the consent of the respondent...................................................................................**

**Starting time of interview:**    ☐☐    ☐☐

Hour    Minute

# Section 1: Information of the Respondent and Her Family Members (Use code book for collecting information)

| Line No. | Name of the members residing in the household | Relationship with the respondent* | Sex | Age (Years) | Marital status | Education | | | | Occupation | | Have birth certificate? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Have ever gone to school? | What is the highest year of schooling? | Is currently going to school? | What is your educational institution? | Is currently working for income? | What is your main occupation? | |
| | Q101 | Q102 | Q103 | Q104 | Q105 | Q106 | Q107 | Q108 | Q109 | Q110 | Q111 | Q112 |
| 01 | Name of the respondent: | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 Don't Know 97 |
| 02 | Name of husband of the respondent: | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 03 | | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 04 | | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 05 | | | Male................1 Female................2 Third gender................3 | | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 06 | | | Male................1 Female................2 Third gender................3 | | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 07 | | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 08 | | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 09 | | | Male................1 Female................2 Third gender................3 | year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |
| 10 | | | Male................1 Female................2 Third gender................3 | Year | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.......1 No.........2 | | Yes.........01 No.........02 DK.........97 |

## Section 2: Related to Household of the Respondent

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 201. | Does your household have:<br>[Ask all the items]<br>Electricity ................................................................................ A<br>Solar Electricity ...................................................................... B<br>Instant power supply (IPS)/Generator .................................... C<br>Almirah/ Wardrobe ................................................................. D<br>Radio ....................................................................................... E<br>Television (TV) .......................................................................... F<br>Mobile Phone ........................................................................... G<br>Land Phone (Telephone) .......................................................... H<br>Computer/Laptop ...................................................................... I<br>Refrigerator (Freeze) ................................................................ J<br>Digital video disk (DVD)/Video compact disk (VCD) Player ...... K<br>Electric Fan (Fan) ...................................................................... L<br>Air conditioner (AC) ................................................................. M<br>Water Pump/Motor ................................................................. N<br>Private Car/ Truck/Microbus/Bus ............................................ O<br>Auto-Rickshaw/Auto-Bike/Tempu/CNG/Easy-bike/Scooter/Nasimon, etc. ...... P<br>Rickshaw/Van ........................................................................... Q<br>Biclye ....................................................................................... R<br>Motor Cycle ...............................................................................S<br>Boat/Engine Boat ..................................................................... T<br>Power Tiller .............................................................................. U | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 202. | Who is the owner of the household? | Self-House.....................................................01<br>Rent House ...................................................02<br>Others (please specify) ................................88 | \|___\|___\| | |
| | **[If answer of '202' is '02' or '88', then collect information of homestead of village or any other places]** | | | |
| 203. | Does your household own any homestead? | Yes .................................................................1<br>No ...................................................................2 | \|___\|<br>⟶ | 205 |
| 204. | How much homestead does your household own? | .......................................................... Decimal<br>.........................................Local Measurement | \|___\|___\|<br>\|___\| | |
| 205. | Does your household own any land other than the homestead land? | Yes .................................................................1<br>No ...................................................................2 | \|___\|<br>⟶ | 301 |
| 206. | How much land other than homestead does your household have? | .......................................................... Decimal<br>.........................................Local Measurement | \|___\|___\|___\|<br>\|___\| | |

## Section 3: Related to Information of Religion of the Respondent

| NNo. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 301. | What is your religion? | Islam ..................................................................... 01<br>Hinduism ............................................................... 02<br>Buddhism................................................................ 03<br>Christianity............................................................. 04<br>Others (please specify) ......................................... 88 | \|___\|___\| | |
| 302. | What is the frequency of your prayer? | Regularly ................................................................4<br>Sometimes ..............................................................3<br>Very few..................................................................2<br>Not at all ................................................................1 | \|___\| | |
| 303. | To what extent is religion important in your life? | Very important.........................................................4<br>Moderately important .............................................3<br>Not much important ................................................2<br>Not at all important ................................................1 | \|___\| | |
| 304. | To what extent is religion important in your family? | Very important.........................................................4<br>Moderately important .............................................3<br>Not much important ................................................2<br>Not at all important ................................................1 | \|___\| | |

| Section 4: Use of Mass Media |||||
|---|---|---|---|---|
| **No.** | **Question** | **Answer** | **Code of Answer** | **Skip** |
| [If answer of 'Q106' is '02', skip to the question number '405'] |||||
| 401. | Have you ever read newspaper/online newspaper/magazines? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 405 |
| 402. | What is the frequency of reading newspaper/online newspaper/ magazines for last week? | Everyday ............................................................. 1<br>At least once a week .......................................... 2<br>More than once a week....................................... 3<br>Not at all ............................................................. 4 | \|___\| | |
| 403. | Does the newspaper play any role for your decision about making planned family? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 405 |
| 404. | If yes, what type of decisions are influenced by newspaper?<br><br><br>[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | Family planning method.................................. A<br>To influence husband about<br>using family planning method .......................... B<br>To influence other women of<br>family about reproductive health..................... C<br>To decide about pregnancy .............................. D<br>To decide the number of children .................... E<br>To decide the sex of the children ..................... F<br>To have knowledge about<br>making planned family ..................................... G<br>Others (please specify) .................................... Z | \|___\|<br><br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 405. | Have you ever listened radio? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 409 |
| 406. | What is the frequency of listening radio for last week? | Everyday ............................................................. 1<br>At least once a week .......................................... 2<br>More than once a week....................................... 3<br>Not at all ............................................................. 4 | \|___\| | |
| 407. | Does the radio play any role for your decision about making planned family? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 409 |
| 408. | If yes, what type of decisions are influenced by radio?<br><br><br>[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | Family planning method.................................. A<br>To influence husband about<br>using family planning method .......................... B<br>To influence other women of<br>family about reproductive health..................... C<br>To decide about pregnancy .............................. D<br>To decide the number of children .................... E<br>To decide the sex of the children ..................... F<br>To have knowledge about<br>making planned family ..................................... G<br>Others (please specify) .................................... Z | \|___\|<br><br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 409. | Have you ever watched television? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 414 |
| 410. | Where do you generally watch television? | Own house ......................................................01<br>Neighbor's house ............................................02<br>Relative's house ..............................................03<br>Market.............................................................04<br>Tea stall ..........................................................05<br>Others (please specify) ....................................88 | \|___\|___\| | |
| 411. | What is the frequency of watching television for last week? | Everyday ............................................................. 1<br>At least once a week .......................................... 2<br>More than once a week....................................... 3<br>Not at all ............................................................. 4 | \|___\| | |
| 412. | Does the television play any role for your decision decision about making planned family? | Yes ....................................................................... 1<br>No ....................................................................... 2 | \|___\| | 414 |

## Section 4: Use of Mass Media

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 413. | If yes, what type of decisions are influenced by television?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Family planning method ................................... A<br>To influence husband about<br>using family planning method .......................... B<br>To influence other women of<br>family about reproductive health ...................... C<br>To decide about pregnancy .............................. D<br>To decide the number of children .................... E<br>To decide the sex of the children ..................... F<br>To have knowledge about<br>making planned family ..................................... G<br>Others (please specify) ...................................... Z | \|__\|<br><br>\|__\|<br><br>\|__\|<br>\|__\|<br>\|__\|<br>\|__\|<br><br>\|__\|<br>\|__\| | |
| 414. | Have you ever used Internet? | Yes ......................................................................1<br>No ..................................................................... 2 | \|__\| | 501 |
| 415. | What is the device used for Internet?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Mobile ................................................................A<br>Computer/Laptop ...............................................B<br>Tab .....................................................................C<br>Smart TV .............................................................D<br>Others (please specify) .......................................Z | \|__\|<br>\|__\|<br>\|__\|<br>\|__\|<br>\|__\| | |
| 416. | What is the frequency of using Internet for last week? | Every day ............................................................1<br>At least once a week...........................................2<br>More than once a week......................................3<br>Not at all ............................................................. 4 | \|__\|<br>\|__\|<br>\|__\|<br>\|__\| | |
| 417. | Does the Internet play any role for your decision about making planned family? | Yes ......................................................................1<br>No ......................................................................2 | \|__\| | 501 |
| 418. | If yes, what type of decisions are influenced by Internet?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Family planning method ................................... A<br>To influence husband about<br>using family planning method .......................... B<br>To influence other women of<br>family about reproductive health ...................... C<br>To decide about pregnancy .............................. D<br>To decide the number of children .................... E<br>To decide the sex of the children ..................... F<br>To have knowledge about<br>making planned family ..................................... G<br>Others (please specify) .......................................Z | \|__\|<br><br>\|__\|<br><br>\|__\|<br>\|__\|<br>\|__\|<br>\|__\|<br><br>\|__\|<br>\|__\| | |

## Section 5: Demographic Characteristics

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 501. | What is the age at your first marriage? | ...........................................Year | \|__\|__\| | |
| 502. | What is the age at your first pregnancy? | ...........................................Year | \|__\|__\| | |
| 503. | What is the age at your first birth? | ...........................................Year | \|__\|__\| | |
| 504. | What is the total number of your pregnancy? | ...........................................Times | \|__\|__\| | |
| 505. | What is the total number of your unwanted pregnancy?<br>**[If there is no unwanted pregnancy, then give '0']** | ...........................................Times | \|__\|__\| | |
| 506. | What is the total number of your miscarriage?<br> **[If there is no miscarriage, then give '0']** | ...........................................Times | \|__\|__\| | |
| 507. | What is the total number of your live birth? | Son................................Number<br>Daughter.......................Number | \|__\|__\|<br>\|__\|__\| | |

## Section 5: Demographic Characteristics

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 508. | Mention birth order and sex of your children. [**If any child died below the age of 1 month, write age as '0'**] | | | |

| Birth order | Year of birth | Son=1 Daughter =2 | Place of birth: Hospital/Health facility= 1, Home/house= 2 | Birth of dead child: Yes=1, No=2 **(If yes, skip to next order)** | Currently alive: Yes=1, No=2 **(If yes, skip to next order)** | Age of death of child (Month) | Year of death |
|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | |
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| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 509. | Do you want to have any more children? | Yes .................................................................................. 1 <br> No ................................................................................... 2 | \|___\| | 601 |
| 510. | If yes, then how many more children do you want? | Son ............................................................ Number <br> Daughter ..................................................... Number <br> No choice ..................................................... 98 <br> Don't know/ Undecided ............................... 97 | \|___\|___\| <br> \|___\|___\| | |

## Section 6: Desired Children (Son/Daughter)

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 601. | How many children did you want? | Son ............................................................... Number <br> Daughter ...................................................... Number <br> No choice ..................................................... 98 <br> Don't know/ Undecided ............................... 97 | \|___\|___\| <br> \|___\|___\| <br> \|___\|___\| <br> \|___\|___\| | |
| 602. | What was the first child you wanted? | Son ............................................................... 1 <br> Daughter ...................................................... 2 <br> No choice ..................................................... 98 | \|___\|___\| | 604 |
| 603. | If you wanted son/daughter as first child, why did you want? <br><br> [**Multiple response is applicable. Don't read out the answers for the respondents. Probe her.**] | More acceptable in the society ..................................... A <br> Source of future security ............................................... B <br> Can secure the asset/wealth of family .......................... C <br> Need to think about more security for rearing the children ...................................................... D <br> Don't need to think about more security for rearing the children ................................................. E <br> Source of future economic security for family .............. F <br> To continue a line of descent ....................................... G <br> Source of mental strength of parents ........................... H <br> Can help in household chores ........................................ I <br> Have the honour in the society ..................................... J <br> Have to work less for rearing children .......................... K | \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| | |

## Section 6: Desired Children (Son/Daughter)

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| | | Other members of family like more .............................. L | \|___\| | |
| | | Can look after the parent at old-age ............................ M | \|___\| | |
| | | Son is your .................................................................... N | \|___\| | |
| | | Daughter is for others.................................................... O | \|___\| | |
| | | Have to give dowry ........................................................ P | \|___\| | |
| | | Can get dowry............................................................... Q | \|___\| | |
| | | Increase the honour in the family/ in-law's family ........ R | \|___\| | |
| | | Others (please specify) ................................................. Z | \|___\| | |
| 604. | How many children does/did your husband want? | Son..............................................................Number <br> Daughter......................................................Number <br> No choice ..................................................................98 <br> Don't know/ Undecided ............................................97 | \|___\|___\| <br> \|___\|___\| <br> \|___\|___\| | 607 |
| 605. | What was the first child your husband wanted? | Son...........................................................................01 <br> Daughter..................................................................02 <br> No choice ..................................................................03 <br> Don't know ................................................................97 | \|___\|___\| <br> \|___\|___\| | 607 |
| 606. | If your husband wanted son/daughter as first child, why did he want? <br><br> [Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | More acceptable in the society ..................................... A <br> Source of future security ............................................... B <br> Can secure the asset/wealth of family .......................... C <br> Need to think about more security for <br> rearing the children ...................................................... D <br> Don't need to think about more security <br> for rearing the children.................................................. E <br> Source of future economic security for family .............. F <br> To continue a line of descent ....................................... G <br> Source of mental strength of parents........................... H <br> Can help in household chores....................................... I <br> Have the honour in the society ..................................... J <br> Have to work less for rearing children ......................... K <br> Other members of family like more .............................. L <br> Can look after the parent at old-age ............................ M <br> Son is your .................................................................... N <br> Daughter is for others.................................................... O <br> Have to give dowry ........................................................ P <br> Can get dowry............................................................... Q <br> Others (please specify) ................................................. Z | \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| | |
| 607. | Have any member other than you and your husband in the family ever suggested to take son or daughter? | Yes ..............................................................................1 <br> No .................................................................................2 | \|___\| | 701 |
| 608. | If yes, then what type of suggestions did they give? | Son as first child.......................................................... 01 <br> Daughter as first child.................................................. 02 <br> Two son ....................................................................... 03 <br> Two daughter ............................................................... 04 <br> A son, a daughter.......................................................... 05 <br> Son and daughter are equal ......................................... 06 <br> Others (please specify) ................................................. 88 | \|___\|___\| | |
| 609. | What is your preferred child? | Son.............................................................................. 01 <br> Daughter...................................................................... 02 <br> Both son and daughter ................................................. 03 <br> Others (please specify) ................................................. 88 | \|___\|___\| | |

## Section 7: Social Power Structure and Women's Dignity

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 701. | Do your family members give importance to your opinion? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 702. | Can you decide by yourself about movement, spending time with people, etc.? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 703. | Can you decide by yourself about different issue of children (for example: eating & drinking, dressing, education, treatment, etc.)? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 704. | Is your opinion given importance in using family planning methods? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 705. | Is your opinion given importance about the decision to take child? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 706. | Can you give opinion on determining your child's number? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| 707. | Can you give opinion on antenatal care (ANC)? | Yes............................................................................1 <br> No............................................................................ 2 | \|___\| | |
| | **If there is no daughter, skip to question '710'.** | | | |
| 708. | How did you feel after giving birth of a daughter? <br><br> **[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | I was very happy ................................................... A <br> I was very sad........................................................ B <br> I was afraid (husband/ in-laws/ people of the society can humiliate me) ................................................. C <br> I was afraid due to lack of social security................................................................. D <br> I was afraid of dowry.............................................. E <br> Others (please specify)........................................... Z | \|___\| <br> \|___\| <br><br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| | |
| 709. | How did your family members feel after you gave birth of a daughter? <br><br> **[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | My husband was happy ...........................................A <br> My mother-in-law was happy .................................B <br> My father-in-law was happy ...................................C <br> My sister-in-law was happy....................................D <br> My husband was not happy ....................................E <br> My mother-in-law was not happy...........................F <br> My father-in-law was not happy ............................G <br> My sister-in-law was not happy .............................H <br> Family members did not talk....................................I <br> Many family members were very happy............................................................... J <br> Many family members celebrated ..........................K <br> Many family members were sad.............................L <br> Many people took care of me ................................M <br> Insulted me .............................................................N <br> Threatened to get out of the house........................O <br> I got respect in the family ......................................P <br> Told that rearing daughter was hard ......................Q <br> Threatened that I would have to give dowry for marriage of daughter...............................................R <br> Told that daughter enlightened family ...................S <br> Abused physically....................................................T <br> Abused mentally .....................................................U <br> Abuse verbally........................................................V <br> Threatened for divorce ..........................................W <br> Others (please specify)............................................Z | \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| | |
| | **If there is no son, skip to question '712'.** | | | |
| 710. | How did you feel after giving birth of a son? <br> **[Multiple response is applicable. Don't read out** | I was very happy ................................................... A <br> I was very sad........................................................ B | \|___\| <br> \|___\| | |

## Section 7: Social Power Structure and Women's Dignity

| | | | | |
|---|---|---|---|---|
| | the answers for the respondents. Probe her.] | Others (please specify)..........................................Z | \|___\| | |
| 711. | How did your family members feel after you gave birth of a son?<br><br><br>[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | My husband was happy ...........................................A<br>My mother-in-law was happy .................................B<br>My father-in-law was happy ...................................C<br>My sister-in-law was happy.....................................D<br>My husband was not happy ....................................E<br>My mother-in-law was not happy ..........................F<br>My father-in-law was not happy ............................G<br>My sister-in-law was not happy .............................H<br>Family members did not talk....................................I<br>Many family members were<br>very happy............................................................... J<br>Many family members celebrated ..........................K<br>Many family members were sad.............................L<br>Many people took care of me ................................M<br>Insulted me .............................................................N<br>Threatened to get out of the house........................O<br>I got respect in the family ......................................P<br>Applauded that son can continue a line of descent..Q<br>Told that son was the source of income in the<br>family .....................................................................R<br>Others (please specify)...........................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 712. | Did you discuss with your husband whether you want a boy or a girl? | Yes.............................................................................1<br>No..............................................................................2 | \|___\| | |
| 713. | Whose opinion got more importance in deciding whether you want a boy or a girl?<br><br>[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | Self ...................................................................... A<br>Husband ............................................................... B<br>Both wife and husband ......................................... C<br>Mother-in-law ....................................................... D<br>Father-in-law......................................................... E<br>Father.................................................................... F<br>Mother .................................................................. G<br>No one's opinion ................................................... H<br>Others (please specify)........................................ Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 714. | Is anyone of your household member included in any social Safety Net programme by the government? | Yes.............................................................................1<br>No..............................................................................2 | \|___\| | → 717 |
| 715. | If yes, then in what type of social Safety Net programmes are they included?<br><br>[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.] | Vulnerable group development (VGD).................. A<br>Maternal ............................................................... B<br>Widow.................................................................... C<br>Elderly ................................................................... D<br>Freedom fighter .................................................... E<br>Handicapped ......................................................... F<br>Education ............................................................... G<br>Poverty.................................................................. H<br>Others (please specify)........................................ Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 716. | Does the membership of this programme influence the opinion of taking children? | Yes.............................................................................1<br>No..............................................................................2 | \|___\| | |
| 717. | Are women safe in the society?<br><br>[Ask all the items]<br><br>[Code of answer: Yes=1, No=2] | (A) Social<br>(B) Economic<br>(C) Domestic<br>(D) Physical | \|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 718. | Who is safer in the society overall? | Son ...................................................................... 01<br>Daughter ............................................................. 02<br>Both.......................................................................03<br>Don't know............................................................99 | \|___\|___\| | |

## Section 8: Knowledge, Access and Use of Sex Selection Technology

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 801. | Have you followed any specific process before pregnancy to get son or daughter? | Yes .......................................................................... 1<br>No ............................................................................2 | \|___\| | 803 |
| 802. | If yes, what type of process have you used?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Prayer .................................................................... A<br>Vow.......................................................................... B<br>Rabid-Trinket .......................................................... C<br>Took child within a year of marriage ...................... D<br>Had sexual intercourse at special time ................... E<br>Took advice from doctor ........................................ F<br>Had a special prayer .............................................. G<br>Ate special food ..................................................... H<br>*Jhaar-Fuk* ................................................................. I<br>*Paani-Para* .............................................................. J<br>Others (please specify) ..........................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 803. | What would be the possible sex of the child according to you, if someone conceives at younger age? | Son.......................................................................... 01<br>Daughter................................................................. 02<br>Both ........................................................................ 03<br>Don't Know ............................................................. 97 | \|___\|___\| | |
| 804. | What would be the possible sex of the child according to you, if someone conceives at older age? | Son.......................................................................... 01<br>Daughter................................................................. 02<br>Both ........................................................................ 03<br>Don't Know ............................................................. 97 | \|___\|___\| | |
| 805. | Do you understand the sex of fetus by noticing any physiological symbol? | Yes .......................................................................... 1<br>No .............................................................................2 | \|___\| | 807 |
| 806. | If yes, by whom did you come to know this?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Self...........................................................................A<br>Husband....................................................................B<br>Father-in-law ...........................................................C<br>Mother-in-law...........................................................D<br>Mother......................................................................E<br>Father .......................................................................F<br>Aunt .........................................................................G<br>Aunt (paternal) ........................................................H<br>Grandmother (paternal) ..........................................I<br>Grandmother (maternal) .........................................J<br>Sister-in-law (brother's wife) ..................................K<br>Sister of husband .....................................................L<br>Sister........................................................................M<br>Sister-in-law (wife of husband's brother) ...............N<br>Friend (girl) ..............................................................O<br>Health worker...........................................................P<br>Family planning visitor.............................................Q<br>Neighbors ................................................................R<br>Others (please specify) ...........................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 807. | Have you heard about any technology to know whether the fetus is male or female? | Yes .......................................................................... 1<br>No ............................................................................ 2 | \|___\| | 811 |
| 808. | If heard, what is the name of the technology?<br> **[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Ultrasonography ......................................................A<br>Amniocentesis ........................................................ B<br>Don't know the name ............................................ C<br>Others (please specify) ...........................................Z | \|___\|<br>\|___\|<br>\|___\| | |

## Section 8: Knowledge, Access and Use of Sex Selection Technology

| No. | Question | Answer | Code of Answer | Skip |
|-----|----------|--------|----------------|------|
| 809. | If yes, from whom did you hear it? <br><br> **[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | Radio...................................................................... A <br> Television ............................................................... B <br> Newspaper/Magazine ........................................... C <br> Husband.................................................................. D <br> Father-in-law .......................................................... E <br> Mother-in-law......................................................... F <br> Mother.................................................................... G <br> Aunt (maternal) ..................................................... H <br> Aunt (paternal) ....................................................... I <br> Grandmother (paternal) ........................................ J <br> Grandmother (maternal) ....................................... K <br> Sister-in-law (brother's wife) ................................. L <br> Sister-in-law (husband's sister).............................. M <br> Sister...................................................................... N <br> Sister-in-law (wife of husband's brother) .............. O <br> Neighbors .............................................................. P <br> Health worker......................................................... Q <br> Family planning visitor........................................... R <br> Doctor..................................................................... S <br> Through social media.............................................. T <br> Through searching Internet .................................... U <br> Friend...................................................................... V <br> Others (please specify) ........................................... Z | \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| | |
| 810. | If heard, where is the technology available? <br><br> **[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | **Government Sector** <br> Medical College Hospital ...................................... A <br> Specialized Medical College Hospital.................... B <br> District Hospital ................................................... C <br> Mother and Child Welfare Centre  ...................... D <br> Upazila Health Complex........................................ E <br> Union Health and Family Welfare Centre ............. F <br> Others (please specify) ......................................... G <br><br> **NGO Sector** <br> Static NGO Clinic................................................... H <br> Others (Please Specify) ......................................... I <br><br> **Non-government Sectors** <br> Non-government Hospital/Clinic .......................... J <br> Skilled doctor's Chamber...................................... K <br> Quack doctor's Chamber (Village doctor)............. L <br> Others (please specify) ......................................... M <br><br> **Others (please specify).......................................Z** <br> Don't Know........................................................... Y | \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| | |
| 811. | Have you ever used any technology (ultrasonography) during your pregnancy? | Yes .......................................................................... 1 <br> No ............................................................................ 2 | \|___\| | 814 |

# Section 8: Knowledge, Access and Use of Sex Selection Technology

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 812. | If you have ever used any technology (ultrasonography) during your pregnancy, then why did you do it?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | For antenatal care ................................................ A<br>To avoid complications during pregnancy ............................................................ B<br>To know the position of child .............................. C<br>Doctor advised me................................................ D<br>For caesarean delivery......................................... E<br>To know the sex of the fetus ............................... F<br>Others (please specify) ........................................ Z | \|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 813. | If you have ever used any technology (ultrasonography) during your pregnancy, where was that?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe her.]** | **Government Sector**<br>Medical College Hospital ...................................... A<br>Specialized Medical College Hospital.................... B<br>District Hospital ................................................... C<br>Maternal and Child Welfare Centre ..................... D<br>Upazila Health Complex........................................ E<br>Union Health and Family Welfare Centre ............. F<br>Others (please specify) ........................................ G<br><br>**NGO Sector**<br>Static NGO Clinic.................................................. H<br>Others (please specify) ......................................... I<br><br>**Non-government Sectors**<br>Non-government Hospital/Clinic .......................... J<br>Skilled doctor's Chamber..................................... K<br>Quack doctor's Chamber (Village doctor)............. L<br>Others (please specify) ........................................ M<br><br>**Others (please specify).......................................Z**<br>Don't Know.......................................................... Y | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br><br>\|___\|<br>\|___\|<br><br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 814. | In your/your neighboring area, is there any technology to know whether the fetus is male or female? | Yes ....................................................................... 1<br>No ......................................................................... 2 | \|___\|<br>→ | 816 |
| 815. | If there is technology to know whether the fetus is male or female, where is that?<br><br><br>**[Multiple answers can be received. Don't read out to respondents. Probe her]** | **Government Sector**<br>Medical College Hospital ...................................... A<br>Specialized Medical College Hospital.................... B<br>District Hospital ................................................... C<br>Mother and Child Welfare Centre ....................... D<br>Upazila Health Complex........................................ E<br>Union Health and Family Welfare Centre ............. F<br>Others (please specify) ........................................ G<br><br>**NGO Sector**<br>Static NGO Clinic.................................................. H<br>Others (please specify) ......................................... I<br><br>**Non-government Institutions**<br>Non-government Hospital/Clinic .......................... J<br>Skilled Doctor's Chamber .................................... K<br>Others (please specify) ........................................ L | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br><br>\|___\|<br>\|___\|<br><br><br>\|___\|<br>\|___\|<br>\|___\| | |

## Section 8: Knowledge, Access and Use of Sex Selection Technology

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 816. | Have you ever used any technology (ultrasonography) to know whether the fetus is male or female? | Yes ......................................................................... 1 <br> No ........................................................................... 2 | |___| → | 820 |
| 817. | If you have ever used any technology (ultrasonography) to know whether the fetus is male or female, why did you use it? <br><br> **[Multiple answers can be received. Don't read out to respondents. Probe her]** | I was willing to know the sex of my child ................................................................. A <br> Though I did not ask, the doctor told me about the sex............................................ B <br> My husband pressurized me................................. C <br> My in-laws pressurized me ................................... D <br> My relatives were keen to know the sex of my child ...................................................... E <br> Everyone does that, that is why I did that ................................................................ F <br> My intention was to abort the child if it was girl ........................................................... G <br> My intention was to abort the child if it was boy........................................................... H <br> Others (please specify) ......................................... Z | |___| <br><br> |___| <br> |___| <br> |___| <br><br> |___| <br><br> |___| <br><br> |___| <br><br> |___| <br> |___| | |
| 818. | Have you used technology to know the sex of the fetus upon your wish? | Yes ......................................................................... 1 <br> No ........................................................................... 2 | |___| | 901 |
| 819. | If it was not your wish, whose wish was it? <br><br><br> **[Multiple answers can be received. Don't read out to respondents. Probe her]** | Husband.................................................................. A <br> Father-in-law/Mother-in-law................................ B <br> Father/Mother........................................................ C <br> Neighbor................................................................. D <br> Friends .................................................................... E <br> Others (please specify) ......................................... Z | |___| <br> |___| <br> |___| <br> |___| <br> |___| <br> |___| | |
| | **If the answer of question 816 is 'Yes', then skip to the question '901'.** | | | |
| 820. | If you have not ever used any technology (ultrasonography) to know whether the fetus is male or female, why did not you use it? <br><br><br><br><br> **[Multiple answers can be received. Don't read out to respondents. Probe her]** | I was not willing to know the sex of my child ....... A <br> Though I asked, the doctor did not tell me about the sex......................................................................... B <br> My husband did not want..................................... C <br> My in-laws did not want ....................................... D <br> My relatives were not interested to know the sex of my child ................................................................ E <br> It is not fair to know the sex of the fetus in advance .............................................................................. F <br> My intention was not to abort the child if it was girl .............................................................................. G <br> My intention was not to abort the child if it was boy .............................................................................. H <br> Knowing the sex of the fetus in advance might create gender discrimination .......................................... I <br> Others (please specify) ......................................... Z | |___| <br><br> |___| <br> |___| <br> |___| <br><br> |___| <br><br> |___| <br><br> |___| <br><br> |___| <br><br> |___| <br> |___| | |

| **Section 9: Menstrual Regulation and Abortion** |
|------|----------|--------|---------------|------|
| **No.** | **Question** | **Answer** | **Code of Answer** | **Skip** |
| 901. | Are you/your husband using any family planning method currently? | Yes ......................................................................... 1<br>No ............................................................................ 2 | |___| <br>———————▶ | <br>903 |
| 902. | If you are currently using, which method is it? | Pill..........................................................................01<br>Injection..................................................................02<br>Lactational amenorrhea method (LAM) ................03<br>Condom ...................................................................04<br>Emergency Contraceptives.....................................05<br>IUD/Copper T...........................................................06<br>Implant ...................................................................07<br>Vasectomy...............................................................08<br>Tubectomy...............................................................09<br>Calendar Method.....................................................10<br>Withdrawal/ Azal Method .....................................11<br>Others (please specify) ........................................ 88 | |___|___| | |
| 903. | Have you ever heard about MR (menstrual regulation)? | Yes ......................................................................... 1<br>No ............................................................................ 2 | |___|<br>———————▶ | <br>930 |
| 904. | If you ever heard about MR, what was the source?<br><br>[Multiple answers can be received. Don't read out to respondents. Probe her] | Radio....................................................................... A<br>TV .......................................................................... B<br>Newspaper/Magazine ........................................... C<br>Husband ................................................................. D<br>Father-in-law ......................................................... E<br>Mother-in-law ....................................................... F<br>Mother ................................................................... G<br>Maternal Aunt ....................................................... H<br>Paternal Aunt.......................................................... I<br>Paternal Grandmother .......................................... J<br>Maternal Grandmother ......................................... K<br>Sister-in-law........................................................... L<br>Sister-in-law (husband's sister).............................. M<br>Sister...................................................................... N<br>Sister-in-law (Husband's brother's wife) ............... O<br>Neighbor................................................................. P<br>Health Worker ....................................................... Q<br>Family Planning Health Worker............................. R<br>Doctor.................................................................... S<br>Social Networking Sites ......................................... T<br>Through searching Internet................................... U<br>Friends................................................................... V<br>Others (please specify) ........................................ Z | |___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___|<br>|___| | |
| 905. | In your area, does anyone have experience of conducting MR (menstrual regulation)? | Yes ......................................................................... 01<br>No ............................................................................ 02<br>Don't know ............................................................. 97 | |___|___| | |
| 906. | Do you know, up to how many months after conceiving one can conduct MR (menstrual regulation)? | Yes ......................................................................... 1<br>No ............................................................................ 2 | |___|<br>———————▶ | <br>908 |
| 907. | If you know, up to how many months after conceiving one can conduct MR (menstrual regulation)? | Up to 3 (three) months......................................... 1<br>More than 3 (three months)................................. 2 | |___| | |
| 908. | Have you ever done MR (menstrual regulation)? | Yes ......................................................................... 1<br>No ............................................................................ 2 | |___|<br>———————▶ | <br>930 |

## Section 9: Menstrual Regulation and Abortion

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 909. | How many times have you done MR (menstrual regulation)? | ...............................times | \|___\|___\| | |

**[Direction: If the respondent conducts MR more than one time, the answer of 939 must be collected by the interviewer]**

| No. | Question | Answer | | | | Code of Answer | Skip |
|---|---|---|---|---|---|---|---|
| 910. | After how many weeks of stopping period, in which year and why did you conduct MR (menstrual regulation)? **Code of Reasons:** Due to physical complications .. 01 To terminate the unintended pregnancy .................................................. 02 To terminate the pregnancy if the fetus is female........................................ 03 To terminate the pregnancy if the fetus is male.......................................... 04 For treatment purpose after abortion caused by accident ................... 05 Others (please specify) ............. 88 | Order | Time (Week) | Reason | Year of conducting MR | \|___\|___\| \|___\|___\| | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 911. | Where have you conducted your last MR (menstrual regulation)? **[Multiple answers can be received. Don't read out to respondents. Probe her]** | **Government Sector** Medical College Hospital ....................................... A Specialized Medical College Hospital ................... B District Hospital ..................................................... C Mother and Child Welfare Centre ....................... D Upazila Health Complex ....................................... E Union Health and Family Welfare Centre............. F Others (please specify) ......................................... G **NGO Sector** Static NGO Clinic.................................................... H Others (please specify) .......................................... I **Non-government Institutions** Non-government Hospital/Clinic.......................... J Skilled Doctor's Chamber ..................................... K Unskilled Doctor's Chamber ................................. L Others (please specify) ......................................... M Others (please specify) ......................................... Z Don't Know........................................................... Y | \|___\| \|___\| \|___\| \|___\| \|___\| \|___\| \|___\|  \|___\| \|___\|  \|___\| \|___\| \|___\| \|___\| \|___\| \|___\| | |
| 912. | By whom have you conducted your last MR? | MBBS Doctor ........................................................ 01 Quack Doctor (Village doctor) .............................. 02 Nurse .................................................................... 03 Health Assistant.................................................... 04 Family Welfare Visitor .......................................... 05 Family Welfare Assistant ...................................... 06 Skilled Midwife ..................................................... 07 Unskilled Midwife................................................. 08 Paramedics/Sub-assistant community medical officer (SACMO) .............................................................. 09 Others (please specify) ........................................ 88 | \|___\|___\| | |

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|

**Section 9: Menstrual Regulation and Abortion**

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 913. | Did you detect the sex of the child before conducting the last MR (menstrual regulation)? | Yes ........................................................................ 1 <br> No .......................................................................... 2 | \|___\| | 915 |
| 914. | If you detected, what was the sex of the child? | Male....................................................................... 1 <br> Female................................................................... 2 | \|___\| | |
| 915. | Who influenced you to conduct the last MR (menstrual regulation)? | Self........................................................................ 01 <br> Husband ............................................................... 02 <br> Father-in-law ....................................................... 03 <br> Mother-in-law ...................................................... 04 <br> Father ................................................................... 05 <br> Mother .................................................................. 06 <br> Relatives ............................................................... 07 <br> Neighbor............................................................... 08 <br> Friends.................................................................. 09 <br> Health Worker...................................................... 10 <br> Others (please specify) ....................................... 88 | \|___\|___\| | |
| 916. | Who took you to the health centre to conduct the last MR (menstrual regulation)? | Self........................................................................ 01 <br> Husband ............................................................... 02 <br> Father-in-law ....................................................... 03 <br> Mother-in-law ...................................................... 04 <br> Father ................................................................... 05 <br> Mother .................................................................. 06 <br> Relatives ............................................................... 07 <br> Neighbor............................................................... 08 <br> Friends.................................................................. 09 <br> Health Worker...................................................... 10 <br> Others (please specify) ....................................... 88 | \|___\|___\| | |
| 917. | In which method, have you conducted the last MR (menstrual regulation)? <br><br> [Multiple answers can be received. Don't read out to respondents. Probe her] | Menstrual regulation with medication (MRM)..... A <br> Manual vacuum aspiration (MVA)........................ B <br> Electric vacuum aspiration (EVA).......................... C <br> Operation dilation and curettage (D&C)............... D <br> Traditional Method............................................... E <br> Others (please specify) ........................................ Z | \|___\| → <br> \|___\| → <br> \|___\| → <br> \|___\| <br> \|___\| <br> \|___\| | 918-21 <br> 922-25 <br> 926-29 |

**If the answer of 917 is A, please collect the answers of 918-921**

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 918. | Was there any side effect of the medicine you used? | Yes ........................................................................ 1 <br> No .......................................................................... 2 | \|___\| | 930 |
| 919. | If there was any side effect, have you taken any treatment/consulted with doctor? | Yes ........................................................................ 1 <br> No .......................................................................... 2 | \|___\| | 930 |
| 920. | If you have taken any treatment/consulted with doctor, where was the place of treatment/consultation? <br><br> [Multiple answers can be received. Don't read out to respondents. Probe her] | **Government Sector** <br> Medical College Hospital ...................................... A <br> Specialized Medical College Hospital ................... B <br> District Hospital .................................................... C <br> Mother and Child Welfare Centre ........................ D <br> Upazila Health Complex ....................................... E <br> Union Health and Family Welfare Centre............. F <br> Others (please specify) ........................................ G <br> **NGO Sector** <br> Static NGO Clinic................................................... H <br> Others (please specify) ........................................ I <br> **Non-government Sector** <br> Non-government Hospital/Clinic........................... J <br> Skilled Doctor's Chamber .................................... K <br> Quack Doctor's Chamber...................................... L | \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br><br> \|___\| <br> \|___\| <br> \|___\| | |

| Section 9: Menstrual Regulation and Abortion | | | | |
|---|---|---|---|---|
| **No.** | **Question** | **Answer** | **Code of Answer** | **Skip** |
| | | Others (please specify) ......................................... M | \|___\| | |
| | | **Others (please specify) ........................................ Z** | \|___\| | |
| | | Don't know ........................................................... Y | \|___\| | |
| 921. | What services did they provide? | Provided suggestions............................................. A | \|___\| | |
| | | Prescribed medicine ............................................. B | \|___\| | |
| | | Surgical MR (MVA)................................................. C | \|___\| | |
| | | Surgical MR (EVA) ................................................ D | \|___\| | |
| | | Nothing................................................................. E | \|___\| | |
| | | Others (please specify) ......................................... Z | \|___\| | |
| **If the answer of 917 is B, Please collect the answers of 922-925** | | | | |
| 922. | Did you face any side effects after conducting MVA? | Yes ........................................................................ 1<br>No ......................................................................... 2 | \|___\| | 930 |
| 923. | If there was any side effect, have you taken any treatment/consulted with doctor? | Yes ........................................................................ 1<br>No ......................................................................... 2 | \|___\| | 930 |
| 924. | If you have taken any treatment/consulted with doctor, where was the place of treatment/consultation?<br><br>**[Multiple answers can be received. Don't read out to respondents. Probe her]** | **Government Sector**<br>Medical College Hospital ....................................... A<br>Specialized Medical College Hospital ................... B<br>District Hospital .................................................... C<br>Mother and Child Welfare Centre ........................ D<br>Upazila Health Complex ....................................... E<br>Union Health and Family Welfare Centre............. F<br>Others (please specify) ......................................... G<br>**NGO Sector**<br>Static NGO Clinic................................................... H<br>Others (please specify) ......................................... I<br>**Non-government Sector**<br>Non-government Hospital/Clinic.......................... J<br>Skilled Doctor's Chamber ..................................... K<br>Quack Doctor's Chamber...................................... L<br>Others (please specify) ......................................... M<br>**Others (please specify) ........................................ Z**<br>Don't know ........................................................... Y | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 925. | What services did they provide? | Provided suggestions............................................. A<br>Prescribed medicine ............................................. B<br>Surgical MR (MVA)................................................. C<br>Surgical MR (EVA) ................................................ D<br>Nothing................................................................. E<br>Others (please specify) ......................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| **If the answer of 917 is C, Please collect the answers of 926-929** | | | | |
| 926. | Did you face any side effects after conducting electric vacuum aspiration (EVA)? | Yes ........................................................................ 1<br>No ......................................................................... 2 | \|___\| | 930 |

## Section 9: Menstrual Regulation and Abortion

| No. | Question | Answer | Code of Answer | Skip |
|-----|----------|--------|----------------|------|
| 927. | If there was any side effect, have you taken any treatment/consulted with doctor? | Yes ......................................................................... 1<br>No .......................................................................... 2 | \|___\| | 930 |
| 928. | If you have taken any treatment/consulted with doctor, where was the place of treatment/consultation?<br><br>[Multiple answers can be received. Don't read out to respondents. Probe her] | **Government Sector**<br>Medical College Hospital ...................................... A<br>Specialized Medical College Hospital ................... B<br>District Hospital .................................................... C<br>Mother and Child Welfare Centre ........................ D<br>Upazila Health Complex ....................................... E<br>Union Health and Family Welfare Centre............. F<br>Others (please specify) ......................................... G<br><br>**NGO Sector**<br>Static NGO Clinic................................................... H<br>Others (please specify) ......................................... I<br><br>**Non-government Sector**<br>Non-government Hospital/Clinic.......................... J<br>Skilled Doctor's Chamber ..................................... K<br>Quack Doctor's Chamber (Village doctor) ............ L<br>Others (please specify) ........................................ M<br><br>**Others (please specify) ......................................... Z**<br>Don't know ........................................................... Y | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\| | |
| 929. | What services did they provide? | Provided suggestions............................................ A<br>Prescribed medicine ........................................... B<br>Surgical MR (MVA)................................................ C<br>Surgical MR (EVA) ............................................... D<br>Nothing................................................................. E<br>Others (please specify) ........................................ Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 930. | Have you ever aborted after three months of conception? | Yes ......................................................................... 1<br>No .......................................................................... 2 | \|___\| | 1001 |
| 931. | If you ever aborted, why did you do that? | Due to physical complications ............................. A<br>To terminate the unintended pregnancy............. B<br>To terminate the pregnancy if the fetus is female. C<br>To terminate the pregnancy if the fetus is male .. D<br>For accidental reason ........................................... E<br>Others (please specify) ......................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 932. | How many times have you aborted? | ...............................times | \|___\|___\| | |
| [Direction: If the respondent aborted child more than once, the answer of 939 must be collected] | | | |

| 933. | After how many months of conception have you aborted and what was the year? |

| Order | Months | Year |
|-------|--------|------|
|       |        |      |
|       |        |      |
|       |        |      |
|       |        |      |
|       |        |      |

| 934. | Where have you aborted the child last time?<br><br>[Multiple answers can be received. Don't read out to respondents. Probe her] | **Government Sector**<br>Medical College Hospital ...................................... A<br>Specialized Medical College Hospital ................... B<br>District Hospital .................................................... C<br>Mother and Child Welfare Centre ........................ D | \|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

## Section 9: Menstrual Regulation and Abortion

| No. | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| | | **Upazila Health Complex** ....................................... E | \|__\| | |
| | | Union Health and Family Welfare Centre............. F | \|__\| | |
| | | Others (please specify) ......................................... G | \|__\| | |
| | | **NGO Sector** | | |
| | | Static NGO Clinic.................................................... H | \|__\| | |
| | | Others (please specify) ......................................... I | \|__\| | |
| | | **Non-government Sector** | | |
| | | Non-government Hospital/Clinic.......................... J | \|__\| | |
| | | Skilled Doctor's Chamber ..................................... K | \|__\| | |
| | | Quack Doctor's Chamber (Village doctor) ............ L | \|__\| | |
| | | Others (please specify) ......................................... M | \|__\| | |
| | | **Others (please specify) ......................................... Z** | \|__\| | |
| | | Don't know ........................................................... Y | \|__\| | |
| 935. | By whom have you aborted your child last time? | MBBS Doctor ........................................................ 01 <br> Quack Doctor (Village doctor) .............................. 02 <br> Nurse ..................................................................... 03 <br> Health Assistant.................................................... 04 <br> Family Welfare Visitor .......................................... 05 <br> Family Welfare Assistant ...................................... 06 <br> Skilled Midwife ..................................................... 07 <br> Unskilled Midwife................................................. 08 <br> Paramedics/ Sub-assistant community medical officer (SACMO) .............................................................. 09 <br> Homeopathic/Ayurvedic....................................... 10 <br> Others (please specify) ........................................ 88 | \|__\|__\| | |
| 936. | Have you detected the sex of the child before aborting the child? | Yes ......................................................................... 1 <br> No ........................................................................... 2 | \|__\| | → 939 |
| 937. | If you detected, what was the sex of the child? | Male........................................................................ 1 <br> Female.................................................................... 2 | \|__\| <br> \|__\| | |
| 938. | What was the method of aborting the child last time? <br><br> **[Multiple answers can be received. Don't read out to respondents. Probe her]** | Operation dilatation and curettage (D&C) ........... A <br> Allopathic Medicine............................................... B <br> Homeopathic Medicine ......................................... C <br> Kabirazi/Ayurvedic/Hakimi Medicine ................... D <br> Prayer/Rituals........................................................ E <br> Consuming Herbs .................................................. F <br> Others (please specify) ......................................... Z | \|__\| <br> \|__\| <br> \|__\| <br> \|__\| <br> \|__\| <br> \|__\| <br> \|__\| | |
| 939. | *If the respondent reported more than one time of MR in 909, following information must be collected. <br> *If the respondent reported more than one time of abortion in 932, following information must be collected. | | | |

| Order | MR=1 Abortion=2 | The process of doing MR/Abortion [More than one answer can come] | Sex of the embryo (Male=1, Female=2, Don't know=97) | MR/Abortion knowing the sex of the embryo (Yes=1, No=2) | Place pf doing MR/Abortion | By whom it was done |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1 | | \|__\|__\|__\|__\| | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

## Section 10: Consequences of Gender-Biased Sex Selection

| No | Question | Answer | Code of Answer | Skip |
|---|---|---|---|---|
| 1001. | What happened/can happen to your personal life after doing MR/abortion knowing that the fetus is girl?<br><br>**[Multiple answers can be received. Don't read out to respondents. Probe her]** | Health remains good...................................A<br>Facing complications in being pregnant.....B<br>Facing physical complications ....................C<br>Ensuring the desired number of children ..D<br>Avoiding unintended pregnancy ...............E<br>Increasing the birth spacing ensuring the desired number of children .......................F<br>Preventing husband from marrying second time ..........................................................G<br>Facing mental stress...................................H<br>Others (please specify) ..............................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\| | |
| 1002. | What happened/can happen to your family life after doing MR/abortion knowing that the fetus is girl?<br><br>**[Multiple answers can be received. Don't read out to respondents. Probe her]** | Complications in finding bride for son in future ....................................................................A<br>The income of family will increase ............B<br>Financial security will be ensured in old-age ....................................................................C<br>Overall security will be ensured in old-age ....................................................................D<br>Mental peace will be ensured ...................E<br>The prestige of family will increase ...........F<br>The resource of family will be saved from harm ...........................................................G<br>The generation flow will be ensured..........H<br>Others (please specify) ..............................Z | \|___\|<br>\|___\|<br><br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\| | |
| 1003. | What happened/can happen to your social life after doing MR/abortion knowing that the fetus is girl?<br><br>**[Multiple answers can be received. Don't read out to respondents. Probe her]** | The prestige of women in society increase...A<br>Social security can be ensured ..................B<br>Violence against women increases ............C<br>Sexual violence against women increases .D<br>The family of groom has to pay money to bride's family for marriage.........................E<br>The number of female decreases...............F<br>The number of male increases...................G<br>Others (please specify) ..............................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

| Time of Finishing the Interview | | |
|---|---|---|
| | Hour | Minute |

## If we come to you again for research, do you agree to be interviewed?

| Yes .............................................................1<br>No.........................................................2 | \|___\| |
|---|---|

**Thank the respondent and end the interview**

**Name and signature of the checker of collected information: _____**

# Appendix A.2: Interview schedule (topic guide) for women who were exposed to activities related to gender-biased sex selection (GBSS)

1. You have informed us that you have taken MR/abortion services. Why have you gone through MR/abortion?

2. Is there any role of the desire of having male child or female child behind the decision of MR/abortion?

a. Is there any role of your husband or family behind this decision?

b. If there is, who played the main role?

c. What type of role it was?

3. What are the advantages of having a boy child?

4. What are the advantages of having a girl child?

5. What are the disadvantages of having a girl child?

6. What type of problems do people have to face if they have a girl child?

7. Why do the people have to face these problems?

8. Did you come to know about the sex of the child before the delivery of the baby?

   a. If you came to know that it is a boy child, what was your reaction?

   b. What was the reaction of your family members?

   c. If you came to know that it is a girl child, what was your reaction?

   d. What was the reaction of your family members?

9. Have you discussed with your husband or family members about the issue whether a boy child is better or a girl child?

   a. If you have, what was their opinion regarding it?

   b. Did you agree with them? Why? Why not?

10. What was the reaction of your family after the birth of your daughter?

    a. If it was good, what type of reaction was that? Why was the reaction good?

    b. If it was bad, what type of reaction was that? Why was the reaction bad?

       i. Have you faced any negligence or humiliation? If you did, tell about that.

       ii. Have you faced any physical violence? If you did, tell about that.

       iii. Have you faced any mental violence? If you did, tell about that.

11. What was the reaction of your family after the birth of your son?

    a. If it was good, what type of reaction was that? Why was the reaction good?

    b. If it was bad, what type of reaction was that? Why was the reaction bad?

       i. Have you faced any negligence or humiliation? If you did, tell about that.

       ii. Have you faced any physical violence? If you did, tell about that.

       iii. Have you faced any mental violence? If you did, tell about that.

12. What type of ways of terminating pregnancy have you heard about?

    a. What are the methods?

    b. Who usually perform these processes?

  c. What type of people visit them?

  d. What about the expenses to terminate pregnancy in these methods?

  e. What are the advantages of these methods?

  f. What are the disadvantages of these methods?

13. You have done MR, right?

  a. Why have you done that?

  b. Have you done that on your own wish?

  c. Have any one influenced you to adopt this process?

  d. How did they do it? Why did they do it?

  e. Where have you done MR?

  f. Have you visited that place alone? If not, who did accompany you?

  g. What was the expense of doing MR?

  h. Who did bear the expense? If you do, what was the source of the money?

  i. If you didn't, who did it for you?

14. Have you faced any challenge when you went through having MR?

  a. If you did, what type of challenges were those?

  b. How did you cope with those challenges?

15. When have you done abortion?

  a. Was that on your own wish?

  b. If it is, did anyone influence you?

    i. Who influenced you?

    ii. How did s/he influence you?

  c. If it is not on your own wish, have anyone insisted you?

  d. How did they insist you?

  e. Where did you have your abortion done?

  f. Did you visit that place alone? If you didn't, who accompanied you?

  g. Who performed the abortion?

  h. What expenses did you need to have the abortion done?

    i. Did you bear that expense by your own? If you did, what was the source?

    ii. If you didn't, who did that for you?

16. Did you come to know about the sex of the child before you aborted it?

  a. If you did, why did you want to know that?

  b. Was there any role of knowing the sex behind the decision of abortion?

  c. What type of role was there?

17. Have you faced any challenge when you went had the abortion done?

  a. If you did, what type of challenges were those?

  b. How did you cope with those challenges?

# Appendix A.3: Interview schedule (topic guide) for husbands of respondents who were exposed to GBSS-related activities

1. Have you desired a boy child or a girl child as your first child?
   a. If you desired for a son, why was that?
   b. If you desired for a daughter, why was that?
2. Was it only your wish or did anyone have any influence on you?
3. If a son is born to a family in your area, what type of reactions does that family show?
4. If a daughter is born to a family in your area, what type of reactions does that family show?
5. Who are most reactive in this regard?
6. What does a family do to have a son?
7. Have you ever heard about any method to terminate pregnancy?
   a. What methods have you heard about?
   b. Who does that?
   c. Who visits them?
   d. What are the expenses for going through these processes?
   e. What are the advantages of these methods?
   f. What are the disadvantages of these methods?
8. Do the people of your area know about any technology through which they can be informed about the sex of the fetus? Where have you heard about it?
9. Do you and your wife follow any method to have a son? If you do, tell about those methods.
10. Are there incidents of abortion in your area? If there are, why are they taking place?
11. Did you come to know about the sex of your child before delivery?
12. If you did, from where/whom did you know that?
13. What was your reaction after knowing it?
    a. If it was good, why?
    b. If it was bad, why?
14. Why did you take your wife to have abortion?
15. Was it a combined decision?
16. Have anyone influenced you to take this decision? If they did, how did they do it?

# Appendix A.4: Interview Schedule (topic guide) for key informant interview (KII)

1. How long have you been in this profession?
2. What type of services are provided in this health care facility?
3. What type of clients usually visit this health care facility?
4. Where do you refer your clients usually?
5. In what type of services are you involved?
6. Are you involved with any other health care facility except this?
a. If you are involved, what type of services are provided in that health care facility?
7. Do you provide MR related services in this facility?
a. If you do, who are involved in providing these services?
8. What are the facilities of performing MR in this health care centre?
9. Do you perform MR yourself if you do, how long have you been performing MR?
10. What type of people of your area has the tendency to undergo the processes of MR? What are the reasons behind it according to you?
11. Do you face any challenges while performing MR? What type of challenges do you face?
12. Do you influence clients to take or not to take MR services?
   a. If you influence to take, how and why do you do that?
   b. If you influence not to take, how and why do you do that?
13. Do women take post-MR services? Provide your opinion on that.
14. Do the women of this area take the services of MR in other ways except visiting professional health workers/physicians/health care centres?
   a. What are other means?
   b. What type of people generally do these?
   c. Why do they do these?
   d. What are the places they visit?
   e. By whom they have it done?
15. Do the women of this area come to you after going through the MR services received from other ways except visiting professional health workers/physicians/health care centres?
   a. What sorts of problem do they usually have?
16. People who decide to take MR services, why do they take this decision according to you?
17. Do you think that knowing the sex of the fetus can play role behind taking the decision of MR? What type of role does it play?
18. Are you informed about the laws and regulation related to MR?
   a. If you are, what do you know?
   b. To what extent of time the MR can be done legally?
   c. What type of service providers are authorized to provide these services legally?
   d. Who are the clients that seek MR services after this period?

19. What type of people of your area has the tendency to undergo the processes of abortion? What are the reasons behind it according to you?

20. Do you face any challenges while performing abortion? What type of challenges do you face?

21. Do you influence clients to take or not to take abortion services?

    a. If you influence to take, how and why do you do that?

    b. If you influence not to take, how and why do you do that?

22. Do women take post abortion services? Provide your opinion on that.

23. Do the women of this area take the services of abortion in other ways except visiting professional health workers/physicians/health care centres?

    a. What are other means?

    b. What type of people generally do these?

    c. Why do they do these?

    d. What are the places they visit?

    e. By whom they have it done?

24. Do the women of this area come to you after going through the abortion services received from other ways except visiting professional health workers/physicians/health care centres?

    a. What sorts of problem do they usually have?

25. People who decide to take abortion services, why do they take this decision according to you?

26. Do you think that knowing the sex of the fetus can play role behind taking the decision of MR? What type of role does it play?

## Appendix A.5: Interview schedule (topic guide) for FWV/ FWA/ SBA/ TBA

1. How long have you been in this profession?
2. What type of services are provided in this health care facility?
3. In which types of services are you involved?
4. How does female client contact with you?
5. Are you involved in any other facility except this one?
6. If you are involved, what type of services are provided in that health care facility?
7. Do you provide MR related services in this facility?
   a. If you do, who are involved in providing these services?
8. What are the facilities of performing MR in this health care centre?
9. Do anyone want to know about MR services from you?
   a. If they do, what type of information they want to know?
10. Do you perform MR? if you do, how long have you been performing MR?
11. What type of people of your area has the tendency to undergo the processes of MR? What are the reasons behind it according to you?
12. Do you face any challenges while performing MR? What type of challenges do you face?
13. Do you influence clients to take or not to take MR services?
    a. If you influence to take, how and why do you do that?
    b. If you influence not to take, how and why do you do that?
14. What are the advantages of having MR done by you?
15. Do women take post-MR services? Provide your opinion on that.
16. Do the women of this area take the services of MR in other ways except visiting professional health workers/physicians/health care centres?
    a. What are other means?
    b. What type of people generally do these?
    c. Why do they do these?
    d. What are the places they visit?
    e. By whom they have it done?
17. Do the women of this area come to you after going through the MR services received from other ways except visiting professional health workers/physicians/health care centres?
    a. What sorts of problem do they usually have?
18. People who decide to take MR services, why do they take this decision according to you?
19. Do you think that knowing the sex of the fetus can play role behind taking the decision of MR? What type of role does it play?
20. Who do accompany the women visiting health care centre to have MR?
    a. Do these accompanying people have any role behind the decision of MR?
21. Are you informed about the laws and regulation related to MR?
    a. If you are, what do you know?
    b. To what extent of time the MR can be done legally?
    c. If clients want to take MR services after 10-12 weeks of pregnancy, do you provide the service?

d. If you do, why do you do that?

e. If you don't, why don't you do that?

22. Do you have any training on MR?

a. If you do, from where did you take the training?

b. Who gave you the training?

c. How does this training help you in providing MR services?

23. What are the facilities of performing abortion in this health care centre?

24. Do anyone want to know about abortion services from you?

a. If they do, what type of information they want to know?

25. Do you perform abortion? If you do, how long have you been performing abortion?

26. What type of people of your area has the tendency to undergo the processes of abortion? What are the reasons behind it according to you?

27. Do you face any challenges while performing abortion? What type of challenges do you face?

28. Do you influence clients to take or not to take abortion services?

a. If you influence to take, how and why do you do that?

b. If you influence not to take, how and why do you do that?

29. What are the advantages of having abortion done by you?

30. Do women take post abortion services? Provide your opinion on that.

31. Do the women of this area take the services of abortion in other ways except visiting professional health workers/physicians/health care centres?

a. What are other means?

b. What type of people generally do these?

c. Why do they do these?

d. What are the places they visit?

e. By whom they have it done?

32. Do the women of this area come to you after going through the abortion services received from other ways except visiting professional health workers/physicians/health care centres?

a. What sorts of problem do they usually have?

33. People who decide to take abortion services, why do they take this decision according to you?

34. Do you think that knowing the sex of the fetus can play role behind taking the decision of abortion? What type of role does it play?

35. Who do accompany the women visiting health care centre to have abortion?

a. Do these accompanying people have any role behind the decision of abortion?

36. Are you informed about the laws and regulation related to abortion?

a. If you are, what do you know?

37. Do you have any training on abortion?

a. If you do, from where did you take the training?

b. Who gave you the training?

c. How does this training help you in providing abortion services?

# Appendix A.6: Interview schedule for facility assessment

| Division/District: | 1= Dhaka; 2= Sylhet; 3= Rangpur |
|---|---|
| Upazila/ Pourashava: | |
| Union/Ward | |
| Name of the Signatory: | |
| Designation of Interviewee: | |
| Mobile Number of Interviewee: | |
| Types of Health Facility: | Government Medical College Hospital.............................01<br>Specialized Hospital...........................................................02<br>Private Medial College Hospital........................................03<br>District Hospital .................................................................04<br>Mother and Child Welfare Centre (MCWC).....................05<br>Upazila Health Complex ....................................................06<br>Union Health and Family Welfare Centre........................07<br>NGO Clinic .........................................................................08<br>Private Clinic......................................................................09 |
| If NGO Clinic, Specify the Name of Clinic: | Name of NGO:<br>Name of Clinic: |
| Address of the Health Facility: | |
| Date: | |
| Starting Time of Interview: | |

INFORMED CONSENT

Assalamualaikum/Adab,

My name is.............................................I have come from the Department of Population Sciences, University of Dhaka. The Department of Population Sciences is conducting a research study titled 'Exploring Gender-Biased Sex Selection in Bangladesh: Causes and Consequences'. If you agree, then I would like to talk with you. I am confirming to you that all the answers you give will be confidential and will only be used for research. Your participation in the survey is fully voluntary. If you want, you may avoid answering any question. Since your views are very important, I hope that you will participate in this survey. The information you provide will help the government to take different steps in reducing gender inequality.

Do you have any more questions about the survey? May I begin the interview now?

Respondent agrees to be interviewed 1→ Start interview

Respondent does not agree to be interviewed 2→ Thank the respondent and end interview

Signature of interviewer based on the consent of the respondent……………………………………………………        ………………

Starting time of interview:  ⬚⬚   ⬚⬚

                                   Hour          Minute

| General Information about Health Facility | | | | |
|---|---|---|---|---|
| No. | Question | Answer | | Answer Code | Skip |

| No. | Question | Type | No. | Answer Code | Skip |
|---|---|---|---|---|---|
| 01. | What are the human resources available in your facility/ department / directorate?<br><br>**[Please collect the information of all types. If not available, give '0']** | 01= Gynecologist | | \|___\|___\| | |
| | | 02= MBBS Doctor | | \|___\|___\| | |
| | | 03= Surgeon | | \|___\|___\| | |
| | | 04= Consultant | | \|___\|___\| | |
| | | 05= Counsellor | | \|___\|___\| | |
| | | 06= Medical Officer (MOMCH) | | \|___\|___\| | |
| | | 07= Paramedics | | \|___\|___\| | |
| | | 08= Radiologist | | \|___\|___\| | |
| | | 09= Anaesthetist | | \|___\|___\| | |
| | | 10= Pathologist | | \|___\|___\| | |
| | | 11= Sonologist | | \|___\|___\| | |
| | | 12= Medical Technologist | | \|___\|___\| | |
| | | 13= Nurse | | \|___\|___\| | |
| | | 14= Health Assistant | | \|___\|___\| | |
| | | 15= Clinic Manager | | \|___\|___\| | |

| | | | | |
|---|---|---|---|---|
| | | 16= Service Promoter | |\_\_|\_\_| | |
| | | 17= Section Officer | |\_\_|\_\_| | |
| | | 18= Upper Division Assistant | |\_\_|\_\_| | |
| | | 19= Lower Division Assistant | |\_\_|\_\_| | |
| | | 20= FWA | |\_\_|\_\_| | |
| | | 21= FWV | |\_\_|\_\_| | |
| | | 22= Midwife | |\_\_|\_\_| | |
| | | 23= SACMO | |\_\_|\_\_| | |
| | | 24= Office Assistant | |\_\_|\_\_| | |
| | | 25= Ayah | |\_\_|\_\_| | |
| | | 26= Cleaner | |\_\_|\_\_| | |
| | | 27= Security Guard | |\_\_|\_\_| | |
| | | 88= Others (please specify) | |\_\_|\_\_| | |
| 02. | What are the services available in your facility/ department / directorate?  **[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Modern family planning service .......................A  ANC.....................................................................B  Normal delivery ..................................................C  Caesarean delivery .............................................D  PNC .....................................................................E  Laboratory Diagnostic Service  Hemoglobin test ..................................................F  Blood grouping ...................................................G  STI screening.......................................................H  Cervical cancer screening ...................................I  HIV test ...............................................................J  Cretonne test......................................................K  Lever functioning test.........................................L  Blood sugar test..................................................M  ECG test ..............................................................N  Ultrasound technology ......................................O  Amniocentesis ...................................................P  X-ray ...................................................................Q  Surgery (except caesarean delivery).................R  Others (please specify) ......................................Z | \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|    \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\|  \|\_\_\| | |
| 02.a. | How many women used ultrasonography in this facility for last 12 months? | ................................. Number | \|\_\_\|\_\_\|\_\_\| | |
| 02.b. | How many women used amniocentesis in this facility for last 12 months? | ...................................... Number | \|\_\_\|\_\_\|\_\_\| | |
| 03. | What types of family planning services are provided in this facility? | | | |

| Type of service | Service provider (use the code of Q01) |
|---|---|
| Pill | |
| Injectable | |
| Condom | |
| Emergency Contraception | |
| IUD | |
| Implant | |
| Vasectomy | |
| Tubectomy | |
| Others (please specify) | |

| | | | | |
|---|---|---|---|---|
| 04. | Is MR service available in this facility? | Yes ..................................................................1  No ....................................................................2 | \|\_\_\| | |
| 05. | Does the facility take consent from client before performing MR? | Yes ..................................................................1  No ....................................................................2 | \|\_\_\| | |

| 06. | If yes, what type of consent are taken when performing MR? **[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Verbal ........................................................... A<br>Written ...........................................................B<br>Both Verbal and written .................................C<br>Others (please specify) ...................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
|---|---|---|---|---|
| 07. | Does the facility provide counselling related to MR management? | <table><tr><td>**Types of counselling**</td><td>**Answer**<br>**1= Yes, 2= No**</td></tr><tr><td>Before MR</td><td></td></tr><tr><td>During MR</td><td></td></tr><tr><td>After MR</td><td></td></tr></table> | | |
| 08. | If yes, what types of counselling are provided?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | **Before MR:**<br>To make good relationship with client ...............A<br>To tell about advantages and disadvantages of MR ......................................................................... B<br>Help to decide about MR.....................................C<br>Help not to decide about MR .............................D<br>To inform about family planning method........... E<br>To tell about the importance of post-MR care ... F<br>Others (please specify) .......................................G<br><br>**During MR:**<br>To talk with service seeker ................................ H<br>To grasp the hand of client tightly...................... I<br>To ensure service seeker .................................... J<br>If she wants, tell the client about steps of MR ...K<br>Others (please specify) .......................................L<br><br>**After MR:**<br>To tell about the importance of post-MR care ..M<br>To ensure anonymity ......................................... N<br>To ensure the client............................................ O<br>To tell the consequences of MR ........................ P<br>To tell about the remedy of the consequences of MR ......................................................................Q<br>To counsel about the remedy of pain ............... R<br>To counsel about self-care ................................ S<br>Others (please specify) ...................................... T<br><br>Others (please specify) ....................................... Z | \|___\|<br>\|___\|<br><br>\|___\|<br><br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br><br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 09. | What are the steps for performing MR?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | **Before MR:**<br>To make good relationship with client ............... A<br>To know the history of client............................... B<br>To test physically .................................................C<br>Laboratory test ....................................................D<br>To inform about family planning method............ E<br>To tell about the importance of post-MR care .... F<br>Others (please specify) ....................................... G<br><br>**During MR:**<br>To talk with service seeker ................................ H<br>To grasp the hand of client tightly........................I<br>To ensure service seeker .................................... J<br>If she wants, tell the client about steps of MR ....K<br>Others (please specify) .......................................L<br><br>**After MR:**<br>To tell about the importance of post-MR care .. M<br>To ensure anonymity..........................................N<br>To ensure the client............................................O<br>To tell the consequences of MR .........................P | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br><br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

| | | | | |
|---|---|---|---|---|
| | | To tell about the remedy of the consequences of MR ....................................................................Q | \|___\| | |
| | | To counsel about self-care ................................. R | \|___\| | |
| | | Others (please specify) ........................................ S | \|___\| | |
| | | Others (please specify) ....................................... Z | \|___\| | |

| 10. | Which methods are used to perform MR? | | |
|---|---|---|---|

| Types | Answer 1= Yes, 2= No |
|---|---|
| MRM | |
| MVA | |
| EVA | |

\|___\|
\|___\|
\|___\|

| 11. | How many women used MR service in last one year **[Use Registrar Book]** **[If answer of Q05 is 'No', then put '0'.** | MRM......................................Number MVA......................................Number EVA .......................................Number Operation (D&C)....................Number | \|___\|___\| \|___\|___\| \|___\|___\| \|___\|___\| | |
|---|---|---|---|---|

| 12. | Who provides MR service? | | |
|---|---|---|---|

| Types | Service provider (Use the code of Q01) |
|---|---|
| MRM | |
| MVA | |
| EVA | |
| Operation (D&C) | |

\|___\|___\|
\|___\|___\|
\|___\|___\|
\|___\|___\|

| 13. | What are the reasons of MR? **[Collect the reasons for last one year]** **[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | | |
|---|---|---|---|

| Cause | Yes | No |
|---|---|---|
| Unplanned pregnancy | | |
| Health problem | | |
| Due to education and job | | |
| Newlywed /Don't want child | | |
| Pressure from husband | | |
| Pressure from family members | | |
| Higher cost of childbearing | | |
| Complicated pregnancy | | |
| Others (please specify) | | |

\|___\|
\|___\|
\|___\|
\|___\|
\|___\|
\|___\|
\|___\|
\|___\|
\|___\|

| 14. | What is the cost of MR service? | | |
|---|---|---|---|

| Methods | Cost (Taka) |
|---|---|
| MRM | |
| MVA | |
| EVA | |

\|__\|__\|__\|__\|
\|__\|__\|__\|__\|
\|__\|__\|__\|__\|

| 15. | What are the medicines used MR service? **[If** MR service is available**]** **[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Misoprostol ..................................................... A Mifepristone.....................................................B Others (please specify) ....................................Z | \|___\| \|___\| \|___\| | |
|---|---|---|---|---|
| 16. | Do you counsel for any family planning method after performing MR service? | Yes ...................................................................1 No .....................................................................2 | \|___\| | |
| 17. | Which family planning method is suggested? **[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Pill.................................................................. A Injectable........................................................B Condom ..........................................................C IUD................................................................. D Implant ...........................................................E | \|___\| \|___\| \|___\| \|___\| \|___\| | |

| | | | | |
|---|---|---|---|---|
| | | Vasectomy ..................................................... F<br>Tubectomy..................................................... G<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\| | |
| 18. | What are the uses of ultrasonography?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]**<br>**[If there is no ultrasonography, then skip]** | To know the position of fetus........................ A<br>To know the growth of fetus ..........................B<br>To know the situation of fetus........................C<br>Health problem.............................................. D<br>Complex pregnancy ........................................ E<br>To know the sex of fetus ............................... F<br>To abort unplanned pregnancy ..................... G<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 19. | What are the uses of amniocentesis?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | To know the position of fetus........................ A<br>To know the growth of fetus ..........................B<br>To know the situation of fetus........................C<br>Health problem.............................................. D<br>Complex pregnancy ........................................ E<br>To know the sex of fetus ............................... F<br>To abort unplanned pregnancy ..................... G<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 20. | Is there any technology available to know sex of fetus? | Yes ..................................................................1<br>No ....................................................................2 | \|___\| ➔ | 22 |
| 21. | What type of sex selection technology is available in this facility? | Ultrasound....................................................01<br>Amniocentesis ..............................................02<br>Others (please specify) ................................88 | \|___\|___\| | |
| 22. | How many people of this facility have training on sex selection technology? | ........................... Number | \|___\|___\| | |
| 23. | Did any woman know the sex of fetus before delivery using technology? | Yes ..................................................................1<br>No ....................................................................2 | \|___\| ➔ | 27 |
| 24. | How many women have used the technology to detect the sex of fetus for last year?<br>**[ If need, check the Registrar]** | Ultrasound...........................................Number<br>Amniocentesis ....................................Number | \|___\|___\|___\|<br>\|___\|___\|___\| | |
| 25. | What is the reason of using sex selection technology for last one year?<br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | ANC............................................................... A<br>Health problem...............................................B<br>Complex pregnancy ........................................C<br>To know the position of fetus........................ D<br>Doctor's prescription ....................................E<br>Abortion ........................................................ F<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 26. | What types of clients want to know the sex of fetus before birth?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Educated (above HSC) ................................... A<br>Educated (6 to 12 class).................................B<br>Less educated ................................................C<br>Illiterate ........................................................ D<br>Newlywed....................................................... E<br>Unmarried ..................................................... F<br>Who have child.............................................. G<br>Rural people .................................................. H<br>Urban people...................................................I<br>Upper class .................................................... J<br>Middle class....................................................K<br>Lower class .................................................... L<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 27. | How many numbers of human resources of this facility have enough training on MR services? | ........................... Number | \|___\|___\| | |

113

| | | | | |
|---|---|---|---|---|
| 28. | Upto which Weeks MR is conducted in this facility? | ........................... Weeks | \|___\|___\| | |
| | **If answer of Q28 is less than 10 weeks, skip to Q31** | | | |
| 29. | How many women used MR after 10 weeks of pregnancy? | ........................... Number | \|___\|___\| | |
| 30. | What is the reason of using MR after 10 weeks of pregnancy for last one year?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | To abort unplanned pregnancy ...................... A<br>Want no more children ...................................B<br>Due to female fetus..........................................C<br>Due to pressure from husband...................... D<br>Due to pressure from family...........................E<br>To save mother's live.......................................F<br>Due to accident .............................................. G<br>Others (please specify) ...................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 31. | Did anyone know the sex of fetus using technology before MR? | Yes ..................................................................1<br>No ...................................................................2 | \|___\| | 33 |
| 32. | How many used sex selection technology to know the sex of fetus before MR for last one year? | ........................... Number | \|___\|___\| | |
| 33. | Does this facility have national manual/ guideline for MR? | Yes ..................................................................1<br>No ...................................................................2 | \|___\| | |
| 34. | Do you know the time period (weeks) of MR mentioned in national MR manual? | Yes ..................................................................1<br>No ...................................................................2 | \|___\| | 38 |
| 35. | If yes, then what is the time period (weeks) of MR? | ........................... Weeks | \|___\|___\| | |
| 36. | In what facilities, MR can be performed within above time period?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Government medical institute ..........................A<br>Medical college hospital.....................................B<br>District hospital .................................................C<br>Mother and Child Welfare Centre  ....................D<br>Upazila Health Complex .................................... E<br>Union Health and Family Welfare Centre.......... F<br>Government approved NGO hospital/clinic ......G<br>Government approved private hospital/clinic...H<br>Others (please specify) ......................................Z<br>Don't know ........................................................ Y | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 37. | Who can perform MR in those facilities?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Trained doctors .................................................A<br>FWV ....................................................................B<br>Female SACMO...................................................C<br>NGO paramedics.................................................D<br>Others (please specify) ......................................Z<br>Don't know ........................................................ Y | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 38. | Did this facility ever refuse to perform MR? | Yes ..................................................................1<br>No ...................................................................2 | \|___\| | 41 |
| 39. | If yes, how many women were refused to perform MR for last one year? | ........................... Number | \|___\|___\| | |
| 40. | What are the reasons of refusing to perform MR for last one year?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Having more than 10-12 weeks of pregnancy   A<br>Having more than 09 weeks of pregnancy .....   B<br>Not having consent from husband .................   C<br>First time pregnancy.......................................   D<br>Lack of enough money to perform MR...........   E<br>Unmarried ......................................................   F | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

| | | | | |
|---|---|---|---|---|
| | | Age less than 18 years ................................. G<br>Others (please specify) ...................................Z | \|___\|<br>\|___\| | |
| 41. | Is there availability of Post-MR service? | Yes ...................................................................1<br>No ....................................................................2 | \|___\| ⟶ | 44 |
| 42. | If yes, how many Post-MR service were provided for last one year? | ........................... Number | \|___\|___\| | |
| 43. | What are the complexities need to have post-MR service?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Mental depression (shock) ............................ A<br>Sepsis (infection) .............................................B<br>Uterine preparation.........................................C<br>Haemorrhage.................................................. D<br>Incomplete MR ................................................ E<br>Cervical/ vaginal laceration ............................ F<br>Urinal problem .............................................. G<br>Others (please specify) ...................................Z | \|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\| | |
| 44. | Is there availability of services for Post MVA complexities? | Yes ...................................................................1<br>No ....................................................................2 | \|___\| ⟶ | 47 |
| 45. | If yes, then how many women received the post MVA services? | ........................... Number | \|___\|___\| | |
| 46. | What are the complexities need to have post MVA service?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Mental depression (shock) ............................ A<br>Sepsis (infection) .............................................B<br>Uterine preparation.........................................C<br>Haemorrhage.................................................. D<br>Incomplete MR ................................................ E<br>Cervical/ vaginal laceration ............................ F<br>Urinal problem .............................................. G<br>Others (please specify) ...................................Z | \|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\| | |
| 47. | Is there availability of services for Post EVA complexities? | Yes ...................................................................1<br>No ....................................................................2 | \|___\| ⟶ | 50 |
| 48. | If yes, then how many women received the post EVA services? | ........................... Number | \|___\|___\| | |
| 49. | What are the complexities need to have post EVA service?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Mental depression (shock) ............................ A<br>Sepsis (infection) .............................................B<br>Uterine preparation.........................................C<br>Haemorrhage.................................................. D<br>Incomplete MR ................................................ E<br>Cervical/ vaginal laceration ............................ F<br>Urinal problem .............................................. G<br>Others (please specify) ...................................Z | \|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\|<br>\|___\|___\| | |
| 50. | Is there provision of MR after 12 weeks of conception? | Yes ...................................................................1<br>No ....................................................................2 | \|___\| ⟶ | 53 |
| 51. | If yes, how many women used MR after 12 weeks of conception? | ........................... Number | \|___\|___\| | |
| 52. | What are the reasons of using MR after 12 weeks of conception?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | To abort unplanned pregnancy ...................... A<br>Want no more children ...................................B<br>Due to female fetus.........................................C<br>Due to pressure from husband....................... D<br>Due to pressure from family............................E<br>To save mother's live.......................................F<br>Due to accident ............................................. G<br>Others (please specify) ...................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

| 53. | Is there availability of abortion service? | Yes ................................................................1<br>No .................................................................2 | \|___\| | |
|---|---|---|---|---|
| | **If the answer of question 53 is 'No', then end the interview with thanking the respondent** | | | |
| 54. | How many people came for abortion for last year? | ........................... Number | \|___\|___\| | |
| 55. | Did anyone detect sex before abortion? | Yes ................................................................1<br>No .................................................................2 | \|___\| ⟶ | 57 |
| 56. | What are the reasons of abortion?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | To abort unplanned pregnancy ....................... A<br>Due to female fetus ...........................................B<br>Health problem..................................................C<br>Education......................................................... D<br>Job related ........................................................E<br>Newlywed/Don't want child .............................F<br>Pressure from husband ................................... G<br>Pressure from family member......................... H<br>Higher cost of bearing child ..............................I<br>Complex pregnancy .......................................... J<br>Accident.............................................................K<br>Others (please specify) .....................................Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 57. | What is the cost of an abortion? | ........................... Taka | \|__\|__\|__\|__\|__\| | |
| 58. | What are the available human resources for performing abortion in this facility? | **Use the Code of Question 01** | | |
| 59. | How many people have the training on abortion in this facility? | ........................... Number | \|___\|___\| | |
| 60. | What is the method generally used for abortion in this facility?<br><br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Operation (D & C) ........................................... A<br>Allopathic medicine ........................................ B<br>Homeopathic medicine .................................. C<br>*Kobiraji/Ayurveda/ Hakimi* ............................ D<br>*Doya-Tabij* ...................................................... E<br>*Lota-Pata* ....................................................... E<br>Others (please specify) ................................... Z | \|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |
| 61. | Is there availability of post abortion service in this facility? | Yes ................................................................1<br>No .................................................................2 | \|___\| | |
| 62. | What are the post abortion service provided in this facility?<br>**[Multiple response is applicable. Don't read out the answers for the respondents. Probe him/her]** | Counselling ..................................................... A<br>Prescribe medicine ..........................................B<br>Surgical MR (MVA)............................................C<br>Others (please specify) ................................... D | \|___\|<br>\|___\|<br>\|___\|<br>\|___\| | |

## Whether the facility has the following equipment and supplies, collect the information by observation:

| SL | Equipment and Supplies | Have?<br>(Yes = 1, No = 2) | How many? | Functional?<br>(Yes = 1, No = 2) |
|---|---|---|---|---|
| | **Name of Equipment:** | | | |
| 1. | BP Machine | | | |
| 2. | Torch | | | |
| 3. | ECG Machine | | | |
| 4. | Hand Rub | | | |
| | **Sterilization Equipment:** | | | |
| 5. | Autoclave Machine | | | |
| 6. | Rubber Gloves | | | |
| 7. | Boiling Machine | | | |
| 8. | Sim's and/ or Cusco's speculum | | | |
| 9. | Volsellum/ Tenaculum/ Allis forceps | | | |
| 10. | Single valve aspirator | | | |
| 11. | Canullae of different sizes with adapter | | | |
| 12. | Hegar's Dilators | | | |
| 13. | Sharp Curette | | | |
| 14. | Kidney Tray | | | |
| 15. | Strainer for Tissues | | | |
| 16. | Plastic Bucket with Chlorine Solution | | | |
| 17. | Ambulatory Bag | | | |
| 18. | Oral Airway | | | |
| 19. | Oxygen Cylinder | | | |
| 20. | Cidex Tray | | | |
| | **Name of Supplies:** | | | |
| 21. | Antiseptic Solution: Iodine Solution/ Chlorhexidine | | | |
| 22. | Sterile Cotton Swabs/ Gauze Pieces | | | |
| 23. | Sterile Gloves | | | |
| 24. | Clean Perineal Sheet | | | |
| 25. | Disposable Syringe | | | |
| 26. | Chlorine Solution/ Bleaching Powder | | | |
| 27. | Silicone for Lubricating Syringe | | | |
| 28. | Sponge Holding Forceps | | | |
| | **Necessary document and book** | | | |
| 29. | Consent form (observe consent form) | | | |
| 30. | Information book for MR service seeker | | | |
| 31. | Similarities of verbal information with Registrar's book | | | |

**Ending time of interview**  ⬜⬜  ⬜⬜

Hour    Minute

**Thank the respondent and end the interview**

# Appendix B: Quality control measures

Strict quality control measures were taken at all levels during the study implementation period. Collection of quality data from the field was ensured through proper selection of field team and preparing them for the tasks through rigorous training and motivation. Three separate teams were formed for collection of quality data:

1)   one team for collecting data from household survey (In-depth interviews were conducted following the household interviews with ever-married women. Prior consent was obtained during the household interview and more experienced enumerators conducted the in-depth interviews);

2)   another team for data collection through Key Informant Interviews (KIIs) simultaneously; and

3)   another team for collecting data from the facilities by using structured questionnaire.

The following criteria were considered for recruitment of field team members:

•   educational qualification;

•   previous relevant work experience; and

•   capacity to work in a team.

Five days intensive training was arranged for the field team for giving orientation on various aspects of gender-biased sex selection. After completing the training, interviewers participated in Mock Interview Sessions. Only successful candidates who performed better in the Mock Interview got final selection as interviewers for this research.

Interviewers were also motivated to ensure quality at every stage of the research as they were paid reasonably and given the flexibility to work within set parameters. Moreover, to make sure that nobody commits any mistake due to negligence or lack of understanding, close monitoring and supervision strategies were executed during the study implementation period. Field monitoring was conducted at different levels such as from field level supervision to the rigorous checking of the filled-in questionnaires by the field supervisors to making a frequent field visit and monitoring by the core team members.

A data collection manual or guideline was prepared and provided to field team members for quality data collection. The manual contained 1) interviewing techniques and 2) editing instructions.

Field Supervisors kept constant supervision, spot checking, re-interviewing (if necessary) and field editing to ensure the quality of the interview. They were responsible for providing logistic and other supports to team members, on the one hand; and maintaining constant liaison with the core research team, on the other. The field supervisors were given separate training on field monitoring and evaluation along with general training. Every day, the supervisors arranged a feedback session for the interviewers on the conducted interviews and planned the work for the next day. In addition, each supervisor carried out 20 per cent back check of the filled-in questionnaires. Each supervisor also ensured that all members of the team were following the procedures as oriented and feedback received after the field practices. The core team arranged a re-survey of the same household by the interviewer, when needed.

The core team members were directly involved in conducting KIIs along with other team members for ensuring collection of quality data. Additional training was provided for the team who collected data through KIIs. They were trained on how to conduct KIIs. Digital recorders were used in conducting KIIs and in-depth interviews whenever possible; otherwise, detail notes-taking was used. Digitally recorded data were transcribed and coded for analysis.

# Appendix C: Ethical issues, privacy and confidentiality

The study ensured that the ethical issues involved, including risks and benefits of the respondents, were addressed. The respondents were assured that their name, address or any other personal identification of the study participants would not be recorded during the study and key informant interview and in-depth interview without their consent. Before conducting data collection, each respondent was clearly informed about the purposes, type of information coverage, confidentiality, interview time, etc. They were also informed that they had the rights to refuse to take part in the interview. It was explained to the respondents that their participation in the study is voluntary, their names or any identifying details would be kept strictly confidential. Verbal consent was taken prior to enrolment to take part in the survey and in-depth interview.

The respondents were informed that their information would be kept strictly confidential. Only the core team members had access to the raw data. Furthermore, privacy during the interview process was safeguarded. The interview was held under conditions where the respondents felt most comfortable in responding. The collected data were entered in password-protected computers, and the findings of the survey were reported as aggregate information. In addition, in the cases of direct quotations, pseudonyms were used.

Personal identification taken during study was kept under lock and key. None other than the core study personnel had access to information of personal identification and other sensitive information. Both qualitative and quantitative data were presented in such a way that no names and personal identifications are revealed. A participant can discontinue the interview any time during data collection.

To minimize risk of the interviewers of DPSDU, they carried official ID cards when visiting the participants at sites. They went with a letter issued by DPSDU informing study activities, which would be handed over to the head of the local government. Field visits were avoided in the evening hours and in situations where risk was anticipated. The ethical aspects of the methodology reviewed by the Institutional Review Board (IRB) to ensure the protection of gender and human rights.

# Appendix D: Timeline for the research

The timeline followed in this research is given below. The duration of the study was from June 2018 to March 2019.

| Scope of the work | June 18 | July 18 | August 18 | Sept 18 | Oct 18 | Nov 18 | Dec 18 | Jan-March 2019 |
|---|---|---|---|---|---|---|---|---|
| Proposal development | ■ | | | | | | | |
| Development of data collection tools | | ■ | ■ | | | | | |
| Selection of interviewers and supervisor | | ■ | ■ | | | | | |
| Conduction of training for data collection team and pre-test | | | ■ | ■ | | | | |
| Collection of data | | | | ■ | ■ | ■ | | |
| Data editing and processing for the analysis of data | | | | | | ■ | | |
| Drafting the report | | | | | | ■ | ■ | ■ |
| Sharing the draft report | | | | | | | ■ | ■ |
| Preparation and presentation of the final report | | | | | | | | ■ |

# Appendix E: Technical Advisory Committee

The Academic Committee of the Department of Population Sciences had a technical advisory committee to support the core research team. The technical advisory committee met three times in the total process to review the research design, data collection instruments and the preliminary findings. The following people were in the technical advisory committee:

1. Prof. Dr. Nitai Chakrabarty, Department of Statistics, University of Dhaka
2. Prof. Dr. Syed Shahadat Hossain, ISRT, University of Dhaka
3. Dr. Abu Jamil Faisel, Former Country Representative of EngenderHealth
4. Dr. Halida Hanum Akhter, Chief of Party, NHSDP
5. Ms. Mahmuda Rahman Khan, Gender Advisor, USAID
6. Mr. Rafiqul Islam Sarkar, Director, Research, NIPORT
7. Ms. Reshma Jesmin, Deputy Director, Representative of Directorate General, Bangladesh Bureau of Statistics, Ministry of Planning, Government of the Peoples' Republic of Bangladesh
8. Ms. Neha Kapil, Chief, Communication for Development, OIC, Gender Specialist, UNICEF Bangladesh
9. Mr. Mohammad Abdul Salam Khan, Deputy Chief, Medical Education & Family Welfare Division, Ministry of Health & Family Welfare
10. Mr. Masrurul Islam, Managing Director, Marie Stopes Bangladesh
11. Ms. Quazi Suraiya Sultana, Executive Director, Reproductive Health Services Training and Education Program (RHSTEP)
12. Mr. Altaf Hossain, Director, Association for Prevention of Septic Abortion, Bangladesh (BAPSA)
13. Dr. Sayed Rubayet, Country Director, Ipas Bangladesh
14. Ms. Shamima Pervin, Programme Specialist-Gender, UNFPA Bangladesh
15. Mr. Mahboob E Alam, National Programme Officer and Chief a.i. PPR, UNFPA Bangladesh
16. Ms. Forhana Rahman Noor, Population Council, Dhaka, Bangladesh
17. Prof. Dr. Mahmuda Khatun, Consultant to UNFPA, Observer

European Union

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