**Title: Attitudes and Utilization of Family Planning Methods among Women with Disabilities: A Comprehensive Study**

**CHAPTER I**

**INTRODUCTION**

**1.1 Introduction**

Family planning is crucial to reproductive health and well-being for individuals and communities (WHO, 2023b). Access to family planning services and information enables individuals to control their reproductive health and prevent unintended pregnancies (Program et al., 2009). However, people with disabilities face numerous barriers to accessing these services, leading to unintended pregnancies, lack of control over their reproductive health, and decreased quality of life. Family planning methods also known as Birth control, contraception, anticonception, and fertility control are the use of methods or devices to prevent unwanted pregnancy (Alhusen et al., 2021). Birth control has been used since ancient times, but effective and safe methods of birth control only became available in the 20th century. Methods of contraception include oral contraceptive pills, implants, injectables, patches, vaginal rings, Intra uterine devices, condoms, male and female sterilization, lactational amenorrhea methods, withdrawal, and fertility awareness-based methods.  These methods have different mechanisms of action and effectiveness in preventing unintended pregnancy (Kantorová et al., 2020).

Despite its importance, there is a lack of research on the attitudes and use of family planning among people with disabilities, and this study aims to fill this gap by providing valuable insights into this important issue. The findings of this study will inform the development of evidence-based interventions to address the barriers faced by people with disabilities in accessing family planning services and information and contribute to improved reproductive health outcomes for this population. The World Health Organization (WHO) global disability action recognizes disability as a public health, human rights, and development priority issue. Disability is a human rights issue since persons with disabilities (PWDs) experience inequalities and are subject to multiple rights violations including violence, abuse, prejudice, disrespect, and denied autonomy (WHO, 2023a). The UN Convention on the Rights of Persons with Disabilities (UNCRPD) marks the paradigm shift by applying a human rights-based approach to disability and claiming an accessible and inclusive society for all (UN, 2006). Article 25 of the Convention guarantees persons with disabilities the right to access the same range, quality, and standard of free or affordable health care and programs as provided to other persons, including those in sexual and reproductive health (SRH) (UN, 2006). Article 23 of the Convention points out the rights of PWDs to decide freely and responsibly on the number and spacing of their children and to have access to age-appropriate information, and reproductive and family planning services including the means necessary to enable them to exercise these rights. The article further mentions the importance of effectively eliminating discrimination against PWDs in all matters relating to marriage, family, parenthood, and relationships (UN, 2006).

Research investigations addressing the reproductive health of women with disabilities began earnestly in the 1990s following an NIH-sponsored conference on the reproductive health of people with physical disabilities (Mosher et al., 2017). There is a growing evidence base on family planning for women and girls with disabilities, which is assessed to be medium-sized (Fraser & Corby, 2019). Different factors affect access to and uptake of family planning for women and girls with disabilities such as Individual factors, Environmental factors, Attitudinal factors, and Institutional factors (Kassim & Ndumbaro, 2022).

Persons with disabilities are marginalized groups of the population and they are frequently marginalized from FP education due to misconceptions that they are not sexually active (Mekonnen et al., 2020). People’s perception of disability can have positive or negative impacts on life experiences and opportunities, including seeking, accessing, and using maternal health services. Many studies’ findings showed that stereotypical views and misconceptions regarding the sexual and reproductive lives of PWDs impede access to SRH services (Babik & Gardner, 2021). A clear understanding of the contraceptive care experiences of women in specific disability subgroups can guide targeted efforts to better meet the diverse needs of women in the large and heterogeneous disability population. However, little is currently known about the contraceptive care experiences of women with different types of disabilities. In a handful of studies, researchers described reproductive healthcare experiences (not necessarily specific to contraceptive care) among women with physical disabilities (Horner-Johnson et al., 2021a). People with disabilities face numerous barriers to accessing family planning services and information, leading to unintended pregnancies, lack of control over their reproductive health, and decreased quality of life. This disproportionate use highlights the need for further research to understand the attitudes and use of family planning among people with disabilities.

**1.2 Justification of the Study**

The population is very important for a nation. Whether it is overpopulation or underpopulation both can create problematic circumstances for the country. To control population knowledge of family planning methods is a must for the people of the individual country. For family planning or more specifically for birth control or contraception, different types of effective and safe methods or devices such as oral contraceptive pills, implants, injectables, patches, vaginal rings, Intra uterine devices, condoms, and male and female sterilization has been used. This study is primarily focused to find out the use or awareness of different types of family planning methods among disabled women.

There is a lack of research on the attitudes and use of family planning among people with disabilities, and this study will fill this gap by providing valuable insights into this important issue. There is limited research into the contraceptive care of people living with disabilities as well as a lack of clinical guidelines on contraceptive methods for use by people with a range of disabilities and conditions (Verlenden et al., 2019). A growing body of literature recognizes that people with disabilities have historically been denied their sexual and reproductive health (SRH) rights. They may have less access to SRH information, which is necessary for healthy and safe relationships, protection from HIV and other sexually transmitted infections (STIs), and realization of autonomy in family planning decisions (Leekuan et al., 2022). The FMOH has initiated this needs assessment to strengthen FP programs for this population. The findings of this study will inform the development of evidence-based interventions to address the barriers faced by people with disabilities in accessing family planning services and information. The study will contribute to improved reproductive health outcomes for people with disabilities, including increased access to family planning services and information, reduced unintended pregnancies, and increased control over their reproductive health. In summary, a study on the attitudes and use of family planning among people with disabilities is necessary to address the disproportionate impact that people with disabilities face in accessing these services, to fill the gap in research on this issue, and to inform the development of evidence-based interventions to improve reproductive health outcomes.

**1.3 Operational Definitions**

**Family planning:**  Family Planning is the practice of controlling the number of children one has and the intervals between their births, particularly by means of contraception or voluntary sterilization.

**Reproductive health:** Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes.

**Exposure to mass media:** Percentage of women 15-49 years who, at least once a week, read a newspaper or magazine, listen to the radio, and watch television

**Contraceptive prevalence rate:** Percentage of women aged 15-49 years currently married who are using (or whose partner is using) a (modern or traditional) contraceptive method

**Functional difficulties:** Women 18-49 years with functional difficulties, who use assistive devices and have functional difficulty within each domain (Seeing, hearing, walking, self-care, communication, and remembering).

**Person with disabilities:** Persons with disabilities as defined in the Convention on the Rights of Persons with Disabilities refers exclusively to persons with long-term impairments. WHO’s mandate, however, includes anyone experiencing disability independent of the duration.

**Sexual & reproductive health:** Sexual and reproductive health is a state of complete physical, mental, and social well-being in all matters relating to the reproductive system. It implies that people are able to have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when, and how often to do so.

**Widow:** A woman who has lost her husband and does not marry again.

**Widower:** A man who has lost her wife and does not marry again.

**Divorced:** Husband or wife legally separated is considered as divorced.

**1.4 Research Question (s)**

* Is there any significant association between the level of education and the use of modern family planning methods among people with disabilities?
* Is there any significant difference in the use of modern family planning methods between urban and rural populations of people with disabilities?
* What is the prevalence of modern family planning use among people with disability?

**CHAPTER II**

**LITERATURE REVIEW**

According to the World Health Organization (WHO), around 15% of the world's population, or an estimated one billion people, live with disabilities, of whom nearly 200 million experience considerable difficulties in functioning in daily life. In the years ahead, disability will be an even greater concern because its prevalence is on the rise. This is due to aging populations and the higher risk of disability in older people as well as the global increase in chronic health conditions such as diabetes, cardiovascular disease, cancer, and mental health disorders. According to the UN development program most persons with disabilities, approximately 80%, are living in developing countries (WHO, 2011).

According to the 2007 Population and Housing Census of Ethiopia, the number of people living with disabilities is 805,492, which is about 1.1% of the total population of the country (*FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA POPULATION CENSUS COMMISSION THE 2007 POPULATION AND HOUSING CENSUS OF ETHIOPIA ENUMERATORS’ INSTRUCTIONAL MANUAL*, 2007). However, this figure is generally agreed to be very low by different actors working in the area. For instance, the World Report on Disability jointly issued by the World Bank and WHO estimated that there are about 15 million children, adults, and elderly persons living with disabilities in Ethiopia, representing 17.6 percent of the population (WHO, 2011; World Bank, 2011). Regional-level studies conducted in Ethiopia also showed that the proportion of people living with disabilities in Oromia, Amhara, and SNNP regions is 12.7%, 14.0%, and 16.8% respectively (*Impact of Musculoskeletal Impairment on the Lives of School-Aged Children in Ethiopia: A Prospective Mixed Methods Study | East and Central African Journal of Surgery*, 2019).

Ahumuza et al. finds an inherent societal misperception among interviewed people with disabilities in Uganda that PWDs do not need SRH services and information (Ahumuza et al., 2014). As a result, the healthcare delivery system has turned away PWDs from seeking and accessing SRH services. The research reports of the disability rights international and Colectivo Chuhcan’s from Mexico demonstrates that 69% of the women interviewed believed that WWDs cannot financially support child rearing and over 60% believed that WWDs should undergo medical tests before considering pregnancy to prevent her from passing on her disability (Yimer & Modiba, 2019).

A study was conducted to see the initial exploration of the experiences of women with different types of disability when they attempt to obtain contraceptive care where they found that to aware women with disability right action need to take. For example, offering a paper pamphlet to a blind woman, is not helpful and can be harmful to women with disabilities. Increased attention to the reproductive health care needs of women with disabilities is important for improving health care equity and quality (Horner-Johnson et al., 2021b). In addition, women with disabilities also expressed extreme dissatisfaction with the quality of services and information being provided by healthcare professionals regarding SRH issues (Mahmood et al., 2022).

According to the first ever-national survey in Ethiopia on fertility and family planning in 1990, only 4% of the women their reproductive age was using some family planning methods, of which only fewer than 3% were using modern contraceptives. The contraceptive prevalence rate (CPR) doubled between the periods 1990 and 2000 and by the year 2000 it was estimated at 8.2%. The increase has been rapid and unprecedented after 2000 and, a subsequent EDHS survey in 2005 recorded a twofold increase in CPR and put the rate at 14.7%. With the trend continuing contraceptive prevalence reached 42% by the year 2014 (Yirga Tejeji & Berhane Assefa, 2017).

In Nepal, a study of 293 young people aged 15-30 with three types of impairment (visual, hearing, or physical) found that only 38% of young people said that they perceived the nearest SRH service center to be physically accessible and disability-friendly (Characteristics of a physically accessible and disability-friendly include: provision of physical facilities like ramps/ railings/ elevators, suitable toilets, availability of sign language interpreters, provision of written text, IEC in Braille or large text, centers located in ground floor with ample moving space) (Kassa et al., 2016).

A study in Uganda noted that people with disabilities often had to wait in long queues at health facilities to access family planning, which was partly due to few health workers: “Whereas long queues are a common occurrence, especially at public health facilities in Uganda, lack of consideration for persons with a physical disability was a hindrance to access of SRH services (Ahumuza et al., 2014).

A multi-country study from Ethiopia, Uganda, and Rwanda observed that discussion on sexuality-related matters between parents and young people with disabilities was ‘very low’, with only 22% of respondents having discussed sex and family planning with their parents (Kassa et al., 2016).

Conversations about sexuality for younger and unmarried girls may be particularly taboo in culturally conservative contexts, for example, research in Jordan with parents of adolescents aged 12-18 with Down’s Syndrome highlighted cultural barriers to discussing masturbation, sexuality, and family planning, which were also seen to be more shameful for parents to discuss with girls (*(PDF) Parental Report of Gender Differences in Sexual Functioning among Adolescents with Down Syndrome: A Jordanian Experience*, 2016)

Studies have found that women with disabilities are at least twice as likely as women without disabilities to be victims of rape, sexual abuse and IPV, with the most common perpetrators being their male partners (*Intimate Partner Violence: Experiences of Women with Disabilities in Canada*, 2018). Myths around asexuality can contribute to IPV and other forms of violence going undetected. For example, research conducted in partnership with young people with disabilities in Senegal found high vulnerability to sexual violence and therefore high risk of unintended pregnancies, particularly among young girls with hearing impairments (Expert comments from Eva Burke, Reproductive and Sexual Health Specialist (30 December 2018)). Research also indicates that women with intellectual impairments are at higher risk, being less likely to receive sexual education, often socialised to be compliant and more reliant on caregivers (Van Der Heijden, 2014).

A review of seven major SRH policy and practice documents from Ghana government sources and NGOs concluded that the attention given to the SRH needs of persons with disabilities has been ‘cursory’, with a need for more guidance and research to ensure disability-friendly services and information (Mprah et al., 2014).

For example, a qualitative study with young people aged 18-24 with physical, visual and hearing impairments in Senegal found that financial costs are a key barrier to accessing SRH services, and recommended that “financial or voucher schemes should be introduced for young people with disabilities to access free or subsidised SRH services (Burke et al., 2017).

A systematic review of the evidence on contraceptive knowledge and use among women with intellectual, physical, or sensory disabilities from high-income countries identified only six intervention studies – five of which reported post-intervention improvements in contraceptive knowledge and use (Horner-Johnson et al., 2019).

A recent scoping study commissioned by DFID found that “people with disabilities are largely invisible in monitoring and evaluation (M&E) activities”, which extends to family planning programming. The study concluded that there was a lack of experience within the monitoring sector for assessing disability inclusion, with many long-running programs not being designed with inclusion in mind, leading to a lack of visibility of disability in M&E (Buchy et al., 2017).

**CHAPTER III**

**RESEARCH METHODOLOGY**

**3.1 Study Objectives**

**3.1.1 General Objective**

The overall objective of this assessment was to assess the prevalence of modern family planning methods among people with disabilities by age and area of residence.

**3.1.2 Specific Objectives**

* To examine the relationship between the prevalence of modern family planning methods among people with disabilities.
* To compare the use of modern family planning methods between urban and rural populations of people with disabilities.
* To identify factors that may influence the use of modern family planning methods among people with disabilities, including level of education and place of residence.
* To inform the development of evidence-based interventions to address barriers to accessing family planning services and information among people with disabilities.
* To contribute to the larger body of knowledge on the attitudes and use of family planning among people with disabilities and inform policy and practice.

**3.2 Conceptual Framework**

**Dependent Variable**

**Independent Variables**

Functional difficulties

(Yes and No)

Modern contraceptive methods (Yes and No)

* Area (Rural and Urban)
* Division (Barisal, Chattogram, Dhaka, Khulna, Rangpur, Rajshahi, Mymensingh, and Sylhet)
* Age (15-49 years)
* Education (None, Primary, Secondary, and Higher)
* Number of livings Children (<=2 and >2)
* Ethnicity of household head (Bengali and Others)
* Wealth index quintile (Poor, Middle, and Rich)
* Religion (Islam and Others)
* Sex of household head (Male and Female)
* Household size (<=4 and >4)
* Accessibility to mass media (Yes and No)
* Husband/partner’s education level (None, Primary, Secondary, and Higher)

**Covariates**

**3.3 Study Design**

MICS survey is a double-stage cluster sampling procedure, randomly selecting households with children under five years. The 2019 MICS is based on a sample of 61,242 households with a 99.4 percent response rate. MICS provides a comprehensive picture of children’s and women’s health for the seven administrative divisions (Dhaka, Chittagong, Sylhet, Rajshahi, Rangpur, Barisal, and Khulna) of Bangladesh. Districts were identified as the primary sample strata for sample selection at stage two (MICS (2019) Bangladesh 2019 MICS Report).

**3.4 Target Population & Sample Population**

In the interviewed households, 68,711 women (age 15-49 years) were identified. Of these, 64,378 were successfully interviewed, yielding a response rate of 93.7 percent within the interviewed households.

**3.5 Study Site & Area**

Bangladesh is one of the world's most densely populated countries and has widespread poverty (*Bangladesh Country Profile - BBC News*, 2023). Most of the land is low and flat, consisting of alluvial soil. Seasonal monsoons dominate the tropical climate in Bangladesh, with mild winters and hot humid summers. Bangladesh has a mean elevation of 85 m above sea level, and the fertile delta is often subjected to natural disasters, such as floods, cyclones, tidal bores, and drought (*Overview of Internet Access in Bangladesh: Impact, Barriers, and Solutions*, 2023).

**3.6 Study Period**

The data were collected by 33 teams; each was comprised of four interviewers, one measurer and a supervisor. Fieldwork began on January 19, 2019 and concluded on June 1, 2019. Data were collected using tablet computers running the Windows 10 operating system, utilizing a Bluetooth application for field operations, enabling transfer of assignments, and completed questionnaires between supervisor and interviewer tablets.

**3.7 Sample Size**

For MICS 2019, the population of Bangladesh was sampled using the sampling frame of the list Enumeration areas (EA) according to the Population and Housing census of Bangladesh in 2011

4333 women eliminated due to not fulfilled all criteria to enlisted in the sample

The survey was successfully carried out a total of 61242 households with response rate 99.4 percent

64400 households from 3220 EAs were selected with probability proportional to the EA’s size

3158 households eliminated due to not fulfilled all criteria to enlisted in the sample

In the interviewed households, 68711 women (age 15-49 years) were identified.

Of these, 64378 were successfully interviewed, yielding a response rate of 93.7 percent within the interviewed households.

13257 women eliminated due to not married or not eligible to use any types of contraceptive methods

51121 women aged 15-49 years currently married who are eligible to use any types of contraceptive methods

**3.8 Inclusion Criteria**

1. Married women in reproductive age group (15-49 years).
2. Those who are willing to participate in the study.

**3.9 Exclusion Criteria**

1. Those who are not willing to participate in the study.
2. Unmarried women in reproductive age group.
3. Data will not be collected from the widows and divorced women.

**3.10 Sampling Technique**

A two-stage, stratified cluster sampling approach was used for the selection of the survey sample. The sampling frame was based on the 2011 Bangladesh Census of Population and Housing. The primary sampling units (PSUs) selected at the first stage were the enumeration areas (EAs) defined for the census enumeration. A listing of households was conducted in each sample EA, and a sample of households was selected at the second stage.

**3.11 Data Collection Tools**

MICS survey utilises Computer-Assisted Personal Interviewing (CAPI). The data collection application was based on the CSPro (Census and Survey Processing System) software, Version 6.3, including a MICS dedicated data management platform. Procedures and standard programs6 developed under the global MICS program were adapted to the Bangladesh MICS 2019 final questionnaires and used throughout. The CAPI application was tested in Gazipur district during October 7-15, 2018. Based on the results of the CAPI-test, modifications were made to the questionnaires and application.

**3.12** **Data Management & Analysis Plan**

 Data will be collected through face-to-face interview. At the beginning of data collection, permission from respective couple. The purpose of the study will be explained in details to the respondents. Interview of the respondents will be taken in the slum. Respondents will be given full assurance on some ethical point of view that under no circumstances any part of the interview will not be disclosed to any unauthorized person.

**Data Preparation:** Clean and prepare the MICS data for analysis. This includes checking for missing values, outliers, and other anomalies in the data.

**Descriptive Statistics:** Calculate descriptive statistics for the variables of interest, such as the mean, median, standard deviation, and frequency distribution. This will help to get a sense of the distribution of the data and identify any outliers or unusual observations.

**Inferential Statistics:** Conduct inferential statistical tests to test the hypotheses. For Hypothesis 1, a chi-square test or logistic regression can be used to test the association between education level and the use of modern family planning methods. For Hypothesis 2, an independent samples t-test or ANOVA can be used to test the difference in the use of modern family planning methods between urban and rural populations.

**Interpretation of Results:** Interpret the results of the statistical tests, including the p-values, effect sizes, and confidence intervals. A p-value less than 0.05 is typically considered to indicate statistical significance, meaning that there is a less than 5% chance that the results are due to chance.

**3.13 Quality Control & Quality Assurance**

Before data collection from responder’s there created the friendly environment and clear on objective on the data to the responders. During data collection their tries to use local Bangla language with respondent.

**3.14** **Ethical Considerations**

Written permission will be taken from the concern authority also from the respondent before data collection. The investigator will explain to the respondents regarding the purpose of the study before data collection.

**3.15** **Expected Outcomes**

Significant association with any types of contraception use and women with functional difficulties. We hypothesis that, women with fictional difficulties are more vulnerable and not met their desire needs of any types of contraception methods as compared with women who haven’t any types of functional difficulties.

**3.16** **Work Plan**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Mar**  **2023** | **Apr**  **2023** | **May**  **2023** | **Jun**  **2023** | **Jul**  **2023** | **Aug**  **2023** | **Sep**  **2023** | **Oct**  **2023** |
| **Designing the Study** |  |  |  |  |  |  |  |  |
| **Review of Literature** |  |  |  |  |  |  |  |  |
| **Development & approval of proposal** |  |  |  |  |  |  |  |  |
| **Development of Data Collection Tools** |  |  |  |  |  |  |  |  |
| **Pre testing Questionnaire** |  |  |  |  |  |  |  |  |
| **Data Collection, Entry & Analysis** |  |  |  |  |  |  |  |  |
| **Report Writing** |  |  |  |  |  |  |  |  |
| **Submission & Approval of Thesis** |  |  |  |  |  |  |  |  |
| **Printing, Binding and Submission** |  |  |  |  |  |  |  |  |

**REFERENCES**

Ahumuza, S. E., Matovu, J. K. B., Ddamulira, J. B., & Muhanguzi, F. K. (2014). Challenges in accessing sexual and reproductive health services by people with physical disabilities in Kampala, Uganda. *Reproductive Health*, *11*(1), 1–9. https://doi.org/10.1186/1742-4755-11-59/TABLES/2

Alhusen, J. L., Bloom, T., Laughon, K., Behan, L., & Hughes, R. B. (2021). Perceptions of barriers to effective family planning services among women with disabilities. *Disability and Health Journal*, *14*(3), 101055. https://doi.org/10.1016/J.DHJO.2020.101055

Babik, I., & Gardner, E. S. (2021). Factors Affecting the Perception of Disability: A Developmental Perspective. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/FPSYG.2021.702166

*Bangladesh country profile - BBC News*. (2023). https://www.bbc.com/news/world-south-asia-12650940

Buchy, M., Resch, E., Wappling, L., Jones, S., & Singh, P. (2017). *Scoping Study: Donor Support for Disability-Inclusive Country-Led Evaluation Systems and Processes*.

Burke, E., Kébé, F., Flink, I., Van Reeuwijk, M., & May, A. Le. (2017). A qualitative study to explore the barriers and enablers for young people with disabilities to access sexual and reproductive health services in Senegal. *Reproductive Health Matters*, *25*(50), 43–54. https://doi.org/10.1080/09688080.2017.1329607

*FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA POPULATION CENSUS COMMISSION THE 2007 POPULATION AND HOUSING CENSUS OF ETHIOPIA ENUMERATORS’ INSTRUCTIONAL MANUAL*. (2007).

Fraser, E., & Corby, N. (2019). *Family Planning for Women and Girls with Disabilities*. https://www.familyplanning2020.org/ayfp

Horner-Johnson, W., Klein, K. A., Campbell, J., & Guise, J. M. (2021a). Experiences of Women With Disabilities in Accessing and Receiving Contraceptive Care. *Journal of Obstetric, Gynecologic, and Neonatal Nursing : JOGNN*, *50*(6), 732–741. https://doi.org/10.1016/J.JOGN.2021.07.005

Horner-Johnson, W., Klein, K. A., Campbell, J., & Guise, J. M. (2021b). Experiences of Women With Disabilities in Accessing and Receiving Contraceptive Care. *JOGNN - Journal of Obstetric, Gynecologic, and Neonatal Nursing*, *50*(6), 732–741. https://doi.org/10.1016/j.jogn.2021.07.005

Horner-Johnson, W., Moe, E. L., Stoner, R. C., Klein, K. A., Edelman, A. B., Eden, K. B., Andresen, E. M., Caughey, A. B., & Guise, J. M. (2019). Contraceptive knowledge and use among women with intellectual, physical, or sensory disabilities: A systematic review. *Disability and Health Journal*, *12*(2), 139–154. https://doi.org/10.1016/J.DHJO.2018.11.006

*Impact of musculoskeletal impairment on the lives of school-aged children in Ethiopia: A prospective mixed methods study | East and Central African Journal of Surgery*. (2019). https://journal.cosecsa.org/index.php/ECAJS/article/view/20180005/1456

*Intimate partner violence: Experiences of women with disabilities in Canada*. (2018). https://www150.statcan.gc.ca/n1/pub/85-002-x/2021001/article/00006-eng.htm

Kantorová, V., Wheldon, M. C., Ueffing, P., & Dasgupta, A. N. Z. (2020). Estimating progress towards meeting women’s contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. *PLoS Medicine*, *17*(2). https://doi.org/10.1371/JOURNAL.PMED.1003026

Kassa, T. A., Luck, T., Bekele, A., & Riedel-Heller, S. G. (2016). Sexual and reproductive health of young people with disability in Ethiopia: a study on knowledge, attitude and practice: a cross-sectional study. *Globalization and Health*, *12*(1). https://doi.org/10.1186/S12992-016-0142-3

Kassim, M., & Ndumbaro, F. (2022). Factors affecting family planning literacy among women of childbearing age in the rural Lake zone, Tanzania. *BMC Public Health*, *22*(1), 1–11. https://doi.org/10.1186/S12889-022-13103-1/PEER-REVIEW

Leekuan, P., Kane, R., Sukwong, P., & Kulnitichai, W. (2022). Understanding sexual and reproductive health from the perspective of late adolescents in Northern Thailand: a phenomenological study. *Reproductive Health*, *19*(1). https://doi.org/10.1186/S12978-022-01528-1

Mahmood, S., Hameed, W., & Siddiqi, S. (2022). Are women with disabilities less likely to utilize essential maternal and reproductive health services?—A secondary analysis of Pakistan Demographic Health Survey. *PLOS ONE*, *17*(8), e0273869. https://doi.org/10.1371/JOURNAL.PONE.0273869

Mekonnen, A. G., Bayleyegn, A. D., Aynalem, Y. A., Adane, T. D., Muluneh, M. A., & Asefa, M. (2020). Level of knowledge, attitude, and practice of family planning and associated factors among disabled persons, north-shewa zone, Amhara regional state, Ethiopia. *Contraception and Reproductive Medicine*, *5*(1). https://doi.org/10.1186/S40834-020-00111-Y

Mosher, W., Bloom, T., Hughes, R., Horton, L., Mojtabai, R., & Alhusen, J. L. (2017). Disparities in receipt of family planning services by disability status: new estimates from the National Survey of Family Growth. *Disability and Health Journal*, *10*(3), 394. https://doi.org/10.1016/J.DHJO.2017.03.014

Mprah, W. K., Anafi, P., & Sekyere, F. O. (2014). Does disability matter? Disability in sexual and reproductive health policies and research in Ghana. *International Quarterly of Community Health Education*, *35*(1), 21–35. https://doi.org/10.2190/IQ.35.1.C

*Overview of Internet Access in Bangladesh: Impact, Barriers, and Solutions*. (2023). https://web.archive.org/web/20160103124803/https://www.isoc.org/inet97/proceedings/E3/E3\_1.HTM

*(PDF) Parental report of Gender differences in Sexual functioning among Adolescents with Down syndrome: A Jordanian experience*. (2016). https://www.researchgate.net/publication/303338509\_Parental\_report\_of\_Gender\_differences\_in\_Sexual\_functioning\_among\_Adolescents\_with\_Down\_syndrome\_A\_Jordanian\_experience

Program, I. of M. (US) C. on a C. R. of the H. O. of F. P. T. X., Butler, A. S., & Clayton, E. W. (2009). *Overview of Family Planning in the United States*. https://www.ncbi.nlm.nih.gov/books/NBK215219/

UN. (2006). *Convention on the Rights of Persons with Disabilities | OHCHR*. https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities

Van Der Heijden, I. (2014). *What works to prevent violence against women with disabilities*.

Verlenden, J. V., Bertolli, J., & Warner, L. (2019). Contraceptive Practices and Reproductive Health Considerations for Adolescent and Adult Women with Intellectual and Developmental Disabilities: A Review of the Literature. *Sexuality and Disability*, *37*(4), 541. https://doi.org/10.1007/S11195-019-09600-8

WHO. (2011). *World report on disability 2011*. https://apps.who.int/iris/handle/10665/44575

WHO. (2023a). *Disability*. https://www.who.int/health-topics/disability#tab=tab\_1

WHO. (2023b). *Sexual and Reproductive Health and Research (SRH)*. https://www.who.int/teams/sexual-and-reproductive-health-and-research-(srh)/areas-of-work/family-planning-and-contraception

World Bank. (2011). *Disability Inclusion Overview*. https://www.worldbank.org/en/topic/disability

Yimer, A. S., & Modiba, L. M. (2019). Modern contraceptive methods knowledge and practice among blind and deaf women in Ethiopia. A cross-sectional survey. *BMC Women’s Health*, *19*(1). https://doi.org/10.1186/S12905-019-0850-Y

Yirga Tejeji, M., & Berhane Assefa, E. (2017). *Assessment on Family Planning Needs of People Living with Disabilities: Case of Addis Ababa, Ethiopia Assessment Team Members*.

**APPENDICES**

**APPENDIX-A**

**CONSENT FORM**

Hello, my name is (your name). We are from Bangladesh Bureau of Statistics (BBS). We are conducting a survey about the situation of children, families and households. I would like to talk to you about your health and other topics. This interview usually takes about 45 minutes. We are also interviewing mothers about their children. All the information we obtain will remain strictly confidential and anonymous. If you wish not to answer a question or wish to stop the interview, please let me know. May I start now?

**APPENDIX-B**

**CONSENT FORM (BENGALI)**

হ্যালো, আমার নাম (আপনার নাম)। আমরা বাংলাদেশ পরিসংখ্যান ব্যুরো (বিবিএস) থেকে এসেছি। আমরা শিশু, পরিবার এবং পরিবারের অবস্থা সম্পর্কে একটি জরিপ পরিচালনা করছি। আমি আপনার স্বাস্থ্য এবং অন্যান্য বিষয় সম্পর্কে আপনার সাথে কথা বলতে চাই। এই সাক্ষাত্কারটি সাধারণত প্রায় 45 মিনিট সময় নেয়। আমরা তাদের সন্তানদের সম্পর্কে মায়েদের সাক্ষাৎকার নিচ্ছি। আমরা প্রাপ্ত সমস্ত তথ্য কঠোরভাবে গোপনীয় এবং বেনামী থাকবে। আপনি যদি কোনো প্রশ্নের উত্তর না দিতে চান বা ইন্টারভিউ বন্ধ করতে চান তাহলে অনুগ্রহ করে আমাকে জানান। আমি কি এখন শুরু করতে পারি?

**APPENDIX-C**

**QUESTIONNAIRE**

Currently, married?

1. Yes 2. No

Are you pregnant now?

1. Yes 2. No

Are you currently doing something or using any method to delay or avoid getting pregnant?

1. Yes 2. No

Have you ever done something or used any method to delay or avoid getting pregnant?

1. Yes 2. No

**The Washington Group Short Set on Functioning (WG-SS)**

VISION

[Do/Does] [you/he/she] have difficulty seeing, even if wearing glasses? Would you

say… [Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

HEARING

[Do/Does] [you/he/she] have difficulty hearing, even if using a hearing aid(s)? Would

you say… [Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

MOBILITY

[Do/Does] [you/he/she] have difficulty walking or climbing steps? Would you say…

[Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

COGNITION (REMEMBERING)

[Do/does] [you/he/she] have difficulty remembering or concentrating? Would you say…

[Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

SELF-CARE

[Do/does] [you/he/she] have difficulty with self-care, such as washing all over or

dressing? Would you say… [Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

COMMUNICATION

Using [your/his/her] usual language, [do/does] [you/he/she] have difficulty

communicating, for example understanding or being understood? Would you say…

[Read response categories]

1. No difficulty

2. Some difficulty

3. A lot of difficulty

4. Cannot do at all

What is your area of residence?

1. Urban 2. Rural

What is your geographic location (Division)?

1. Barisal 2. Chattogram 3. Dhaka 4. Khulna 5. Rangpur 6. Rajshahi 7. Mymensingh 8. Sylhet

What is your age?

Level of Education?

1. None 2. Primary 3. Secondary 4. Higher

Number of living children in the household?

Ethnicity of the household head?

1. Bengali 2. Others

Wealth index quintile of the household?

1. Poor 2. Middle 3. Rich

The religion of household?

1. Islam 2. Others

Sex of household head?

1. Male 2. Female

Household size?

Accessibility to mass media?

1. Yes 2. No

Husband/partner’s education level?

1. None 2. Primary 3. Secondary 4. Higher

**APPENDIX-D**

**QUESTIONNAIRE (BENGALI)**

 বর্তমানে বিবাহিত?

1. হ্যাঁ 2. না

আপনি কি এখন গর্ভবতী?

1. হ্যাঁ 2. না

আপনি কি বর্তমানে কিছু করছেন বা গর্ভবতী হওয়ার বিলম্ব বা এড়াতে কোনো পদ্ধতি ব্যবহার করছেন?

1. হ্যাঁ 2. না

আপনি কি কখনও কিছু করেছেন বা গর্ভবতী হওয়ার বিলম্ব বা এড়াতে কোনো পদ্ধতি ব্যবহার করেছেন?

1. হ্যাঁ 2. না

ওয়াশিংটন গ্রুপ শর্ট সেট অন ফাংশন (WG-SS)

ভিশন

[কি/কি] [আপনি/সে/সে] চশমা পরলেও দেখতে অসুবিধা হয়? আপনি কি

বল... [প্রতিক্রিয়া বিভাগ পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

শ্রবণ

[কি/কি] [আপনি/সে/সে] শ্রবণযন্ত্র ব্যবহার করলেও শুনতে অসুবিধা হয়? হবে

আপনি বলেন... [প্রতিক্রিয়া বিভাগ পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

গতিশীলতা

[কি/কি] [আপনার/সে/সে] হাঁটতে বা সিঁড়ি বেয়ে উঠতে অসুবিধা হয়? আপনি কিছু বলতে চান…

[প্রতিক্রিয়া বিভাগগুলি পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

উপলব্ধি (মনে রাখা)

[কি/কি] [আপনার/সে/সে] মনে রাখতে বা মনোযোগ দিতে অসুবিধা হয়? আপনি কিছু বলতে চান…

[প্রতিক্রিয়া বিভাগগুলি পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

নিজের যত্ন

[করে/করেন] [আপনি/সে/সে] স্ব-যত্ন করতে অসুবিধা হয়, যেমন পুরোটা ধোয়া বা

ড্রেসিং? আপনি কি বলবেন... [প্রতিক্রিয়া বিভাগগুলি পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

যোগাযোগ

[আপনার/তার/তার] স্বাভাবিক ভাষা ব্যবহার করা, [করেন/করেন] [আপনি/সে/তার] অসুবিধা হয়

যোগাযোগ, উদাহরণস্বরূপ বোঝা বা বোঝা হচ্ছে? আপনি কিছু বলতে চান…

[প্রতিক্রিয়া বিভাগগুলি পড়ুন]

1. কোন অসুবিধা নেই

2. কিছু অসুবিধা

3. অনেক অসুবিধা

4. একেবারেই করতে পারবেন না

আপনার বসবাসের এলাকা কি?

1. শহুরে 2. গ্রামীণ

আপনার ভৌগলিক অবস্থান (বিভাগ) কি?

1. বরিশাল 2. চট্টগ্রাম 3. ঢাকা 4. খুলনা 5. রংপুর 6. রাজশাহী 7. ময়মনসিংহ 8. সিলেট

আপনার বয়স কত?

শিক্ষার স্তর?

1. কোনটিই নয় 2. প্রাথমিক 3. মাধ্যমিক 4. উচ্চতর

পরিবারে জীবিত শিশুদের সংখ্যা?

পরিবারের প্রধানের জাতিসত্তা?

1. বাংলা 2. অন্যান্য

পরিবারের সম্পদের সূচক কুইন্টাইল?

1. দরিদ্র 2. মধ্যম 3. ধনী

গৃহের ধর্ম?

1. ইসলাম 2. অন্যান্য

বাড়ির প্রধানের লিঙ্গ?

1. পুরুষ 2. মহিলা

পরিবারের আকার?

গণমাধ্যমে প্রবেশযোগ্যতা?

1. হ্যাঁ 2. না

স্বামী/সঙ্গীর শিক্ষার স্তর?

1. কোনটিই নয় 2. প্রাথমিক 3. মাধ্যমিক 4. উচ্চতর