Jagannath University Journal of Social Sciences
Vol. 13. Issue 1, 2024-2025, https://doi.org/10.3329/jnujss.v13i186059

Status and Challenges of Reproductive Maternal Healthcare in Bangladesh: A Sociological Study

Md. Reazul Islam[1]
Assistant Professor, Department of Sociology,
Jatiya Kabi Kazi Nazrul Islam University, Trishal

Saiful Islam[*]
Lecturer, Department of Sociology,
Jatiya Kabi Kazi Nazrul Islam University, Trishal

Jannatul Ferdous Tora
Graduate Student, Department of Sociology,
Jatiya Kabi Kazi Nazrul Islam University, Trishal

Abstract

Maternal healthcare is one of the most important public health services and has become a global concern. The principal aim of the study was to explore the major challenges of reproductive maternal healthcare in Netrokona district, Bangladesh. The sample was taken based on a mixed method approach that was conducted on women from 2 villages of Netrokona Sadar Upazilla. This study was conducted through 139 surveys for quantitative, 3 FGD, and 8 IDI for qualitative purposes through purposive sampling. Researchers have used the feminist theory of Mary Wollstonecraft to advocate equal rights in every path of life especially in maternal healthcare as well as the health promotion theory of Dr. Nola Pender to understand how health behavior changes during maternal time. The findings of this study delineates that from pregnancy period to the post-natal period one fourth of women faced financial challenges where more than one third of women faced physical challenges. A good number of women faced psychological problems, treatment-related challenges, delivery complexity as well as post delivery depression as part of reproductive maternal health challanges. Findings of this study also shows that not all but most of women have knowledge of maternal health but more than one fourth of their family members are not conscious of reproductive maternal health which is a significant challange of reproductive maternal healthcare. This study holds strong significant insights for health policymakers, education experts, health service providers as well as for reproductive mothers not only in Netrokona district but also in broader Bangladesh.

Keywords: *maternal health, pregnancy, reproductive, healthcare, challenges*

[*] **Corresponding Author:** Saiful Islam, saifuldusoc8@gmail.com
Submission: 15.01.2025; Acceptance: 25.05.2025

1. Introduction

A woman's maternal phase is the most magical time of her life. It is a divine gift from God. Pregnant women's health depends on maternal healthcare (Nove et al., 2021). Maternal health refers to the health of girls throughout pregnancy, childbirth and the postnatal period (World Health Organization, 2016). Maternal health was not prioritized in early healthcare policies. The challenges of reporductive, maternal healthcare are shaped by poverty, rural-urban division of healthcare facilities, cultural norms, gender inequalities, early/teenage pregnancy, low female literacy rate, lack of knowledge about maternal issues, weak policy, etc. Maternal and reproductive issues have a strong correlation with a desired healthcare procedure.One female has to take care of her reproductive health in order to have a safe, risk-free, and healthy pregnancy period. Having a healthy sexual system is just as important to reproductive health as being physically, mentally, and socially stable. A healthy mother's body is a prerequisite for a healthy sexual and emotional bond. It is essential for every mother's health and welfare to have access to medical treatment before, during, and following childbirth. In practical terms, the mother's and the child's bodies undergo certain physiological changes during each of the three terms that make up the mother's duration. Preconception, antenatal or prenatal, postnatal, and family planning aspects in order to guarantee a successful and enjoyable experience. Maternal healthcare is one of the most important public health services and has been a global concern for many years (Shoby et al., 2019).

Reproductive and maternal healthcare issues are now crucial to the health sector in Bangladesh. Government and non-government organizations conduct research on the problems and work to expand the sector's resources. The Sustainable Development Goals (SDGs) include measures to provide universal access to reproductive health care and lower maternal and newborn mortality by 2030, with a focus on SDG 3 for excellent health and well-being (Grove et al., 2015). With regard to reaching the fifth Millennium Development Goal (MDG), which calls for a 75% decrease in the maternal mortality ratio (MMR) between 1990 and 2015, Bangladesh has achieved considerable strides. Maternal fatalities per 100,000 live births were at 570/100,000 in 1990; by 2001, that number had dropped by 44% to 322, according to the Directorate General of Health Services in 2016. A balanced diet and better health are crucial for better maternal healthcare services. Morbidity and death among mothers and toddlers are also caused by the absence of critical health condition measures (Akseer et al., 2020). Their experience of motherhood is shaped by both physical and psychological factors, as well as their new role as a prospective mother. These factors can also play a significant role in the parenting style that they choose (Berlanga et al., 2013).

Therefore, a mixed method study was designed focusing on the Challenges of Reproductive Maternal Healthcare Service in Netrakona District, Bangladesh. This study deals with the challenges of reproductive maternal healthcare for women in Bangladesh. It mainly focuses on the challenges of maternal healthcare and the causes of the problems. This study also gives a discussion about the healthcare process in Bangladesh during the maternal period and gives recommendations. It also could provide the overall perspectives on maternal healthcare in Bangladesh.

2. Objectives of the Study

2.1 Main objective

The main objective of the study is to examine the challenges of reproductive maternal healthcare in Netrokona district, Bangladesh.

2.2 Specific objectives

1. To observe the socio-economic condition of the respondents.
2. To examine the challenges of reproductive maternal healthcare.
3. To know the information and facilities of maternal healthcare services of women in Bangladesh.

3. Rationale of the Study

This study would be regarded as a pioneering exertion within the field of health and society through constructing new ground in public health sectors worldwide by addressing challenges of maternal healthcare access. This study will represent a global scenario from a local context that can help the international organization like WHO, UNICEF, and UNDP to design new polices for maternal health and foster global development of the health sector. The findings of this study will create a new vision in the context of Sustainable Development Goals (SDGs) 03 which assure a healthy life as well as well-being for all and SDGs 5 (Gender Equality) in rural areas of Bangladesh for reproductive women. In Bangladesh including Netrokona district, maternal healthcare is facing barriers because of physical, social, cultural, economic, and treatment related factors. Prejudices, stereotypes, religious regulation, and evil thoughts also hindered the process. Existing research papers on maternal healthcare have not focused on an in-depth analysis of the challenges of maternal healthcare service with mixed-method approach rather they focused on urban-rural and national contexts. However, this present study is significant because its aim is to explore the socio-economic condition of respondents, examine the various challenges, find the factors that work behind the challenges of reproductive maternal health and know the information and facilities of maternal health care status.

4. Review of Relevant Literature

The UN MMEIG report calls for coordinated action to address problems in the health system that prevent all women and girls from having access to sexual and reproductive health and rights, as well as safe, respectful, and affordable prenatal care (World Bank, 2023). Age, maternal education, and monthly family income were shown to be significantly correlated with antenatal care (ANC) or prenatal care of Bangladeshi women (Mohammad et al., 2018). According to the Bangladesh Demographic Health Survey, 88% of mothers from the wealthiest part receive maternity care from qualified professionals, compared to 34% of mothers from the lowest section (Moral, 2023). A spouse's or husband's financial and emotional support has an impact on a pregnant woman's general health and the delivery of her kid (Atif et al., 2023).

Before giving delivery, the World Health Organization (WHO) recommends receiving this care at least four times (Islam, 2020). According to research conducted two years ago, 52% of expectant mothers received prenatal treatment four times (Moral, 2023). According to the Directorate of Family Planning, 43% of expecting mothers receive prenatal treatment four times, compared to 83% of expectant moms who receive it just once. 47% of women have had four prenatal care (Islam, 2020). A statistical study says, above 80% of pregnant women of Bangladesh are taking prenatal care only one time (Moral, 2023).

Ten percent of pregnancies in the US and around the world are affected by hypertensive disorders, which include preeclampsia and eclampsia. Every year, 2% to 10% of pregnancies in the United States are affected by gestational diabetes (Centers for Disease Control and Prevention, 2018). It continues to be the primary cause of maternal and perinatal morbidity and mortality globally,

notwithstanding improvements in medical management (Hinson and Magley, 2023). Although there isn't a national database on miscarriages in Bangladesh, a survey revealed that 11.2% of women who had ever been married were having miscarriages (Das et al., 2023). The world's highest rate of preterm births occurs in Bangladesh. 16 of every 100 babies born in Bangladesh are born before the full 37 weeks of pregnancy which represents 16.2 percent (Prothom Alo, 2023, September 1)**.**

Pregnancy-related mental health issues including anxiety and depression raise the risk of major health issues and pregnancy complications (Bedaso, 2021). The length of gestation and birth weight of the child may be impacted by maternal behaviors or psychosocial stress levels caused by macroeconomic changes during pregnancy (Margerison-Zilko et al., 2017). Pregnancy can bring happiness and joy but it can also lead to increased stress, particularly for first-time pregnant women (Bedaso, 2021). Prejudice, stereotypes, and other social issues confront expectant mothers and new mothers.

Maternal complications cause 303,000 maternal deaths worldwide each year, with over 90% of these deaths occurring in underdeveloped nations (Arifeen et al., 2014). Every 11 seconds, a pregnant woman or newborn passes away worldwide (UNICEF, 2019). Bangladesh loses over 7,660 moms to pregnancy and childbirth each year (Kassebaum et al., 2015). Between 2000 and 2017, there was a about 38% global decrease in maternal mortality in Bangladesh. In the 1970s, our average life expectancy was only 52 years; today, it is 72 years (Lombrog, 2021). In 2021, men's life expectancy came down to 70.6 years from 71.2 years, and women's from 74.5 years to 74.1 years (Prothom Alo, 2023.

Approximately 60% of all deliveries occur via cesarean section; but the WHO says it should be less than 15 percent (The Daily Star, 2023, April 12). Normal delivery in Bangladesh is 62.01 percent, while the rate of C-sections is 35.05 percent and it is 2.05 percent in other ways in 5 April (Prothom Alo, 2017, April 9). Blood transfusions were administered in 121 cases, or 2.67% of all deliveries; these cases included 1.58% elective cesarean sections and 3.84% emergency cesarean sections. Furthermore, blood transfusions were necessary for 2.82% of vaginal births for a variety of unforeseen causes (Kathpalia et al., 2016). Nowadays the C-section rate is increasing alarmingly in Bangladesh. Many people decide to have a C-section without any reason, and some private organizations take it as a professional benefit.

Although several research works have been conducted on specific challenges in maternal healthcare, none have yet to thoroughly address the broader concerns in this field. For example, Basu et al. conducted a research on "The cost of maternal health services in low-income settings: A study from Bangladesh" in 2019, while Kassebaum et al. worked on "Global, regional, and national levels and causes of maternal mortality during 1990-2013" in 2015. Like these research manuscripts, many empirical study have already conducted by medical sociologists on reproductive maternal health. But, there is also insufficiency of comprehensive investigations that examine how socioeconomic, physical, psychological, social, and healthcare system elements interact to affect maternal and reproductive health outcomes in Bangladesh, especially in Netrokona district, presents the research gap. For instance, Lee et al. (2020), conducted a research work in two rural areas of Sylhet district, Zakiganj and Khanaighat on “Urinary tract infections in pregnancy in a rural population of Bangladesh: population-based prevalence, risk factors, etiology, and antibiotic resistance”. Like this no specific reserch work has been yet conducted in Netrokona sadar upazila. Additionally, previous studies have not adequately explored the

psychological burden of pregnancy, particularly mental health issues like; depression and anxiety, and their impact on maternal health. Furthermore, the rising cesarean section rates and the limited access to quality prenatal care in rural areas need more nuanced investigation, considering cultural, economic, and healthcare infrastructure challenges. So, aims of this study are to fill this gap by exploring how socio-economic conditions, healthcare access, psychological stress, and cultural factors collectively influence maternal and reproductive health and delivery systems in Netrokona, Bangladesh.

5. Theoretical Framework

5.1 Feminist theoretical approach on reproductive maternal health

Feminism refers to the equality of men and women in social, economic, and political sectors. In the field of sociology, feminist theory redirects attention from male-dominated viewpoints to highlight women's experiences and their pursuit of equality (Wollstonecraft, 1794). Mary Wollstonecraft's feminist philosophy advocates for equal rights for women, especially in education, health, personal freedom, and public life. She believed that inherently women are not inferior to men, but they are made to seem so due to a lack of proper education and societal limitations. Feminist Wollstonecraft argued that by providing women with equal educational opportunities, they could gain intellectual independence and contribute equally to society. Her ideas challenged traditional gender roles and set the foundation for future feminist movements, focusing on women's autonomy and the need for rational equality (Smith, 2020).

Feminism holds that women should receive equal treatment and care when they are pregnant not just the same care as a man, but actually greater care. Women's physical and mental states undergo significant changes when they bear a nation's future generation, so they require extra care throughout this period. The ability to make decisions regarding their reproductive and maternal health, including abortion, childbirth, eating habits, and other matters, must belong to women. It also advocates for societal changes that advance equality, support, and better maternal health.

5.2 Health promotion theory on reproductive maternal health

The Health Promotion Model (HPM) was developed by Dr. Nola Pender in 1982. This theory explains the nature of health behaviors by seeking answers to health-related questions (why, how, what) (Pender, 1982). This theory centers on empowering individuals to adopt behaviors that improve their health and prevent disease. It underscores the impact of personal, social, and environmental factors on health choices, with an emphasis on encouraging proactive health measures such as physical activity, proper nutrition, and preventive healthcare, rather than solely addressing illness. The theory also stresses the importance of self-confidence, perceived advantages, and support networks in motivating individuals to engage in health-promoting actions (Alligood, 2014).

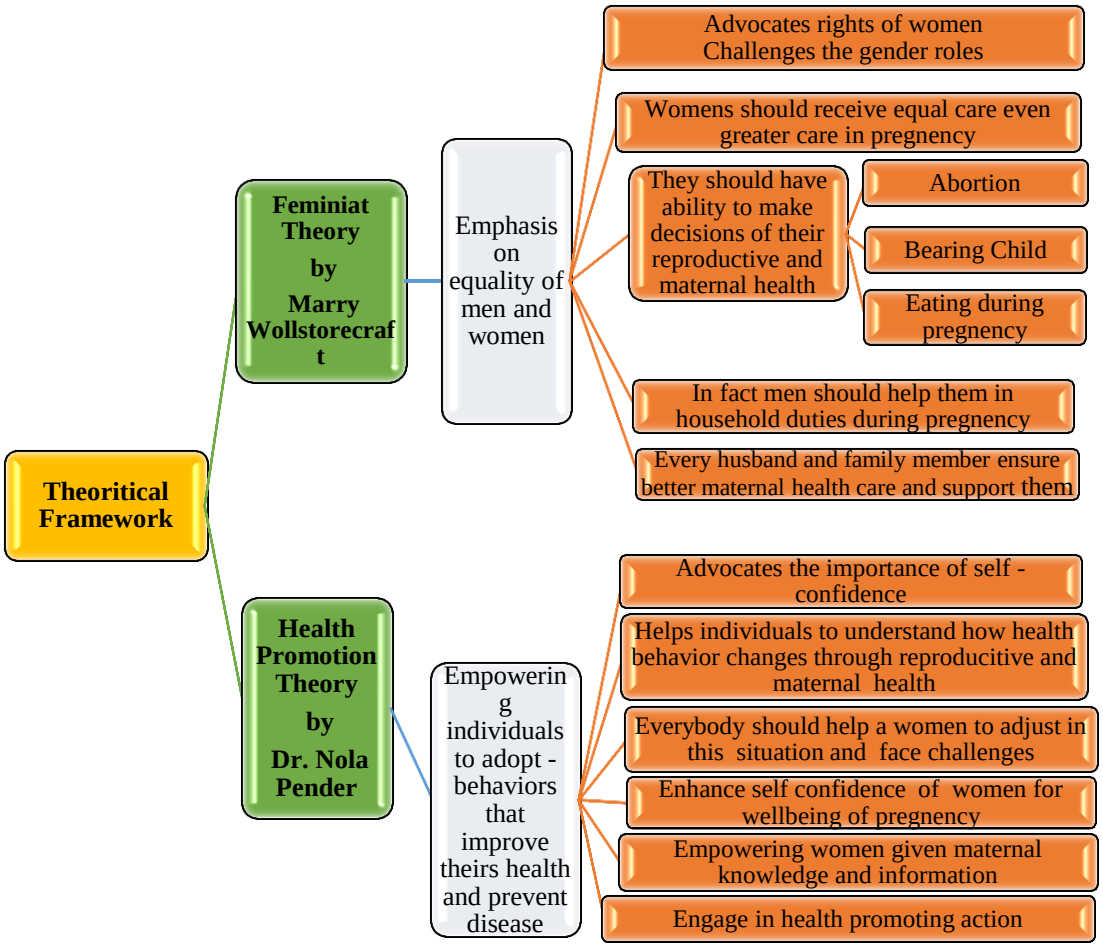
This theory helps us understand how health behavior changes during the maternal period. Everyone should observe the causes of changing mother’s behavior and threats based on this concept. In the context of maternal challenges, this theory suggests that promoting maternal well-being involves not just addressing medical issues but also empowering women with the knowledge as well as resources to make sensible decisions regarding their health during the maternal period. Health promotion measures can be used to address issues including poor prenatal care, postpartum depression, or a lack of social support. Efforts can be focused on improving maternal health outcomes by empowering women to actively participate in behaviors that enhance

their well-being during the pregnancy period by applying health promotion theory to maternal problem.

6. Methodology

A mixed method approach, both qualitative and quantitative methods has been applied in the study to efficaciously fulfill the objective of the research. Quantitative methods provide numerical data that can be analyzed statistically to identify patterns, trends, and correlations. On the other hand, qualitative methods provide descriptive and contextual data, offering a deeper exploration of participants' perspectives, experiences that can be thematically analyzed. Mixed methods in this study ensure robustness, validity, and an understanding the challenges of reproductive maternal healthcare in the Netrakona Sadar Upazila in Bangladesh, making it valuable and representable to readers, researchers, and policymakers.

Figure 1: Theoretical Framework of Reproductive Maternal Healthcare



Source: Wollstonecraft, 1794; Pender, 1982

In this study, researchers have selected the Netrakona district, Bangladesh as their research area. Here, try to collect data information from 2 villages of Netrokona Sadar upazila in Netrakona

district. The study is done on married women who go through the motherhood stage of their reproductive span and has minimum of 1 child.

Here, Researchers have conducted a Survey for quantitative data collection; In-depth case interviews and Focus Group Discussion (FGD) for qualitative data collection. Out of the total 1000 married women from two villages of Netrokona Sadar Upazila who go through the motherhood stage of their reproductive span and have minimum of 1 child, 139 respondents have been selected by applying The Yamane sample size formula: $n=N/1+Ne^2$ Where n = required sample size, N = population size=1000, e = margin of error =0.0787. So, n = 1000 / {1 + 1000 × (0.0787) ²} = 1000 / (1 + 1000 × 0.006194) = 1000 / 7.194 ≈ 139. By applying purposive sampling, total 139 respondents for the survey, 8 respondents for In-depth case interviews, and 15 respondents from 03 FGD have been selected from the study area to collect data

Figure 2: Location of the Study Area

The questionnaire had been developed for survey using a methodical approach in order to ensure its relevance, clarity, and compatibility with the study's objectives. Researchers collected data through developing semi-structured survey questionnaire by including a few open-ended questions meant for in-depth answers and individual ideas, but mostly closed-ended questions for convenience of analysis. In order to eliminate any ambiguity or bias, the questions were written in plain, straightforward English. They were also arranged rationally, beginning with general inquiries and progressively progressing to more focused subjects. A pilot study was carried out using a limited sample of participants in order to improve the structure and language of questionnaire. Less educated or illiterate respondents were helped by skilled data collectors who accurately documented their responses, whereas educated respondents completed the final version of the questionnaire own selves. The combination of quantitative and qualitative analysis

broadened the scope of this study, ensuring a well-rounded interpretation of the collected data and enhancing its comprehensibility for readers, academics, and policymakers. The quantitative data analysis was conducted through Excel and SPSS to find out descriptive statistical measures like; frequency, percentage as well as graphical representation of statistical data. Verbatim analysis has used for qualitative data analysis of the study to represent original expression of participants.

In order to ensure the privacy and dignity of each participant, strict ethical standards were followed when conducting this social science study. Before beginning the study, each participant gave their informed permission after being fully informed about its goal, the voluntary nature of participation, and their right to discontinue participation at any moment without facing any adverse consequences. Pseudonyms were used to protect participant identity, and personal identifiers were eliminated to ensure confidentiality and anonymity. Data were handled carefully, guaranteeing that the supplied information was kept safe to avoid unwanted access and utilized only for study. The integrity and credibility of the study process are enhanced by these actions, which also conform to accepted ethical guidelines.

7. Data Analysis and Results

7.1 Socio demographic profile of respondent

As socio-economic and demographic data are correlated with reproductive maternal health care. Researchers included questions on the socio-economic and demographic profile of the respondents in section A of the survey questionnaire. The following table will represent the frequency and percentages of respondents about their socio-economic and demographic data.

Table 1. Socio-economic and Demographic Characteristics of the Respondents

Parameter	Frequency	Percentage
A. Age		
15-20	19	13.67
20-25	40	28.78
25-30	30	21.58
30-35	29	20.86
35-40	16	11.51
40+	5	3.6
Total	139	100
B. Education		
Primary	18	12.45
Secondary	46	33.09
Higher-secondary	23	16.55
Graduation	31	22.30
Post-graduation	9	6.47
Others	11	7.91
Total	139	100

C. Occupation		
Housewife	70	50.36
Job	11	7.91
Business	12	8.63
Student	24	17.27
Others	22	15.83
Total	139	100
D. Monthly Income in thousand		
5-10	9	6.47
10-20	19	13.67
20-30	37	26.62
30-40	46	33.09
More than 40	28	20.14
Total	139	100
E. Monthly Expenditure in thousand		
5-10	8	5.76
10-20	23	16.55
20-30	47	33.81
30-40	53	38.13
More than 40	8	5.76
Total	139	100

Source: Field Survey, 2023

Reproductive maternal health care depends on the age of pregnant women. Under aged women are more prone to challenges of reproductive maternal health care than mature pregnant women. Table 01 reveals that the highest percentage (28.78) of respondents belong to the age group 20-25 and the second highest percentage (21.58%) belong to the age group 25-30. Whereas the lowest percentage of respondent belong to the age group 40+. Most of women of this study are young adult. Educated women are more conscious about their reproductive maternal health care than illiterate women. Table 01 shows that 12.45% of respondents received primary education whereas 33.09% received secondary education which is the highest percentage of respondent. On the other hand, only 6.47% respondents of this study completed their post-graduation.

Although employed women all over the world enjoy maternal health, they face more challenges during their pregnancy period than unemployed women. That's why researchers have collected

data about the occupational status of the respondents of this study. Table 01 represents that most of the respondents are housewives, which is 50.36% whereas only 7.71% are job holders and 8.63% do business. Reproductive maternal health care also depends on the family's income and expenditure status. Women of economically well-established family's get better maternal health care than a poorer family. Table 01 shows the monthly income range of respondents' families where the highest percentage (33.09%) belong to the range 10 to 20 thousand and 20 to 30 thousand taka and the lowest percentage (13.67%) of respondents belong to the range of 5 to 10 thousand taka. At the same time table 01 reveals the monthly expenditure of the respondents in thousands. The highest percentage (38.13%) of expenditure belong to the range 30 to 40 thousand tk where the lowest percentage (5.76%) belong to the range more than 40 thousand tk.

7.2 Knowledge about reproductive maternal healthcare

Health knowledge is a critical component in predicting health-related actions like prenatal care (Becker, 1974). Lack of knowledge about pregnancy-related risks, nutrition, and healthcare options exacerbates the likelihood of delays in seeking care, contributing to higher rates of maternal morbidity and mortality. Consciousness of family members and a quality relationship with them is good for maternal health services (Allendorf, 2010).

Table 2. Consciousness about Reproductive Maternal Healthcare

Knowledge	Categories	Frequency	Percentage
Reproductive mothers have knowledge of maternal health	Yes	118	84.89
	No	21	15.11
	Total	139	100
Consciouness of family members about reproductive maternal health	Yes	100	71.94
	No	39	28.05
	Total	139	100

Source: Field Survey, 2023

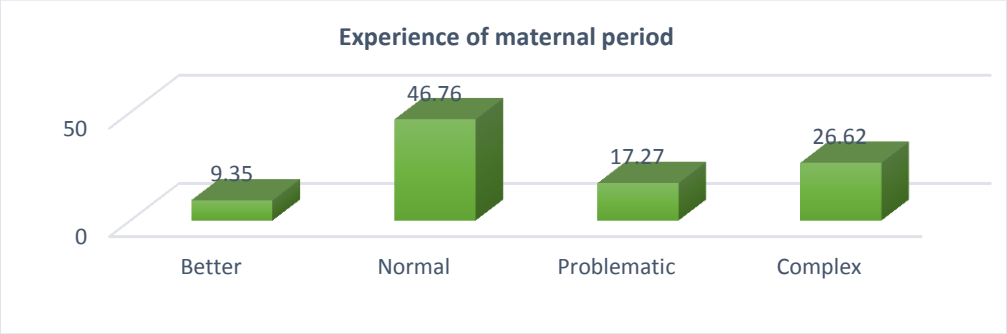
Table 2 reveals information about knowing the maternal healthcare service. It represents that 84.89% of respondents know about healthcare services whereas 15.11% of the respondents don't know about it. This table also reveals that 71.94 % of the respondent's family members are aware of maternal healthcare where 28.05% are not aware of maternal healthcare.Qualitative findings of this study delineate that the women who has knowledge about maternal healthcare face fewer problems than others. Because educated mothers are more likely to have knowledge about maternal health care.

7.3 Challenges of reproductive maternal healthcare

7.3.1 Experience of maternal period

Experience of motherhood is shaped by both physical and psychological factors, as well as their new role as a prospective mother. These factors can also play a significant role in the parenting style that they choose (Berlanga et al., 2013).

Figure 3: Experience Faced by Women During Maternal Period



Source: Field Survey, 2023

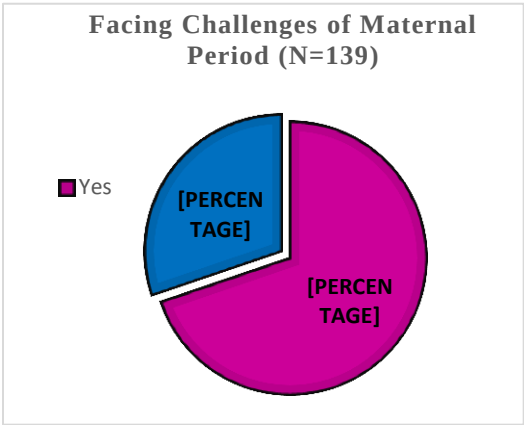
The bar chart shows the experience of the maternal period of the woman. It reveals that 26.62% of women faced complex situations where 17.27% women faced problemic situations. On the other hand 46.76% of the respondent's experience of the maternal period is normal and the rest 9.35% had better experience. In qualitative analysis, the experience of one respondent of focused group discussions was as follows:

> *" Maternal period is very normal for every woman. I had no complexity during that time. I took regular medical cheekups and tried to follow my doctor's instructions. I took medicine in time and took proper rest. Mainly, I highly ensured proper sleep and ate nutritious foods. My family members also looked after me at that time. My pregnancy journey is very normal".(Ambia, 37)*

7.3.2 Facing challenges during the maternal period

The challenges of reproductive, maternal healthcare are shaped by poverty, rural-urban division of healthcare facilities, cultural norms, gender inequalities, early/teenage pregnancy, low female literacy rate, lack of knowledge about maternal issues, weak policy etc. Teenage pregnancy is a critical maternal health issue globally, with adolescents facing higher risks of complications, including obstetric fistulas, preterm birth, and eclampsia (Patel et al., 2021).

Figure 4: Facing Challenges During the Maternal Period



Source: Field Survey, 2023

The pie chart reveals that about 70% of responses are yes; they face challenges of reproductive maternal healthcare, and the rest, about 30% of responses, are no; they do not face any challenges during pregnancy, such as physical, social, mental, economic, environmental, etc. In qualitative analysis, one respondent described her horrible experience during an in-depth case interview as follows:

> *"I had a horrible experience with pregnancy. In that time I faced many challenges and negativity. I had many physical problems. The doctor suggested me to take full bed rest because I had a miscarriage history. I tried much to follow the doctor's advice."(Habiba, 27)*

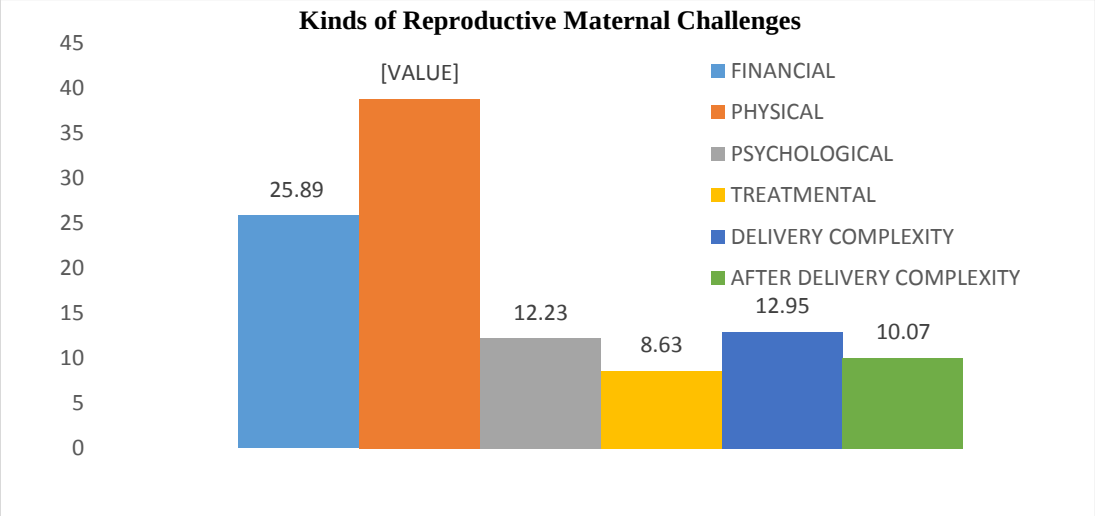
Where another respondent of the qualitative part of this study shares her experience during conducting FGD as follows:

> *"I am a diabetic patient. I had to maintain many hard roles in my pregnancy for diabetes. I took insulin in a timely manner in my pregnancy journey. I also took my meal in a fixed amount according to the doctor's suggestion. I also felt tired at that time. All of these problems make my pregnancy journey very complex." (Momota, 33)*

7.5 Kinds of maternal challenges

Financial barriers increase the risks of complications during pregnancy and childbirth, contributing to higher maternal mortality (Graham et al., 2016). Women often lack the autonomy to make healthcare decisions and may face opposition from family members when seeking institutional care (Yamin et al., 2019).

Figure 5: Kinds of Maternal Challenges



**Note:* Respondents had the option to choose all that apply.

Source: Field Survey, 2023

This chart represents the challenges of women during the maternal period. It represents that 25.89% of women faced financial challenges, 38.85% faced physical challenges, 12.23% faced

the psychological or mental problems, 8.63% of faced treatment challenges, 12.95% faced delivery complexity, and 10.07% faced after-delivery depression. The above table shows that physical challanges contains the highest percentage where treatmental challenges obtain the lowest percentage in terms of reproductive maternal health challenges.

7.4 Factors behind creating challenges

Maternal challenges are shaped by both physical and psychological factors (Berlanga et al., 2013). Pregnant women, particularly those in low-resource settings, are at a higher risk of depression due to socioeconomic stresses, lack of social support, and fear of childbirth outcomes; this condition negatively affects their willingness to seek timely care (Rahman et al., 2018).

Table 3: Factors Behind Creating Challenges

Categories	Frequency	Percentage
Physical	52	37.41
Social	33	23.74
Economical	27	19.42
Psychological	27	19.42
Total	139	100

Source: Field Survey, 2023

Table 3 reveals that 37.41% of respondents define the physical factor of creating challenges, whereas 23.74% define social factors,19.42% define the economical factors and the rest 19.42% define psychological factors to create challenges during the reproductive maternal stage.

7.5 Physical challenges

Types of physical challenges

Stress, Headache, vomiting, genital bleeding, urinary tract infections, and abdominal pain were common pregnancy-related complaints (Fredricks,2015). Pregnant women are more vulnerable to infections, such as urinary tract infections (UTI) which can lead to preterm delivery or stillbirth (Lee et al., 2020).

Table 4. Types of Physical Challenges

Categories	**Frequency**	**Percentage**
Headache	58	41.73
Vomiting	101	72.66
Back pain	50	35.97
Belly pain	6	4.32
Teeth pain	11	7.91
Urin Infection	45	32.37
Insufficient blood/anemia	29	20.86
VDRL	5	3.59
Blood pressure	30	21.58
Vertigo	20	14.39
Others	10	7.19

**Respondents had the option to choose all that apply, *Source:* Field Survey, 2023

Table 4 shows that 41.73% had a headache as physical challenges during pregnancy where 72.66% had vomiting, 35.97% had back pain, 4.32% had belly pain, 7.91% had teeth pain, 32.37% had a urine infection, 20.86% had Animia, 3.59% had VDRL, 21.58% had blood pressure,14.39% had vertigo and 7.19% had others physical challenges.

7.6 Having chronic disease during pregnancy

A chronic disease is a long-term illness that progresses slowly and requires continuous management, like diabetes, hypertension, hepatities virus, blood pressure, heart disease, asthma, arthrities etc. Every year, 2% to 10% of pregnancies in the United States are affected by gestational diabetes(Centers for Disease Control and Prevention, 2018).

Table 5. Having Chronic Disease during Pregnancy

Purpose	Frequency	Percentage
Yes	51	36.69
No	88	63.32
Total	139	100

Source: Field Survey, 2023

Table 5 shows that 51 (36.69%) respondents out of 139 faced chronic disease during their pregnancy period, whereas 88 (63.32%) respondents out of 139 faced no chronic diseases. This data delineates that more than one-third of respondents in this study faced chronic diseases during their pregnancy. In qualitative analysis, a participant claimed that

> *" I have two children. I had diabetic during my 1st pregnancy and had to follow many rules and regulations by my doctor. But at the time of my 2nd pregnancy, I had THS and diabetes. As a result, I took medicine from time to time. This type of diabetes and THS are only seen during pregnancy and after delivery it become reduced." (Tani,22)*

In a case study, a participant described her experience having chronic diseases in pregnancy as follows:

> *"I am a Hepatitis B virus patient. For this, I confront many complications during pregnancy. At the time of delivery, we cannot manage the clinic. In fact, every clinic denies to conduct this operation or demands huge amount. At least, my husband manages a private hospital for delivery. After delivery, my newborn was given 2 vaccines for his protection. I face much stress and tension during my pregnancy journey. But now I am leading a normal and happy life."(Kolpona, 24)*

Another respondent of the qualitative part of this study described her experience having chronic diseases in pregnancy as follows:

> *"My bad luck! I have blood pressure during pregnancy. I confronted water breck at 36 weeks of pregnancy so doctors suggested me for immediate C-section, but high blood pressure made obstacle in the path of surgery. "(Dristy,27)*

7.7 Accident of reproductive maternal time

The world's highest rate of preterm births occurs in Bangladesh.16 of every 100 babies born in Bangladesh are born before the full 37 weeks of birth (Prothom Alo, 2023, September 1)**.**

Table 6. Accident of Reproductive Maternal time

Types of accident	Frequency	Percentage
Miscarriage	10	7.19
Pre-mature child delivery	13	9.35
Child death	9	6.47
Eclampsia	7	5.04
None	100	71.94
Total	139	100

Source: Field Survey, 2023

Table 6 that 7.19% of respondents have experienced a miscarriage during maternal time where 9.35% have experienced of pre-mature or preterm infants delivery, 6.47% have experienced of child death and 5.04% face eclampsia and the remaining 71.94 percent have no experience of accidents. Accident secenario during the reproductive maternal time have also been reflected in the qualitative findings of this study where one respondent described as follows:

> *"I am a nurse at a government hospital. I have only one child. My pregnancy experience was very fatal. During pregnancy, I had headache, vertigo and vomiting. I took regular prenatal care according to the doctor's instructions. At the time of delivery, I faced many complications for having high blood pressure. When my pressure is normal, I gave birth to a child by C-section. After delivery, I confronted eclampsia.I was hospitalized for 21 days and I had no sense. For this situation now I am very afraid of bearing another baby."(Nasrin, 32)*

Teenage pregnancy is a critical maternal health issue globally, with adolescents facing higher risks of complications, including obstetric fistulas, preterm birth, and eclampsia (Patel et al., 2021). In qualitative analysis, another respondent described her experienced as follows:

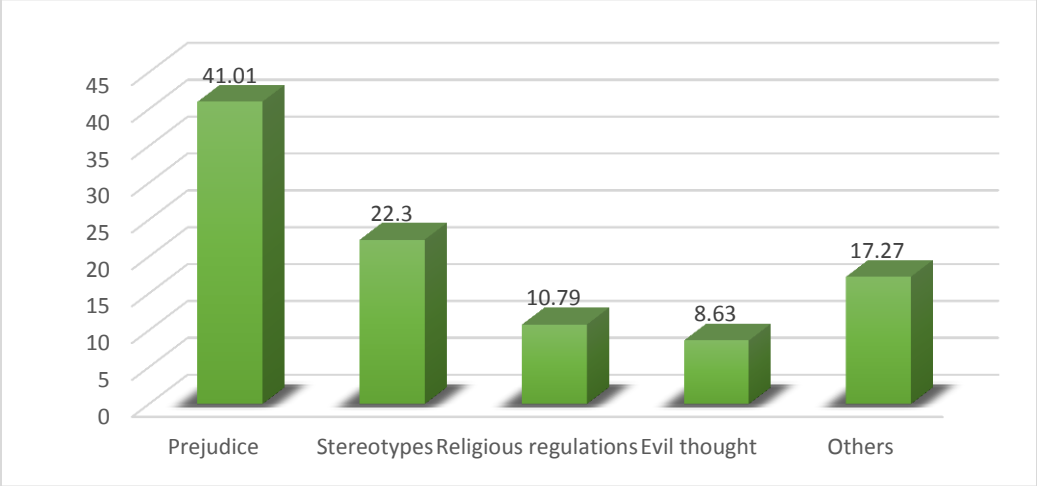
> *"I got married at 15 years old. Because of early marriage, I became pregnant at the age of 16. I felt stressed and depressed. I confront child death. In my 1st pregnancy, I gave birth twin baby. Both are dead after few hours. I also had a Pre-eclamsia history in pregnancy. There is a possibility of mother and child death because of Pre-eclamsia." (Munni,16)*

7.8 Social challenges

30% of employers believe that pregnant and new moms are "generally less interested in career progression" than other employees (McKinsey & Company, 2020). Pressure to conform to societal expectations regarding childbearing and family size often causes psychological strain, leading to adverse health outcomes (Rahman et al., 2017).

The graph shows the types of social challenges. It reveals that 41.01% faced prejudice, 22.35% faced stereotypes, 10.79% faced religious regulation, 8.63% faced evil thoughts and the remaining 17.27 percent faced other social problems during their maternal healthcare service.

Figure 6: Types of Social Challenges



Source: Field Survey, 2023

7.9 Psychological challenges

While pregnancy can be a time of happiness and joy, it can also bring psychological challenges like; increased stress, especially for women experiencing their first pregnancy (Bedaso, 2021).

Table 7. Types of Psychological Challenges

Parameter	Frequency	Percentage
Mental Problem	45	32.37
Family Problem	29	20.86
Spouse Problem	13	9.35
Occupational Stress	30	21.58
Postpartum Depression	22	15.84
Total	139	100

Source: Field Survey, 2023

Table 7 represents the psychological and mental challenges of pregnancy. It reveals that 32.37 percent have mental problems, 20.86 percent have family problems, 9.35 percent have spouse problems, 21.58 percent have occupational stress and the rest 15.84 percent face postpartum depression. Psychological challenges described by a respondent during in-depth case interview as follows :

> *"I become pregnant at the age of 21. As my husband is a jobholder, he does not live with me all the time. My pregnancy experience had been quiet but sometimes I felt very lonely and restless. Deu to some complications, I had a C-section. I had postpartum depression up to 3 months after delivery. I was crazy and neglected my child and that was the worst experience of life. One of my family members took me to the doctor and gave me treatment. Whereby the issue was resolved and now I am well……ohooo…."(Jenny Chowdhury, 21)*

7.10 Economic challenges

The cost of maternal healthcare is a significant barrier for low-income women, especially in countries like India and Bangladesh (Basu et al. , 2019). Financial barriers increase the risks of complications during pregnancy and childbirth, contributing to higher maternal mortality (Graham et al., 2016).

Table 8. Economic Challenges

Parameter	Frequency	Percentage
Direct (High treatment cost and low income)	49	35.3
Indirect (Limited opportunity and dependency)	90	64.7
Total	139	100

Source: Field Survey, 2023

This table represents that 49 (35.3%) out of 139 respondents faced economic challenges directly whereas 90 (64.7%) out of 139 respondents faced indirect economic challenges. The above data shows that Women faced Indirect (Limited opportunity and dependency) economic challenges more than Direct (High treatment cost and low income) economic challenges in terms of receiving ng their reproductive maternal health care.

7.11 Information about healthcare services of reproductive maternal healthcare

Antenatal care, sometimes referred to as prenatal care, is a kind of preventative medicine. Every mom should take prenatal care during pregnancy (Islam, 2020).

Table 9. Taking Prenatal Care

Taking Prenatal Care	Yes						No	Total
Frequency	117	One time	Times	Three times	Four times	More than four times		139
		17	33	20	21	26	22	
Percentage	84.17	14.53	28.21	17.09	17.45	22.22	15.83	100

Source: Field Survey, 2023

Table 9 shows a complex description of prenatal care in the Netrokona district. Here is the second division of calculating percent. It reveals that 84.17% of women were taking prenatal care, and another 15.83% did not take prenatal care. It also represented that among the 84.17% prenatal-taking women; 14.53% took it one time, 28.21% took it two times, 17.09% took it three times, another 17.45% took it four times, and the remaining 22.22% took more than four times. During qualitative analysis, one participant of FGD described as follows:

> *"I had a little knowledge about reproductive issues. I did not know about prenatal care ago. I knew it from my cousin. After that, I went to the government hospital and took 3 times of prenatal care. The doctor examines me through some medical cheek up and prescribes me medicines."(Sobita,23)*

Another respondent from the qualitative part of this study has described her experience as follows"

> *"My family member were not conscious of my health during pregnancy. They always discouraged me from taking prenatal care. So, I took only one prenatal care facing the complex situation of a water break." (Kulsoma,43)*

7.12 Delivery or C-section

Normal delivery means the natural process of childbirth where the baby is born through the vaginal canal (Cleveland Clinic, 2022, May 26). On the other hand, *"C-sectional delivery means a surgical procedure to deliver a baby by making incisions in the mother's abdomen and uterus"* (Johns Hopkins Medicine, 2025).

Table 10. Normal Delivery or C-section

Categories	Frequency	Percentage
Normal Delivery	79	59.85
C-Section	60	43.17
Total	139	100

Source: Field Survey, 2023

Table 10 reveals that 79 (59.85%) out of 139 respondents gave birth their child by means of normal delivery or vaginal delivery whereas 60 (43.17%) out of 139 respondents gave birth to their child through cesarean section or C-section.

7.13 Blood transfusion category

A blood transfusion is a medical procedure where blood or its components are given to a patient to replace lost blood or improve health. The following table will represent the scenario of blood transfusion during normal delivery as well as during C-sectional delivery.

Table 11. Blood Transfusion Category

Purpose	Frequency		Percentage	
	Yes	No	Yes	No
Blood transfusion among 139 respondents	26	113	18.71	81.29
Blood transfusion among 79 normal delivery respondents	08	71	10.13	89.97
Blood transfusion among 60 c-sectional delivery respondents	18	42	30.00	70.00

Source: Field Survey, 2023

Table 11 reveals the blood transfusion conducted information. It represents 18.71% blood transfusion conduct among the 139 respondents. Blood transfusion in normal delivery is 10.13% of 79 respondents, whereas blood transfusion in c-sectional delivery is 30% among 60 respondents. One respondent of the qualitative part of this study claims that:

> *" In my second pregnancy, I contiued some exercise for normal delivery according to the doctors suggesion. I need a blood transfusion thorough confront normal delivery because of heavy blood flow during childbirth and I have anemia too."(Puspita, 34)*

Another respondent of the qualitative part of this study also claims that:

> *" I have 3 children. I have had 2 normal deliveries and one C-sectional delivery. I had anemia in my third pregnancy. So I need a blood transfusion at the time of my childbirth. But my blood group is A negative and that's why my family faced many troubles managing blood for me."(Misu, 33)*

8. Discussion

This paper displays the major challenges of reproductive maternal healthcare at the Netrokona district in Bangladesh. Researchers have also observed the socio-economic condition of the respondents and obtained information of maternal healthcare facilities in Bangladesh. The findings of this study represent frequency and percentages of respondents about their socio-economic and demographic data including age, education, occupation, monthly income and expenditure. Most of the respondents belong to the age group of 20–25 years old. Most of them have a secondary level of education, which is 33.09% of the respondents. About 50.36 percent are housewives, and they represent the greatest part. The maximum income and expenditure are almost in the range of 30 to 40 thousand, which represents a greater portion of the income of middle-class families.

The total journey of the maternal period is very complex and challenging. Respondents of this study faced many kinds of challenges during pregnancy. This study examines different types of challenges due to different factors. The main challenges of reproductive maternal health are lack of knowledge about maternal health and family planning. 15.11% of the respondents do not know about reproductive maternal knowledge, 26.66% had faced complexity in pregnancy and 46.76% of the respondent's experience of the maternal period was normal. Findings of this study delineate that 25.89% women face financial challenges, where 38.85% face physical challenges, 12.23% face psychological or mental problems, 8.63% of face treatment challenges, 12.95% face delivery complexity and 10.07% faced after-delivery depression. These findings support the importance of raising awareness and spreading knowledge about maternal health and family planning, making maternal healthcare more affordable for economically disadvantaged groups, improving healthcare infrastructure in rural areas, and arranging maternal healthcare programs to overcome all these challenges and ensure a smooth maternal period.

Quantitative data of this study also delineate that 36.69% of women faced chronic diseases during their pregnancy period like diabetes, THS, hepatitis, and physical disease.7.19% of respondents have experienced a miscarriage during the maternal time, 9.35% have experienced of pre-mature or preterm infants' delivery, 6.47% have experienced of child death, 5.04% face eclampsia and the remaining 71.94% have no experience of accidents. Vomiting and headaches are common in every pregnancy. Here are 72.66% with vomiting syndrome where 41.73% suffer from headaches, 35.97 % had a back pain, 7.11% had teeth pain, 32.37% had urine infection and 20.86 % had

insufficient blood. A great portion of 41.01% of respondents face prejudice and 22.30% face stereotypes as a social challenge. 35.3% of respondents faced economic challenges directly and 64.7% indirectly faced economic challenges.These findings reflect the physical, social, and econmical challenges of maternal healthcare service and support to enrich the quality of healthcare and minimize the cost of treatment; also encourage to take the physical test during and before pregnancy to know the health conditions.

The findings of this study represents that 84.17% of women have taken prenatal care on the other hand 15.83% of women did not take prenatal care. Findings of this study also represent that among the 84.17% prenatal-taking women; 14.53% took it one time, 28.21% took it two times, 17.09% took it three times, another 17.45% took it four times, and the remaining 22.22% took more than four times. Women give birth to their children through vaginal or normal delivery as well as by means of C-section delivery. The findings of this study illustrate that 59.85 percent of the respondents face vaginal or normal delivery whereas 43.17 percent take C-section delivery. A total of 26 (18.71%) respondents out of 139 have experienced transfusions of blood. Blood transfusion was required for 08 respondents among 79 respondents during normal delivery where 18 out of 60 respondents have experienced blood transfusion during C-section delivery. Most of the blood transfusion cases have happened in C-sectional delivery. These results recommend improving maternal healthcare outcomes by enhancing prenatal care access**,** promoting safe delivery practices, strengthening health care infrastructure to better manage complications during delivery and reducing the dependency on blood transfusions and providing community-based health education to empower women with knowledge about maternal health and delivery options.

9. Conclusions and Recommendations

This study sheds light on the significant challenges accessing and utilising maternal healthcare services in the Netrakona district, Bangladesh. It reveals that various factors, including socio-economic challenges, lack of awareness, financial hardships, physical and psychological issues, and insufficient family support, create the complexity faced by women during pregnancy and the postpartum period. A notable portion of participants reported complications during delivery and experiences of postpartum depression, highlighting the urgent need for more comprehensive healthcare support. In the context of maternal health challenges, Health Promotion Theory of Dr. Nola Pender on reproductive maternal health suggests that promoting maternal well-being involves not just addressing medical issues but also empowering women with the knowledge as well as resources to make sensible decisions regarding their health during the maternal period. To address these issues, a holistic approach is essential, focusing on increasing awareness, improving healthcare infrastructure, and strengthening family and community involvement. Creating a supportive environment and implementing targeted interventions can greatly enhance maternal health outcomes and ensure the overall well-being of women during and after pregnancy.

The maternal healthcare system in Bangladesh has improved, although problems still exist. Progress has been made possible by initiatives like maternal education programs, community health workers, and easier access to facilities. Improving infrastructure, assigning community health workers, and launching locally specific awareness programs are some of the initiatives being taken to notice these problems. The goal of continuous cooperative relationship between governmental groups and non-governmental groups is to get over these challenges and improve

maternal health care. This study aligns closely with Sustainable Development Goals (SDGs) of United Nations, particularly ensuring healthy lives as well as promoting well-being for all aged people (SDG 3). The Sustainable Development Goals (SDGs) include measures to provide universal access to reproductive health care and lower maternal and newborn mortality by 2030, with a focus on SDG 3 for excellent health and wellbeing (Grove et al., 2015). By following the success of Millennium Development Goals (MDGs), the Government of Bangladesh would also be to focus on obtaining 3rd goal of SDGs. The study highlights the necessity of enhancing healthcare infrastructure, raising awareness, and fostering community involvement to ensure universal health coverage and better maternal health outcomes. Though this study highlights various challenges of maternal healthcare, but lacks an in-depth comparative analysis of socio-economic and regional variations. So, future researchers should explore the impact of education, culture, gender norms, postpartum care, physicians roles, and family support on maternal healthcare services in various areas.

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