Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Medicine and Health Sciences
Department of Public Health and Nursing

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Attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study.

Master's thesis in Global Health Master program
Supervisor: Valentina Cabral Iversen
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Declaration

I, Masruk Ahmed, hereby confirm that I am the writer of this work, that the literature used by other researchers has been appropriately cited, and that this work has not been submitted elsewhere.

Date: 14.05.2023

…….

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Master's student

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Attested by

…….

Valentina Cabral Iversen

Supervisor,

Professor, NTNU, Norway.

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Table of Contents

List of Tables

List of Figures

Abbreviations and Acronyms

ANC= Antenatal Care

INC= Intra natal Care

PNC= Postnatal Care

WHO= World Health Organization

HP= Health Care Provider

UNHCR= United Nations High Commissioner for Refugees

RRRC= The Office of the Refugee Relief and Repatriation Commissioner

MSF= Médecins Sans Frontières

Abstract

Background

Involving men has been shown to have a beneficial impact on maternal health outcomes and is a crucial strategy for lowering rates of maternal and infant mortality. Although men play important roles in maternal and child health care, they are still understudied and their participation in maternal health care services is considerably below expectations. The objective of this study is to explore the attitudes and levels of participation of Rohingya male partners in maternal health care services.

Methods

A mixed-methods study was conducted from 7th- 26th November 2022, among married Rohingya men (aged 18-69), married Rohingya women (aged 18-49), and health care providers (aged 25-67) in Rohingya refugee camps in Bangladesh. For quantitative research, we surveyed 386 male partners, and for qualitative research, we performed in-depth interviews with 14 participants (9 women and 5 health care providers). Quantitative data was analyzed using STATA-14, while interviews were carried out, transcribed, and translated from Bengali to English before being imported into NVivo 20 for the purpose of conducting thematic analysis.

Results

A total of 386 male partners were considered for the quantitative study, with a mean age of 33.55 (SD ± 10.57) years. Around 72.28% of male partners had a high level of understanding, 52% had a positive attitude, and 66.58% had involved in maternity care. Rohingya men who were unemployed (AOR: 3.62; CI: 1.54 to 8.48; p< 0.05), had a good understanding (AOR: 2.71; CI: 1.27 to 5.80; p<0.05) of maternity care were more likely to have positive attitudes toward maternity care. Age (AOR: 11.45; CI: 1.87 to 70.11; p<0.05), Good levels of understanding (AOR: 32.27; CI: 14.05 to 74.13; p<0.05), and a positive attitude (AOR: 7.57; CI: 3.59 to 16.87; p< 0.05) were more likely to involved in maternity care. Women's and health care providers' perspectives on male partners' attitudes and involvement in maternity care revealed six themes: "understanding and knowledge towards maternity care services," "Attitude towards maternity care," "Level of participation and involvement in maternity care," "Barriers to involvement," "Benefits of male involvement," and "Women's satisfaction and expectation."

Conclusion

The Rohingya refugee camp's male partners understood maternity care but were less positive about it and were more engaged in ANC than PNC. Based on the barriers found, the Bangladeshi government, international organizations, and public health professionals should revise maternity care strategies and policies and encourage men to be involved more to ensure safe birth and pregnancy.

Key Words: Maternity care, Antenatal care, Intra natal care, Postnatal care, Maternal health Male partner’s understanding, attitude, and involvement, Rohingya refugee camp, Bangladesh.

1. Introduction:

1.1. Background

Maternal health is defined as the condition of females during pregnancy, delivery, and the postpartum period. It is essential that all women have access to dignified and exceptional maternal healthcare so that each stage is a positive experience (1). Access to proficient healthcare services during the antenatal, intrapartum, and postnatal periods for obstetric care is a significant factor that strongly influences maternal and neonatal health outcomes (2). Around 800 women per day, or around one every two minutes, died in 2020 from pregnancy and childbirth-related preventable causes. The Sustainable Development Goal 3.1 aims to achieve a reduction in maternal mortality to below 70 maternal deaths per 100,000 live births by the year 2030 (3). In 2020, the maternal mortality ratio (MMR) in low-income countries was recorded at 430 per 100,000 live births, while high-income countries reported a significantly lower MMR of 12 per 100,000 live births (4). The incidence of maternal mortality is deemed to be unacceptably elevated. In the year 2020, an estimated 287,000 women lost their lives during and after the process of pregnancy and childbirth (4). In 2020, a significant majority of maternal deaths, approximately 95%, were reported in countries categorized as low and lower middle-income. Efforts to reduce maternal mortality face challenges in humanitarian, armed conflict, and post-conflict settings (4). The topic of maternal health has always been viewed and handled primarily as a female concern. Though it was first proposed at a conference in Cairo in 1994, nothing has been done practically in the developing world to involve males in ensuring and improving maternal health (5). Globally, the importance of involving men in reproductive, maternal, and infant health services is widely recognized (6). The participation of male partners during conception, delivery, and the postnatal period has been found to have positive impacts on various aspects of the health of mother and child, as well as family welfare. As such, male partners are considered crucial sources of support for many women during the childbearing process (7). It is widely acknowledged that the participation of males in maternity care is a crucial strategy for enhancing mother health and speeding the decline in the rate of maternal mortality (8). Men make crucial decisions about household resources and care seeking that affect women and newborns' health in most homes worldwide (9). In numerous nations, husbands hold a pivotal role in household decision-making, thereby exerting significant influence over women's ability to obtain healthcare services (10). Men's participation has been proved to be an important

motivation for improving women's reproductive health. In many countries, it is a prevalent phenomenon that men hold a crucial and commanding position in the realm of family planning and reproductive health choices, which can exert a noteworthy influence on the well-being of women (11). Although the MDGs set a goal of lowering maternal death by 75 percent by 2015, this rate remains unacceptable. Husbands' participation may help bring this rate down. The Sustainable Development Goals (SDGs) of 2015–2030 continue to address this issue (12). A previous research study revealed that a considerable number of males acknowledge the significance of proficient health care during the pregnancy and delivery phases, as well as the advantages of their participation. However, most of them did not actively engage in maternal healthcare matters unless complications arose during the pregnancy or labor. Less than 25% of male participants had previously accompanied their spouses for antenatal or postnatal care at a healthcare facility (13). Age, occupation, and education are associated with maternity care comprehension, whereas male partners have a favorable attitude toward maternity care but are under-involved due to sociocultural factors (14). The issue of male partner involvement in maternity health care services presents a significant obstacle to the accessibility and utilization of effective maternal health care on a global scale (15). Inadequate knowledge levels appeared to be an important barrier to active engagement in maternity care (16). The majority of males exhibited a willingness to acquire knowledge regarding their anticipated responsibilities during the process of childbirth and demonstrated enthusiasm towards providing support to their partners during maternity period (17). Male engagement in antenatal and delivery care leads to positive outcomes (18) (19). The involvement of men in caring for mothers has been identified as a crucial approach to enhancing maternal health and expediting the reduction of maternal mortality (20). Mothers and babies health can benefit from the modification and enhancement of men's engagement in reproductive health (21) (22). When men are provided with comprehensive reproductive health services and treated equally to their female partners, it is anticipated that reproductive health indicators, including but not limited to birth control acceptance and extension, safer sexual behavior, utilization of reproductive health resources, and decreased maternal morbidity and mortality, will improve (23).

Bangladesh has improved mother and newborn health together with government and civil society partners. In 1990, 90 children died per 1,000 live births; in 2012, 48 did. Bangladesh has achieved significant progress, The mother and infant health initiative in Bangladesh seeks to

reduce maternal and infant mortality and morbidity, especially among marginalized and impoverished populations. Between 2011 and 2015, there was a 62% increase in antenatal care contacts, a 42% increase in postnatal care administered at facilities, and a 34% increase in institutional births (24) (25). In Bangladesh, the status of men's understanding and attitudes toward women's, newborn, and infant health care is largely unknown, as is the impact of community oriented interventions on men's understanding level (26). Bangladesh, a country characterized by patriarchal norms, faces challenges in engaging men in matters related to family planning and reproductive health care (27). A previous study in Bangladesh revealed that just a small percentage of males accompanied their wives when seeking maternity care for emergencies (28). The Rohingya are a Muslim stateless community that has lived in Myanmar (also known as Burma) for decades. As per the United Nations, they represent the most oppressed population globally. They have endured destitution and discrimination for decades (29). In Bangladesh, the majority of Rohingya refugees are Forcibly Displaced Myanmar Nationals who have migrated to Bangladesh (30). For decades, the Rohingya have been persecuted in Myanmar due to their ethnicity and religion. Most have migrated to Bangladesh. More than 655,000 Rohingya Muslims have migrated to Bangladesh since August 25, 2017 (31), as a consequence of the recent escalation of the conflict in Myanmar (32). Currently, Rohingya women account for roughly 67 % of the refugee population, with 70,000 (20 percent) of the 335,670 female refugees being pregnant or new mothers (33). In the Rohingya refugee camps, maternal and neonatal health is a significant concern because poverty and a lack of education place new mothers and infants at risk. Each week, more than 50 infants are born in deplorable conditions, and lower than one-fourth of mothers give birth in a safe environment (34). Consequently, the maternal mortality ratio (MMR) and infant mortality rate (IMR) of the Rohingya refugee camp are a major national and international concern in terms of reducing maternal and child morbidity and mortality to achieve SDG-3.

1.2 Problem statement

The involvement of family members is a crucial element of patient-centered care, which has an important effect on the standard of care and patient outcomes (35). Males typically assume a significant role in matters related to women's reproductive health and family planning.

Nonetheless, male involvement in these domains has proven to be challenging (36). Low levels of knowledge appeared to be a significant barrier to positive involvement, even though spouses' interest and efforts to promote pregnant women's health were generally high (37). Despite evidence indicating that males, grandmothers, and other family members have an impact on maternal health, a significant number of social and behavioral interventions continue to concentrate on mothers (38). The concept of male engagement in maternal and child health refers to the active participation of men in the provision of care for women, with the aim of improving their access to quality health services. A correlation exists between increased male involvement and improved health outcomes for both mothers and children. Nevertheless, the implementation of this practice may not always be optimal, particularly in countries with low to middle income, where women may encounter limited access to economic resources and decision-making authority (39).

The health of Rohingya refugees, particularly women and children, poses a huge burden for Bangladeshi health care providers (40). During the period spanning from September 2017 to August 2018, a total of 52 cases of maternal mortality were reported within the Rohingya refugee camps situated in the Ukhia and Teknaf Upazilas of the Cox's Bazar District in Bangladesh. The availability of reproductive health services in refugee camps is constrained by the social and cultural context of both Rohingya and Bangladeshi host communities (41). In Rohingya camp, Maternal health has emerged as a significant health concern (42) and due to the migratory experience and the difficult resettlement in host countries, The health outcomes of refugee and displaced women are comparatively inferior to those of migrant and host nation populations (43). According to earlier research, men or religious leaders (such as an imam or husband) must be involved in the decision to send a pregnant woman to a facility (42). Therefore, it is important to explore family member’s specifically male partners attitude and involvement in maternity health facilities. However, other studies have revealed that most male partners had good attitudes but were under-involved in maternity care. However, there is no research on the attitudes and engagement of male partners in the provision of maternal healthcare services, especially for refugee women such as Rohingya women, which is a concern for the establishment of an effective sound policy.

1.3. Objectives of the study

General objective:

To explore family members' attitude and their level of participation in maternal health care services.

Specific Objectives:

- To explore male partner's attitude and understanding regarding maternity care.
- To find out the association of attitude, and involvement status with male partner's socio-demographics.
- To find out wife's perception to involvement of male partners in maternal health care and services.
- To explain the attitude and knowledge of male partners that health care providers have experienced.
- To investigate the barriers to male partners' participation in maternity care services.

1.4 Research questions

- What is the status of attitude and understanding of male partners towards maternity care related services?
- What are male partners' levels of participation in maternity care services?
- Is there any association of male partner's attitude and involvement with their socio-demographic characteristics?
- What are the perception and expectations of women to involvement of their husbands towards maternity care and services?
- How do healthcare providers view male partners' participation in maternity care and services?

- What are the barriers that limit male partners from becoming involved in the care of pregnant women?

1.5 Research Hypothesis

H0: Male partners have negative attitude on maternity care.

H1: Male partners have positive attitude towards maternity care services.

H0: There is no association between male partner's sociodemographic attributes and their attitude on maternity care services.

H1: There is association between male partner's sociodemographic attributes and their attitude on maternity care services.

H0: There is no correlation between the sociodemographic characteristics of male partners and their participation in maternity care services.

H1: There is correlation between the sociodemographic characteristics of male partners and their participation in maternity care services.

1.6 Justification of the study

The health and access to care of pregnant women are significantly influenced by their male partners. The participation of men is of crucial significance in ensuring the provision and acceptance of maternal healthcare services, as well as enhancing the health outcomes of both mothers and children (44). Men have been hesitant to participate in reproductive health services because they are unaware of pregnancy complications and risk factors (45) which should be addressed properly. For women to give birth safely, men must play an active role in promoting maternal health, and supporting their spouses is a virtue that should be upheld throughout their marriages. According to policymakers and practitioners, increased male participation would enhance mothers and infant health in numerous ways, one of the most significant impacts is the improvement of access to resources and interventions for women and children (46) (47) (48). The involvement of husbands in prenatal, delivery, and the after-childbirth period is crucial for

providing support to childbearing women. This support has been shown to have positive effects on various outcomes related to maternal and child health, as well as family wellbeing (49). A study previously conducted in Bangladesh revealed that a mere 38% of male partners went with their female partners when seeking maternity care for pregnancy-related emergencies, labor, and after delivery (2), which is very alarming. Although males play important roles in maternity and child health services, their involvement is still far below expectations (50) and their participation in maternal health care services has not been thoroughly studied (51) (52). However, relatively few studies have examined how married males in refugee camps comprehend and participate in maternity care. The objective of this study is to acquire an in-depth understanding of the phenomenon of married refugee men's engagement with maternity care and their attitudes towards it, with the aim of developing successful strategies for safe motherhood in the Rohingya refugee camp in Bangladesh.

2. Methodology

2.1 Study design and settings:

The study was carried out using a mixed methods approach in nature, in two phases quantitative and qualitative methods (53), In order to enhance comprehension of the interrelationships or inconsistencies between qualitative and quantitative data (54), give participants a voice and allow them to share their experiences, and open up new avenues of exploration to enrich the evidence and answer questions more deeply (55). Kutupalong, in Ukhia, Cox's Bazar, Bangladesh, is the largest refugee camp in the world, which is inhabited primarily by Rohingya refugees who escaped ethnic and religious persecution in Myanmar (56). The study was conducted among Rohingya refugee married males, married females, and health care providers in Camps 4, 5, and 17 of the Kutupalong Camp in Cox's bazar, Bangladesh. The Rohingya people have a low socioeconomic status and are exiles in Bangladesh who fled Myanmar. The health care providers who provide maternal care in these camps are in the Ukhiya Rohingya refugee camp. The quantitative research was conducted among married Rohingya men (18-69) whose wives were of reproductive age (18-49). In the Rohingya refugee camp in Cox's Bazar,

Bangladesh, married Rohingya women between the ages of 18 and 49 and health care providers between the ages of 25 and 67 were interviewed for qualitative research. The quantitative research design with structured questionnaires was chosen to investigate the understanding, attitudes, and involvement of male partners in maternity care services in relation to their socio-demographics backgrounds. A qualitative research design with semi-structured interviews was chosen to explore the attitude and knowledge regarding maternity care and services in refugee camps. The qualitative study design looks for a deeper meaning of the local setting in context and time, the people, and their surroundings, how they perceive the world and try to make meaning out of it (57). Phenomenological research seeks to explain the significance of the lived experiences associated with a particular phenomenon or concept. Asking questions like "What" they have experienced and "How" they experience it- in this case challenges refugees and health workers in Rohingya refugee camp.

2.2 Inclusion and exclusion criteria:

In order to be considered for inclusion in the study, potential participants had to meet the following criteria: married males between the ages of 18 and 69, wives between the ages of 18 and 49, residents of the Rohingya Camp, and all health care practitioners between the ages of 25 and 67 who were willing to take part in the research. People who couldn't meet the requirements for the study weren't included in it.

2.3 Sampling and sample size:

To conduct quantitative research, followed convenient sampling and the sample size was estimated by using the following formula:

$$n = \frac{z^2 \times p(1-p)}{d^2} = 384$$

Here, n = sample size, z = z-score associated with chosen level of confidence interval (which is 1.96 at 95% confidence interval), p = expected prevalence rate among population based on

previous study (50%), d = standard error (5%). We took 386 participants (n=386) for the quantitative research.

For qualitative portion, data from eligible respondents were collected using the purposive and snowball sampling techniques. Previous research demonstrated that sample size recommendations suggested a range of 20–30 interviews as sufficient (58), 14 in-depth interviews we were conducted to resolve the guideline Wives (n= 9), and health care providers (n= 5) were among the respondents, and Before finishing all 14 interviews, we realized that we had reached statistical significance.

2.4 Data collection and measure:

The quantitative data was collected between the 7th of November 2022 and the 19th of November,2022, while the qualitative interviews were carried out between the 8th and 26th of November,2022. Before we started collecting the data, we undertook a field study to recruit the participants. We also obtained authorization from the Office of the Refugee Relief and Repatriation Commissioner (RRRC) in Cox's Bazar, Bangladesh (59), to carry out the study in the Rohingya refugee camp in Ukhiya, which is in Cox's Bazar. After receiving approval from the RRRC, we contacted the Camp in-charge officer of the camps 4,5, and 17 that make up the Ukhiya camp. We started by contacting the officer in charge of the camp to request permission to contact the informants. The Camp in-charge officer also provided us with information regarding the leader of the camp and the leader of the health care team. After evaluating relevant literature, a structured questionnaire and consent form was constructed for quantitative analysis. A brief introduction to the study's background, objectives, eligibility criteria, and declaration of confidentiality were included on the questionnaire's first page. Sociodemographic data, knowledge of maternal healthcare services, attitudes about maternity care, and level of participation in maternal health care services all were included in the self-administered questionnaire. After the pre-testing phase, data from eligible listed participants were obtained via face-to-face interview. Prior to data collection, the qualitative in-depth interview outline was developed through a review of significant relevant literature, and pre-testing was performed. Using an open-ended questionnaire, data were collected while considering the respondents' convenience. The first page of the questionnaire provided a concise overview of the study's

history, objectives, eligibility requirements, confidentiality, anonymity, and each respondent's informed consent. The interview guideline was like: Did your husband encourage you to take ANC services? Did your husband look out for your emotional needs and make sure you had nutritious food and micronutrient supplements? Did your husband have any concerns about family planning? Did you both make prior joint plans for delivery? How many times usually women received postnatal visit? Do you think husbands encourage their wives to attend postnatal visits? Do husbands usually come with their wives to take PNC services? And so on. All interviews were recorded on audiotape, and their duration ranged from 30 to 45 minutes. The interviews were conducted according to a guideline for conducting semi-structured interviews that was developed for use in qualitative research.

2.5 Data management and analysis:

For quantitative all statistical analyses were conducted using Microsoft Excel version 10 and STATA version 14.1. Using Microsoft Excel, data cleaning, categorizing, and coding were performed initially. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed utilizing STATA 14.1. To determine the significant factors that influence attitudes and involvement in maternity care, this study utilized descriptive statistics and logistic regression as analytical techniques. The result of multivariate regression analyses was presented as an adjusted odds ratio (AOR) with a 95% confidence interval (CI). The association between variables was deemed significant when p-values were less than or equal to 0.05. In respect of qualitative portion, after completing the data collection, the Bengali-native researcher professionally transcribed and translated the data into English. Following this, the transcripts were compared to the audio recordings to identify any textual errors. During the open coding process, an a priori codebook was utilized, which was developed by examining relevant literature, and inductive coding was also performed. The completed codebook was then utilized to manually code the entire dataset, where texts were extracted and summarized. Then, related codes that appeared to represent similar ideas or concepts were grouped together to create an initial theme. During the data analysis, the themes were refined by combining and modifying them, as well as adding and removing codes to capture additional concepts. Considering the research questions and objectives, we then developed six themes with subthemes. Furthermore, NVivo 20 is used to speed up analysis, improve interpretation, and simplifies data administration.

2.6 Ethical dimension, data protection and participants' right*:*

The Public Health foundation Bangladesh, ethical review committee (PHFBD-ERC) approved this study from an ethical standpoint after the researchers addressed the concerns raised by PHFBD members. The Office of the Refugee Relief and Repatriation Commissioner (RRRC) in Cox's Bazar, Bangladesh, has granted permission and approval for the study to be conducted in the Rohingya camp. The Norwegian Centre for Research Data (NSD) evaluated the research protocol to ensure compliance with the requirements of the General Data Protection Regulation and Personal Data Act. Participants were provided with an information letter and consent, and as the sample population aged 18 to 69 with the competence to consent, they were able to engage on their own choice. Participants' understanding of the purpose and nature of the study, the risks and benefits of participation, their rights as participants, and their written consent to ensure that they are completely informed of their rights and that their participation is voluntary were confirmed. It was ensured that all participant data is kept secure and confidential. The identifying information of the participants, including their names and contact details, was substituted with a unique code. The list of individuals' identities, contact information, and corresponding codes were separated from the remaining gathered information and secured through measures such as encryption or physical locking. No unauthorized person was allowed to use or gain access to the data. The study did not include any personally identifiable information. Participants who believe they may have been identified by their submitted responses had the right to see their information and have it updated or removed if they may be recognized in the data set.

3. Results

3.1 Quantitative analyze:

3.1.1 Socio-demographic characteristics of the participants:

The mean age of the study participants was 33.55 (SD ± 10.57), and 3.11% (n=12) of the respondents were in the age group fifty-nine to sixty-eight. On the contrary, the majority of the study participants, 40.41% (n=156) were in the age group eighteen to twenty-eight (Table 01). Most of the participants 47.15% (n=182) had no formal education, whereas only 2.59% (n=10) and 13.73% (n=53) were Higher Secondary and Secondary School Certificate level, respectively (Table 01). About their occupation, the majority of the participants 37.56% (n=145) were day

labor, and 23.32% were involved in business and 20.73% were unemployed among the respondents (Table 01).

Table 01: Socio demographic Information of the study respondents (N=386)

Variables	Category	Frequency (N)	Percentage (%)
Age	18-28	156	40.41
	29-38	115	29.79
	39-48	78	20.21
	49-58	25	6.48
	59-68 Mean age (33.55, SD ± 10.57)	12	3.11
Education	No Formal Education	182	47.15
	Below Primary	85	22.02
	Primary	56	14.51
	Secondary	53	13.73
	Higher Secondary	10	2.59
Occupation	Business	90	23.32
	Day Labor	145	37.56
	Student	2	0.52
	Unemployed	80	20.73
	Others	69	17.88
Marital status	Family arranged marriage	337	87.31
	Love marriage	49	12.69
Family size	Nuclear	261	67.62
	Combined	125	32.38
No. of Children	1-3	208	53.89
	4-6	109	28.24
	7-9	60	15.54
	10-13	9	2.33
Monthly Family Income (BDT)	< 10,000	335	86.79
	10,000-15,000	48	12.44
	15,001-20,000	3	0.78

Among the study participants, 87.31% and 12.69% got married by considering family arranged and love marriage, respectively. The majority of the participants 67.62% (n=261) belonged to the nuclear family, while 32.38% belonged to the combined family. 53.89% (n=208) participants had children in the range of one to three and 2.33% (n=9) participants had children in the range of ten

to thirteen. About 86.79% (n=335) and only 0.78% (n=3) had the monthly income in the range of <10,000 and 15,001-20,000, respectively (Table 01).

3.1.2 Male partner's understanding towards maternity care:

In this study, it was shown that 27.72% of participants had poor knowledge and understanding of maternity care, compared to 72.28% who had good understanding of maternity care (Figure: 01).

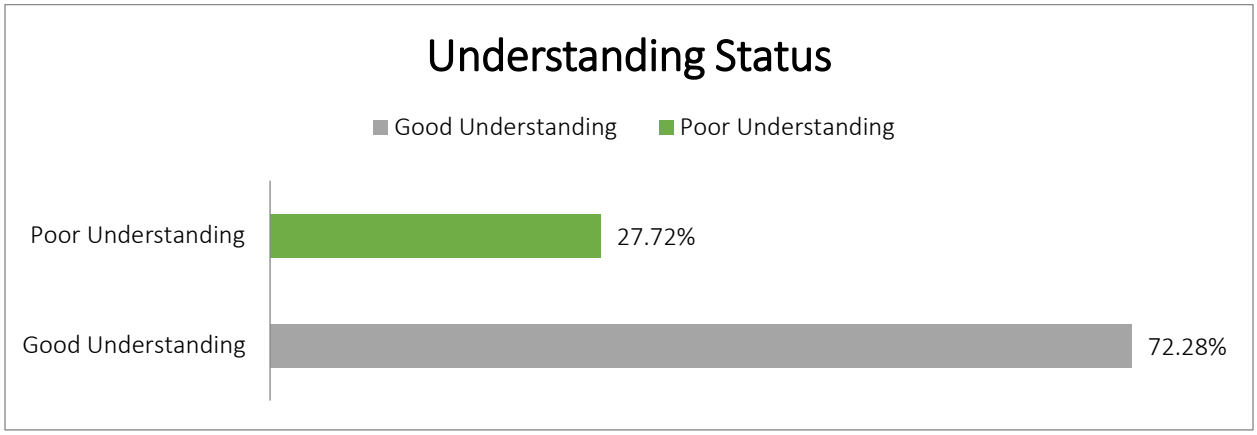

Figure 01: Understanding status towards maternity care.

Participants in this study had good understanding levels of antenatal, intra natal, and postnatal care at 70.47%, 81.09%, and 86.27%, respectively, whereas participants had poor understanding levels of antenatal, intra natal, and postnatal care at 29.53%, 18.91%, and 13.73% (Figure 02)

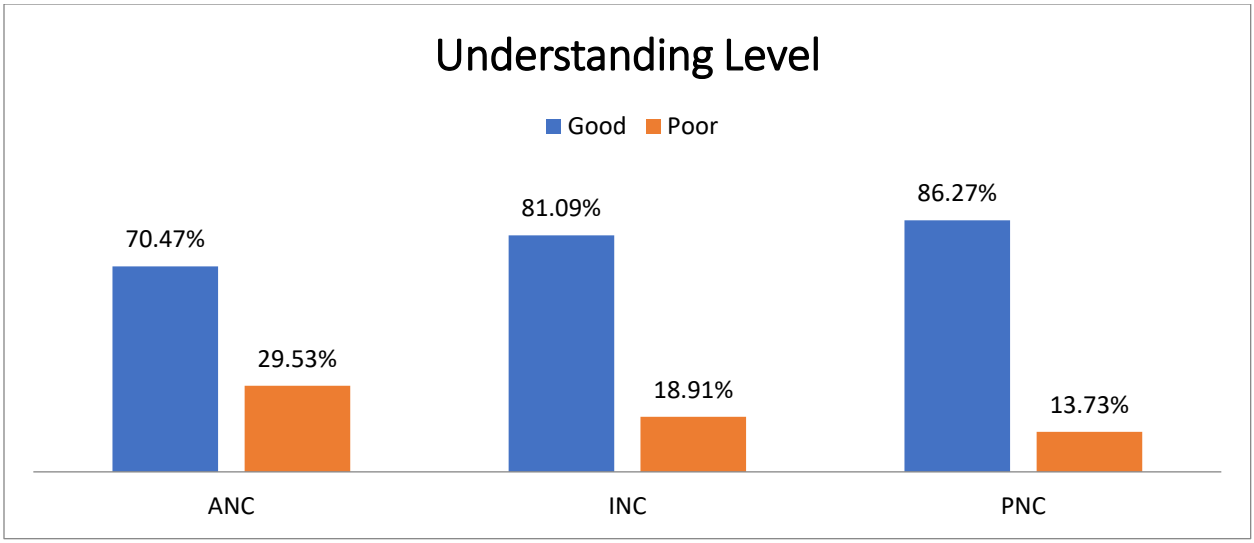

Figure 02: Understanding level regarding ANC, INC, PNC.

3.1.3 Male partner's attitude towrds maternity care

It was found that 73.83% (n=285) participants agreed men should encourage their wives to go for antenatal care. Among the participants 53.63% (n=207), 49.74% (n=192), 70.21% (n=271), 59.33% (n=229) agreed that men should go along with their wives, encourage for family planning, decide the palces of delivery, and should be present in labor room respectively, while 10.88% (n=42), 18.65% (n=72), 5.70% (n=22), and 26.68% (n=103) disagreed regarding above mentioned statement respectively (Table: 02).

Table 02: Attitude of Rohingya male partners' regarding maternity care (n=386)

	Level of attitude n (%)			
Statement	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
Men should encourage their wives for antenatal care	86(22.28)	285(73.83)	15(03.89)	00(0.00)
Men should go along with their wives for antenatal care	136(35.23)	207(53.63)	42(10.88)	01(00.26)
Men should encourage for family planning	118(30.57)	192(49.74)	72(18.65)	04(01.04)
Men should decide the places of delivery	93(24.09)	271(70.21)	22(05.70)	00(00.00)
Men should be present in the labor room	46(11.92)	229(59.33)	103(26.68)	08(02.07)
Men should support their wives to attend postnatal visits	98(25.39)	251(65.03)	36(09.33)	01(00.26)
Men should assist in house chores	190(49.22)	192(49.74)	04(01.04)	00(0.00)
Men should ensure child complete immunization	186(48.19)	190(49.22)	10(02.59)	00(0.00)
Men should support exclusive breastfeeding (EBF)	177(45.85)	187(48.45)	19(04.92)	03(00.78)

Among the participants 25.39% (n= 98), 49.22% (n=190), 48.19% (n=186), 45.85% (n=177) strongly agreed men should support their wives to attend postnatal visits, assist in house chores, ensure child complete immunization, and support exclusive breastfeeding, whereas 9.33% (n=36), 1.04% (n=04), 2.59% (n=10), 4.92% (n=19) participants were disagreed about these above mentioned statement (Table 02). According to the study's findings on male partners' attitudes toward maternity care, 52% of participants had positive attitudes toward it, which is much more than the 48% of participants who had negative attitudes towards in maternity care (Figure 03).

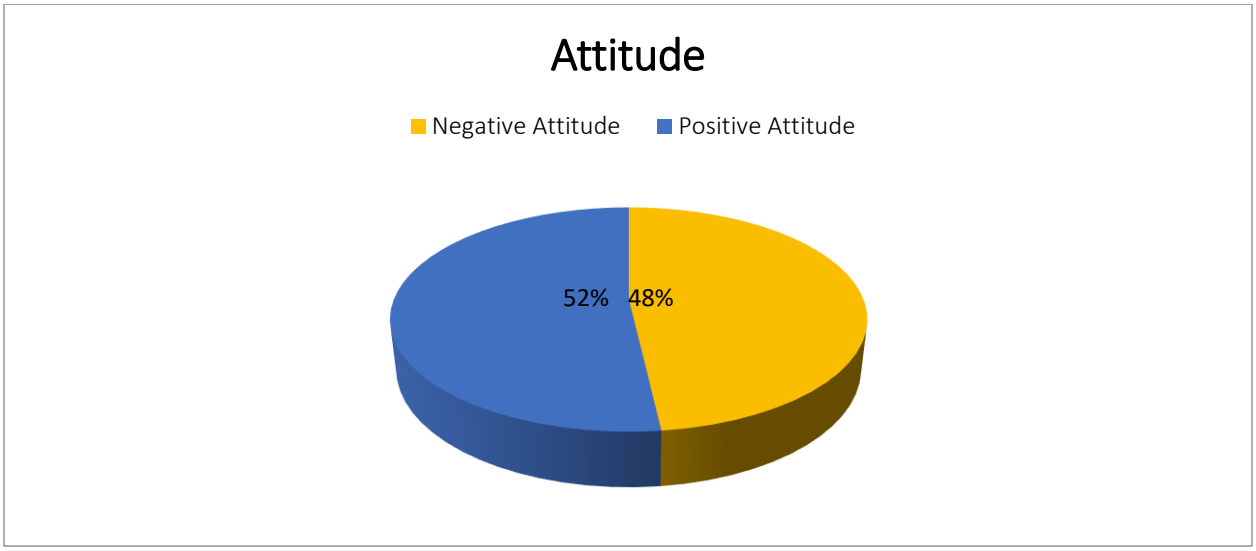

Figure 03: Attitude of Rohingya male partners regarding maternity care

3.1.3. (a) Factors associated with male partners' attitude in respect of maternity care:

The multivariate logistic regression showed that the Rohingya male who were unemployed (AOR: 3.62; CI: 1.54 to 8.48; p< 0.05), love marriage (AOR: 3.98; CI: 1.68 to 9.40; p<0.05), combined family size (AOR: 2.55; CI: 1.17 to 5.5; p<0.05), good understanding regarding maternity care (AOR: 2.71; CI: 1.27 to 5.80; p<0.05) were more likely to showed positive attitudes in respect of maternity care (Table 03).

Table 03: The multivariate logistic regression model of factors associated with male partners' attitude in respect of maternity care (n=386).

Variables	Attitude Status n (%)		AOR (95% CI)	P value
	Positive	Negative		
Age				
18-28	96(48.00)	60 (32.26)	Ref.	
29-38	51(25.50)	64(34.41)	0.81(0.42 to 1.55)	0.51
39-48	36(18.00)	42(22.58)	0.90(0.37 to 2.20)	0.82
49-58	11(05.50)	14(07.53)	0.55(0.15 to 2.07)	0.38
59-68	06(03.00)	6(03.23)	0.80(0.12 to 5.09)	0.81
Education				
No Formal Education	75(37.50)	107(57.53)	Ref.	
Below Primary	50(25.00)	35(18.82)	1.74(0.89 to 3.40)	0.11
Primary	36(18.00)	20(10.75)	1.79(0.81 to 3.92)	0.15
Secondary	33(16.50)	20(10.75)	1.15(0.52 to 2.59)	0.73
Higher Secondary	06(03.00)	04(02.15)	0.96(0.18 to 5.13)	0.96
Occupation				
Business	37(18.50)	53(28.49)	Ref.	
Day Labor	65(32.50)	80(43.01)	0.91(0.44 to 1.86)	0.79
Student	02(01.00)	00(00.00)	1.00	-
Unemployed	55(27.50)	25(13.44)	3.62(1.54 to 8.48)	0.003
Others	41(20.50)	28(15.05)	1.50(0.64 to 3.49)	0.34
Marital status				
Family marriage	166(83.00)	171(91.94)	Ref	
Love marriage	34(17.00)	15(08.06)	3.98(1.68 to 9.40)	0.002
Family size				
Nuclear	138(69.00)	123(66.13)	Ref.	
Combined	62(31.00)	63(33.87)	2.55(1.17 to 5.55)	0.01
Number of children				
1-3	124(62.00)	84(45.16)	Ref.	
4-6	47(23.50)	62(33.33)	0.62(0.29 to 1.29)	0.20
7-9	23(11.50)	37(19.89)	0.57(0.19 to 1.73)	0.32
10-13	06(03.00)	03(01.61)	2.30(0.33 to 16.22)	0.40
Monthly family income (BDT)				
< 10,000	177(88.50)	158(84.95)	Ref.	
10,000-15,000	22(11.00)	26(13.98)	1.06(0.50 to 2.23)	0.88
15,001-20,000	01(00.50)	02(01.08)	2.22(0.13 to 38.04)	0.58
Understanding				
Poor	22(11.00)	85(45.70)	Ref.	
Good	178(89.00)	101(54.30)	2.71(1.27 to 5.80)	0.01

3.1.4 Male partners' involvement in maternity care

In this study, about 66.58% married males had good involvement, and 33.42% had a poor engagement or involvement in maternity care in Rohingya refugee camp, Bangladesh (Figure 04).

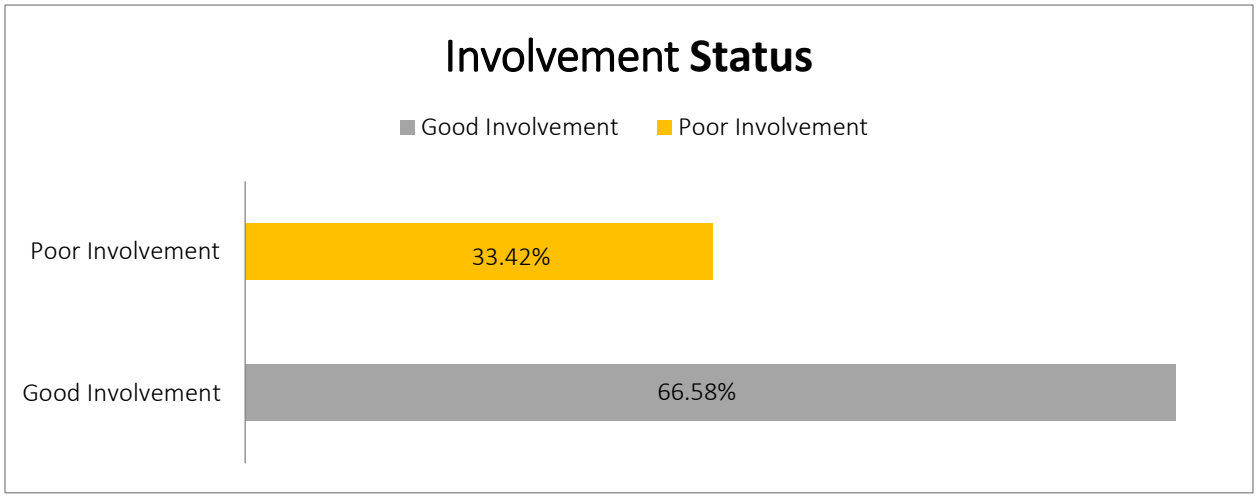

Figure 04: Involvement status of Rohingya male partners regarding maternity care

3.1.4 (a) Factors associated with involvement of male partners in maternity care:

The multivariate logistic regression showed that the Rohingya married male aged range forty-nine to fifty-eight (AOR: 11.45; CI: 1.87 to 70.11; $p<0.05$) were more likely to involved in maternity care. Furthermore, the married males who had primary education (AOR: 6.17; CI: 1.86 to 20.35; $p<0.05$), were day labor (AOR: 4.82; CI: 1.93 to 12.04; $p<0.05$), good understanding levels (AOR: 32.27; CI: 14.05 to 74.13; $p<0.05$) and positive attitude (AOR: 7.57; CI: 3.59 to 16.87; $p< 0.05$) regarding maternity care were more likely to get involved in maternity care (Table 04). On the other hand, did love marriage (AOR: 0.28; CI: 0.11 to 0.73; $p<0.05$), had number of children range seven to nine (AOR: 0.14; CI: 0.04 to 0.57; $p<0.05$) were likely to less involved in maternity care (table 04).

Table 04: The multivariate logistic regression model of factors associated with male partners' involvement in respect of maternity care (n=386).

Variables	Involvement Status n (%)		AOR (95% CI)	P value
	Good	Poor		
Age				
18-28	119(46.30)	37 (28.68)	Ref.	
29-38	75(29.18)	40(31.01)	1.23(0.49 to 3.08)	0.67
39-48	42(16.34)	36(27.91)	1.91(0.54 to 6.81)	0.32
49-58	15(05.84)	10(07.75)	11.45(1.87 to 70.11)	0.008
59-68	06(02.33)	06(04.65)	1.48(0.17 to 12.90)	0.72
Education				
No Formal Education	106(41.25)	76(58.91)	Ref.	
Below Primary	57(22.18)	28(21.71)	1.13(0.48 to 2.64)	0.78
Primary	44(17.12)	12(09.30)	6.17(1.86 to 20.35)	0.003
Secondary	42(16.34)	11(08.53)	3.12(0.97 to 10.02)	0.06
Higher Secondary	08(03.11)	02(01.55)	1.32(0.12 to 14.26)	0.82
Occupation				
Business	45(17.51)	45(34.88)	Ref.	
Day Labor	105(40.86)	40(31.01)	4.82(1.93 to 12.04)	0.001
Student	02(00.78)	00(00.00)	1.00	-
Unemployed	53(20.62)	27(20.93)	1.13(0.40 to 8.48)	0.82
Others	52(20.23)	17(13.18)	2.10(0.64 to 6.86)	0.22
Marital status				
Family marriage	228(88.72)	109(84.50)	Ref	
Love marriage	29(11.28)	20(15.50)	0.28(0.11 to 0.73)	0.009
Family size				
Nuclear	188(73.15)	73(56.69)	Ref.	
Combined	69(26.85)	56(43.41)	1.68(0.57 to 4.95)	0.35
Number of children				
1-3	160(62.26)	48(37.21)	Ref.	
4-6	68(26.46)	41(31.78)	0.44(0.16 to 1.25)	0.12
7-9	25(09.73)	35(27.13)	0.14(0.04 to 0.57)	0.006
10-13	04(01.56)	05(03.88)	0.15(0.02 to 1.42)	0.10
Monthly family income (BDT)				
< 10,000	228(88.72)	107(82.95)	Ref.	
10,000-15,000	29(11.28)	19(14.73)	0.66(0.23 to 1.84)	0.42
15,001-20,000	00(00.00)	03(02.33)	1.00	-
Understanding				
Poor	18(07.00)	89(68.99)	Ref.	
Good	239(93.00)	40(31.01)	32.27(14.05 to 74.13)	0.00
Attitude				
Negative	82(31.91)	104(80.62)	Ref.	
Positive	175(68.09)	25(19.38)	7.57(3.59 to 16.87)	0.00

3.2 Qualitative analyze:

Six themes with subthemes developed from the qualitative research on male partners' knowledge, attitude, and involvement in maternity care services from the viewpoints of the 14 participants (9 women and 5 health care providers). (Table:05)

Table:05 Emerged themes and subthemes

Themes	Sub-themes
Understanding and knowledge towards maternity care services	
Attitude towards maternity care services	Men encouraged to attend in ANC, INC and PNC
	Concerned about the family planning
	Attitude towards to stay in labor room
	Attitude towards exclusive breastfeeding and child development immunization
	Attitude towards supporting emotional, financial, and household work
Level of participation and involvement in maternity care	Men attend ANC, INC and PNC visit
	Emergency decision making and planning
	Involved in family planning
	Men attend in labor room and help during delivery
	Health seeking behavior for mother and newborn
	Men involved in mother and child development
	Men provide financial, emotional, and household supports
Barriers to men's involvement	Cultural beliefs and practices
	Economic situation
	Educational qualifications
	Lack of willingness and dependent on volunteers
Benefits of men's involvement in maternity care services	
Women's satisfaction and expectations	

3.2.1 Understanding and knowledge towards maternity care services

During the interview, when asked the respondents about the husband's knowledge and understanding antenatal and post-natal visit, all of the respondents (n=14) reported that husbands were well-informed and knowledgeable about ANC and PNC visits and demonstrated a strong concern for their wives' and children's health. Additionally, according to the respondents, husbands demonstrated a satisfactory comprehension of the recommended frequency of antenatal care visits (Four times during ANC), as well as the obligatory visits for PNC. In addition, the respondents indicated that Husbands were aware of the numerous supports that women require during this period, including nutritional diets, emotional and mental support, financial assistance, and housekeeping help. The respondents also claimed that spouses had a good understanding of the significance of immunizations for both the mother and the kid, as well as the necessity of receiving these services for the growth of the child. Following the health personnel (HP) and wife's (Women) perspective on men's understanding towards maternity care:

"Yes, my husband knows about the services provided in ANC from the hospital here.... 4 visits before delivery. ...At this time, mothers must be given nutritious food, mothers must take vaccinations, my husband is well aware of all these things..." (Women: 4)

"My husband knows that if a woman is pregnant then she must go to the health center for checkup 4 times during pregnancy, during this time the mother must be vaccinated, given nutritious food(...) if the baby is born into the hospital, it is good for both the mother and the baby... Then he was aware that even after the baby is born, both the mother and the baby should go to the hospital for a checkup to stay healthy and the baby needs to be vaccinated." (Women:7)

During the in-depth interviews, the study respondents were asked about their husbands' knowledge and understanding of the importance of family planning. The respondents reported that prior to coming to Bangladesh, men had limited knowledge about family planning and its various methods. However, the respondents also mentioned that husbands had acquired a comprehensive understanding of methods of family planning, and the importance of controlling birth rates since arriving in Bangladesh. One health care provider shared:

"In the beginning, they did not know a lot about family planning (...) now they understand how important it is to use whatever method is currently being used, which has helped to somewhat lower the birth rate." (HP:3)

When respondents were asked where their spouses learned about maternity care services, they mentioned the presence of various government and non-government organizations in the camp, including MSF, HOPE Foundation, BRAC, and UNHCR. These organizations' healthcare

providers and volunteers played a crucial role in increasing husbands' awareness of maternity care services. Volunteers specifically visited households to inform both men and women about the significance of maternity care services and encourage them to embrace them.

"My husband knows that there are at least 4 visits before delivery, (...) in our camp, various NGOs do awareness work like Hope Foundation, MSF has many volunteers who come to our house and explain about these health services, why we should take these services or when we should go to the hospital. ... My husband also used to stay with me and get the information from the volunteers...." (Women: 2)

"Doctors and volunteers from the health center where I took care used to counsel me and my husband to take these services during in this maternity period..." (Women:4)

3.2.2 Attitude towards maternity care:

Men encouraged to attend in ANC, INC and PNC:

All women (n=9) in the sample stated that they had received INC services, in addition to attending ANC and PNC at least four times each. Furthermore, when asked whether husbands encouraged their wives to attend these services, most respondents (n=10) stated that husbands did provide encouragement. This was in response to the question "Did husbands encourage to attend these services?" During the in-depth interviews, the respondents' revealed that husbands had a favorable attitude towards encouraging maternity care services for the purpose of improving the health of both their wives and their children, and that they have a direct role in encouraging women to seek healthcare services.

"If the husbands do not come with their wives though they play a direct role in receiving these maternity services, like here, if the husbands say yes, you should do it then the wives do it and if the husbands say no you don't then the wives never do it... It is also seen that some husbands do not like to take these services and wives never take them. Since many pregnant women are now coming to seek ANC and PNC services, I think the attitude of their husbands is positive now..." (HP:4)

"Yes, he encouraged me to go to the hospital and advised me to take postnatal care as it would be beneficial for both me and my baby... He used to tell me that you may be feeling well now but any time you and baby can be got sick, so it is better to go to the health care center for regular checkup ... these are the things he used to encourage me..." (Women:3)

According to our participants, husbands had positive attitudes regarding maternity care services during pregnancy and delivery. However, following the birth, they did not actively motivate their spouses to seek postnatal care (PNC). As a result, the women were not driven by their partners to seek essential healthcare after delivering baby.

"I don't think so they are encouraging their wives to attend postnatal care services, like they do in before birth or during birth...It's my personal opinion…" (HP:1)

Concerned about the family planning:

The majority of those who participated (n=11) believed that males did not appear to be interested in making use of different methods of family planning. These respondents also claimed that men held superstitious ideas about such approaches, which contributed to an overall negative attitude towards family planning.

"No, no such plan was made between us…my husband does not like to use family planning method…he believes children are a gift from God and since God is giving so we should take it…and God is the owner of the provider, so we did not have any such plan. …but the volunteers come to us from house to house to explain about family planning, but my husband doesn't like that much …" (Women:5)

During the interview, we inquired as to why husbands showed a lack of interest in utilizing family planning methods one of the respondents mentioned that they perceived having more children would lead to increased benefits from the Bangladesh Government and NGOs. This was identified as one of the reasons for their reluctance to pursue family planning methods, as they felt less concerned about the matter and were also less inclined to encourage their wives to consider family planning.

"They don't want to take family planning…They totally dislike it...because they think if they have more children will benefit them, this is my personal opinion. I think having a child means adding a new member to the family.... because of this they want to increase the family member and thus all the benefits they want to get are from Government or NGOs..." (HP:2)

A contrasting point of view was expressed by some of the respondents, who said that there were some husbands who were interested in utilizing family planning methods. These husbands exhibited real concern for their families and understood the need to use contraception and other

methods of family planning. They were motivated to utilize such approaches in order to make sure that the necessities of their family were covered and to enhance the general well-being of their family members.

"To be honest, we didn't talk much about family planning before, ...but the doctors and volunteers here made us aware of this... made us aware of the problems of having more children...so me and my husband realized that we should be aware of the family planning.... my husband used family planning method." (Women:9)

Attitude towards to stay in labor room:

The majority of the respondents said that women's partners stayed in the hospital during the delivery time, but refrained from entering the labor room, in response to a question concerning the husband's attitude towards staying in the labor room during delivery. Furthermore, it was noted that hospital authorities did not allow husbands to enter the labor room, and husbands themselves expressed a reluctance to do so. However, they expressed a strong desire to remain outside the labor room and help their partners during the delivery process.

"My husband was with me when I delivered at the hospital ...He took me to the operating room. ... In fact, not all hospitals here allow men to enter the labor room.... and I have not seen much desire from my husband to enter the labor room either...but he was out and did all that was necessary…." (Women:9)

"No, he was outside. The doctor did not allow him to enter the operation room, so he was outside the labor room...." (Women:4)

Attitude towards Exclusive breast feeding and child development immunization:

Over half of the respondents (n=9) stated that men had a positive view towards exclusive breastfeeding and showed good understanding and concern for the practice. They were extremely insistent about their partners breastfeeding their children and discouraged the use of supplementary feed. Furthermore, they motivated their wives to breastfeed for a duration of at least six months, in line with recommendations from healthcare organizations.

"Yes, husbands are very concerned about this, they tell their wives that you should breastfeed the baby till 6 months…many times the baby does not get breast milk properly, then they come to us

with their wives…we have nutritionists in our NGO, and they consult with them… So, I think quite a lot of husbands know that breastfeeding is essential for the baby and their attitude towards it is positive…" (HP:2)

"He used to tell me to drink more water, because if I drink more water, the baby will get more milk. Then sometimes he encouraged me to eat nutritious food, because it will make the breast milk thicker. My husband told me he heard from the health center that a baby should be breastfed for 6 months, that's why he always told me to breastfeed the baby for at least 6 months" (Women: 1)

Some husbands, according to the responses of a few numbers of respondents (n=5), showed a lack of interest in breastfeeding and had misconceptions about it. These husbands did not demonstrate any interest or encouragement towards their wives regarding exclusive breastfeeding for their children.

"No, my husband didn't encourage me to breastfeed because breastfeeding the baby would get cold, so he used to get cow's milk from the store..." (Women: 4)

When asked about their husbands' attitudes about child immunization, nearly all the respondents said they had a good attitude. The men were given information about child vaccination, and when the mother forgot to send their child to the health care center for vaccination, the husbands reminded their wife to get the vaccine for the child from the health care center. Respondents noted this remarkable attitude towards child vaccination among men.

"They (Husbands) are very careful about vaccinations. They remind their wives to vaccinate their children on their own… I have been working here since the beginning, so I see that before they did not bother so much about vaccination but now, they come to vaccinate on their own…" (HP:2)

"He used to say to go... especially because of the vaccinations that the child must do…" (Women:1)

Attitude towards supporting emotional, financial, and household work:

When respondents were asked to describe their experiences with husbands' attitudes towards providing emotional, financial, and household assistance, a variety of perspectives were expressed. In terms of emotional, financial, and household work help, it appears that husbands were more concerned with providing full support during the antenatal care (ANC) and intra natal care (INC) periods than during the postnatal care (PNC) period, as reported by the respondents. Respondents provided a variety of perspectives on husbands' behavior and support during the

various phases of care. In contrast, most women reported that their husbands were more concerned and supportive during the ANC and INC phases than during the PNC phase.

"He gave me emotional support ... gave me courage when I was worried about something or when I was sick my husband gave me emotional support and doing household work during the pregnancy period...but to be honest he was not too concern for giving supports after childbirth...." (Women: 6)

"My husband used to help me with housework when he had time, especially cooking, washing clothes, and taking care of my other children...when I was sick, he would not go to work and help me with housework. I felt his willingness to help me during that time…" (Women: 9)

A few of the respondents claimed that husbands were unwilling to provide help and had a negative attitude towards assisting their wives, particularly in emotional needs and household responsibilities. These comments were made by the respondents and A participant expressed his experience in such a way:

"I think very few husbands help with household chores…because they think it is women's work why should I do it many have this attitude…they think both baby and mother are healthy so, I don't need to do household works... she can manage herself..." (HP:5)

3.2.3 Level of participation and involvement in maternity care

Men attend ANC, INC and PNC visit:

When participants were asked about men's participation in ANC, INC, and PNC visits, a range of perspectives emerged. According to the majority of respondents (n=12), partners participated in these health visits, but they were not present for all four visits with their wives. While a few husbands managed to attend all four visits for ANC and PNC, most of them escorted their wives to the health care center for less than 4 visits.

"I saw husbands are coming with their wives now 2 or 3 times for ANC, they come sometimes for 4 visits, I mean at least 1-time husbands come with their wives…and if the husbands don't come then women come with their mothers, sisters or other relatives." (HP:3)

"No, not 4 times, my husband went 1 time out of 4 times. If he stayed at home or didn't go to work, he would go with me to the health center." (Women: 2)

According to participant's feedback, husbands' involvement in postnatal care was considerably lower than their involvement in antenatal and intra natal care. Respondents specifically stated that husbands were less likely to join their spouses during the postnatal period. Indeed, the

majority of respondents stated that males were less engaged in visiting postnatal services, and some even indicated that a small percentage of spouses did not accompany their wives to any postnatal visit. One participant shared:

"No, my husband did not go with me for postnatal care... (Our financial situation is not very good.....) ... he never used to go with me for taking postnatal care services..." (Women: 8)

Another added:

"No, my husband did not go with me for checkup…" (Women: 6)

The answers given by all of the respondents (n = 14) suggested that husbands had a high level of involvement in intra-natal care, most notably during the delivery process. The participants reported that husbands were present during the most important stages of labor and offered their wives support in a variety of ways. The involvement of these individuals was regarded as valuable and was praised by those who participated in the interview.

"When the baby was born, my husband was present at the hospital because if blood was needed or if medicine was needed, they had to be arranged, so men had to stay, so he was there. Then after having the baby, he used to visit me while I was in the hospital..." (Women: 1)

Emergency decision making and planning:

According to the respondents, husbands were actively involved in the decision-making process, working closely with their wives to plan. When questioned about their husband's involvement in maternity care decision making, more over half (n=10) reported being personally involved in pre-birth, delivery, and post-delivery planning stages. Respondents emphasized men's proactive role in selecting childbirth method, arranging for blood, managing money, and jointly planning for any emergency situations.

"My husband and I both consulted together about joint planning. We discussed whether we should have the baby in the hospital or at home and then we decided which method to have the baby ... Then I asked my husband to put money aside in case of emergency... We discussed all this together..." (Women: 6)

"Husbands think that blood is needed for his wife, he is arranging for blood or blood donor (....) Again, if the mother or child needs medicine in an emergency, they arrange it... In a word, during these times they are ready for any emergency and fully assist the wives as best they can." (HP:1)

All the respondents believed men had either directly or indirectly participated in the process of preparing transportation for any emergency, and that they had also preplanned to do so. The following are some of the ways that participants conveyed their experiences:

"He (Husband) had fixed the ambulance(...), so my husband was calling the ambulance when the delivery was nearing…and when we went to the hospital for checkup the doctors gave us the number of the ambulance to call and book the ambulance, so my husband kept in touch with the ambulance driver and booked the ambulance in advance..." (Women:5)

"Men call for ambulance themselves or in case of emergency by local vehicles such as auto-rickshaws bring the patient…" (HP:2)

Involved in family planning:

According to the study participants, the perception of the role of men in family planning was rather discouraging. The overwhelming majority of respondents, approximately two-thirds, reported that husbands appeared unwilling to discuss family planning with their wives. Men appeared to be comparatively unconcerned about the importance of family planning, as they were not actively using family planning methods, according to the participants. Respondents shared in this way:

"It has also been observed that if a wife uses family planning without informing her husband, he quarrels or fights with his wife. Husbands are actually very reluctant in this family planning...I, personally didn't see their (Husbands) active participation in family planning." (HP:1)

"We didn't talk much about family planning...my husband didn't like to talk with me about family planning (...) and he didn't like to use family planning methods both for us..." (Women: 6)

Furthermore, the majority of respondents stated that husbands were becoming more accepting of family planning methods and were willing to utilize them. This was a beneficial trend because including males in family planning decisions might result in better outcomes for both mother and child.

"(…) Now they are using family planning method which ever method is now taking which the birth rate has decreased a little bit..." (HP:4)

"...here in camp, many health workers come to the house and then talk about the family planning method, now me and my husband are following the family planning method...so, we feel when our financial situation will be better, we will take children again…" (Women: 4)

Men attend in labor room and help during delivery:

It was strongly reported by each of the 14 respondents that the husbands were either present in the hospital while their wives gave birth or stayed with their wives at home if the birth took place at home. They waited outside since it is procedure not to allow males to enter the delivery room when the woman is in labor, and this is why the men were there. During the process of giving birth, husbands offer their wives the essential support that may be required by healthcare providers or might be needed by the women themselves. As part of this support, the husbands provided emotional encouragement, make arrangements for medication or blood, and met any other need that came up during the delivery.

"Men are not allowed to be in the labor room during the operation, but men are present either outside the room or by the side. Then if we need anything like blood or any medicine which is not available in the hospital at that moment then they arrange it." (HP:2)

"He (Husband) was outside the room…my husband gave me emotional support during delivery…I was scared, especially when it was my first delivery, he came to me and advised me not to worry...he called the midwives and did what the midwife told him during delivery." (Women:3)

Health seeking behavior for mother and newborn:

According to study participants, husbands were less involved in discussing health issues with healthcare providers during antenatal, intra natal, and postnatal care. Although husbands accompanied their wives to healthcare facilities, they demonstrated a lack of willingness to engage with healthcare professionals and enquire about the health of both the mother and the newborn. When the mother's or newborn's health was at risk, husbands did participate in conversations and seek medical counsel.

"Husbands rarely engage with us in conversation or discussion...men visit us with their spouses, and few speak with us alone. Then he inquires as to what is wise to do, when immunizations should be administered, and what medications should be taken he shares and discuss with us ...But this is how 20-30% husbands discuss with us." (HP:2)

"No, he didn't discuss. He didn't go inside the doctor's room, he used to stand outside. I think he was shy or lacked knowledge so maybe he didn't talk... The doctor used to talk to me, prescribe medicine or checkup." (Women: 1)

Men involved in mother and child development:

It was found that the partners were actively involved in providing nutritious and micronutrient-rich foods and in ensuring that their pregnant wives received vaccinations. All respondents indicated that husbands showed a high level of concern and were generally involved in the improvement of their wives' maternal health. In addition, the majority of respondents indicated that husbands were concerned about breastfeeding and child vaccination. Therefore, husbands played a direct role in ensuring their infant receives enough breastmilk and nutritious food and is vaccinated after birth. One of the respondents explain in that way:

"He (husband) used to bring fruits, milk, eggs, vegetables, fish, and meat so that the baby and I could have nutritious food. Because if I eat healthy food or eat adequately, the baby will get adequate amount of breast milk... After having a baby, my body is weak. Then for the child to grow up, to be healthy, vitamins are needed, my husband used to bring healthy food to me and for my child so that both of us are good and healthy." (Women: 2)

Another added:

"My husband used to go with me to the health care center, to get the vaccination during my pregnancy period (...) he was concern and encourage me about child vaccination and used to go with me to the hospital...." (Women:4)

Men provide financial, emotional, and household supports:

We found a wide range of opinions from participants when we asked how much help their husbands gave them financially, emotionally, and practically throughout their pregnancies, labors, and after the birth. Among the respondents, most of them (n=11) claimed that husbands provided full financial support during all three stages of maternity care. However, there were differing opinions on the emotional and household support provided by husbands during these stages. The respondents stated that husbands were more actively involved in antenatal and intra natal care but were less involved and active in postnatal care.

Financial support:

All the respondents claimed that their husbands made at least some effort to offer financial support for them when their wives were pregnant. This included covering the expense of

transportation, purchasing medicine, and purchasing food that was nutritious for both the mother and the newborn.

"My husband used to pay money... If I went to the hospital, it would have cost a lot, like transport cost, so if I asked him for money, he gave it to me... Then the doctor often prescribed to buy medicine, vitamin pills...then when I told my husband, he used to buy me the medicines..." (Women: 3)

Mental and Emotional support:

According to the participants in the study, Husbands were a significant source of mental and emotional support during the maternity period. Nonetheless, some respondents believed that husbands provided less emotional support following childbirth. The majority of respondents (n=11) believed husbands were more likely to provide emotional support and care for their wives during pregnancy and delivery.

"Couldn't do as well as my husband did before or during delivery...not being able to provide mental peace after delivery is totally wrong...he did but less than before…He used to give me mental support when I was worried or scared for any situation...but to be honest I felt he was less supportive after childbirth..." (Women:4)

On the contrary, one participant reported that their husbands were less supportive of women's mental health needs and engaged in domestic violence during their maternity period. The participant shared his experience in that way:

"I don't think, they provide much emotional support, if they (Husbands) did then there would be no domestic violence. As far as I know, domestic violence happens in the camp and we get such cases, the mental support that a woman must give is not a headache." (HP:4)

Household support:

The majority of the respondents (n=9) reported that husbands did not contribute to household assistance due to time constraints and prevailing socio-cultural norms that view such work as shameful for men. Nevertheless, a few respondents indicated that husbands did assist with responsibilities such as cooking, heavy lifting, laundry, and childcare, but that their involvement was higher during pregnancy and delivery and decreased after childbirth.

"I think very few husbands help with household chores…because they think it is women's work why should I do it many have this attitude…they think both baby and mother are healthy... I don't need to do household work…but Husbands do help when they are sick…otherwise they rarely help the women in household works…" (HP:3)

"Yes, he used to help me when he got time. Then he used to take care of another child... He used to change the child's clothes when the child defecates or urinates. If I didn't want to wash my clothes, he used to wash my clothes, helped in cooking... like that..." (Women:2)

3.2.4 Barriers to men's involvement

Cultural beliefs and practices

The study participants have indicated that cultural beliefs and practices act as a barrier to men's involvement in maternity care services. In a religious and male-dominated society, husbands are hesitant to allow their wives to seek medical care, particularly from male physicians, out of concerns for their wives' privacy and modesty. This inhibits women from participating in maternity care and makes it difficult for males to participate. One health care provider explained:

'the women here are religious and they actually cover themselves with a veil outside the house, they actually wear a veil in front of the public, so when they come to the hospital, naturally they cannot maintain veils and that's why men don't want to let them come to the hospital to get these services...and if they come to get services, they prefer female doctors. From here, you can understand how much influence they have in receiving treatment and Rohingya is a male-dominated society, so women are deprived of services because of this attitude of men and keep away themselves (Husbands) to involve..." (HP:4)

The respondents claimed extramarital affairs and polygamy are common practices among husbands, which creates another barrier to their involvement in maternity care services. The husbands' lack of commitment and support during the maternity period, combined with their decreased involvement with their pregnant wives, can be attributed to these extramarital affairs.

"And now especially in the camp polygamy is increasing and one husband is marrying 2 or 3 or having 7-8 children…These cases are increasing now, it seems to me that polygamy is one of the reasons why wives are not getting full benefits because his wife is pregnant, but he is living with another wife, so his pregnant wife is being deprived of proper care." (HP: 1)

"When we are counseling men, we also try to understand their perception why they are not fully providing these supports to their wives... Due to many misconceptions or superstitions they are not fully involved, even because of their polygamy and extra marital affairs..." (HP:5)

Economic situation

According to the majority of respondents, men's low socioeconomic status is a major barrier to their participation in maternity care. In this context, men are the primary family breadwinners,

and their financial circumstances frequently demand them to prioritize work over maternity care. Men's daily work occupied them to the point that they lacked the time to accompany their spouses to healthcare facilities, despite their desire to do so. This economic circumstance results in a lack of male participation in maternity care, thereby exacerbating the difficulties women face when seeking appropriate healthcare services.

"Because my husband works in daily base, so when he has something to do, he goes out for work and sometimes he is busy looking for new job...I think it is difficult for him to find some extra time to go with me in the health care center..." (Women:3)

Another respondent said:

"No, my husband did not go with me for postnatal care. Our financial situation is not very good, moreover we have many members in one family and my husband is the only earner. He works as a day laborer so he had to go to work to earn money, maybe if we didn't have financial shortages, I believe my husband would have gone to the hospital with me and could have taken care of me and my baby more..." (Women:8)

Educational qualifications:

The respondents noted a correlation between men's educational qualifications and their participation in maternity care. Additionally, they observed that individuals who had educational qualifications tended to be more involved with these services compared to those with who had no formal education. participants explained:

"I think that they were less involved because of lack of education…" (HP: 1)

"Many people in this camp are uneducated, so due to lack of education, they do not understand the importance of this service..." (HP:2)

Lack of willingness and dependent on volunteers:

The study's participants reported that men didn't seem particularly eager or willing to accompany their spouses to medical facilities. Instead, they appeared to place a higher value on idle leisure time than actively participating in their spouses' healthcare needs.

"I think he doesn't think it's important that he needs to go with me to get services… he doesn't want to go to the hospital because even though he spends idle time, (…) I have not seen any desire or preference in my husband..." (Women 6)

Based on the responses received, it was noted that a significant number of individuals believed that husbands tended to rely heavily on the assistance of volunteers working in the camp. Specifically, many husbands displayed an attitude that placed the responsibility for ensuring their

wives received necessary services solely on the volunteers, while they themselves remained somewhat detached from these responsibilities. This reliance on volunteers was perceived as a significant barrier to men's involvement in maternity care, with some respondents indicating that it discouraged husbands from taking a more active role in the care of their wives.

"I (Husband) told the volunteers that they will come and take you to the hospital, I think his (Husband) belief is that these are volunteers' responsibility not his..." (Women: 6)

"Most of the time volunteers from different NGOs came here and took me because they know when I have to go for checkup...that's why my husband didn't go with me... "(Women:2)

3.2.5 Benefits of men's involvement in maternity care services:

According to respondents, husbands have an important role in encouraging their spouses to obtain maternity care services. They stated that the participation of spouses in these services assisted women in obtaining accurate healthcare information and assistance. Given that many of the women in this camp were uneducated and lacked a proper understanding of the benefits and significance of maternity care services, the respondents believed that the participation of husbands was crucial in ensuring that their wives received the appropriate information and assistance throughout their pregnancy.

"We always tell the husbands to involve themselves in these maternity services because their wives will get the right information about the services (...)But if the husband talks to our doctors, they can guide his wife according to our recommendations and plays one of the roles for receiving services..." (HP:5)

According to the respondents of the study, Husbands' participation in maternity care services is crucial. This was because men were more likely to follow the advice provided by healthcare providers and motivate their wives to take better care of themselves by following doctors' instructions. Husbands were perceived as effective advocates for their wives, ensuring that they received appropriate care and treatment during pregnancy and childbirth.

"My husband used to talk to the doctors about me and the baby's health (...) my husband used to consult doctors and motivate me to take more care of my body and baby's body. I think he used to discuss with the doctor and encourage me as the doctors advised him..." (Women:9)

Throughout the in-depth interview, each of the participants conveyed the diverse advantages associated with male participation in the provision of maternal healthcare. They emphasized that

men played a vital role in taking appropriate action to assist their partners during pregnancy and childbirth. The participants noted that men could help in arranging transportation and making appropriate decisions as husbands were often the main decision-makers for their families. A respondent explained:

"Since a husband is the decision maker of his wife, the role of husband is very important in this matter (...) Because only a husband can take the right steps at the right time...such as encouraging the wife to take ANC and PNC services, arranging her transportation, providing emotional comfort...so, I do believe a husband should be involved for taking right decision..." (HP:4)

3.2.6 Women's satisfaction and Expectations

When asked about women's satisfaction with their husbands' involvement during the maternity period, the majority of respondents (n=9) reported that women were full satisfaction with the level of assistance provided by their spouses throughout the stages of antenatal, intra-natal, and postnatal care. They added that husbands were actively involved in supporting their wives during the various phases of maternity care, and that their efforts were appreciated by women in the community.

"Yes, I am satisfied…my husband has given me full support and help…I think it was because of his maximum support that both me and my baby are healthy…" (Women: 4)

Another Added:

"I am happy (...) I am satisfied with what my husband is doing for me and supporting me…" (Women:2)

Fewer respondents reported that women were moderately satisfied with their husbands' support during their pregnancy and delivery, but they felt that they did not receive adequate support after childbirth. The respondents expressed the opinion that husbands should provide more comprehensive support throughout all stages of the maternity period, including antenatal care (ANC), intra natal care (INC), and postnatal care (PNC). This support should include financial assistance, emotional support, and assistance with household work.

"Fairly satisfied.... I think a woman needs a lot of support from her husband even after delivery.... Because as a new mother, a woman changes a lot during this time, bringing up the baby, then when the baby gets sick, you get stressed, then there is the stress of money... then sometimes the body breaks down... the mood changes... so it is very important to be by the husband's side even after delivery." (Women: 4)

"Yes, quite satisfied. I wish my husband would have helped me more (...) I would have been happier if he would have given me time rather than giving me money..." (Women:8)

The respondents emphasized the importance of mental and household assistance in postnatal care during the maternity period, and they believe that husbands should prioritize these aspects of support.

4. Discussion of the study findings:

The primary objective of this study is to explore the attitudes of male partners regarding maternal health care services and their degree of involvement in such services. This section will present the outcomes derived from the male partners who were part of the quantitative research, alongside the women and healthcare providers who were part of the qualitative research. This section will address various aspects related to male partners in maternity care services, including their knowledge and understanding of such services, their attitudes towards them, their participation in them, the barriers that prevent their involvement, and the level of satisfaction and expectations of women regarding their male partner's involvement.

This mixed methods study focused largely on the understanding, involvement, and attitude of married male partners toward maternity care in the Rohingya refugee camp in Bangladesh. This care included antenatal, intra natal, and postnatal care. The majority of the study participants had a strong comprehension of postnatal care, a significant proportion of the participants, specifically 72.28%, demonstrated a satisfactory level of understanding regarding maternity care. A prior study found that, majority of male partners 63% had good knowledge and understanding towards maternity care (60) which is comparatively lower than Rohingya camp. The qualitative findings revealed that married Rohingya men had a comprehensive understanding of antenatal and postnatal care services, including recommended visits for antenatal (61) and postnatal care (62), required vaccinations, assistance in providing micronutrient-rich foods, emotional needs, and chores at home. Husbands had minimal knowledge about family planning, and a previous study was also found male partners poor knowledge about family planning methods (63), but following mass education, husbands obtained a thorough understanding of the subject. This study implies that the efforts of health care providers and volunteers in making spouses understandable

and informed about maternity care, as well as the roles played in the camp by government and non-government organizations like as MSF, BRAC, HOPE Foundation, and UNHCR.

The present study showed that 52% of male partners exhibited an encouraging attitude towards maternal healthcare, determined through the evaluation of 9 statements, with response options ranging from Strongly Agree to Strongly Disagree. 98% of respondents either strongly agreed or agreed with the statement ‘men should assist in house chores', indicating the maximum level of positivity which reflects husbands had good concern to provide household support during the maternity period. The majority of respondents agreed or strongly agreed that men should encourage their wives to receive antenatal care, support their wives to receive postnatal care, ensure their children are fully immunized, and support exclusive breastfeeding these suggest that men were willing to take active role to promote their wife’s maternal health. However, there has been a lack of promotion of husbands' attitudes toward accompanying their wives to antenatal care, accepting family planning methods, and staying in the labor room during delivery, all of which indicate that some husbands do not fully understand the significance of these aspects or may feel uneasy about them. Male partners’ positive attitude towards antenatal, intra natal & postnatal care using multivariate logistic regression model, we could not rule out any association between age category and the husbands’ positive attitudes of maternity care in this study but a prior study found positive attitude of male partner’s association with their age (64). There was no association between education and positive attitude towards maternity care among the male partners in this study. It was found that, in terms of occupation, those in unemployment were more likely to have a positive attitude toward maternity care than those in business or day labor, and that those who had a love marriage were more likely to have a positive attitude than those who had an arrange marriage. According to the findings of this study, individuals who come from combined families are more likely to have a negative attitude when compared to those who come from nuclear families. Similarly, the number of children does not have a significant association with the attitude status of male partners. On the other hand, when compared to men who had a poor understanding of maternity care, those who had a high understanding of maternity care were significantly more likely to have a positive attitude. Qualitative analysis was used to gain insight into the experiences respondents had during pregnancy, labor and after

childbirth. Husbands actively encouraged their wives to seek out maternity care services, including ANC, INC, and PNC visits. However, it was revealed from the respondents that men gave more encouragement during the pregnancy and delivery time rather than postnatal care services, and participants experienced that men were less motivated their wives to attend their wives in the postnatal care services, despite the fact that men had more knowledge and understanding towards postnatal care services and had a positive attitude towards postnatal care services, so more strategies and awareness are needed. In contrast to a previous study that found men had a positive attitude towards utilizing methods of family planning (65), In our study, we discovered that husbands exhibited a lack of interest and a negative attitude regarding the use of family planning methods. Although many government and non-government organizations have made strenuous attempts to encourage men to use family planning methods, this study indicated that just a small percentage of males were worried about doing so. It was discovered that men were less interested in attending the labor room, despite their positive attitudes towards staying in the hospital or delivery location, and that hospital authorities in the camp restricted husbands' access to the labor room during childbirth. This attitude developed as a result of their religious view and the cultural norm, despite the fact that a prior study in a Muslim community indicated that couples had a good attitude towards staying husbands in the delivery room during the labor and delivery process (66). Husbands support exclusive breastfeeding and child immunization, with the majority supporting their wife to breastfeed at least for six months after childbirth. However, it was shown that some husbands have misconceptions about exclusive breastfeeding or are less interested in it, highlighting the need for education and awareness initiatives. The findings of our study explored men's attitudes towards aiding and support during the maternity period in the areas of emotional support, financial support, and household work. It also revealed from the perspectives of the participants that husbands' attitudes were positive to give fully supported during the antenatal care and intra natal care, but they had lack interested to support during post-natal care even though they had a good understanding to help their wives during the postnatal period.

There was a statistically significant correlation between the age distribution of male partners and their level of participation in maternal healthcare. For example, participants aged 49 to 58 and

older had a greater likelihood of being involved than participants in any other age category. This finding contradicts the conclusion of earlier studies, which stated that there was no statistically significant correlation observed between age category and involvement status (67) (52). This inconsistency may be due to the fact that socio-demographic differences can cause inconsistencies. In our research, we found that there is a correlation between the educational level of partners and their participation in maternity care. Additionally, a prior study discovered that there was a correlation between husbands with higher levels of education and the likelihood that they would accompany their wives to ANC checkups (68).However, there was no correlation between education and involvement status, which accords with the findings of the subsequent investigations (69) (67). It was found that males who worked in day labor were significantly more likely to get involved in maternity care than men who worked in any other profession. This finding was firmly confirmed by a multivariate logistic regression model. Previous study found that males who were employed had a lower likelihood of participating in antenatal care (69). This might be due to how people in different locations and with different experiences perceive their employers to feel. In this study, there was a significant relationship between those who got love marriage and the likelihood that they would participate more in maternity care. In contrast, a prior investigation yielded no statistically significant association between marital status and engagement in maternal health services (69). In our study we found that those who had number of children range seven to nine were more likely to involved in maternity care, where another study did not find any significant relation number of children and their involvement in maternity care services (69). We could not find any association between husbands' involvement and family income to get engaged in maternity care; However, a prior investigation conducted in Bangladesh demonstrated a noteworthy association between monthly household income and male participation in reproductive health (27).In addition, using multivariate logistic regression, it was discovered that individuals who had a good understanding of and positive attitudes towards maternity care services were more involved in maternity care services. This finding suggests that knowledge and positive attitudes play a statistically significant role in the decision to become involved in maternity care. It was found out through qualitative interviews that husbands were actively participated in attending ANC, and PNC visits; a prior study (70) also verified our findings, which were also supported by the findings of this study. On the other hand, it was found out from the responses that not all men went to all the required visits for ANC and

PNC, and it was also discovered that some husbands did not accompany their wives to post-natal visits. This occurs because of their lack of willingness, their lack of knowledge, cultural hurdles, as well as other barriers. It was found while partners were more involved in intra natal care, particularly during the time of delivery. This finding indicates that husbands had a good involvement in the delivery phase as opposed to prenatal and postnatal care. The qualitative data suggested that husbands were actively involved in the pre-delivery, during delivery, and post-delivery planning stages. For example, husbands were involved in arranging transportation, blood, managing finances, and participating in joint planning. On the other hand, a previous study suggested that men were less involved in emergency planning. For example, men were less likely to save money for an emergency or arrange transportation (71). According to the results of the qualitative analysis, a significant proportion of the participants reported that husbands were not involved in the utilization of family planning methods. Additionally, a separate investigation revealed that the level of male involvement in family planning was relatively low (72). In spite of this fact, respondents also indicate that, in the Rohingya refugee camp presently, a few spouses have shown a favorable tendency towards accepting the family planning methods due to a lot of campaigns and awareness by the government and non-government organizations such as UNHCR, BRAC, HOPE foundation, and MSF. Regarding the presence of husbands in the labor room, respondents reported that husbands were not present in the labor room, though they remained outside the room and offered assistance. This involvement to attend in labor room is not possible for men due to their lack of willingness, and the majority of respondents claim that hospital authorities do not permit men to remain in the labor room due to cultural factors and outmoded practices. In addition, a previous study found that husbands' participation and presence in the labor room promotes positive feelings about the birthing process, nurtures paternal role attainment, and strengthens family ties (73). During antenatal, intra natal, and postnatal care, men are directly involved in providing mental, financial, and household support. Previous studies have demonstrated the benefits of providing mental health support for the mother's mental well-being as well as for improving her physical and mental health postpartum (74). As per a relevant study, husbands who provide support to their partners during pregnancy and childbirth, and participate in household chores alongside their wives, perceive themselves as contemporary men (75). However, it was shown that while men were involved in providing financial support during all three stages, their involvement in providing emotional support and support around the house

during the postnatal time was significantly lower compared to their involvement during the prenatal and intra natal periods. We found in this study that husbands had an adequate understanding about postnatal care from the quantitative analysis; nevertheless, we discovered from the qualitative analysis that husbands had less involvement in postnatal care services in comparison to prenatal and intra natal care periods. In addition, it was found through the qualitative research that husbands were more concerned and directly involved to develop mother's and newborn's development by providing micronutrients foods, participating to ensure mother and child vaccination, and another study confirmed that fathers were more likely to participated in child vaccination (76), which confirmed our findings as well. In addition, the findings of this study confirmed that fathers were more likely to participate in child vaccination.

From the qualitative research it was emerged four sub themes “cultural beliefs and practices”, “economic situation”, “educational qualifications”, and “lack of willingness and dependent on volunteers” were the barriers to husband’s participation in maternity care in Rohingya refugee camp. Consistent with our study's findings, a separate investigation revealed that cultural obstacles constituted the primary and widespread factor contributing to men's abstention from antenatal healthcare (77). Our findings align with the aforementioned statement, suggesting that cultural beliefs and customs are a significant barrier to men's engagement in maternal healthcare. As per the participants' responses, in a society that is both male-dominated and religious, husbands exhibited hesitance towards allowing their wives to receive medical attention from male physicians due to concerns regarding their wives' privacy and they also kept themselves away from becoming involved in the care services. This reflects the husbands' misunderstanding and incorrect assumption regarding the health care services. Furthermore, respondents stated that the majority of men in the Rohingya camp engage in extramarital affairs and polygamy, which prevented them from giving their full attention to their pregnant wives and participating in maternity care also discussed in another study (78).Educational qualification is another barrier to involvement. According to the respondents, lack of educational knowledge hindered husbands from understanding the significance of their role in maternity care, and they lacked the self-awareness educational involved. Those with a higher level of education were more likely to receive antenatal, intra natal, and postnatal maternity care. According to a previous study, males

with higher levels of education are more likely to attend prenatal care visits (79), which supports our findings that the lack of education of partners is a substantial barrier to their participation in maternity care. The economic situation of the men is another reason why they were not involved in maternity care services. Men are the primary providers of financial support for their families, and the majority of men in the study worked as day labor. As a result of their work schedules, the husbands of the women in this study had limited opportunity to attend ANC and PNC meetings with their wives. A previous study found a similar reason, which was that due to their heavy workloads, men were unable to participate in maternal health care services (80). Respondents also revealed that male partners were less inclined to accompany their wives to the health care center, preferring instead to spend their time gossiping or engaging in leisure activities. Moreover, in this camp, volunteers from organizations such as MSF, HOPE foundation, and BRAC played an active role in encouraging pregnant women to receive antenatal and postnatal care services. As a result, the men's attitude was that they had no responsibilities towards their wives, and that these tasks, such as taking pregnant women to the health care center, managing transportation, and arranging bloods, were the volunteers' responsibility.

The findings of this study indicate that the participation of male partners in maternal healthcare has beneficial impacts on both maternal and child outcomes. According to the participants, the involvement of husbands in maternal healthcare facilitated their wives in acquiring relevant information and support to access healthcare services, adhere to healthcare professionals' recommendations, and take necessary measures to aid their partners during the antenatal and perinatal periods, which demonstrates that husbands play a crucial role for safe motherhood, a similar results found in another study to Men's participation during pregnancy and childbirth is crucial to the safety of their female companions' pregnancies and births, as it ensures access to care and provides emotional and financial support (81).

Women's perceptions of their partners' participation in their maternity care are also explored. According to women and health care providers, wives were satisfied with their husbands' involvement and support throughout pregnancy, delivery, and the postpartum period. However, it was noted that wives expected more assistance and support from their spouses, especially during the postnatal period.

5. Strength and Limitation

The strength of the present study is its mixed-methods approach to gathering qualitative and quantitative data. Combining married women's and health care provider's understanding with the perspective of male partners in maternity care provided a real picture of the circumstances involving male partner’s participation in maternity care, and collecting quantitative data from the husbands made this study credible. Using mixed methods during data analysis and inference allowed for in-depth comprehension and confirmation of one perspective by another (82). As a sequential mixed-methods study, the quantitative findings provide the prevalence of male partners' understanding, attitude, and involvement in maternity care, whereas the qualitative interviews disclosed the respondents' experiences and explained the factors influencing males' involvement.

There were certain limitations to this study. Firstly, the self-reported data in the study exhibited a susceptibility to reporting bias. Secondly, the convenience sampling method was confined by selection bias, yet it was somewhat challenging to use alternative probability sampling methods due to time and resource constraints. Thirdly, the cross-sectional design used in the study posed a challenge in establishing causality. To further investigate these concerns, large-scale research with a mixed-method study should be carried out. Finally, the women did not feel comfortable answering the questions since they were not used to providing information using the qualitative approach, and there was also a language barrier, which occasionally produced an environment that was problematic for deriving meaning in a deeper way.

6. Conclusion

In the Rohingya refugee camp, the findings of this study suggest that male partners had a good comprehension of antenatal, intra natal, and postnatal care due to the efforts of various types of government and non-government organizations, as well as the active role of volunteers. Even though male partners had a good comprehension of maternity care services, it emerged that they had less positive attitudes towards maternity care, particularly postnatal care where they had a good level of understanding. Men had positive attitude towards to encourage their wives to go ANC, should accompany with their wives to visit ANC and PNC, encourage for family planning, assist in house chores, child immunization and exclusive breastfeeding. Occupational status, marital status, family size, and level of understanding of maternity care were found to influence male positive attitudes towards maternity care. In this study, married Rohingya men had a standard level of participation in maternity care, but less involvement in postpartum care. Age, Educational Qualifications, Occupation, Good Levels of Understanding, and Positive Attitudes impacted male partners' participation in maternity care. It was discovered that men were less involved in family planning, staying in the labor room, and performing emotional and household chores during the postpartum period, whereas they were more involved in ANC visits, delivery support, and mother and child development. Male participation in maternity care services was hindered by cultural beliefs and practices, economic circumstances, educational qualifications, and a lack of willingness and dependence on volunteers. It is recommended that more campaigns should be introduced to educate male partners to change their attitude towards receiving maternity care services for their wives, and that more counselling departments should be made available in health care centers from which they will obtain more information and be motivated to get involved in maternity care services. It is also suggested that the Bangladeshi government and international organizations, public health professionals revise the current strategies and policies for receiving maternity care services, and make more planning, strategies, and policies based on the cultural norms, education level, and economic status of the Rohingya people. This is because the Rohingya are able to readily accept the current maternity care services, and men are more likely to become actively involved in using these services to ensure a safe birth and pregnancy.

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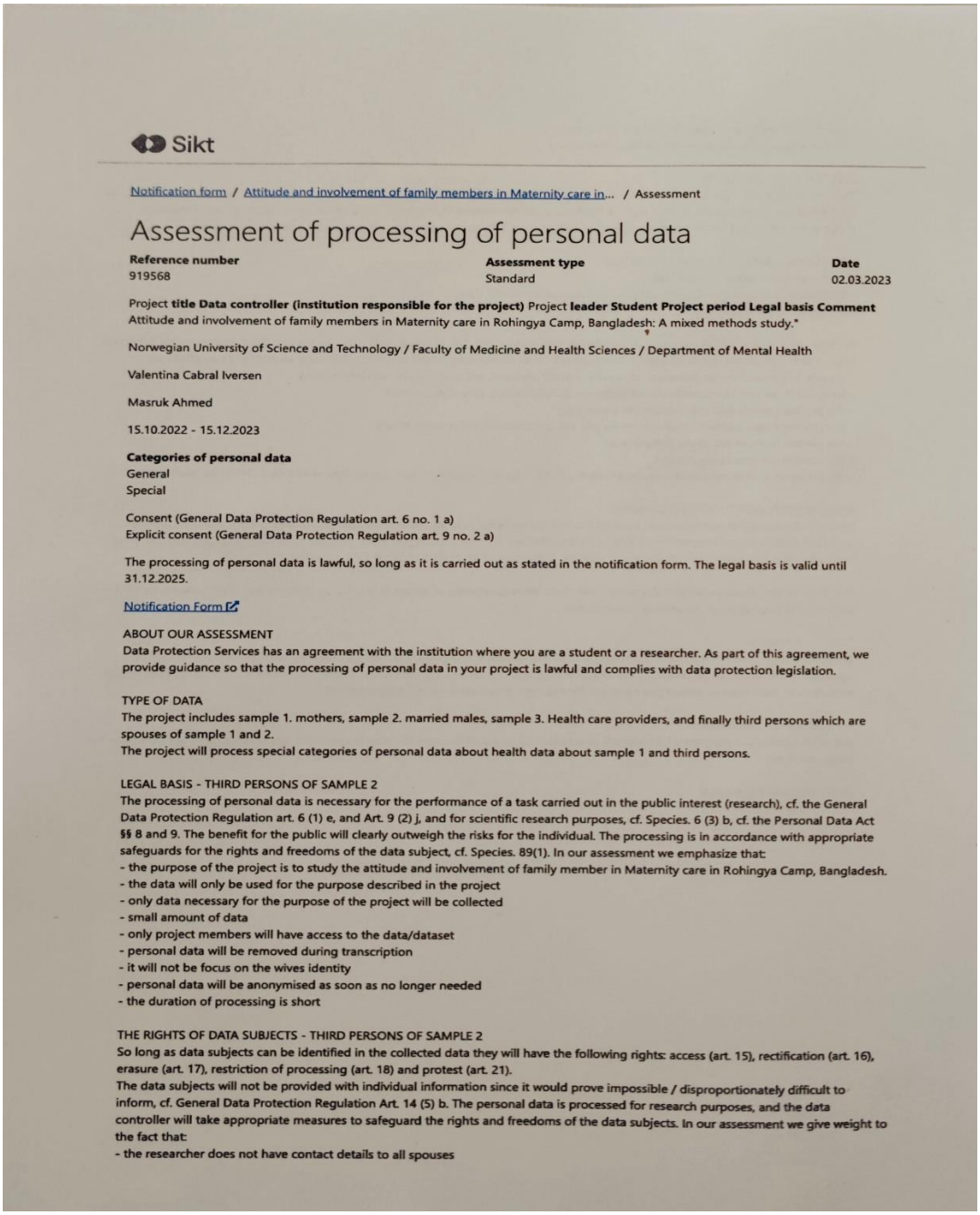
Appendix

Ethical Approval from NSD



Sikt

Notification form / Attitude and involvement of family members in Maternity care in... / Assessment

Assessment of processing of personal data

Reference number	Assessment type	Date
919568	Standard	02.03.2023

Project **title Data controller (institution responsible for the project)** Project **leader Student Project period Legal basis Comment**
Attitude and involvement of family members in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."

Norwegian University of Science and Technology / Faculty of Medicine and Health Sciences / Department of Mental Health

Valentina Cabral Iversen

Masruk Ahmed

15.10.2022 - 15.12.2023

Categories of personal data
General
Special

Consent (General Data Protection Regulation art. 6 no. 1 a)
Explicit consent (General Data Protection Regulation art. 9 no. 2 a)

The processing of personal data is lawful, so long as it is carried out as stated in the notification form. The legal basis is valid until 31.12.2025.

Notification Form

ABOUT OUR ASSESSMENT
Data Protection Services has an agreement with the institution where you are a student or a researcher. As part of this agreement, we provide guidance so that the processing of personal data in your project is lawful and complies with data protection legislation.

TYPE OF DATA
The project includes sample 1. mothers, sample 2. married males, sample 3. Health care providers, and finally third persons which are spouses of sample 1 and 2.
The project will process special categories of personal data about health data about sample 1 and third persons.

LEGAL BASIS - THIRD PERSONS OF SAMPLE 2
The processing of personal data is necessary for the performance of a task carried out in the public interest (research), cf. the General Data Protection Regulation art. 6 (1) e, and Art. 9 (2) j, and for scientific research purposes, cf. Species. 6 (3) b, cf. the Personal Data Act §§ 8 and 9. The benefit for the public will clearly outweigh the risks for the individual. The processing is in accordance with appropriate safeguards for the rights and freedoms of the data subject, cf. Species. 89(1). In our assessment we emphasize that:
- the purpose of the project is to study the attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh.
- the data will only be used for the purpose described in the project
- only data necessary for the purpose of the project will be collected
- small amount of data
- only project members will have access to the data/dataset
- personal data will be removed during transcription
- it will not be focus on the wives identity
- personal data will be anonymised as soon as no longer needed
- the duration of processing is short

THE RIGHTS OF DATA SUBJECTS - THIRD PERSONS OF SAMPLE 2
So long as data subjects can be identified in the collected data they will have the following rights: access (art. 15), rectification (art. 16), erasure (art. 17), restriction of processing (art. 18) and protest (art. 21).
The data subjects will not be provided with individual information since it would prove impossible / disproportionately difficult to inform, cf. General Data Protection Regulation Art. 14 (5) b. The personal data is processed for research purposes, and the data controller will take appropriate measures to safeguard the rights and freedoms of the data subjects. In our assessment we give weight to the fact that:
- the researcher does not have contact details to all spouses

- information will be provided individually when possible
- personal data will only be evident in the online survey

DUTY OF CONFIDENTIALITY

The data subjects, sample 3. are bound by their duty of confidentiality and cannot share confidential data with the research project. We advise that you remind them of their duty of confidentiality. Please note that it is not sufficient to avoid using names of students, patients etc. Be careful when using examples and background data such as age, sex and pinpointing exact time or place.

ASSESSMENT WHERE DPIA IS NOT REQUIRED

The project will process personal data:
- that is sensitive (special categories of personal data about health data)
- about vulnerable individuals

In most cases, this would require a more comprehensive assessment (DPIA). Nevertheless, we assess that the data protection risk is not high, and therefore will not need a DPIA. This is based on an overall assessment where the following elements are emphasized:
- sample 1-3, as well as the husbands of sample 1. (third persons), will be provided with information
- sample 1-3, as well as the husbands of sample 1. (third persons), give their consent
- the project ensures that the recruitment is voluntary
- few personal data will be processed and no one can be identified in the publications
- few people have access to the data/dataset
- the duration of processing is short
- the project has received ethical approval from the Public Health Foundation, Bangladesh Ethical Review Committee (PHFBD-ERC)

FOLLOW YOUR INSTITUTION'S GUIDELINES

We have assessed that you have legal basis to process the personal data, but remember that you must store, send and secure the collected data in accordance with your institution's guidelines. This means that you must use data processors (and the like) that your institution has an agreement with (i.e. cloud storage, online survey, and video conferencing providers).

Our assessment presupposes that the project will meet the requirements of accuracy (art. 5.1 d), integrity and confidentiality (art. 5.1 f) and security (art. 32) when processing personal data.

NOTIFY CHANGES

If you intend to make changes to the processing of personal data in this project, it may be necessary to notify us. This is done by updating the information registered in the Notification Form. On our website we explain which changes must be notified. Wait until you receive an answer from us before you carry out the changes: https://sikt.no/en/notify-changes-notification-form

FOLLOW-UP OF THE PROJECT

We will follow up the progress of the project at the planned end date in order to determine whether the processing of personal data has been concluded.

Good luck with the project!

Ethical Approval from Public Health foundation Bangladesh

Public Health Foundation Bangladesh Govt. Reg. No: DHA-09528

54, Inner Circular Road, Scout Market (2nd floor), Dhaka-1000. www: phfbd.net

Date: October 30, 2022

Ethics Reference No: *Please quote this ref on all correspondence*	**PHFBD-ERC-13/2022**
Project Title:	Attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study
Researchers Name (s):	Mamun Ur Rashid Pranta, Md. Taqbir Us Samad Talha, Quazi Maksudur Rahman, Sayeda Samira Binte Hoque, Taufique Joarder, Valentina Iversen
Principal Investigator (s):	Masruk Ahmed
Supervisor (s)	Taufique Joarder, Valentina Iversen

Thank you for submitting your application which was considered by the Public Health Foundation, Bangladesh Ethical Review Committee (PHFBD-ERC). The following documents were reviewed:

1. Ethical Review Checklist
2. Research Proposal
3. Consent Form
4. Research Tools

The PHFBD-ERC approves this study from an ethical point of view upon the addressing by the researchers of the concerns as raised by the PHFBD-ERC affiliates.

Approval is given for three years. Projects, which have not commenced within two years of original approval, must be re-submitted to PHFBD-ERC. You must inform PHFBD-ERC when the research has been completed.

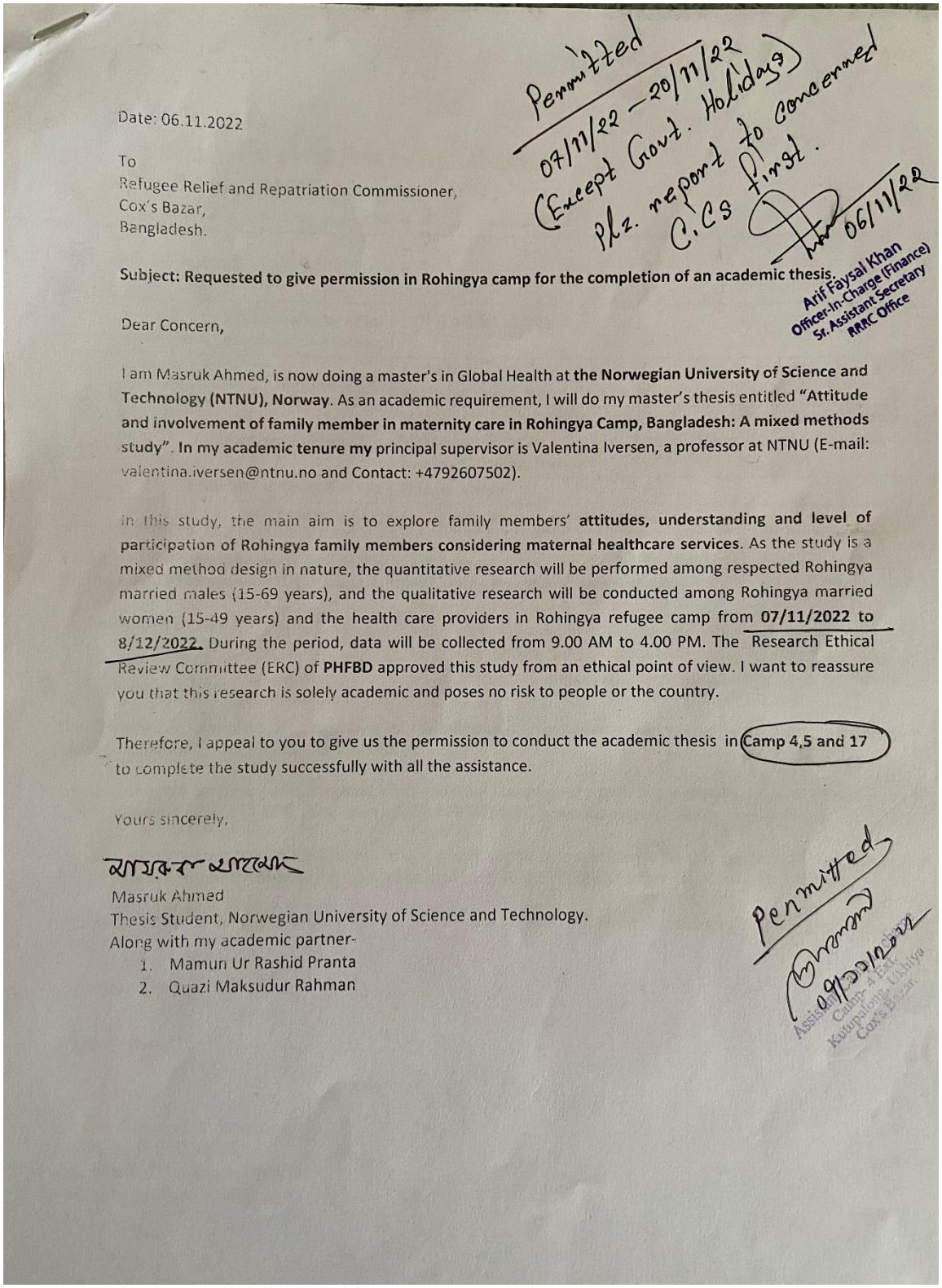
Any serious adverse events or significant change which occurs in connection with this study and/or which may alter its ethical considerations must be reported immediately to the PHFBD-ERC.

Approval is given on the understanding that the 'Guidelines for Ethical Review' are adhered to.

Yours sincerely,

Professor Sharmeen Yasmeen
Chair of the PHFBD-ERC
Public Health Foundation, Bangladesh
Email: sharmeenbmc@yahoo.com

Ethical Permission from RRRC and Camp in-Charge Officer



Permitted
07/11/22 – 20/11/22
(Except Govt. Holidays)
Plz. report to concerned
C.Cs first.
06/11/22
Arif Faysal Khan
Officer-In-Charge (Finance)
Sr. Assistant Secretary
RRRC Office

Date: 06.11.2022

To
Refugee Relief and Repatriation Commissioner,
Cox's Bazar,
Bangladesh.

Subject: Requested to give permission in Rohingya camp for the completion of an academic thesis.

Dear Concern,

I am Masruk Ahmed, is now doing a master's in Global Health at **the Norwegian University of Science and Technology (NTNU), Norway**. As an academic requirement, I will do my master's thesis entitled **"Attitude and involvement of family member in maternity care in Rohingya Camp, Bangladesh: A mixed methods study". In my academic tenure my** principal supervisor is Valentina Iversen, a professor at NTNU (E-mail: valentina.iversen@ntnu.no and Contact: +4792607502).

In this study, the main aim is to explore family members' **attitudes, understanding and level of participation of Rohingya family members considering maternal healthcare services**. As the study is a mixed method design in nature, the quantitative research will be performed among respected Rohingya married males (15-69 years), and the qualitative research will be conducted among Rohingya married women (15-49 years) and the health care providers in Rohingya refugee camp from **07/11/2022 to 8/12/2022.** During the period, data will be collected from 9.00 AM to 4.00 PM. The Research Ethical Review Committee (ERC) of **PHFBD** approved this study from an ethical point of view. I want to reassure you that this research is solely academic and poses no risk to people or the country.

Therefore, I appeal to you to give us the permission to conduct the academic thesis in **Camp 4,5 and 17** to complete the study successfully with all the assistance.

Yours sincerely,

মাসরুক আহমেদ

Masruk Ahmed
Thesis Student, Norwegian University of Science and Technology.
Along with my academic partner-

1. Mamun Ur Rashid Pranta
2. Quazi Maksudur Rahman

Permitted
Assistant Camp-in-Charge
Camp- 4 Ext.
Kutupalong Ukhiya
Cox's Bazar

Information letter, Consent form and Questionnaire for Male Partners (Quantitative research)

Information Pages:

Are you interested in taking part in the research project entitled **" Attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."**?

This is an inquiry about participation in a research project where the main purpose of this study is to explore male partners attitude, understanding and their level of participation in maternal health care services in Rohingya camp, Bangladesh. In this letter, we will give you information about the purpose of the study and what your participation will involve.

Purpose of the study

This research study is a part of a master's thesis where male partner's knowledge, attitude and involvement regrading maternity care and services will be explored. This study will find out wife's perception to involvement of male partners in maternity care and services as well as explain the attitude and knowledge of male partners that health workers have experienced. This study also finds out the association of knowledge, attitude, and involvement status with male partner's socio-demographics.

The following research questions will be addressed:

- Socio-demographic background
- Understanding of antenatal care (ANC), intranatal care (INC), and postnatal care (PNC) among male partners'
- Male partners attitude towards maternity care; to find out their attitude to the level of participation in ANC, INC and PNC
- Involvement of male partners towards maternity care; how they are involved in ANC, INC and PNC.

This project will aim to develop knowledge about:

- This study will evaluate wives and male partners' knowledge of maternity care in order to address safe motherhood and aid in the development of future health policies.
- This study will provide information of present male partners' attitudes toward maternity care.
- This study will explore the actual phenomenon of male partners' level of participation in maternity care.

The interview data will be used for the master's thesis paper of the researcher only. No other institute or person will use them for any kind of research or educational purposes.

Who is responsible for the research study?

Norwegian University of Science and Technology (NTNU), Norway, is responsible for the research study.

Why are you being asked to participate?

We are looking for study participants who are married male at least have one child and whose age between 18-69 years in living Rohingya Refugee camp and are willing to participate voluntarily in this study.

In order to get permission to contact the informants, firstly, we contact the camp in charge officer and from them we got information regarding the camp leader and the health care leader in the camp. Secondly, the leaders in the camp, contact the health care providers and refugees and inform about the study.

What does participation involve for you?

If you willing to take part in this cross-sectional study, this will involve you giving a questionnaire. It will take approx.10-12 minutes. The questionnaire includes questions about your knowledge, attitude, and involvement towards maternity care. Answering question is also voluntary. You have the right not to answer any question that you don't want to answer.

Participation is voluntary.

Your participation in this study will be voluntary and you may withdraw yourself at any time during this study without any consequences. I would like to assure you that all the information will be kept confidential, and not to be used for any other purposes except research. No information will be disclosed and there will be no risk of participating in this study.

Your personal privacy – how we will store and use your personal data.

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

- As a master's student Masruk Ahmed (Global Health, NTNU) and his supervisor Professor Valentina Iversen will have access to the personal data of the participants for the research purpose only.
- Your name and contact details will be replaced with a code. The list of names, contact details, and respective codes will be stored separately from the rest of the collected data, locked away/encrypted, etc. No unauthorized person will be allowed to use or gain access to the data.
- The survey will be taken by the master's student(researcher) himself.
- Data will be kept under a file folder in a safe and secure place with a lock and key. No unauthorized person will have access to the files.

The participants will not be recognizable as their names will not be disclosed. Age group, occupation, and whether they are living in a town or village may be published but in a way that, they will not be recognizable.

What will happen to your personal data at the end of the research project?

The master's thesis is scheduled to end in 15.12.2023. After the result publication and thesis defense all the personal data will be kept for two more years for reference. But if within this time the research will go further to publish a paper in a scientific journal, follow-up studies, or future research, then all the data will be stored in a safe and secure place to use as a reference.

Your rights

So long as you can be identified in the collected data, you have the right to

- access the personal data that is being processed about you.

- request that your personal data be deleted.

- request that incorrect personal data about you be corrected/rectified.

- receive a copy of your personal data (data portability), and

- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data.

What gives us the right to process your personal data?

NTNU (Norwegian University of Science and Technology) is responsible for the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project or want to exercise your rights, contact:

- NTNU (Norwegian University of Science and Technology) via Masruk Ahmed (MSc. In Global Health), email: masruka@stud.ntnu.no Cell: +4746398909 (Norway), +8801745277155 (Bangladesh), Supervisor: Valentina Iversen, Professor, Department of Mental Health, email: valentina.iversen@ntnu.no
- Our Data Protection Officer: Thomas Helgesen, Data protection officer, Director Organization and Infrastructure, email: thomas.helgesen@ntnu.no, cell:+4793079038, Address: Sluppenveien 12B/C, Møllenberg 4 etg, Trondheim.
- Data Protection Services, by email: (personverntjenester@sikt.no) or by telephone: +47 53 21 15 00

Your Sincerely

Project leader Student if applicable

(Researcher/Supervisor)

……

Consent form

I have received and understood information about the research study entitled "Attitude **and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."** and have been given the opportunity to ask questions. I give consent:

☐ to participate in the study.

☐ for my personal data to be stored after the end of the project for two years

☐ that I know who and where to contact if I have any queries about the study and my rights or want to discontinue my participation and opt-out of the study.

I give consent for my personal data to be processed until the end date of the project, approx. 15.12.2023.

……..

(Signature of the participant's, Date)

Section A: Socio-demographic background (সামাজিক-জনসংখ্যাগত পটভূমি তথ্য)

1 Age (বয়স):

2 Educational Qualification (শিক্ষাগত যোগ্যতা):

☐No formal education (প্রাতিষ্ঠানিক শিক্ষা নেই) ☐Below Primary (প্রাথমিকের নিচে) ☐Primary (প্রাথমিক)
☐Secondary (মাধ্যমিক) ☐Higher Secondary (উচ্চ মাধ্যমিক) ☐ Graduate (স্নাতক)
☐Others (অন্যান্য)

3 Occupation (পেশা):

☐Businessman (ব্যবসায়ী) ☐ Day labor (দিনমজুর) ☐Student (শিক্ষার্থী) ☐Unemployed (বেকার)
☐ Others (অন্যান্য)

4 Marital statuses (বৈবাহিক অবস্থা):

☐Arranged marriage (ব্যবস্থা বিবাহ) ☐ Love marriage (প্রেমের বিয়ে) ☐ Others (অন্যান্য)

5 Family size (পরিবারের আকার):

☐Nuclear family (ছোট পরিবার) ☐Combined family (সম্মিলিত পরিবার) ☐ others (অন্যান্য)

6 Number of children (সন্তান সংখ্যা):

7 Monthly income (মাসিক আয়):

☐<10000tk ☐ 10000-15000tk ☐ 15001-20000tk ☐ 20001-25000tk
☐ >25000tk

Section B: Understanding of antenatal care (ANC), intranatal care (INC), and postnatal care (PNC) among family members (male partner). (পরিবারের সদস্যদের (পুরুষ সঙ্গী) মধ্যে প্রসবপূর্ব যত্ন (ANC), অন্তঃসত্ত্বা যত্ন (INC), এবং প্রসবোত্তর যত্ন (PNC) সম্পর্কে বোঝা।)

Understanding towards ANC (এএনসি এর প্রতি ধারণা)

Do Pregnant women need to go for ANC? (গর্ভবতী মহিলাদের কি এএনসি এর জন্য যেতে হবে?)	☐Yes	☐No
Do ANC comprise 4 visits, (1st visit: 8-12 weeks, 2nd visit: between 24-26 weeks, 3rd visit: 32 weeks and 4th visit: 36-38 weeks)? (এএনসি কি 4টি ভিজিট নিয়ে গঠিত, (1ম ভিজিট: 8-12 সপ্তাহ, 2য় ভিজিট: 24-26 সপ্তাহের মধ্যে, 3য় ভিজিট: 32 সপ্তাহ এবং 4র্থ ভিজিট: 36-38 সপ্তাহ)?	☐Yes	☐No
Do ANC screen high risk cases? (এএনসি স্ক্রিন উচ্চ ঝুঁকির ক্ষেত্রে করে?)	☐Yes	☐No
Do ANC services provide ongoing primary preventive health care? (এএনসি পরিষেবাগুলি কি চলমান প্রাথমিক প্রতিরোধমূলক স্বাস্থ্যসেবা প্রদান করে?)	☐Yes	☐No
Do ANC services discuss the couple about the place, time and mode of delivery, and care of newborn? (এএনসি পরিষেবাগুলি কি দম্পতির স্থান, সময় এবং প্রসবের পদ্ধতি এবং নবজাতকের যত্ন সম্পর্কে আলোচনা করে?)	☐Yes	☐No
DO ANC services provide pregnant women with access to supplemental micronutrients? (এএনসি পরিষেবাগুলি কি গর্ভবতী মহিলাদের সম্পূরক মাইক্রোনিউট্রিয়েন্টগুলির অ্যাক্সেস প্রদান করে?)	☐Yes	☐No
Do ANC services ensure mother vaccination is up to date? (এএনসি পরিষেবাগুলি কি	☐Yes	☐No

নিশ্চিত করে যে মায়ের টিকা আপ টু ডেট?)		
Do ANC services treat or prevent any early pregnancy related complications? (এএনসি পরিষেবাগুলি কি প্রাথমিক গর্ভাবস্থা সম্পর্কিত জটিলতার চিকিত্সা বা প্রতিরোধ করে?)	☐Yes	☐No

Understanding towards INC (আইএনসি এর প্রতি ধারণা)

Do INC services comprise through asepsis? (আইএনসি পরিষেবাগুলি কি অ্যাসেপসিসের মাধ্যমে গঠিত?)	☐Yes	☐No
Do INC services ensure smooth delivery without injuring mother or baby? (আইএনসি পরিষেবাগুলি কি মা বা শিশুকে আঘাত না করে মসৃণ প্রসব নিশ্চিত করে?)	☐Yes	☐No
Do INC services involve readiness to deal with pregnancy related complications? (আইএনসি পরিষেবাগুলি কি গর্ভাবস্থা সম্পর্কিত জটিলতাগুলি মোকাবেলা করার প্রস্তুতির সাথে জড়িত?)	☐Yes	☐No
Do INC services provide care of the baby at delivery? (আইএনসি পরিষেবাগুলি কি প্রসবের সময় শিশুর যত্ন প্রদান করে?)	☐Yes	☐No

Understanding towards PNC (পিএনসি এর প্রতি ধারণা)

Do PNC services prevent postpartum complications? (পিএনসি পরিষেবাগুলি কি প্রসবোত্তর জটিলতা প্রতিরোধ করে?)	☐Yes	☐No
Do PNC promote the physical well-being of mother and baby? (পিএনসি কি মা ও শিশুর শারীরিক সুস্থতার বিকাশ ঘটায়?)	☐Yes	☐No
Do PNC educate care of the baby and strengthen mothers' own confidence? (পিএনসি কি শিশুর যত্ন নিতে এবং মায়েদের নিজের আত্মবিশ্বাসকে শক্তিশালী করে?)	☐Yes	☐No
Do PNC support of optimal breast-feeding technique? (পিএনসি কি সর্বোত্তম স্তন খাওয়ানোর কৌশল সমর্থন করে?)	☐Yes	☐No
Do PNC ensure immunization of the infant? (পিএনসি কি শিশুর টিকা নিশ্চিত করে?)	☐Yes	☐No

Section C: Male partners attitude towards maternity care (প্রসূতি যত্নের প্রতি পুরুষদের মনোভাব)

	Strongly Agree দৃঢ়ভাবে একমত	Agree একমত	Disagree অসম্মতি	Strongly Disagree দৃঢ়ভাবে অসম্মতি
Men should encourage their wives for preconception care (পুরুষদের উচিত তাদের স্ত্রীদেরকে গর্ভধারণের পূর্ব পরিচর্যার জন্য উৎসাহিত করা)				
Men should go along with their wives for ANC (এএনসি				

যত্নের জন্য পুরুষদের তাদের স্ত্রীদের সাথে যাওয়া উচিত)				
Men should encourage for family planning (পরিবার পরিকল্পনার জন্য পুরুষদের উৎসাহিত করা উচিত)				
Men should decide places of delivery (পুরুষদের প্রসবের স্থান নির্ধারণ করা উচিত)				
Men should be present in the labor room (পুরুষদের লেবার রুমে উপস্থিত থাকতে হবে)				
Men should support their wives to attend postnatal visits (পুরুষদের উচিত তাদের স্ত্রীদের প্রসবোত্তর পরিদর্শনে যোগদান করতে সহায়তা করা)				
Men should assist in house chores (পুরুষদের উচিত ঘরের কাজে সহযোগিতা করা)				
Men should ensure child complete immunization (পুরুষদের উচিত শিশুর সম্পূর্ণ টিকাদান নিশ্চিত করা)				
Men should support exclusive breast feeding (EBF) (পুরুষদের বুকের দুধ খাওয়ানোকে সমর্থন করা উচিত)				

Section D: Involvement of male partners towards maternity care (মাতৃত্বকালীন যত্নে পুরুষদের সম্পৃক্ততা)

Male partners involvement in ANC (এএনসি -তে পুরুষদের সম্পৃক্ততা)

Did you live together with your wife at the time of pregnancy? (আপনি কি গর্ভাবস্থায় আপনার স্ত্রীর সাথে একসাথে থাকতেন?)	☐Yes	☐No
Did you involve in planned pregnancy? (আপনি কি পরিকল্পিত গর্ভাবস্থায় জড়িত ছিলেন?)	☐Yes	☐No
Did you put money aside for emergency? (আপনি কি জরুরি অবস্থার জন্য টাকা আলাদা করে রেখেছিলেন?)	☐Yes	☐No
Did you involve making transport arrangements? (আপনি কি পরিবহন ব্যবস্থা করার সাথে জড়িত ছিলেন?)	☐Yes	☐No
Did you go along with your wife for antenatal visits? (আপনি কি আপনার স্ত্রীর সাথে প্রসবপূর্ব পরিদর্শনের জন্য গিয়েছিলেন?)	☐Yes	☐No
Did you make consult with your wife's health care professionals about maternal health issues? (আপনি কি আপনার স্ত্রীর স্বাস্থ্যসেবা বিশেষজ্ঞদের সাথে মাতৃস্বাস্থ্য সমস্যা সম্পর্কে পরামর্শ করেছেন?)	☐Yes	☐No
Did you give financial support during pregnancy? (আপনি কি গর্ভাবস্থায় আর্থিক সহায়তা দিয়েছেন?)	☐Yes	☐No

Did you give mental support during pregnancy? (আপনি কি গর্ভাবস্থায় মানসিক সমর্থন দিয়েছেন?)	☐Yes	☐No

Male partners involvement in INC/ আইএনসি -তে পুরুষদের সম্পৃক্ততা

Did you give accompany with your wife at the time of delivery? (আপনি কি প্রসবের সময় আপনার স্ত্রীর সাথে সঙ্গ দিয়েছেন?)	☐Yes	☐No
Did you make prior joint plan for delivery? (আপনি কি প্রসবের জন্য পূর্বে যৌথ পরিকল্পনা করেছিলেন?)	☐Yes	☐No
Did you make discuss maternal health issues with your wife's health care professionals during delivery? (আপনি কি প্রসবের সময় আপনার স্ত্রীর স্বাস্থ্যসেবা বিশেষজ্ঞদের সাথে মাতৃস্বাস্থ্য সমস্যা নিয়ে আলোচনা করেছেন?)	☐Yes	☐No
Did you provide household working support during delivery? (আপনি কি প্রসবের সময় পরিবারের কাজের সহায়তা প্রদান করেছেন?)	☐Yes	☐No

Male partners involvement in PNC/ পিএনসি-তে পুরুষদের সম্পৃক্ততা

Did you stay with your wife after delivery? (আপনি কি প্রসবের পর আপনার স্ত্রীর সাথে থাকতেন?)	☐Yes	☐No
Did you make joint plan during post-delivery period? (আপনি কি পোস্ট-ডেলিভারি সময়কালে যৌথ পরিকল্পনা করেছিলেন?)	☐Yes	☐No
Did you go along with your wife for post-natal visits? (আপনি কি প্রসব-পরবর্তী পরিদর্শনের জন্য আপনার স্ত্রীর সাথে গিয়েছিলেন?)	☐Yes	☐No
Did you make discuss maternal health issues with your wife's health care professionals after delivery? (আপনি কি প্রসবের পরে আপনার স্ত্রীর স্বাস্থ্যসেবা বিশেষজ্ঞদের সাথে মাতৃস্বাস্থ্য সমস্যা নিয়ে আলোচনা করেছেন?)	☐Yes	☐No
Did you provide mental, financial, and household support after delivery? (আপনি কি প্রসবের পরে মানসিক, আর্থিক এবং পারিবারিক সহায়তা প্রদান করেছেন?)	☐Yes	☐No

Thank you for giving your valuable time/ আপনার মূল্যবান সময় দেওয়ার জন্য আপনাকে ধন্যবাদ.

Information Letter, Consent Form and Guidelines for Women (Qualitative research)

Information Pages:

Are you interested in taking part in the research project entitled **" Attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."**?

This is an inquiry about participation in a research project where the main purpose of this study is to explore male partners attitude, understanding and their level of participation in maternal health care services in Rohingya camp, Bangladesh. In this letter, we will give you information about the purpose of the study and what your participation will involve.

Purpose of the study

This research study is a part of a master's thesis where male partner's knowledge, attitude and involvement regrading maternity care and services will be explored. This study will find out wife's perception to involvement of male partners in maternity care and services as well as explain the attitude and knowledge of male partners that health workers have experienced. This study also finds out the association of knowledge, attitude, and involvement status with male partner's socio-demographics.

The following research questions will be addressed:

- Socio-demographic background
- Understanding of antenatal care (ANC), intranatal care (INC), and postnatal care (PNC) among male partners'
- Male partners attitude towards maternity care; to find out their attitude to the level of participation in ANC, INC and PNC
- Involvement of male partners towards maternity care; how they involved in ANC, INC and PNC.

This project will aim to develop knowledge about:

- This study will evaluate wives and male partners' knowledge of maternity care in order to address safe motherhood and aid in the development of future health policies.
- This study will provide information of present male partners' attitudes toward maternity care.
- This study will explore the actual phenomenon of male partners' level of participation in maternity care.

The interview data will be used for the master's thesis paper of the researcher only. No other institute or person will use them for any kind of research or educational purposes.

Who is responsible for the research study?

Norwegian University of Science and Technology (NTNU), Norway, is responsible for the research study.

Why are you being asked to participate?

We are looking for study participants who are married women at least have one child and whose age between 18-49 years in living Rohingya Refugee camp and are willing to participate voluntarily in this study.

In order to get permission to contact the informants, firstly, we contact the camp in charge officer and from them we got information regarding the camp leader and the health care leader in the camp. Secondly, the leaders in the camp, contact the health care providers and refugees and inform about the study.

What does participation involve for you?

If you willing to take part in this study, this will involve you giving an in-depth interview. It will take approx.30- 45 minutes. The interview includes questions about your experience in maternity care. Answering question is also voluntary. You have the right not to answer any question that you don't want to answer. Your interview will be recorded electronically with an audio recorder.

Participation is voluntary.

Your participation in this study will be voluntary and you may withdraw yourself at any time during this study without any consequences. I would like to assure you that all the information will be kept confidential, and not to be used for any other purposes except research. No information will be disclosed and there will be no risk of participating in this study.

Your personal privacy – how we will store and use your personal data.

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

- As a master's student Masruk Ahmed (Global Health, NTNU) and his supervisor Professor Valentina Iversen will have access to the personal data of the participants for the research purpose only.
- Your name and contact details will be replaced with a code. The list of names, contact details, and respective codes will be stored separately from the rest of the collected data, locked away/encrypted, etc. No unauthorized person will be allowed to use or gain access to the data.
- Survey will be taken by the master's student(researcher) himself.
- Data will be kept under a file folder in a safe and secure place with a lock and key. No unauthorized person will have access to the files.

The participants will not be recognizable as their names will not be disclosed. Age group, occupation, and whether they are living in a town or village may be published but in a way that, they will not be recognizable.

What will happen to your personal data at the end of the research project?

The master's thesis is scheduled to end in 15.12.2023. After the result publication and thesis defense all the personal data will be kept for two more years for reference. But if within this time the research will go further to publish a paper in a scientific journal, follow-up studies, or future research, then all the data will be stored in a safe and secure place to use as a reference.

Your rights

So long as you can be identified in the collected data, you have the right to

- access the personal data that is being processed about you.

- request that your personal data be deleted.

- request that incorrect personal data about you be corrected/rectified.

- receive a copy of your personal data (data portability), and

- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data.

What gives us the right to process your personal data?

NTNU (Norwegian University of Science and Technology) is responsible for the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project or want to exercise your rights, contact:

- NTNU (Norwegian University of Science and Technology) via Masruk Ahmed (MSc. In Global Health), email: masruka@stud.ntnu.no Cell: +4746398909 (Norway), +8801745277155 (Bangladesh), Supervisor: Valentina Iversen, Professor, Department of Mental Health, email: valentina.iversen@ntnu.no
- Our Data Protection Officer: Thomas Helgesen, Data protection officer, Director Organization and Infrastructure, email: thomas.helgesen@ntnu.no, cell:+4793079038, Address: Sluppenveien 12B/C, Møllenberg 4 etg, Trondheim.
- Data Protection Services, by email: (personverntjenester@sikt.no) or by telephone: +47 53 21 15 00

Your Sincerely

Project leader Student if applicable

(Researcher/Supervisor)

……

Consent form

I have received and understood information about the research study entitled "Attitude **and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."** and have been given the opportunity to ask questions. I give consent:

☐ to participate in the study.

☐ for the audio recording of the interview.

☐ for my personal data to be stored after the end of the project for two years

☐ that I know who and where to contact if I have any queries about the study and my rights or want to discontinue my participation and opt-out of the study.

I give consent for my personal data to be processed until the end date of the project, approx. 15.12.2023.

……..

(Signature of the participant's, Date)

Interview guidelines for mothers/ মায়েদের জন্য সাক্ষাৎকার নির্দেশিকা।

The interviewer will inquire about (সাক্ষাৎকারী জিজ্ঞাসা করবে):

- Respondent: Age, Education level, Occupation, Age and number of children, Source of income (উত্তরদাতা: বয়স, শিক্ষার স্তর, পেশা, বয়স এবং সন্তানের সংখ্যা, আয়ের উৎস)
- Husband: Age, Education level, Occupation, Income (স্বামী: বয়স, শিক্ষার স্তর, পেশা, আয়)
- Household: Other members of household (with relationship), Condition of household. (পরিবার: পরিবারের অন্যান্য সদস্য (সম্পর্কের সাথে), পরিবারের অবস্থা)

Antenatal Care/ প্রসবপূর্ব যত্ন

Have you received antenatal care services during your pregnancy? If not, what was the main reason behind it? If the answer is yes, (আপনি কি আপনার গর্ভাবস্থায় প্রসবপূর্ব যত্ন পরিষেবা পেয়েছেন? তা না হলে এর পেছনে মূল কারণ কী ছিল? উত্তর যদি হ্যাঁ হয়,)

- How many times, did you take ANC service? Was your husband present with you? If not, why he did not go? If yes, do you think your husband helped you decide to have ANC visits, and if so, how? Please explain. (আপনি কতবার প্রসবপূর্ব পরিচর্যা সেবা নিয়েছেন? আপনার স্বামী কি আপনার সাথে উপস্থিত ছিলেন? তা না হলে তিনি গেলেন না কেন? যদি হ্যাঁ, আপনি কি মনে করেন যে আপনার স্বামী আপনাকে প্রসবপূর্ব পরিচর্যা পরিদর্শন করার সিদ্ধান্ত নিতে সাহায্য করেছেন, এবং যদি তাই হয়, কিভাবে? দয়া করে ব্যাখ্যা করুন.)
- Did your husband encourage you to take ANC services? If yes, how? Please explain it. What role do you think a husband should play in taking ANC services? (আপনার স্বামী কি আপনাকে প্রসবপূর্ব সেবা নিতে উৎসাহিত করেছেন? যদি হ্যাঁ, কিভাবে? এটা ব্যাখ্যা করুন. প্রসবপূর্ব সেবা গ্রহণে একজন স্বামীর কী ভূমিকা পালন করা উচিত বলে আপনি মনে করেন?)
- Has your husband participated in the preplanned pregnancy, the transportation preparations, or the emergency plan? If yes, what role has he played? (আপনার স্বামী কি পূর্বপরিকল্পিত গর্ভাবস্থা, পরিবহন প্রস্তুতি বা জরুরী পরিকল্পনায় অংশগ্রহণ করেছেন? যদি হ্যাঁ, তিনি কি ভূমিকা পালন করেছেন?)
- Did your husband look out for your emotional needs and make sure you had a nutritious food and micronutrient supplement? If yes, how? (আপনার স্বামী কি আপনার মানসিক চাহিদার দিকে নজর দিয়েছেন এবং নিশ্চিত করেছেন যে আপনার পুষ্টিকর খাবার এবং মাইক্রোনিউট্রিয়েন্ট সম্পূরক আছে? যদি হ্যাঁ, কিভাবে?)
- Did your husband have any concerns about family planning? If yes, did he discuss it with you before making the decision about the family planning method? (আপনার স্বামীর কি পরিবার পরিকল্পনা নিয়ে কোনো উদ্বেগ ছিল? যদি হ্যাঁ, পরিবার পরিকল্পনা পদ্ধতি সম্পর্কে সিদ্ধান্ত নেওয়ার আগে তিনি কি আপনার সাথে আলোচনা করেছিলেন?)
- When you were pregnant, did your husband discuss your health concerns with health care providers? (আপনি যখন গর্ভবতী ছিলেন, আপনার স্বামী কি আপনার স্বাস্থ্যের উদ্বেগ নিয়ে স্বাস্থ্যসেবা প্রদানকারীদের সাথে আলোচনা করেছিলেন?)
- Do you feel your husband provided you with all the support you needed during your pregnancy? If yes, can you tell me in detail about the support your husband provided for your finances and mental health? How satisfied were you with the support you received from your husband during pregnancy? If not, what were the main challenges to get full support from your husband? (আপনি কি মনে করেন যে আপনার স্বামী আপনার গর্ভাবস্থায় আপনার

প্রয়োজনীয় সমস্ত সহায়তা প্রদান করেছেন? যদি হ্যাঁ, আপনি কি আমাকে আপনার আর্থিক এবং মানসিক স্বাস্থ্যের জন্য আপনার স্বামী যে সহায়তা প্রদান করেছেন সে সম্পর্কে বিস্তারিত বলতে পারেন? গর্ভাবস্থায় আপনার স্বামীর কাছ থেকে আপনি যে সমর্থন পেয়েছেন তাতে আপনি কতটা সন্তুষ্ট ছিলেন? যদি না হয়, আপনার স্বামীর কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান সমস্যাগুলি কী ছিল?)

Intranatal Care/ অন্তঃসত্ত্বা পরিচর্যা

Have you received intranatal care services during your pregnancy? If not, what was the main reason behind it? If the answer is yes, probe: (আপনি কি আপনার গর্ভাবস্থায় অন্তঃসত্ত্বা যত্ন পরিষেবা পেয়েছেন? তা না হলে এর পেছনে মূল কারণ কী ছিল? যদি উত্তর হ্যাঁ হয়, অনুসন্ধান করুন:)

- Did you get accompany from your husband during the labor time? If not, explain why, and if so, explain how. (প্রসবকালীন সময়ে আপনি আপনার স্বামীর কাছ থেকে সঙ্গ পেয়েছেন? যদি না হয়, কেন ব্যাখ্যা করুন, এবং যদি হ্যাঁ, কিভাবে ব্যাখ্যা করুন।)
- Did you both make prior joint plans for delivery? Was your husband present in the labor room? If not, why? If yes, how did he help you in the delivery room? (আপনি উভয় ডেলিভারির জন্য পূর্বে যৌথ পরিকল্পনা করেছেন? আপনার স্বামী কি লেবার রুমে উপস্থিত ছিলেন? না হলে কেন? যদি হ্যাঁ, তিনি কীভাবে আপনাকে ডেলিভারি রুমে সাহায্য করেছিলেন?)
- Do you feel your husband provided you with the all the support you needed during your delivery? Can you explain about the financial support, mental support, and household working support in detail? How satisfied were you with the support you received from your husband during delivery? If not, what were the main challenges to get full support from your husband? (আপনি কি মনে করেন যে আপনার স্বামী আপনার প্রসবের সময় আপনার প্রয়োজনীয় সমস্ত সহায়তা প্রদান করেছেন? আপনি কি আর্থিক সহায়তা, মানসিক সহায়তা এবং পরিবারের কাজের সহায়তা সম্পর্কে বিস্তারিতভাবে ব্যাখ্যা করতে পারেন? প্রসবের সময় আপনি আপনার স্বামীর কাছ থেকে যে সমর্থন পেয়েছেন তাতে আপনি কতটা সন্তুষ্ট ছিলেন? যদি না হয়, আপনার স্বামীর কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান সমস্যাগুলি কী ছিল?)

Post-natal Care/ প্রসব পরবর্তী যত্ন

Have you received postnatal care services during your pregnancy? If not, what was the main reason behind it? If yes, probe: (আপনি কি আপনার গর্ভাবস্থায় প্রসবোত্তর যত্ন পরিষেবা পেয়েছেন? তা না হলে এর পেছনে মূল কারণ কী ছিল? যদি হ্যাঁ, অনুসন্ধান:)

- Did your husband stay with you after delivery? If not, why? If yes, what did he do? Please explain. (প্রসবের পর আপনার স্বামী কি আপনার সাথে থাকতেন? না হলে কেন? যদি হ্যাঁ, তিনি কি করেছেন? দয়া করে ব্যাখ্যা করুন.)
- Have you received postnatal visits? Do you think your husband encourage you to attend postnatal visits? If yes, how? Please explain it. Did your husband go along with your post-natal visit to the health care facilities? If yes, how many times? (আপনি কি প্রসবোত্তর পরিদর্শন পেয়েছেন? আপনি কি মনে করেন যে আপনার স্বামী আপনাকে প্রসবোত্তর পরিদর্শনে যোগ দিতে উত্সাহিত করেন? যদি হ্যাঁ, কিভাবে? এটা ব্যাখ্যা করুন. আপনার স্বামী কি প্রসব-পরবর্তী স্বাস্থ্যসেবা সুবিধায় আপনার সাথে গিয়েছিলেন? যদি হ্যাঁ, কত বার?)
- Do you feel husband should be supportive about exclusive breast feeding and did your husband gave active support for exclusive breast-feeding activities? Tell me details.

(আপনি কি মনে করেন যে স্বামীকে বুকের দুধ খাওয়ানোর ব্যাপারে সহায়ক হওয়া উচিত এবং আপনার স্বামী কি বুকের দুধ খাওয়ানোর জন্য সক্রিয় সমর্থন দিয়েছেন? আমাকে বিস্তারিত বলুন.)

- Did your husband look out for your emotional needs and make sure you had a nutritious food and micronutrient supplement after delivery? Can you explain how he managed? (আপনার স্বামী কি আপনার আবেগের দিকে নজর দিয়েছেন এবং নিশ্চিত করেছেন যে প্রসবের পরে আপনার পুষ্টিকর খাবার এবং মাইক্রোনিউট্রিয়েন্ট সম্পূরক আছে? আপনি কি ব্যাখ্যা করতে পারেন কিভাবে তিনি সবকিছু পরিচালনা করেছেন?)
- Do you feel your husband provided you with the all the support you needed after your delivery? Can you explain about the financial support, mental support, and household working support in detail? How satisfied were you with the support you received from your husband after your delivery? If not, what were the main challenges to get full support from your husband? (আপনি কি মনে করেন যে আপনার স্বামী আপনার প্রসবের পরে আপনার প্রয়োজনীয় সমস্ত সহায়তা প্রদান করেছেন? আপনি কি আর্থিক সহায়তা, মানসিক সহায়তা এবং পরিবারের কাজের সহায়তা সম্পর্কে বিস্তারিতভাবে ব্যাখ্যা করতে পারেন? আপনার প্রসবের পর আপনার স্বামীর কাছ থেকে আপনি যে সমর্থন পেয়েছেন তাতে আপনি কতটা সন্তুষ্ট ছিলেন? যদি না হয়, আপনার স্বামীর কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান সমস্যাগুলি কী ছিল?)

Information letter, Consent form and Guidelines for Health care providers

Information Pages:

Are you interested in taking part in the research project entitled **" Attitude and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."**?

This is an inquiry about participation in a research project where the main purpose of this study is to explore male partners attitude, understanding and their level of participation in maternal health care services in Rohingya camp, Bangladesh. In this letter, we will give you information about the purpose of the study and what your participation will involve.

Purpose of the study

This research study is a part of a master's thesis where male partner's knowledge, attitude and involvement regrading maternity care and services will be explored. This study will find out wife's perception to involvement of male partners in maternity care and services as well as explain the attitude and knowledge of male partners that health workers have experienced. This study also finds out the association of knowledge, attitude, and involvement status with male partner's socio-demographics.

The following research questions will be addressed:

- Understanding of antenatal care (ANC), intranatal care (INC), and postnatal care (PNC) among male partners'
- Male partners attitude towards maternity care; to find out their attitude to the level of participation in ANC, INC and PNC
- Involvement of male partners towards maternity care; how they involved in ANC, INC and PNC.

This project will aim to develop knowledge about:

- This study will evaluate wives and male partners' knowledge of maternity care in order to address safe motherhood and aid in the development of future health policies.
- This study will provide information of present male partners' attitudes toward maternity care.
- This study will explore the actual phenomenon of male partners' level of participation in maternity care.

The interview data will be used for the master's thesis paper of the researcher only. No other institute or person will use them for any kind of research or educational purposes.

Who is responsible for the research study?

Norwegian University of Science and Technology (NTNU), Norway, is responsible for the research study.

Why are you being asked to participate?

We are looking for study participants all health professionals who have provided maternal care in Rohingya camp and their age between 25-67 years and are willing to participate voluntarily in this study.

In order to get permission to contact the informants, firstly, we contacted the camp in charge officer and from them we got information regarding the camp leader and the health care leader in the camp. Secondly, the leaders in the camp contact the health care providers and refugees and inform them about the study.

What does participation involve for you?

If you are willing to take part in this study, this will involve you giving an in-depth interview. It will take approx.30-45 minutes. The interview includes questions about your experience in maternity care. Answering questions is also voluntary. You have the right not to answer any question that you don't want to answer. Your interview will be recorded electronically with an audio recorder.

Participation is voluntary.

Your participation in this study will be voluntary and you may withdraw yourself at any time during this study without any consequences. I would like to assure you that all the information will be kept confidential, and not to be used for any other purposes except research. No information will be disclosed and there will be no risk of participating in this study.

Your personal privacy – how we will store and use your personal data.

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

- As a master's student Masruk Ahmed (Global Health, NTNU) and his supervisor Professor Valentina Iversen will have access to the personal data of the participants for the research purpose only.
- Your name and contact details will be replaced with a code. The list of names, contact details, and respective codes will be stored separately from the rest of the collected data, locked away/encrypted, etc. No unauthorized person will be allowed to use or gain access to the data.
- The survey will be taken by the master's student(researcher) himself.
- Data will be kept under a file folder in a safe and secure place with a lock and key. No unauthorized person will have access to the files.

The participants will not be recognizable as their names will not be disclosed. Age group, occupation, and whether they are living in a town or village may be published but in a way that, they will not be recognizable.

What will happen to your personal data at the end of the research project?

The master's thesis is scheduled to end in 15.12.2023. After the result publication and thesis defense all the personal data will be kept for two more years for reference. But if within this time the research will go further to publish a paper in a scientific journal, follow-up studies, or future research, then all the data will be stored in a safe and secure place to use as a reference.

Your rights

So long as you can be identified in the collected data, you have the right to

- access the personal data that is being processed about you.

- request that your personal data be deleted.

- request that incorrect personal data about you be corrected/rectified.

- receive a copy of your personal data (data portability), and

- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data.

What gives us the right to process your personal data?

NTNU (Norwegian University of Science and Technology) is responsible for the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project or want to exercise your rights, contact:

- NTNU (Norwegian University of Science and Technology) via Masruk Ahmed (MSc. In Global Health), email: masruka@stud.ntnu.no Cell: +4746398909 (Norway), +8801745277155 (Bangladesh), Supervisor: Valentina Iversen, Professor, Department of Mental Health, email: valentina.iversen@ntnu.no
- Our Data Protection Officer: Thomas Helgesen, Data protection officer, Director Organization and Infrastructure, email: thomas.helgesen@ntnu.no, cell:+4793079038, Address: Sluppenveien 12B/C, Møllenberg 4 etg, Trondheim.
- Data Protection Services, by email: (personverntjenester@sikt.no) or by telephone: +47 53 21 15 00

Your Sincerely

Project leader Student if applicable

(Researcher/Supervisor)

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Consent form

I have received and understood information about the research study entitled "Attitude **and involvement of family member in Maternity care in Rohingya Camp, Bangladesh: A mixed methods study."** and have been given the opportunity to ask questions. I give consent:

☐ to participate in the study.

☐ for the audio recording of the interview.

☐ for my personal data to be stored after the end of the project for two years

☐ that I know who and where to contact if I have any queries about the study and my rights or want to discontinue my participation and opt-out of the study.

I give consent for my personal data to be processed until the end date of the project, approx. 15.12.2023.

……..

(Signature of the participant's, Date)

Interview Guidelines for Health Care Providers/ স্বাস্থ্যসেবা প্রদানকারীদের জন্য সাক্ষাৎকারের নির্দেশিকা

Antenatal Care/ প্রসবপূর্ব যত্ন

Experience in providing Antenatal care (If applicable)/ প্রসবপূর্ব যত্ন প্রদানের অভিজ্ঞতা (যদি প্রযোজ্য হয়)

Do you provide ANC services? What responsibilities do you have in providing antenatal care? If yes, probe: (আপনি কি এএনসি পরিষেবা প্রদান করেন? প্রসবপূর্ব যত্ন প্রদানের ক্ষেত্রে আপনার কী দায়িত্ব রয়েছে? যদি হ্যাঁ, অনুসন্ধান:)

- How many times usually the women's take ANC services? Are the women come alone to take the services? If not, are their husband come with them? Do you feel their husband helped them decide to have ANC visits, and if so, how? Please explain. (গর্ভবতী মহিলারা সাধারণত কতবার প্রসবপূর্ব সেবা গ্রহণ করেন? মহিলারা কি একাই সেবা নিতে আসে? না হলে তাদের স্বামী কি তাদের সাথে আসে? আপনি কি মনে করেন যে তাদের স্বামী তাদের প্রসবপূর্ব পরিদর্শন করার সিদ্ধান্ত নিতে সাহায্য করেছেন, এবং যদি তাই হয়, কিভাবে? দয়া করে ব্যাখ্যা করুন.)
- What role do you think a husband should play in taking ANC services? Do you think their husband were motivated to take the services and actively encourage their wives to take ANC services? If yes, how? Please explain it. (প্রসবপূর্ব সেবা নেওয়ার ক্ষেত্রে একজন স্বামীর কী ভূমিকা পালন করা উচিত বলে আপনি মনে করেন? আপনি কি মনে করেন যে তাদের স্বামী সেবা নিতে অনুপ্রাণিত হয়েছেন এবং তাদের স্ত্রীদের প্রসবপূর্ব সেবা নিতে সক্রিয়ভাবে উৎসাহিত করেছেন? যদি হ্যাঁ, কিভাবে? এটা ব্যাখ্যা করুন)
- Do you think husband should participate in the preplanned pregnancy, the transportation arrangements, and any emergency plan? If yes, when you are giving ANC services, you have probably noticed what role the husband played for these? Please explain. (আপনি কি মনে করেন স্বামীর পূর্বপরিকল্পিত গর্ভাবস্থা, পরিবহন ব্যবস্থা এবং কোনো জরুরি পরিকল্পনায় অংশগ্রহণ করা উচিত? যদি হ্যাঁ, আপনি যখন প্রসবপূর্ব সেবা দিচ্ছেন, আপনি সম্ভবত লক্ষ্য করেছেন যে এসবের জন্য স্বামী কী ভূমিকা পালন করেছেন? দয়া করে ব্যাখ্যা করুন.)
- Do you feel that their husband look out for mother emotional needs, helps to improve their health issues, make sure that mother got nutritious foods and micronutrient supplement? If yes, how? (আপনি কি মনে করেন যে তাদের স্বামী মায়ের মানসিক চাহিদার দিকে নজর দেন, তাদের স্বাস্থ্য সমস্যাগুলি উন্নত করতে সাহায্য করেন, নিশ্চিত হন যে মা পুষ্টিকর খাবার এবং মাইক্রোনিউট্রিয়েন্ট সম্পূরক পেয়েছেন? যদি হ্যাঁ, কিভাবে?)
- Have you noticed any concern from husbands in regard to family planning? Did their husbands discuss with you about family planning method and how they involved with family planning? Can you explain it briefly? (আপনি কি পরিবার পরিকল্পনার ব্যাপারে স্বামীদের কোন উদ্বেগ লক্ষ্য করেছেন? তাদের স্বামীরা কি আপনার সাথে পরিবার পরিকল্পনা পদ্ধতি এবং কিভাবে তারা পরিবার পরিকল্পনার সাথে জড়িত সে বিষয়ে আলোচনা করেছেন? আপনি এটা সংক্ষেপে ব্যাখ্যা করতে পারেন?)
- Did their husband appropriately follow your counsel and talk to you about the problems with their wife's health? During the consultation, how did their husbands feel about ANC services? (তাদের স্বামী কি যথাযথভাবে আপনার পরামর্শ অনুসরণ করেছেন এবং তাদের স্ত্রীর স্বাস্থ্যের সমস্যা সম্পর্কে আপনার সাথে কথা বলেছেন? পরামর্শের সময়, তাদের স্বামীরা পরিষেবা সম্পর্কে কেমন অনুভব করেছিলেন?)
- Do you feel the husbands provided their wives with all the support during their pregnancy? If yes, can you tell me in detail about the financial and mental health support based on your observations and experience? Do you feel the wives were satisfied with the support received from their husbands during pregnancy? If not, what were the main

challenges to get full support from their husbands? (আপনি কি মনে করেন যে স্বামীরা তাদের গর্ভাবস্থায় তাদের স্ত্রীদের সমস্ত সহায়তা দিয়েছিলেন? যদি হ্যাঁ, আপনি কি আমাকে আপনার পর্যবেক্ষণ এবং অভিজ্ঞতার ভিত্তিতে আর্থিক এবং মানসিক স্বাস্থ্য সহায়তা সম্পর্কে বিস্তারিত বলতে পারেন? আপনি কি মনে করেন যে স্ত্রীরা গর্ভাবস্থায় তাদের স্বামীদের কাছ থেকে প্রাপ্ত সমর্থনে সন্তুষ্ট ছিল? যদি না হয়, তাদের স্বামীদের কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান অসুবিধা কি ছিল?)

Intranatal Care / অন্তঃসত্ত্বা পরিচর্যা

Do you provide INC services? What responsibilities do you have in providing intranatal care? If yes, probe: (আপনি কি আইএনসি পরিষেবা প্রদান করেন? অন্তঃসত্ত্বা যত্ন প্রদানের ক্ষেত্রে আপনার কী দায়িত্ব রয়েছে? যদি হ্যাঁ, অনুসন্ধান:)

- Do you consider it essential for husbands to stay with their women during labor? Have you ever observed wives being accompanied by their husbands while giving birth? explain using your personal experience. (আপনি কি প্রসবের সময় স্বামীদের তাদের মহিলাদের সাথে থাকা অপরিহার্য মনে করেন? আপনি কি কখনো সন্তান প্রসবের সময় স্ত্রীদের স্বামীর সাথে থাকতে দেখেছেন? আপনার ব্যক্তিগত অভিজ্ঞতা ব্যবহার করে ব্যাখ্যা করুন।)
- Do you think it is important to make joint plans for delivery? How the husband involved in delivery time? Was the husband present in the labor room during delivery? If not, why? If yes, How they helped their wives in labor room? (আপনি কি মনে করেন যে ডেলিভারির জন্য যৌথ পরিকল্পনা করা গুরুত্বপূর্ণ? প্রসবের সময় স্বামী কীভাবে জড়িত? প্রসবের সময় স্বামী কি লেবার রুমে উপস্থিত ছিলেন? না হলে কেন? যদি হ্যাঁ, তাহলে তারা কীভাবে তাদের স্ত্রীদের লেবার রুমে সাহায্য করেছিল?)
- Do you feel the husbands provided their wives with all the support during their delivery? If yes, can you tell me in detail about the financial and mental health support based on your observations and experience? As a health care provider, do you feel the wives were satisfied with the support received from their husbands during delivery? If not, what were the main challenges to get full support from their husbands? (আপনি কি মনে করেন যে স্বামীরা তাদের স্ত্রীকে তাদের প্রসবের সময় সমস্ত সহায়তা দিয়েছিল? যদি হ্যাঁ, আপনি কি আমাকে আপনার পর্যবেক্ষণ এবং অভিজ্ঞতার ভিত্তিতে আর্থিক এবং মানসিক স্বাস্থ্য সহায়তা সম্পর্কে বিস্তারিত বলতে পারেন? একজন স্বাস্থ্যসেবা প্রদানকারী হিসাবে, আপনি কি মনে করেন যে প্রসবের সময় স্ত্রীরা তাদের স্বামীদের কাছ থেকে প্রাপ্ত সহায়তায় সন্তুষ্ট ছিল? তা না হলে তাদের স্বামীদের কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান সমস্যাগুলো কী ছিল?)

Post-natal Care / প্রসব পরবর্তী যত্ন

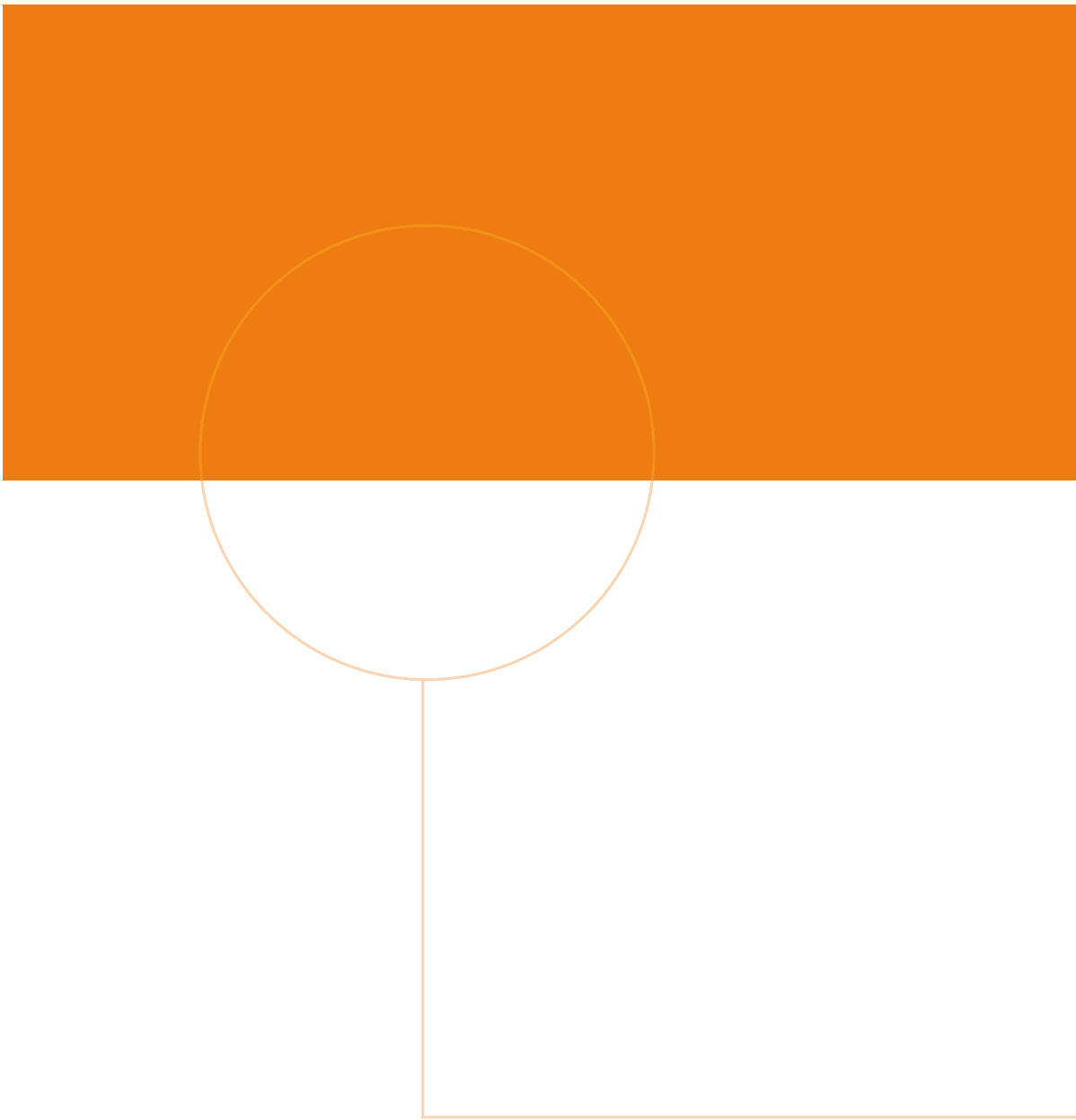
Do you provide PNC services? What responsibilities do you have in providing postnatal care? If yes, probe: (আপনি কি পিএনসি পরিষেবা প্রদান করেন? প্রসবোত্তর যত্ন প্রদানের ক্ষেত্রে আপনার কী দায়িত্ব রয়েছে? যদি হ্যাঁ, অনুসন্ধান:)

- Do you think it is important for wives to stay with their husbands after delivery? If yes, why it is important? (আপনি কি মনে করেন প্রসবের পর স্ত্রীদের স্বামীর সাথে থাকা জরুরী? যদি হ্যাঁ, কেন এটা গুরুত্বপূর্ণ?)
- How many times usually women received postnatal visit? Do you think husbands encourage their wives to attend postnatal visits? Are usually husbands come with their

wives to take PNC services? If yes, how many times usually they come? (মহিলারা সাধারণত কতবার প্রসব পরবর্তী পরিদর্শনে আসেন? আপনি কি মনে করেন যে স্বামীরা তাদের স্ত্রীদের প্রসব-পরবর্তী পরিদর্শনে যোগ দিতে উত্সাহিত করে? সাধারণত স্বামীরা কি তাদের স্ত্রীদের সাথে প্রসব পরবর্তী সেবা নিতে আসে? যদি হ্যাঁ, তারা সাধারণত কতবার আসে?)

- Do you feel husband should be supportive about exclusive breast feeding? Do you feel husband give active support for exclusive breast-feeding activities? Tell me detail. (আপনি কি মনে করেন যে স্বামীকে বুকের দুধ খাওয়ানোর ব্যাপারে সহায়তা করা উচিত? আপনি কি মনে করেন যে স্বামী স্তন্যপান করানোর কার্যক্রমের জন্য সক্রিয় সমর্থন দিচ্ছেন? আমাকে বিস্তারিত বলুন।)
- Do you feel that their husband looks out for wives' emotional needs, helps to improve their health issues, make sure that mother got nutritious foods and micronutrient supplement? If yes, how? (আপনি কি মনে করেন যে তাদের স্বামী স্ত্রীদের মানসিক চাহিদার দিকে নজর দেন, তাদের স্বাস্থ্য সমস্যাগুলি উন্নত করতে সাহায্য করেন, নিশ্চিত হন যে মা পুষ্টিকর খাবার এবং মাইক্রোনিউট্রিয়েন্ট সম্পূরক পেয়েছেন? যদি হ্যাঁ, কিভাবে?)
- Are husbands' attitudes about childcare positive? Do they take steps to ensure that children receive all necessary vaccinations? If not, what are the reasons behind it? (সন্তানের যত্ন সম্পর্কে স্বামীদের মনোভাব কি ইতিবাচক? শিশুরা যাতে প্রয়োজনীয় সব টিকা পায় তা নিশ্চিত করার জন্য তারা কি পদক্ষেপ নেয়? না হলে এর পেছনের কারণগুলো কী?)
- Do you feel the husbands provided their wives with all the support after their delivery? If yes, can you tell me in detail about the financial, household, and mental health support based on your observations and experience? As a health care provider, do you feel the wives were satisfied with the support received from their husbands after delivery? If not, what were the main challenges to get full support from their husbands? (আপনি কি মনে করেন যে স্বামীরা তাদের স্ত্রীদের প্রসবের পরে সমস্ত সহায়তা দিয়েছিলেন? যদি হ্যাঁ, আপনি কি আমাকে আপনার পর্যবেক্ষণ এবং অভিজ্ঞতার ভিত্তিতে আর্থিক, পারিবারিক এবং মানসিক স্বাস্থ্য সহায়তা সম্পর্কে বিস্তারিত বলতে পারেন? একজন স্বাস্থ্যসেবা প্রদানকারী হিসেবে, আপনি কি মনে করেন যে প্রসবের পর স্ত্রীরা তাদের স্বামীদের কাছ থেকে পাওয়া সহায়তায় সন্তুষ্ট ছিল? তা না হলে তাদের স্বামীদের কাছ থেকে পূর্ণ সমর্থন পেতে প্রধান সমস্যাগুলো কী ছিল?)
- Would you like to share anything more with me concerning the attitude and involvement of the male partners in maternity care? (আপনি কি প্রসূতি যত্নে পুরুষদের মনোভাব এবং জড়িত থাকার বিষয়ে আমার সাথে আরও কিছু শেয়ার করতে চান?)

Thank you for your participation/ আপনার অংশগ্রহণ করার জন্য আপনাকে ধন্যবাদ.



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