Maternal Morbidity and Mortality among Indigenous People in Bangladesh: A Study of the Mru Community

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This thesis is dedicated to:

The Mru mothers who have passed away during their pregnancy, delivery and after delivery.

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Acronyms

ADB	Asian Development Bank
ANC	Antenatal Care
BBS	Bangladesh Bureau of Statistics
BDHS	Bangladesh Demographic and Health Survey
CHT	Chittagong Hill Tracts
CPR	Contraception Prevalence Rate
FP	Family Planning
FPI	Family Planning Inspector
FWV	Family Welfare Visitor
FWA	Family Welfare Assistant
FWC	Family Welfare Center
FYP	Five-year Plan
ICDDR,B,	International Centre for Diarrheal Disease Research, Bangladesh
ICM	International Confederation of Midwives
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MOH&FW	Ministry of Health and Family Welfare
NGO	Non-government Organization
NIPORT	National Institute of Population Research and Training
PNC	Postnatal Care
SC	Satellite Clinic
TBA	Traditional Birth Attendant
TVH	Traditional Village Healer
UHC	Upazila Health Complex
UHFWC	Union Health and Family Welfare Center
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UN	United Nations
WHO	World Health Organization

Explanation of Local Terms

Headman	Head of a Mouza who is responsible to collect revenue-
Jhum Cultivation	Jhum is a slush-and-burn or shifting agricultural technique.
Karbari	Head of a village and village level administration is also headed by a karbari.
The Mru,	Name of an indigenous group in CHT, Bangladesh.
Para	Village is known as para in the Mru community.
Upazila	An administrative Sub-district.
Union	Smallest local administrative unit comprising of mouza and village.
Village Doctor	The person who has no medical background and mostly less than 10 years of general education. In most cases they sell drugs within the Mru villages or set-up small drug store near to the villages.

ACKNOWLEDGEMENT

SUMMARY

Maternal health of indigenous people is poorer than the non-indigenous people across the world which is also true in the Bangladesh context. However, little research has been done among indigenous people in Bangladesh. As a result, the present study was conducted among the Mru indigenous people to comprehend their maternal health status and the factors associated with it. The study was carried out in three upazilas (administrative sub-districts) namely Alikadam, Lama and Thanchi of the Bandarban district and a part of CHT, the south-eastern part of Bangladesh where most of the Mru people live. In this research, a mixed method approach, combining both qualitative and quantitative methods, was employed. A total of 374 currently married women having at least one child aged less than five years old or women having at least one delivery experience were interviewed purposively from three upazilas. On the other hand, a total of 26 in-depth interviews were conducted among people from different stratas of the Mru community from those three upazilas. Finally, the collected data was presented using uni-variate, bi-variate and multivariate analyses.

The study showed that maternal health was poor among the Mru women and less than one-third of the Mru women had access to health care services which might be one of the key reasons for their poor health. Their access to maternal health care services was beyond geographical, linguistic, cultural and economic reach. By and large, the major problems and complications Mru women faced during their pregnancy, delivery and after delivery were headache, blurry vision, high blood pressure, cough or fever, excess vomiting tendency, morning sickness, excessive hemorrhage, obstructed labour, prolonged labour, eclampsia, premature rupture of membrane, anemia, post-partum hemorrhage, perineal tears and swelling of the legs and body. The study also revealed that one out of every nine women visited for antenatal care while only one out of sixteen women visited for postnatal care in the Mru society. More than half of the respondents reported that they did not receive any antenatal or postnatal care due to the long distance to the service center as well as lack of transportation facilities. The study also demonstrated that delivery care and current use of contraception were also low among the Mru mothers as compared to

Bengali mothers. Almost all deliveries were home-based deliveries assisted by traditional midwives. About forty per cent of the respondents have heard of family planning methods and only one-fourth of them were current users of contraceptives. The factors associated with low antenatal and postnatal cares and contraception use were age, mothers' education and occupation, husbands' education and occupation, religion, place of residence, place of service provided in the locality, distance of the service centers and exposure to mass media of radio, television and newspaper. Maternal mortality also seemed to be higher in the community due to the delivery practices done by the traditional midwives. Traditional beliefs and practices after delivery were also responsible for their high deaths rate.

This high maternal morbidity and mortality rate in the Mru society was interwoven with multiple factors that could be classified into three major aspects. First, socio-economic and cultural factors were functioning through their effect on the Mru mothers. Secondly, spatial factors which include geographic settings and proximity and road infrastructure was one of the significant constraints to access to health care services resulting in poor health. Finally, clinical factors that consist of every aspect of obstetric knowledge and education of both women and midwives and availability of care were totally absent in the society. This maternal morbidity and mortality was somewhat consistent with the historic experiences of western countries in seventeenth and eighteenth century.

The present study is concluded with urgent requests for implementation of special health care strategies. For instance, the development of obstetric care and maternal health programs, replacement of existing traditional midwives by well-trained midwives, community-based collaborative strategy and most importantly to train the young Mru girls as midwives, particularly those that are bilingual and educated. Along with this significant strategy, socioeconomic development, Mru language-based maternal health education and family planning programs with a special emphasis on awareness through mass media may have a significant influence on maternal health status of the Mru community.

CHAPTER ONE

1.1 Introduction

Indigenous people all over the world are historically subjugated and discriminated against, which is explicitly and implicitly affecting their health status. Studies reveal that indigenous/ethnic population experience more health related problems and inequalitie than mainstream population (Ahmed, 2001; Fiscella, 2004; Hansen et al., 2008; Harris et al., 2006; Williams et al., 2003). In particular, indigenous people or ethnic minorities are adversely affected by reproductive health problems where maternal mortality and infant mortality rates are significantly higher. For instance, only a small percentage (4%) of all maternal deaths occurred in Latin America and the Caribbean, but these deaths disproportionately occurred among indigenous peoples (UNFPA, 2005). In USA, black women have four times higher pregnancy-related mortality rates (Berg et al., 2003, cited in Fiscella, 2004), and 70 per cent higher hospitalization rates for pregnancy-related complications than white women (Scott et al., 1997). The study also demonstrates that infant mortality rates among indigenous peoples are higher than non-Indigenous peoples in Canada, New Zealand, Australia, Brazil, India, Uganda and Peru, and these differences are significantly greater in the latter four less developed countries (See details in Stephens et al., 2006). Although indigenous people generally have a poorer health situation than the population at large, very few studies also show that health of indigenous people is better than non-indigenous people. For instance, reproductive health status of Garo indigenous people in Bangladesh is better than the Bengali population at large (see details in Islam, et al., 2009; Islam, et al., 2009; Islam, et al., 2010).

In Bangladesh, indigenous people also experience discrimination in health status as compared to their Bengali neighbours (Ahmed, 2001; 2001; Ahmed et al., 2003; Karim et al., 2005). The indigenous people of Chittagong Hill Tracts (CHT), particularly in the Bandarban area, are marginalized in terms of 'ultra-poor' households, literacy, livelihood, childhood immunization, contraception, pregnancy and professional delivery care, and access to static (institutionalized) government health facilities as compared to plain land areas (Ahmed et al., 2003; Rafi and Chowdhury, 2001). Since British rule up till today, most of the literature available on indigenous communities has focused on the socio-economic, cultural and political

issues of these communities (Kamal, 2001:11-15). Most importantly very few accessible studies have been done regarding reproductive health issues of indigenous people. Moreover, these works do not cover all areas of reproductive health. No systematic research, to my best knowledge, has been conducted on maternal morbidity and mortality among the Mru people in CHT, Bangladesh. Thus, the present study has been designed to comprehend the maternal health status of the Mru indigenous people in Bangladesh. To understand the maternal health status, the present study focuses on access to health care services and health care-seeking behaviour, antenatal care, delivery care, postnatal care visits and its related complications and family planning (FP) and current use of contraception.

1.2 Motivation for the Research – Point of Departure

One shiny hot summer day, back in 2005, I was going to TSC (Teacher-Student Centre at Bangladesh Agricultural University, Mymensingh) to have lunch. On the way, near the university campus auditorium, I saw a large number of students were looking at something. I felt interest and went ahead to the crowd and saw there was a photo exhibition by Mahmud, a young photographer of Bangladesh. I was astounded by these pictures since as a mainstream Bengali individual and was absolutely disorientated by these scenarios. Initially I thought these pictures have been taken from the Andaman & Nicobar Islands or Caribbean Islands. However, when I started to read the headings and sub-headings written on the top and bottom of these pictures, I came to discover these pictures, in fact, were taken from the Bandarban district, the most remote area of Bangladesh where the Mru people, an indigenous community, live. From these pictures I read that half of the Mru mothers and children died after delivery due to their cultural practices. I was stunned and I felt curiosity to know the reality of those mothers and babies. However, I had no financial support to do so. I tried to collect small fund from my country to conduct research on that issues, but it was in vain. In 2008; I thought this was probably the common reproductive health status of indigenous people in Bangladesh. Accordingly I planned to conduct research on the Garo people, an indigenous community in Bangladesh, close to my university. Since I had no economic support, I took this nearby indigenous community based on my preconceived notions of indigenous health. In November 2008 when I was processing data on the Garo people, my colleague who completed his Master of Philosophy degree in Peace and Conflict

Transformation in 2006 from the University of Tromsø, Norway, opened a new window to fulfill my dream. He enlightened me and suggested that since you are working on indigenous people, you should apply to the Department of Indigenous Studies. This is my point of departure to study Mru people's reproductive health in Bangladesh.

1.3 Purpose of the Research

A mother's death can be devastating to the children left behind, who become vulnerable to poor health, poverty and exploitation. Thus, mothers' health is one of the basic benchmarks of socio-economic development and is the center of the family as well. However, Mru mothers are tormented in Bangladesh due to the high maternal and infant mortality (Mahmud, 2006). In such a situation it has become important to carry out research to find some viable strategies to ensure quality reproductive health, particularly maternal health of the Mru women. The present study is broadly an attempt to explore the maternal morbidity and mortality and its determinants among the Mru people in Bangladesh. More specifically, the study objectives are: i) to investigate their access to health care services and health care seeking behaviour; ii) to explore the cause-specific maternal morbidity and mortality and its determinants among Mru mothers; and iii) to find viable strategies to reduce the problems through community participation.

1.4 Research Questions

The following research questions have been formulated to meet the research objectives:

   i)   What is the level of access to health care services in the study community?

   ii)   What are the problems and complications Mru mothers encounter during pregnancy, delivery and after delivery and the factors associated with it?

   iii)   Why is high maternal morbidity and mortality taking place in this community? and

   iv)   To what extent do Mru mothers use traditional knowledge in their maternal health practices?

1.5 Key Concepts

Five key concepts have been taken into account, which are significant for this research. A brief overview about these concepts and its applicability in the present research has been identified.

1.5.1 Indigenous peoples

Three different approaches to the problems of definition have been found in the text of the United Nations, the International Labour Organization (ILO) and the World Bank (Kingsbury, 1998). As a result, United Nation concluded that there is no formal universal definition of the term indigenous people. However, the classical definition from Jose R. Martinez Cobo is now more or less accepted in different quarters. In Asian perspectives, two characteristics are significant for the researched people, which have been borrowed for ADB working definition of indigenous people. These are:

(i) Descent from population groups present in a given area, most often before modern states or territories were created and before modern borders were defined; and

(ii) The maintenance of cultural and social identity as well as social, economic, cultural, and political institutions separates the group from mainstream or dominant societies and cultures.

1.5.2 Maternal Morbidity

Maternal morbidity is defined as "any departure, subjective or objective, from a state of physiological or psychological well-being, during pregnancy, childbirth and the postpartum period up to 42 days or 1 year" (Last, 1995). The postpartum complications may continue up to 5 years after birth depending on severity and types of the complications. However, postpartum complications up to 42 days has been taken into account in the present study, since most of the disasters resulting from post delivery complications happen during this period in Bangladesh. Postnatal care visit has also been considered for those visits within 42 days after delivery.

1.5.3 Maternal Mortality

Maternal mortality is defined as the "deaths of women associated with childbearing and birth. It is the numbers of mothers' deaths due to complications of birth, divided by the number of births" (White, 2006:137). In this research maternal mortality has been considered death during pregnancy and delivery or within the 42 days of termination of pregnancy from any cause associated with pregnancy or its management but not from accidental or incidental causes.

1.5.4 Indigenous Knowledge

Indigenous knowledge is defined as the "common sense knowledge and ideas of local peoples about the everyday realities of living" (Dei, 1993:105, cited in Agrawal, 1995:418). It includes the cultural traditions, values, beliefs, and worldviews of local peoples as distinguished from Western scientific knowledge. Such local knowledge is the product of indigenous peoples' direct experience of the workings of nature and its relationship with the social world. It is also a holistic and inclusive form of knowledge (Agrawal, 1995:418). Indigenous knowledge is considered as the most productive approach for development – development from below (Brokensha et al., 1980, cited in Agrawal, 1995:419), and it is also basis for the local level decisions-making, health care, food preparation and security, education, natural resource management and so on (Kalland, 2000; UNESCO, 2005; Warren, 1991:1, cited in Agrawal, 1995:416). The indigenous community where I have done my research has significantly been using indigenous/traditional knowledge and culture for their livelihoods and health care practices (Miah and Chowdhury, 2003). As a result, the study has substantially tried to explore how the indigenous people use indigenous/traditional knowledge for their antenatal care, delivery care and postnatal care and its effects. Since some researchers argued that women have particularly rich insights in many indigenous cultures and local knowledge systems (Thrupp, 1989:140, cited in Agrawal, 1995), the study has attempted to investigate the women's attitude towards indigenous knowledge practices by themselves and healers as well. Non-indigenous people might have this indigenous or local knowledge that has not been addressed in this study.

1.5.5 Indigenous Midwives or Traditional Midwives?

Different kinds of local names have been used to designate indigenous midwives around the world (Lefèber and Voorhoeve, 1998:5-8). Likewise, in the Mru society an elderly woman who assists women during deliveries is known as *Petsra* *(*Dorgabekova, 2003:34). However, in this study the term *traditional midwife* has been used to designate indigenous midwives/petsra. These traditional midwives mostly neither have any general education nor have any formal training about delivery. They are generally unfamiliar with the physiology and anatomy of human body. They are often older women who have children themselves and most have passed their child-bearing age and acquired experiences and knowledge from previous traditional midwives.

1.6 Maternal Health Status in Bangladesh: Indigenous and Non-Indigenous Perspective

The literature on maternal health of indigenous people in Bangladesh is scant. Standard database (Pubmed, Medline) searches on maternal health of indigenous people in Bangladesh ended with zero results. Even, broadly speaking, peer reviewed international studies on indigenous health are scarce due to many factors (See details in Stephens et al., 2006). Bangladesh Demographic and Health Survey is the main survey on reproductive health issue in Bangladesh conducted by the government that has never included the maternal health issue of indigenous people separately. Though a few studies have been found, they did not cover all issues of maternal health which have been discussed under the following relevant headings.

1.6.1 Maternal Mortality

In Bangladesh, the maternal mortality ratio (MMR) has declined from nearly 574 per 100,000 live births in 1990 to between 320 and 400 in 2004 (National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2001, 2005; MOH&FW, 2004). Regardless of this development, about 16,000 women died in the year 2000 from maternal health related complications (WHO and UNFPA, 2004). The estimated lifetime risk of dying from pregnancy and child birth-related causes in Bangladesh is also about 100 times higher than that of developed countries (NIPORT, ORC Macro, John Hopkins University, ICDDR,B, 2003). The most striking information is that 80% of such deaths occur at home, where delivery is

attempted under unhygienic conditions and assisted by trained or untrained traditional birth attendants (TBAs), close relatives or neighbors (WHO, 2004). Although maternal deaths can occur at any time during pregnancy, most deaths occur in the last trimester and the first week following the end of pregnancy (Campbell and Graham, 1990; Hurt et al., 2008; Koenig et al., 1988; Li et al., 1996). In rural Bangladesh, maternal mortality related to pregnancy remains high up to six months after birth and significantly higher after a spontaneous and induced abortion or stillbirth than after a live birth which is accounted for more than half of the pregnancy related deaths (Hurt et al., 2008:4). Though the pregnancy-termination by so-called menstrual regulation has been legally approved in Bangladesh since late 1970s, many abortions are still performed illegally by traditional healers (Ahmed et al., 2005; Rahman et al., 2001). However, the number of maternal deaths and the associated complications are unknown among indigenous people in Bangladesh.

1.6.2 Maternal Morbidity

Maternal morbidity still poses serious threat for rural women in Bangladesh due to the lack of skilled health personnel, particularly a lower percentage of deliveries are assisted by trained birth attendance and severe lack of adequate facilities for pregnancy related complications (Bari et al., 2002; Chakraborty et al., 2003; Chakraborty et al., 2003; Chakraborty et al., 2002; Chowdhury et al., 2004; Islam et al., 2004). The common complications faced by the Bangladeshi women during ante-partume, delivery and post-partume period are morning sickness/dizziness, cough/fever, palpitations, headache, hemorrhage, abdominal pain, pre-eclampsia, excessive vomiting, oedema, septic abortion, excessive hemorrhage, obstructed labor, prolonged labor, excessive bleeding, retained placenta, eclampsia, convulsion, premature rupture of the membrane, pelvic infection, vaginal tract infection, urinary tract infection, uterine prolapse, perineal tears, severe anemia, hypertension (Diastolic >90), leg problems and postpartume sepsis (Chakraborty et al., 2003; Fronczak et al., 2005; Islam et al., 2004; Islam et al., 2004; Khanam and Akanda, 2007). Factors associated with maternal morbidity in rural Bangladesh are economic status, level of education, age at marriage (teenage marriage and early pregnancy), unwanted pregnancy, number of pregnancies, visit for antenatal care and histories of sexually transmitted disease, hypertension, heart disease and breathing problem (Gulshan et al., 2005; Islam et al., 2006).

1.6.3 Access to Health Care services and Health Care Seeking Behaviour

The government of Bangladesh has strengthened efforts to improve MCH (Maternal and Child Health) since independence in 1971 and established many public medical facilities, such as the Upazila Health Complex (UHC), throughout the country. An extensive network of MCH services has also been launched by the government at the union level, which is known as union health and family welfare centers (UHFWCs). Policies advocated by successive five-year plans (FYPs) of the Bangladesh government have consistently emphasized improving MCH care services in rural areas (Shuaib, 1995). However, the situation of maternal morbidity and mortality in rural Bangladesh is worse due to the inadequate access to modern health services and poor utilization (Chakraborty et al., 2003:327). This poor utilization is often associated with cultural rather than economic factors, since most of the government services are almost free (Nahar and Costello, 1998:417). A study among inter-ethnic groups in CHT revealed that health care-seeking behaviour was lower among indigenous groups as compared to Bengali people (Ahmed, 2001).

1.6.4 Antenatal Care

Antenatal care coverage, especially by a trained provider, has increased to 52% in 2007 from 49% in 2004, which was very low in 1999- 2000 and only one third of child-bearing women received antenatal care from a medically trained person. The percentage of women who made four or more antenatal care visits has increased to 21 per cent in 2007 from 16 per cent in 2004 and urban women are more likely to make visit for antenatal care than rural women. Antenatal care visit has also increased with the level of mother's education and the household income status (Bangladesh Demographic and Health Survey, 2005; 2007; National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2001; 2005). A study in Garo, a matrilineal indigenous community found that the antenatal care coverage was much higher (86.1%) than the national average due to their high literacy rate and their easy access to private and public health care services (Islam et al., 2010).

1.6.5 Delivery Care

Only 15 per cent births in Bangladesh take place in a health facility, though it was very low (4%) in 1993-94 BDHS and increased over 10 points in the last 13 years (Bangladesh Demographic and Health Survey, 2007). According to 2007 BDHS, almost two in three births are assisted by dais (untrained traditional birth attendants) and one in seventeen is assisted by relatives or friends. Treatment seeking behavior from medically trained provider (qualified doctor, nurse/midwife etc.) with maternal complications around the time of delivery has increased to 42% in 2007 from 29% in 2004. In addition, 19% did not seek care from any provider for complications (Bangladesh Demographic and Health Survey, 2007; National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2005).

1.6.6 Postnatal Care

Postnatal care is equally inadequate in Bangladesh. Only 21 per cent of mothers receive postnatal care from a trained provider within 42 days after birth (Bangladesh Demographic and Health Survey, 2007). Among mothers who do not give birth at a health facility, only 8 per cent women receive care after birth (National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2005). The likelihood of receiving postnatal care for mothers has improved slightly, from 18 per cent in 2004 to 21 per cent in 2007 (Bangladesh Demographic and Health Survey, 2007; National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, 2005). On the other hand, a study revealed that care after birth was three times higher (63.7%) among Garo indigenous women than the Bangladeshi women (Islam et al., 2010).

1.6.7 Family Planning and Contraception

Knowledge about FP methods is widespread in Bangladesh and all married women know of at least one modern method of family planning. On the other hand, eighty per cent women know of at least one traditional family planning method (Bangladesh Demographic and Health Survey, 2005). The contraceptive prevalence rate (CPR) for married couples has increased to 56 per cent in 2007 from 8 per cent in 1975. The prevalence of the modern method is always higher than the traditional method. Among different modern and traditional methods, the pill ranks high. Traditional

and long-lasting methods are declining. For instance, long-lasting method accounted for 26 per cent in 1993-1994, which has been declined to 13 per cent in 2007 (Bangladesh Demographic and Health Survey, 2007). A study conducted among different ethnic groups in CHT found that the CPR among indigenous people was lower than the national average (Ahmed, 2001:169). On the contrary, a study in matrilineal Garo indigenous community revealed that the CPR was much higher (79.5) than the national figure due to their strong preference of female babies (Islam et al., 2009:303).

1.7 Significance of the Study/Policy Implications

Very few studies have been done on health issues of Mru people particularly focusing on Mru beliefs and practices and on antenatal care and contraception use. So, the present study will shed more light on these issues. In addition, the study will focus on access to health care services, delivery care, postpartum care and knowledge about family planning method that will prove helpful for the indigenous community to address problems surrounding the survival of pregnant women and mothers. It will also bring this community to the attention of policy makers, NGO workers and donors in order to improve their maternal health status. It will therefore contribute to the academic discourse on reproductive health within the discipline of public health, and medical sociology and medical anthropology and possibly will give ideas for future research on the subject.

1.8 Organization of the Thesis

This thesis comprises of six chapters. The first chapter has introduced the brief background discussion of indigenous health status in both national and international context. The research questions; the objectives, my motivations and justifications for the study have also been described in this chapter. This chapter has also included the various issues of maternal health of Bangladesh both from indigenous and non-indigenous perspective. Chapter Two has described the geographical and social context of the three study locations of Bandarban district of CHT (CHT). It is also here that the study population, the Mru, their general health and illness and maternal heath has been discussed. Chapter Three has been framed with detailed methodology combining both qualitative and quantitative approaches, with its strengths and limitations; the various methods of data collection techniques have been illustrated.

Different dependent and independent variables have been demonstrated and the challenges encountered and relevant experiences have also been disclosed in this chapter. Chapter Four is the main findings of the thesis and is divided into four sections. In the first section, qualitative data has been analyzed focusing on socio-economic condition, religion and their maternal health. The next three sections have been examined the quantitative results of maternal heath using uni-variate, bi-variate and multivariate analyses emphasizing the main issues of maternal health, for instance, access to health care services and health care seeking behaviour, antenatal, delivery and postnatal care, knowledge of FP and current use of contraception. Chapter Five has summarized both qualitative and quantitative results with an indigenous and historical context. Chapter Six had concluded the thesis with a recapitulation of the themes discussed in the previous chapters, summarizing and analyzing the findings. It has also recommended strategies some of which have immediate importance for the government, NGOs or donor agencies to improve the maternal health status of Mru people.

CHAPTER TWO

Geographical and Social Context of Research

This chapter has describes two main issues: the study area and the study population. The explanation of the study area is important in the sense that this part is absolutely different due to its geographical settings (see Appendix I, Picture 2.1) than the rest of the parts of Bangladesh which might be the important underlying factor of health status of CHT. The second part of the chapter has illustrated the Mru people and their general health as well as maternal health status.

2.1 The Study Area

The study has been conducted in three upazilas (administrative sub-districts) of Bandarban, a district on South-Eastern Bangladesh, and a part of the Chittagong Division and CHT. The CHT has been divided in recent years into three separate administrative units (districts), namely Khagrachari Hill Tracts, Rangamati Hill Tracts and Bandarban Hill Tracts. The historical and geographical feature of CHT is unique relative to other districts of Bangladesh. Recognizing these distinctive features as well as uniqueness of tribal population, the entire CHT is also divided into three circles; Chakma Cirlcle (Rangamati district), Bohmong Circle (Bandarban district), and Mogh Circle (Khagrachari district). Each circle is headed by a circle chief who is also a tribal chief, is responsible to collect revenue, assisted by a Headman (Head of a Mouza) and a Karbari (Head of a Village) at mouza and village level respectively. It is believed that Bandarban means the dam of Monkeys which is also known as Arvumi or the Bohmong Circle. Aung Shue Prue Chowdhury, from Marma tribe is the current chief (King or *Raja*) of Bohmong circle. The district is constituted by seven upazilas namely, Alikadam, Bandarban Sadar, Lama, Naikhonchhari, Rowangchhari, Ruma and Thanchi. The district is bordered by Cox's Bazar, Chittagong, Rangamati and Khagrachari districts inside the country. On the other hand, the perimeter borders by the Myanmar provinces of Chin and Arakan (see the Map below). Three significant rivers in the district are Sangu, Matamuhuri and Bakkhali. Sangu which is also known as Sangpo or Shankha, is the only river originating inside Bangladesh territory. Some tourist places like the Buddha Dhatu

Jadi – the largest Buddhist temple in the country, the waterfall named Shoilo Propat, tribal culture and different lakes and hills are of great interest and attraction of the district (Encyclopedia; PBM, 1983; Shelley, 2000).

The total area of Bandarban district is 4479 sq. km., which is almost similar to Østfold municipality (4182 sq. km.) of Norway,[1] of which 52.4 per cent is not available for cultivation, 27.6 per cent is under forest, 10.6 per cent is cultivable waste, 3.8 per cent is under current fallows, 3.7 per cent is under single cropped area, 1.5 is under double cropped area, and 0.5 is under triple cropped area. The total area under net cropping is the lowest (5.7%) in country. The cropping intensity of this district is also the second lowest in Bangladesh (BBS, 1993). The Forestal Survey has classified the land of CHT from Class A to D, on the basis of slope and other terrain characteristics, the water retention capacity, and the fertility of soils. Agricultural lands mostly belong to A and B class lands and used for paddy cultivation while most of the C and D classes are forests and green vegetation (cited in Shelley, 2000). The soils of Bandarban are mainly brown, well drained, strongly acid, loamy sands to silty clays. They are mainly deep, but shallow soils occur over hard siltstones and sandstones. Nutrient status and moisture-holding capacity are generally low. Valley soils include brown loams on terraces and grey silts and clays on poorly drained land subject to seasonal flooding. So, most of the terrains are C and D class lands.

The Bandarban district lies between 2111 and 2345 north latitudes and between 9142 and 9242 east longitude. This territory is the largest mountainous area of the country. The topography of this district is uneven, consisting of several small valleys and several hundreds of steep hills with an elevation of 300-1100 meters above msl (mean sea level). Only about six per cent (about 40,500 ha) of the total land of the area is suitable for intensive crop cultivation. The average annual rainfall is 2032-3810 mm and 80 per cent of which occurs during the months of May to September. The mean monthly maximum temperature ranges between 25 and 34 Celsius. According to 2001 census, the district has a total population of 298,120 with a 119 sex ratio, which indicates a predominance of males in the upazila. The population

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[1] http://en.wikipedia.org/wiki/%C3%98stfold

density is very low in this district (67 per sq.km.) as compared to the national average (755 per sq.km.) (BBS, 2002).

The socio-economic condition of the district is very poor as compared to other districts; however, the situation is changing nowadays. The economy is mostly dependent on swidden farming, also known as *Jhum* cultivation, which is a slush-and-burn or shifting agricultural technique. The district has a rich cultural heritage since there are twelve indigenous groups, the Bowm, the Chakma, the Khumi, the Khyang, the Lusai, the Marma, the Mru, the Mrung/Riang, the Pangkhua, the Sak, the Tangchangya and the Tripuraare are living there (Brauns and Loffler, 1990:26-37), comprising almost fifty per cent of the total population. On the other hand, the remaining population of the district is the Bangali known as non-indigenous people. Their per capita income is lower than the national average and their level of education is also poor due to extreme poverty, poor access to schools and shortage of teachers. Another significant cause of low literacy is that children are kept at home for household and income generating activities. The Chakma, the Marma and the Tripura are the largest ethnic groups while the remaining are the smallest ethnic groups (Brauns and Loffler, 1990:26-37). A comparative information regarding socio-economic, demographic and spatial factors by the study upazilas, district and national level has been given in the appendix (see Appendix I, Table 2.1).
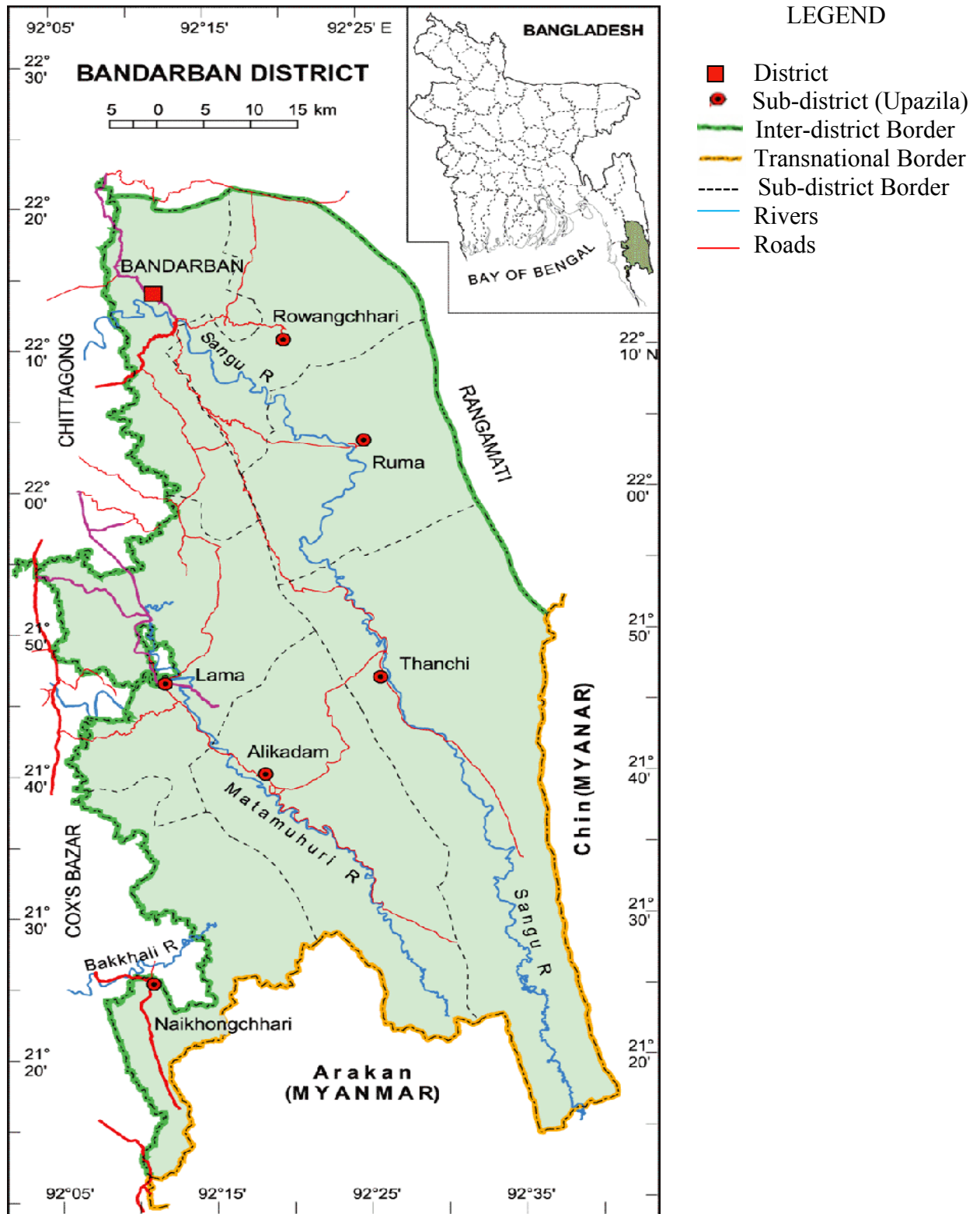
Figure 2.1 Map of the Study Areas (three sub-districts), Bandarban
(http://www.mybandarban.info/ retrieved in 27 October 2009).

2.1.1 Alikadam

Alikadam is the second largest upazila of Bandarban district, which occupies an area of 885.78 sq. km. including 650.09 sq. km. forest area. It lies between 2121 and 2150 north latitudes and between 9215 and 9234 east longitudes (BBS, 1992). The upazila is bordered on the north by Lama Upazila, on the east by the Thanchi upazila, on the south by the Myanmar and on the west by the Naikhongcchari and Lama upazials. According to 1991 census, the upazila has a total population of 24,782 (13,682 males and 11,100 females) with a 123 sex ratio, which indicates a predominance of males in the upazila. The population density is very low (28 per sq.km.) as compared to the national average (BBS, 1992).

There are five indigenous communities, the Chakma, the Marma, the Mru, the Tangchangya and the Tripura are living in Alikadam upazila (Ahamad, 2008:30-31); the Mru is the largest group among them (Rafi, 2006). There are 86 Mru villages comprising 1251 households in the upazila. Mru literacy rate in this upazila is extremely low, .36 per cent for male and .08 per cent for female, relative to other study upazilas and the school enrollment is 2.59 per cent and 1.06 per cent for boys and girls respectively. In Alikadam, agriculture, household work and day labourers are found as the major occupational groups in the Mru society and three-fourth of the people belong to Buddhism (Rafi, 2006). Even though Mohammad Rafi's work is not beyond criticism, I found only this study on household census of ethnic minorities in Bangladesh. Since the national census data does not include indigenous people, this study is very much significant for background information of the Mru community.

2.1.2 Lama

Lama is the most populous upazila in the Bandarban district. According to 1991 census, the upazila has a total population of 64,717 (34,908 males and 29,809 females) with a 117 sex ratio, which also indicates a predominance of males in the upazila. The population density is 96 per square kilometers. The upazila occupies an area of 671.84 sq. km. including 349.26 sq. km. forest area and 1.04 sq. km. river area. It is located between 2136 and 2159 north latitudes and between 9204 and 9223 east longitudes (BBS, 1992). The upazila is bordered on the north by Bandarban Sadar and Satkania upazila of Chittagong district, on the east by the Ruma, Alikadam

and Thanchi upazilas, on the south by the Naikhongcchari upazila and on the west by the Chakaria upazila of Cox's Bazar district and Lohagara upazila of Chittagong district (BBS, 1992).

Five indigenous groups the Chakma, the Marma, the Mru, the Tangchangya and the Tripura also live in Lama upazila, and the Mru is the second largest community among them (Rafi, 2006). There are 80 Mru villages and 1409 households in the upazila. The literacy rate is (2.66% for male and 1.3% for female) a little better in this upazila than other study upazilas and school attendance is 8.04 per cent and 5.26 per cent for boys and girls respectively. Agriculture, household work and day labourer are the major occupation of the Mru people in this upazila too and about three-fourth of the people belongs to Buddhism (Rafi, 2006).

2.1.3 Thanchi

Thanchi upazila occupies an area of 1020.82 sq km including 680.55 sq km forest area. It lies between 2115 and 2105 north latitude and between 9241 east longitude (BBS, 1992). It is some 55 km southeast (Location) of Bandarban district. The upazila is include in the CHTs region of which 90 per cent of the area is hilly, 4 per cent covers rivers and marshes and the rest 6 per cent is only suitable for intensive agriculture. The upazila has a total population of 18,000, of which Mru constitutes a total of 3,738, compared to its population of 22,178 in the whole of the CHTs. The population density is 16 per square kilometers, which is lowest in the country (BBS, 1992; 2002). The climate of the upazila is tropical in nature as it is situated in the tropical zone. The area is remarkable for its uniform temperature, high humidity and heavy rainfall from May to October. The minimum and maximum temperatures vary between 10 and 36 degree Celsius. The level of humidity is around 91 per cent from September through December and 65 per cent from December through February. The annual rainfall is 1836 millimeters. The soil is mainly reddish brown loam and is strongly acidic (BBS, 1992).

In Thanchi upazila, eight indigenous groups the Bowm, the Chakma, the Khumi, the Khyang, the Lusai, the Marma, the Mru and the Tripura are living together with Bengali population. In terms of households the Mru is the third largest community (Rafi, 2006). There are 54 Mru villages consist of 795 households in the upazila. The

literacy rate is very low (2.43% for male and .85% for female), however, the school enrollment is significant, 28.91 per cent and 21.3 per cent for boys and girls respectively compared to other study upazilas. Most of the people are involved in agriculture and about half of the people believe in Buddhism (Rafi, 2006).

2.2 The Study Population

2.2.1 The Mru

The Mru is the largest small indigenous group (Brauns and Loffler, 1990:36-34), and the most underprivileged people living on the hilltops, ravines, cliffs and deep forest areas of Bandarban district in Bangladesh. Though they are now living in the southern part of CHT, they came to this region several hundred years ago from the state of Arakan in Mayanmar (Brauns and Loffler, 1990:34). Captain Lewin's writing also reveals that the Mru formally lived in the Arakan hills and a Mru was king of Arakan in the 14th century. However, they were forced from Arakan hills by the Khumi tribe due to a blood feud between them and came to Bandarban (Lewin, 1869:92). There is a popular tale among the Mru of how they came in this region and how their name was set forth. The name Mru is spelled and pronounced differently by different groups, for instance, "Murong" or "Murung" as it is called by the Bangali, "Mro" by the Marma and "Mru" by themselves (Brauns and Loffler, 1990). The following story regarding their migration and identification of the name is collected by Sing Young Mru from Ilong Karbari, Alikadam;

> When the clan wars took place in Arakan Hills, the *Sandhus* and the *Khumis* defeated the Mrus ... …The defeated Mrus managed to escape to the hills of Chittagong where …they met the Bangalis for the first time. Neither the Mrus nor the Bangalis could understand the language spoken by the other...
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> … The Bangalis finally settled on this expression and pronounced it "Murung" and this is how the name came into being (see details in Mahmud, 2007).

Linguistically and culturally, Mru people categorize themselves into five distinctive groups. *The Anok* – Anok means "West", although today this group is living in the south of Bandarban. *The Tshung* – "Mountain People" have joined the Anok and are living in the southern part in the upper Sangu valley. *The Domrong* – "Lowlands"

group lives in the north of Matamuhuri. *The Dopreng and the Rumma* – "Forest People" are living in the far south and on into the Arakan (Brauns and Loffler, 1990:34). According to Bangladesh Population Census 1991, the total Mru population was estimated 22,167 in Bnadarban district (BBS, 1992); however, according to the survey conducted by the Mru Social Culture in 1995, the total Mru population was estimated 59748 (Mahmud, 2006). The exact number of Mru people is unknown today since the last population census of Bangladesh did not enumerate the indigenous people. The highest grade[1] completed by the Mru boys and girls is 2.6 per cent and 1.1 per cent respectively and the distance of the nearest schools from the Mru villages is on an average 12.12 kilometers (Rafi, 2006:44-48).

Mru people are living in 356 villages (known as *Paras*) in the Bandarban district comprising 5398 households (Rafi, 2006:37). The average household of Mru villages (16.4) is smaller than the Bengali villages (54.3); however, the average size of Mru household is 5.8, which is almost similar to Bengali household size (5.3) (Rafi and Chowdhury, 2001:43). Mru villages are mostly situated near to the water sources, either river, small brook or stream, which do not run dry even in the dry season (Brauns and Loffler, 1990:61). Mru houses are built on wood or bamboo stilts, which are entirely different from Bengali dwellings. Forest resources, particularly bamboo and wood are the two most significant materials for the construction of Mru houses (see Appendix I, Picture 2.2). These resources are collected from nearby forests or sometimes from neighboring forests since the resources is now gradually becoming scarce. In earlier times, bamboo, reed and straw were used as the main materials for the roof; however, rudimentary roofs using tin are very common nowadays in their houses especially among higher-class families. The main materials of walls and floors of Mru houses are bamboo and wood. The *Kim-tom*, the *Kimma* and the *Tsar* are the three basic units of an Mru house. The *Kim-tom* is a common living room where Mru people cook, eat, receive visitors, entertain guests and also sleep, particularly children and unmarried members of the family. The *Kimma* is a private room which is considered as bedroom for married couple and infants or smaller children. Children are born in the extreme back part of this room where there is a second fireplace in the front most part. Valuable things like spears, rice, cloth, cotton

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[1] The highest grade completed by boys and girls in the community were 9.1 and 8.1 years of schooling respectively.

and vegetables are also kept in the kimma room. This room is prohibited for the strangers. Finally, the *Tsar* is an open platform which is used for some other household works such as drying rice, cleaning vegetables, washing vessels and dishes, carving animals and fishes, etc. (Brauns and Loffler, 1990:66-67).

2.2.2 Health and Illness of Mru People in Bangladesh

In Mru society, the common illnesses are pain, fever, dysentery, malaria, diarrhoea, smallpox, cholera; however, smallpox and cholera are not epidemic as they were in earlier times. Sacrifice is associated with illness in the Mru society, and it is considered as a preventive measure against illness. If someone does not recovery from an illness within a normal period of time, they assume that sacrifice is necessary. The Mru presume that sacrifice anticipates recovery and often sacrifices are made after recovery is done. To do these sacrifices, prior to the end of nineteenth century, they would depend on one kind of Shaman who sent his soul out to make direct contact with the sprits since the Mru believe that sprits are responsible for illness. *Thurai*[2] alone can control the spirits. Today the shaman is no longer used. Instead sacrifices are carried out by Sra[3] from the village if available or are called upon from other villages. However, sacrifice is forbidden for epidemics like smallpox and cholera. In such cases, isolation rather than sacrifice is considered as a remedy. For illness like pain, malaria and dysentery, they seek remedies from Bengali merchants/local pharmacy, albeit they are often ignorant how to take or apply these medicines (Brauns and Loffler, 1990:195-196; Dorgabekova, 2003:32-33). The study demonstrates that vitamin A capsule intake is very low among the Mru children (24%) as compared to Bangalis (86%). The percentage of immunization intake is very low among the Mrus (10.7%) relative to other ethnic communities (Bangali 53.8%, Marma 34.9%, Tripura 19.5% and Chakma 17.4%) in Bangladesh (Karim et al., 2005:744).

2.2.3 Maternal Health Status of Mru People in Bangladesh

Mru society is traditional in nature and their reproductive health status is still determined by their distinct cultural practices. The study has found that Mru women

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[2] Mru people strongly believe in God, which is known as Thurai in their language who decides everything and is responsible for everything.
[3] A specialist man who is knowledgeable in the area of religion and called upon to find out cause and treatment of illness (Brauns and Loffler, 1990).

believe pregnancy is determined by the wish of *Turai.* Mru women are accustomed to working in the *Jhum* field during pregnancy even in the last day of pregnancy. For example, Sheila, an Mru woman, continued to work in the *Jhum* until the final day of her pregnancy. They also have some restrictions in food intake, for instance, Sheila did not drink tea during her pregnancy because it might make her delivery difficult. In Mru society deliveries are assisted by *Petsra,* (traditional birth attendants). The *Petsra* is called upon only when the delivery pain begun. She is not consulted during pregnancy or after delivery. (Dorgabekova, 2003:36-39). Postnatal care is also preferred by their distinct cultural practices. The study also revealed that nutrition uptake among mothers after child birth was heavily restricted in Mru society. After delivery, a mother is given only salted rice and sits beside the fire from nine to thirty days, depending on their clan practices. (Dorgabekova, 2003; Mahmud, 2006). About half of the Mru children die during delivery and after delivery (Mahmud, 2006). However, it is not possible to tell exactly how much and when children die since this is written by a photographer who did not explore on an in-depth basis. On the other hand, the most valuable anthropological study on the Mru society conducted in 1960s by Brauns and Loffler reported that *"According to the data I have on a few families, however, the mortality rate for newborns does not exceed 10 per cent; in most of the families not one single child died"* (Brauns and Loffler, 1990). So, in reality the situation might be different nowadays, which claims further systematic study.

CHAPTER THREE

Methodology

This chapter discusses the methods and techniques used in the study in detail. A mixed method strategy combining both qualitative and quantitative approaches has been used. Experiences and challenges during fieldwork have also been expressed here. This chapter finally ends by discussing the strengths and limitations of the study.

3.1 Ontological basis of the Study

Every individual research plan is connected to larger philosophical worldviews, although it remains mostly hidden in research (Slif and Williams, 1995; cited in Creswell, 2009:5). Thus, this study has also been conducted keeping the pragmatic worldview in mind. Pragmatism is a set of ideas that emphasize the research problem, using diverse approaches and valuing both objective and subjective knowledge to understand the problem (Creswell and Plano Clark, 2007:26; Creswell, 2009:10). Pragmatism rejects the traditional conception that positivism and constructivism (quantitative and qualitative approaches respectively) are essentially incompatible and in conflict. Moreover, they are compliment to each other (Jupp, 2006:180). Creswell argued that for the mixed methods researcher, pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis (Creswell, 2009:11).

3.2 The Study Design: A Mixed Methods Approach

The study was designed combining both qualitative and quantitative forms, which is known as the mixed methods approach. Creswell argued that since the mixed methods approach uses both forms alongside each other, the overall strength of a study is greater than either qualitative or quantitative research (Creswell & Plano Clark, 2007; cited in Creswell, 2009:4). The study used sequential mixed methods strategies rather than concurrent mixed methods or transformative mixed methods strategies. Sequential mixed methods strategies may involve beginning with a qualitative interview for exploratory purposes and following up with a quantitative

survey method with a large sample so that the researcher can generalize the results to a population and vis-à-vis (Creswell, 2009:14). The study was started with interview survey, followed by in-depth interviews involving detailed exploration on some specific issues. Women reported, for instance, long space between births in the study area; however, they have been using very limited contraceptives. Why this is happing and the answer is only found by detailed exploration through in-depth interviews. Sequential mixed method was a good approach in this regard.

3.3 Time and Location of the Fieldwork

The fieldwork was conducted at Bandarban, CHT during the rainy season (In Bangladesh, rainy season is roughly considered for two months from 15 May to 15 July) in 2009. The data collection process was started on 3rd June 2009 and came to an end on 7th August 2009. The CHT is constituted by three hill Districts namely Bandarban, Khagrachhari and Rangamati. The Mru people live only in Bandarban district (Khan, 2005, Mahmud, 2006), which is the hilltops in a pristine environment, inside the high ranges of hills and dense forest almost totally beyond the eyesight's of the outer civilized world (Chowdhury and Miah, 2003). There are seven Upazilas in Bandarban district. The Mru people mostly inhabit in the Alikadam, Thanchi, Lama, Ruma, Bandarban Sadar and Naikhyangchari upazilas. The data was thus collected from Alikadam, Thanchi and Lama since most of the Mru people are living there. There were four reasons to select them as study areas. First, most of the Mru people live in Alikadam followed by Thanchi and Lama. Second, Thanchi is the most remote hilly area followed by Alikadam and Lama. Third, people belonging to different religions, for instance, Buddhism, Christianity, Animism and Crama, are living in these regions. Four, people living in Lama Upazila is better off followed by Alikadam and Thanchi.

3.4 Participants of the Study

Firstly, Mru women were considered as participants of the study. Currently married Mru women having at least one child aged five years or less and women whose children died were also selected as respondents for the interview survey. Secondly, leaders-particularly known as Headman and Karbari, traditional midwives, school teachers, relatives of death mothers, NGO workers those are from the Mru

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community were taken into account for the in-depth interviews. In addition, village doctors, family welfare visitors (FWVs), family welfare assistants (FWAs), family planning inspectors (FPI) and nurses those are from outside communities, however, working for the Mru people were also selected for the in-depth interviews. The study aimed to interview doctor (gynecologists); however, no doctors were found in the study area.

3.5 Research Assistants

As a non-indigenous young male Bengali speaking researcher from mainstream society, it was difficult for me to conduct the study by the Bengali language since the Mru have a distinct language, and they are almost all, particularly women unable to communicate in the Bengali language. In addition, the issue of maternal morbidity and mortality is gender sensitive. Consequently, seven female interviewers from the Mru community were recruited to conduct the interview survey, namely: Ruichum Mru, Samori Mru, Ruiham Mru, Lalsem Mru, Tumyen Mru, Taking Mru, Kotong Mru, one from Alikadam, one from Thanchi and five from Lama. One interviewer from Lama went to Alikadam and Thanchi to conduct the survey since there were few women having 10 years of schooling in that area. These interviewers have 9 to 12 years of schooling and they are bilingual, speaking both the Mru and Bengali languages fluently. Moreover, three interviewers were working as health workers in NGOs, specifically one took formal training as a midwife from a private medical college hospital and two interviewers were students and the others were housewives. One college student named Anik Mru was always with me as an interpreter and guide. Some in-depth interviews, particularly on women having delivery experiences, traditional midwives and relatives of mothers who died, were conducted by one female interviewer. These interviews were instantly translated and recorded into Bangla language and later transcribed into Bangla by the interpreter as well. However, most of the in-depth interviews with leaders, school teachers, NGO workers, FWVs, FWAs, nurses and village doctors who speak the Bengali language, were conducted by me and these interviews were transcribed by my wife Rebeca Ansary.

3.6 Sampling

The study was conducted to answer the question: what are the problems and complications Mru mothers encounter during pregnancy, delivery and after delivery and the factors associated with it? Due to geographical location of the villages and the lack of household lists, it was not possible to follow the probabilistic sampling technique. It is also noted that the number of villages were also heterogeneous in terms of households that ranges from about 6 to 100 households in each village. A total of 374 currently married women having at least one child aged less than five years old, of which 133 were from Alikadam, 71 were from Thanchi and 170 were from Lama. They were selected purposively for the face to face interview survey using convenient sampling technique. As a result, in the present study generalization could only be possible on the study population rather than on the whole community due to non-probabilistic sampling technique.

The study also aimed to find answers such as: why are high maternal morbidity and mortality taking place in this community and to what extent do Mru mothers use traditional knowledge in their maternal health practices. In this perspective, respondents were also selected purposively, however, in different ways. For example, there were only two FWVs in two UHCs I interviewed,but in another UHC there was no FWV where I interviewed the family FWA. Additionally, Mru leaders and key informants socially recognized as important persons were interviewed. I interviewed some more experienced older traditional midwives and some less experienced relatively younger traditional midwives. In the end, a total of 26 in-depth interviews were conducted among people from different stratas of the Mru community.

3.7 Mode of Data Collection

Since both qualitative and quantitative methods were employed in the present study focusing on the emic point of view, – "insider's" or "native's" interpretation of their customs/beliefs –particularly for the qualitative investigation, data was collected from two sources: social survey and in-depth interview.

3.7.1 Social Survey

Social survey is a relatively efficient method for collecting data from a large number of cases and produced data which is well suited to statistical analysis. The content of social survey is social and deals with human behaviour, knowledge, attributes, beliefs and attitudes (Jupp, 2006:284-85). Today, the most common survey approaches are mail survey, telephone survey, internet survey and face to face survey (Czaja and Blair, 2005:33-35). So, face to face interview survey was conducted only among currently married women having at least one child aged less than five years to know the access to health care services, factors affecting maternal morbidity and mortality, health care seeking behaviour, knowledge and practices of FP and contraception. Though face to face interview survey is the most expensive social survey method, it is better than other survey techniques due to its high response rate, high quality data and less biasness of the sampling frame (Czaja and Blair, 2005:50-55).

3.7.2 In-depth Interview

In-depth interviews include a list of questions, topics or issues often called an interview guide. The way of questioning is usually informal and the phrasing and sequencing of questions varied from interview to interview (Bryman, 2004:113). In-depth interviews were conducted among currently married women having at least delivery experiences, unskilled birth attendance, family welfare visitors, nurses, village doctor and relative of those mothers who died during delivery and just after delivery to know the access to health care services, cause-specific maternal morbidity and mortality and cultural beliefs and practices during and after delivery of that community. In-depth interviews were also conducted among leaders, school teachers and NGO workers to get the information about socio-economic conditions, the marriage system, women's role in the society, religion, rituals, cultural practices, etc.

3.8 Data Collection Instrument

Since, there is no systematic research-based information on maternal morbidity and mortality in the community, a direct household survey was employed using a structured interview schedule. The interview schedule included close-ended

questions, which were prepared keeping the objectives of the study in view. The interview schedule covered the following issues such as socio-demographic, cultural and religious variables; access to health care services, complications and health care seeking behaviour during pregnancy, during and after delivery, knowledge and use of FP, mass media exposure to FP messages and finally respondents' opinion/suggestions for the improvement of their maternal health. For in-depth interviews, different interview guides were developed for different kinds of participants. The interviews were conducted in the local Mru language where necessary and were tape recorded. A pilot survey was conducted before using both the interview schedule and the interview guides for final data collection. Crama, for example, was added as a new category after the pilot survey under the question 'What is your Religion?'

3.9 Data Analysis

The collected data was summarized, tabulated and analyzed using the SPSS 16.0 package. Uni-variate analysis was conducted in terms of frequency distributions, bi-variate analysis was accomplished in terms of cross tabulations and chi-square tests, and multivariate analysis was performed in terms of binary logistic regression analysis. The response variables for bi-variate analyses were: ever visit to service center (yes = 1, no = 0), visit for antenatal care (yes = 1, no = 0), visit for postnatal care (yes = 1, no = 0), ever heard of FP (yes = 1, no = 0) and current use of contraceptive (using = 1, not using = 0). The explanatory variables used in bi-variate analyses were demographic (age and parity/number of children), socio-economic (religion, school attendance, occupation, husband's school attendance, husband's occupation, means of transportation, accompany, current use of contraceptive and access to mass media messages), and spatial (place of residence, service provided in the locality and distance of the service center) variables of the respondents. A binary logistic regression model was fitted to explore the determinants on access to maternal health care services, antenatal care and current use of contraceptives among Mru women. The response variables were: ever visit to service center (yes = 1, no = 0), visit for antenatal care (yes = 1, no = 0), and current use of contraceptive (using = 1, not using = 0). The explanatory variables included demographic (age and parity), socio-economic (religion, education, and access to mass media messages), and spatial (place of residence, service provided in the locality and distance of the service

center) variables of the respondents. Initially all the independent variables found significant in bivariate analyses were used during binary regression analyses, however, only the significant variables (except age in some case) were considered in the final model. Some variables found significant in bi-variate analyses, however, were not found to be significant in regression analyses due to highly skewed data. Multi-colinearity among the independent variables was also considered during the regression analyses.

Finally, sequential data analysis technique was employed. The rationale of the sequential mixed methods analysis of the data is to use the information from the analysis of the first database (qualitative data) to explain the results of second database (quantitative data). Some cases, for instance, provide the best insights in the quantitative results (Creswell & Plano Clark, 2007:143).

3.10 Challenges and Experiences during Data Collection

During the field work challenges were faced that influenced the reliability and validity of the data and the research results. Problems that I faced in the field could be categorized as seasonality, physical access to the community, resources (research assistants), language and security. Since the fieldwork was conducted during the rainy season in June to first week of September, heavy rains washed away the mud paths and made them slippery and dangerous to climb up and down the hills. I was fortunate that the rainy season was bit late in Bangladesh that year compared to last few years which made it possible to complete the study in time, though some areas were flooded during the fieldwork. Physical access is connected to communication and transportation rather than community support. The transportation from the Upazila town was mostly old jeeps often out of condition which is known as Chander Gari (see Appendix I, Picture 3.1). However, there was no vehicle from Thanchi to the study villages. This transportation was limited to particular local markets. The only way to reach the Mru villages was walking. The local transportation was always risky due to inadequate road infrastructure and hilly areas. For instance, I finished my in-depth interviews in one field area at Mongla Para, Lulaing bazar, about 50 kilometers from Lama town. When I came back to the town, two days later, a jeep was capsized in the nearby ditch and five people died.

Since most of the lands of Mru are gradually and illegally grabbed by the Bangali people, Mrus are hostile to Bangalis. As a result, initially, community access was also difficult; however, one professor[4] from the University of Dhaka helped me a lot. He made contact with different national[5] and local[6] indigenous leaders and unfolded the importance of the study. Then I was warmly welcomed in the community. I faced difficulties finding interviewers to conduct the interview survey. Since, the issue is gender sensitive, it demanded a female interviewer. But I found very few women who had about 10 years of schooling and most of them were involved in an NGO job. Due to the lack of community access and language barriers, NGOs were employing community people to work efficiently. So, I had to make contact with and requested highest personnel of NGO for certain hours leave for those interviewers particularly on Thursday so that they could conduct interview survey on Thursday, Friday and Saturday (Friday and Saturday are official holidays in Bangladesh). Language was another challenge I faced during field work. I went and stayed several times in the Mru villages where nobody could communicate with the Bangla language. In such cases I found a very dynamic young college student as a guide and interpreter who delivered my ideas and words to them. We stayed most nights at the house of headman or karbari where most of the villagers gathered after having their dinner and heard our words and shared their ideas and views. Thereafter, it was easy to conduct in-depth interviews the next morning where necessary.

Though the situation in the CHT is much better now after signing the CHT peace accord in 1997 between Government of Bangladesh and Parbatya Chattagram Jana Sanghati Samiti (United People's Party of the Chittagong Hill Tracts), insurgency is still continuing in some remote areas. Sometimes Bengali people are abducted, although this is very infrequent. However, I was always in fear. I was mostly scared due to health hazards in the study areas. There was no safe drinking water, no electricity. When I went to villages, I had to carry safe drinking water from the town.

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[4] Mesbah Kamal is a Professor of History, University of Dhaka and General Secretary of an NGO, Research and Development Collective (RDC). He is working on different rights of Indigenous people in Bangladesh.

[5] National Indigenous leaders include K.S. Mong, President, Bangladesh Jono Songhati Samity and Ranglai Mru, Headman, 315-Renikhang Mouza, Bandarban Sadar, Bandarban Bohmong Circle.

[6] Local Indigenous leaders include Khamlai Mru, Upazila Chairman, Thanchi, Bandarban and Maliram Tripura, Member, Union Parishad.

Moreover, these areas were highly prone to diarrhoea, malaria and skin diseases prone areas and the prevalence accelerated during the rainy season. I took a typhoid vaccine before going to the field and took a malaria preventive every week. I was so cautious in the field. Nevertheless, I suffered from skin diseases during my field work. As a Bangali person, I was not oriented with their foods. So, my stay in the Mru villages was very difficult, though I carried oil and some spices from the town. When we stayed in the Mru villages, every headman and karbari slaughtered chicken and gave them to me to cook. I cooked chicken and had it with their family members that also helped building trust among us.

3.11 Ethical Considerations

The research was conducted completely anonymously. That means the privacy of the informants and respondents was guaranteed. The study questions were in the local language and the sensitivity of some local words was considered. Members from the community were employed to administer the study. Moreover, local informants were consulted with the goal of conducting the study to its best. Finally, the research objectives and its benefits were presented to the respondents.

The major strength of the present study was to use both a qualitative and quantitative approach to understand the maternal health status of the Mru people. Another strong point was that the study tried to incorporate different stratas of the Mru population on the basis of their highpopulation in the area, distance from the service centers and urban areas, economy and livelihood, and religion which have been discussed in the earlier section in this chapter. However, the main drawback of this study was the use of non-probabilistic sampling technique. Thus, it was not possible to make inferences on the whole community. Secondly, few educated Mru girls were found in the community, even though they had no prior experience to conduct such kind of survey or interview that might influence the quality of data. Finally, out of seven interviewers, three were involved in NGOs as health workers that might affect their viewpoint or skew their portrayal of the health situation of the study area in their own way.

CHAPTER FOUR

Findings and Analysis of Data

This chapter analyzes both qualitative and quantitative data consisting of four sections. The first section describes the qualitative data focusing on socio-economic and cultural features, access to health care services as well as beliefs and practices of maternal health of the Mru people. This section also will be helpful to understand the remaining parts of the chapter. On the other hand, rest of the three sections analyzes the quantitative data using uni-variate, bi-variate and multivariate anlyses. These sections focus on access to health care service and health care seeking behaviour, antenatal, perinatal and postnatal care and complications, and finally FP and contraception.

4.1 Section I
Socio-economic and Cultural Features and Maternal Health[*]

4.1.1 Socio-economic Condition

The socio-economic condition of the Mru people is very low as compared to other indigenous people in Bangladesh, which might be one of the important causes of their poor health since they can not afford the costs related to maternal health. Their livelihood mostly depends on Jhum cultivation (see details in chapter 2), which normally starts in March/April and ends up by September/October. Rice is usually produced in the Jhum field and is the staple food of Mru people. Maize, green chilly, turmeric, ginger, cotton and various kinds of vegetables and fruits are also produced in the Jhum filed. In the past banana was exclusively produced in the Mru area. Recently some Mru people involve in intercropping fruits cultivation which is increasing gradually. Nowadays some people have also started growing tobacco; however, they do not want to continue growing tobacco anymore since it makes land infertile for further Jhum cultivation as argued by headman and karbari. Jhum productions rarely sell as they can not produce surplus crops. For most of the households, crops are not enough for their whole year of subsistence. Consequently,

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[*] Some parts of this section have been accepted as an oral presentation at the 4th International Indigenous Conference on Traditional Knowledge, 6-9 June, Auckland, New Zealand.

they sell their products, particularly rice and vegetables in the weekly local market to meet other necessities like salt, fuel and cloths. Other indicators of social life are also very poor in the Mru community. For example, they do not have safe drinking water sources in the community. They collect drinking water either from stream or from river. The Mru households do not have sanitary toilet facilities except those that are living in urban areas. They usually use forest and open fields as their toilets. They have little access to primary education which is far from their villages. A study found that the average distance to the nearest school from the Mru villages is 12.12 kilometers (Rafi, 2006). Nowadays, some primary schools have been introduced by NGO and by individual endeavours which is raising hopes among Mru people.

4.1.2 New Religion

Before the 1950s, theMru people believed in Animism and Buddhism as reported by some key informants. However, after the 1950s few Mru people have converted to Christianity. Nowadays, the majority of the Mru people belong to the new religion Crama. Man Ley Mru is the founder of the new religion Crama, which started to disseminate religious and moral messages to Mru people in the 1980s. Man Ley Mru was very quiet but solemn in his behaviour since his early life; however, occasionally he invited and shared his morals, ideals and thoughts to the community people. Finally, in 1985 when he was 19 years old, he arranged a meeting for Mru people and announced that he had created new religion of their own since they have no distinct religion and beliefs in different other religions. During this time, he also revealed that he created letters for the Mru language. In the late 1990s, he left to the Himalaya Mountain for divine contemplation and religious as well as social development of Mru people. Now Mru people are unsure whether he is alive, and they have no communication with this originator of the new religion. The Reyung Khiti is the central religious book of Crama which means good ethics. This religious book is comprised of good messages mostly from Christianity, Buddhism and Hinduism as argued by Mru people. Like Christianity religious rituals are conducted to be a member of Crama religion. At the age of 12, a boy or a girl is sent to prayer room (Kiyang Ghar) for religious purification conducted by a priest where he or she will be taught rules, regulations and religious messages of Crama religion. For instance, animals should not be killed on Sunday and Thursday and purified boys and girls have to attend different religious rituals and festivals thereafter. People

belonging to Buddhism and Animism are living in the remote areas as compared to those belonging to Christianity and Crama. Buddhists and animists also do more traditional practices and rely on local remedies for their maternal health problems. Numerous rituals and festivals are held in the Mru society throughout the year, which is mostly carried out by these people.

4.1.3 Marriage and Family

One of my key informants mentioned that there are about hundred of clans in the Mru society. Marriage is not accepted where both partners (boys and girls) belong to the same clan. In addition, marriage is also not allowed between clans who have kinship or brotherhood relationship. In the Mru society girls are generally getting married in late teenage years and early twenties to late twenties, which are known as late marriage as compared to Bengali girls, while boys are getting married in their late teens to early twenties. Thus, girls are almost always older than boys in their conjugal life. The Mru believe that girls need to learn all necessary skills before marriage in order to run the family properly. They also believe that their bodies need to mature enough to work in the Jhum field and to bear children. Boys also prefer those girls who are skilled in Jhum cultivation, knitting traditional cloths and managing household activities properly. These girls are relatively dear either in the arranged or loved marriage and respected by the husband's family as well. Consequently, boys often like to marry older girls. There are three kinds of marriage customs found in the Mru society: settle marriage, love marriage and escape marriage. Settle marriage is done by the consent of parents through huge rituals. First, boys' parents will visit girls' home with some chickens and wine[7] to decide whether they like that girl. If the parents like that girl, secondly the boy will visit the girl's home with his friends where the girl's family will arrange *Champua*[8], through which the bridegroom and bride exchange their views and try to understand each other. If the boy likes girl, his parents will visit the girl's family again with spear and will fix the marriage date after discussing with the girl's parents. Generally, most of

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[7] This is particularly home made wine, however, nowadays people also bringing soft drinks instead of wine depending on the context, for instance, if the family is living nearer to the market place or town and availability of soft drinks.

[8] An assemble fellows by idle gossips among young Mru girls and boys including bridegroom and groom.

the marriage ceremonies take place at the end of Jhum cultivation when people are free from their works. On the wedding day, bridegroom, his relatives, clansmen, and friends come to the bride's home with chickens. According to their customs, these chickens are slaughtered for the feast of bride and her accompanied people, while pigs are slaughtered by the bride's parents for the bridegroom side people. The bridegroom side can not eat chickens that they brought from their home; similarly the bride side can not eat pigs according to their customs. Finally, the bridegroom side people return to their home with bride. On the next day, a healthy large pig is slaughtered during the *Bongkom*[9] ceremony. The bride's mother plucks seven hairs from the back of slaughtered pig and ties them with seven coloured threads, considered as amulet. This amulet is finally fastened to the couple's wrists and proclaims that the bride has become the part of her husband's family members. The next morning is the *Mangtam* (gift exchange) ceremony which is very common and important in Mru society. During this ceremony, the bride's father receives 100 silver coins as is their customs and the mother receives 10 silver coins for her breast feeding from bridegroom's parents as a Buksung (marriage gift). The amount of silver coins may vary up to 250-300 depending on the skill of the girls and the economic status of bridegroom's parents; however, 110 silver coins are mandatory to get married. As a result, some Mru boys can not marry in their entire life since they are not able to pay 110 silver coins. Nowadays educated Mru people are trying to make headman and karbari change this customs or to reduce the amount. Bride's parents also receive spears, choppers, arrows, spades and swords as marriage gifts. Love marriage is also following almost same ceremonial procedures except initial visit, rituals and discussion made by the parents or guardians that reduce the cost. Therefore, love marriage has become very common among the Mru people and is consistently increasing. Escape marriage, on the other hand, is one kind of love marriage where parents are not agreed upon their children's own decision regarding choosing their partner. In such cases, the bride escapes to the bridegroom's house without her parents consent. Then the bridegroom's father kills a pig and conducts the *bonkong* ceremony by which the bride becomes a member of her husband's family. Escape marriage usually goes through fewer rituals than settle or love marriages. In the Mru society, men generally can not possess two wives at the same time. If there is maladjustment between husband and wife, the marriage is broken up

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[9] A formal ritual through which the bridegroom and bride become husband and wife socially.

by mutual agreement. Pre-marital relationships seem to be common in the Mru society since love marriage is predominant and young boys and girls come together during *Champua*. This might be one of the important causes of unintended pregnancy resulting in maternal morbidity and mortality which demands further study.

In the Mru society, most of the families are still extended family where married couples and their children, siblings, parents and grandparents are living together. Major decisions regarding maternal health care seeking behaviour are usually taken by the head of the households rather than couple. Few are nuclear families living only with their wives and children and are found only among the educated people and people who have migrated one from their ancestral homelands to city areas. These groups of people are also involved either in service or business rather than Jhum cultivation. People that belong to nuclear family seem to be better regarding their maternal health as compared to people those belong to extended family.

4.1.4 Women's Role in the Family

Though Mru is a patriarchal society, women play a central and vital role in the Mru family. Mru women do almost all the household works and more agricultural works in the Jhum field as compared to their male counterparts according to their customs. During Jhum cultivation period, almost all women are very busy all day long as mentioned by the key informants. They wake up very early in the morning and must cook the rice usually eaten three times a day (early morning, noon and early night). After cooking rice women serve food to other family members and must carry drinking water from the stream usually two times a day (morning and evening). Sometimes they also must pound rice in the morning before going to the Jhum field. They can also do it after coming back from the field in the evening depending on whether they have clean rice in stock for immediate cooking. Women and girls try to reach the Jhum field as early as possible even before the sun rises. Girls who reach to the Jhum field early enough are considered as important bride in the marriage and are also socially respected. Women and girls carry their lunch to the Jhum field wrapped in banana leaves and stay up into the evening. In the Jhum field Mru girls and women are involved in planting, weeding and harvesting. Sometimes they also help during slashing and burning.

On the way back home they take their bath from nearby rivers. Some women also wash themselves at morning in the river or in the stream when they clean their dishes and cloths. Afterwards, if rice is not ready for the next day, generally young girls start to pound rice and women begin cooking. After taking dinner, women take care of their small babies if any. On the other hand, majority young girls and boys come together for idle gossiping (*Champua*) in the neighbouring house or in their own house. They also knit and sew cloths while boys play bamboo flute. They also smoke bidi (a kind of cheap cigarette) during this gathering. Young boys and girls generally fall in love and find their partner at this *Champua*. In addition, women must collect firewood almost everyday during winter season; however, men are not obliged to do such hard work. Women are also engaged in beer and liquor production in the Mru society. Older women generally stay at home and take care of the babies of those are working in the field. This kind of hard work might be hazardous before and after delivery and might produce greater maternal morbidity and mortality. On the other hand, men are generally involved in selecting, slashing and burning the Jhum field, constructing housing by bamboo and wood, making baskets and other household utensils, hunting, going to the market for shopping as well as taking all kinds of decisions in the family.

4.1.5 Access Exists or Non-utilization?

Access to general health well as maternal health care services is extremely poor among the Mru people. The study found that the average distance of health facilities from the villages are 11.7 miles for Mru and 3.9 miles for the Bengalis (Rafi and Chowdhury, 2001:44). There is a government hospital in each Upazila in Bangladesh and, in the study area Alikadam, Lama and Thanchi also have government hospitals. Though there is an obstetric and gynecology unit in each UHC, there is no emergency obstetric care. Moreover, there is no gynecologist in these hospitals, which might be the reason most of the doctors in Bangladesh prefer to stay in big cities, particularly in the capital city as compared to remote areas. For instance, an indigenous lady doctor from Thanchi is practicing in the city areas. Community people expect that she will work for the community after the completion of her education. But she argued that *"I did not spend vast amount of money and effort to live in these villages"* as reported by local people. Thus, duty doctors, often new

graduates usually take care of the patients rather than specialized doctors in the hospitals of the study areas. One of each UHC (Alikadam and Lama) has only one FWV, whereas Thanchi UHC has none of the FWVs. On the other hand, some FWAs and nurses are instrumental in each UHC when women are coming and seeking for maternal health care services. Nevertheless, staff member and distribution of drugs are not adequate in the hospitals. One FWV, for instance, reported that "*in the last six months there was no medicine in this section*". If the patients are serious, they refer them to district level government hospitals and private clinics. Nursing of pregnant mothers and child, vaccination of pregnant mothers and child, supply of iron tablet and distribution of FP materials are the major services provided by these hospitals. FWAs also visit villages eight times per month; however, most of the Mru villages are beyond reach due to geographical settings and communication problems. Even NGOs are not working in these villages due to the language barriers as well as geographical and communication problems, though some NGOs have recently started their work in some areas at small scale. In Lama, for instance, a local NGO 'Concern Universal' introduced a community-based satellite clinic (SC) project in some of the Mru areas from 2002 to 2008. They have also introduced another project starting in 2009 entitled, "Mobilizing poor and disadvantaged people to manage local health service in Bandarban". On the other hand, a local NGO 'Humanitarian Foundation' has launched awareness and health education program commencing in 2008 in one union of Thanchi upazila.

Non-utilization is similarly apparent among the Mru women due to the distance to service centers, illiteracy, lack of awareness and language barriers. They do not know where they will get the proper treatment. Very few women visit to service centers when they face serious complications. Many women are too ashamed of their complications to seek treatment. One FWV argued that "*though the Mru women are usually open and live bare cloths in their society, they are very close to the Bengali society. They are ashamed to share their problems with us and so they did not come to the hospitals.*" As a result, they do not utilize health facilities, even though some households are living relatively near the service centers. I found several women and key informants explaining that "*we cannot unfold our problems and complications precisely to the doctors and staffs that made them annoyed. Consequently, we did not visit service centers later*". Another FP inspector argued that Mru women never

came to health centers before the 1990s. Nowadays they have started coming to the hospitals for contraception and FP; however, they are feel ashamed to make it known to others.

4.1.6 Maternal Health: Beliefs and Practices

4.1.6.1 Family Planning and Contraception

Before the 1990s, the modern FP method was almost entirely absent among the Mru family as reported by one of my key informants. However, their population growth was not much higher compared to other indigenous groups and Bengali people. Several factors are instrumental in this regard, for instance, most of the Mru women are suffering from severe anemia after their child birth due to their distinct postpartum care practices that has been discussed in the following section under postnatal care and practices. Anemia becomes severe from a second birth to the following births due to their distinct food habits. As a result, about half of the women suffer from menstruation problem after their child birth which continues two to three years as mentioned by several FWVs/FWAs and nurses. Moreover, a majority of the Mru women work hard in the Jhum field which makes them reluctant to have sexual intercourse. This is another important factor in the low use of contraception as reported by FWVs and nurses which claims further study. Though the situation is gradually changing, very few people are coming to the health centers for FP and contraception particularly those that are living a relative short distance from the service centers. They are ashamed to share it with other community people. The Mru women usually prefer the pill because they can get it easily from UHCs when they visit on the weekly market day. FWV of Alikadam UHC mentioned that *"Of late Mru women are very much interested in the use contraception, particularly the pill, that you can easily notice their long queue on the market day"*. Some women also use the permanent method. However, those people living in the remote areas are not using contraceptive yet.

4.1.6.2 Antenatal Care and Practices

Mru maternal health is often determined and healed by its own beliefs and practices. From conception to post delivery Mru women mostly depend on different kinds of traditional practices and beliefs. When the first menstruation stops, they know that they have conceived and going to be mother. Some pregnancies last nine months,

some ten months and a very few last for seven and eight months. They believe that if the pregnancy lasts ten months there is a higher probability of having a male baby and if the pregnancy lasts for nine months or less that will be a female baby. They determine their new baby's sex by pulling a *loho* plant in single breath. They believe that if the main root is straight, the baby will be boy and if it is divided, then the baby will be girl. If the root is rotten or eaten by insects, the baby might be dead. The Mru people also foretell about their upcoming baby. They believe that if the pregnant mother speeds up her left leg first from sitting to walking during pregnancy, she will give birth female baby and if she puts forward right leg then she will breed male baby. If the mother had a gun or sickle in a dream during the pregnancy, she will give birth male baby. On the other hand, if she had a pitcher or *thurong*[10] (Basket) in a dream, she will give birth female baby. During the pregnancy, if the areola darkens substantially, the woman will give birth female baby, if darkens relatively less she will give birth male baby. If a woman had a finger ring or bracelet or the tender core of the banana plant's trunk in a dream, she will give birth female baby. On the contrary, if she had sun or moon or roaster in a dream she will breed male baby. The Mru women do not eat eggs, fish caught in the hook and meat of animal killed by the trap during pregnancy in believing that the delivery will be extremely painful.

Mru mothers generally do not go to the health centers during the first and second trimesters of pregnancy as mentioned by several of my key informants. Thus, iron, calcium and folic acid supplement is quite absent among Mru mothers during their pregnancy. They work in the Jhum field during the whole period of pregnancy, even on the day before delivery. Some women also breed their child in the Jhum field, although the event is unusual. This might be highly risky for the Mru mothers. Very few women go to the service centers if they face serious complications during the third trimester of pregnancy and delivery, even when all other efforts are in vain. FWV from Alikadam mentioned that *"in my 17 years of service life, I found only two Mru women who came to the hospital due to their delivery complications."* Women, for instance, first go to the traditional midwives for their complications. If the midwives are unable to handle the situation, then patients' husbands or father-in-law

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[10]Mostly used to carry crops from the Jhum field and also used to carry firewood and what not.

are sent to visit the traditional village healer[11] (TVH). TVH can only diagnose the complications; however, he cannot speak about or find out the reasons behind these complications. According to TVH's suggestion, they have to visit another reader who finds out the causes and provides treatment offering worshipping and killing animals, particularly pigs. If this treatment fails, they go to the village doctor. If the village doctor is also unable to handle the complications, they again visit the TVH. This time if the TVH could not find any way out, they only pray to *Thurai* according to their religious belief and wait until death of the mother. In a few cases, if the village doctor fails, they try to bring the patient to the hospitals or private clinics using a human ambulance.[12] But those Mru people that are animist and living in extremely remote areas, they themselves first worship nature like the river, mountain and sacrifice a chicken, pig or cow for their healing rather than going to the service centers.

4.1.6.3 Delivery Care and Practices

In Mru society almost all the deliveries are home-based delivery assisted by traditional midwives. These traditional midwives mostly do not have any general education or formal training in midwifery. Any woman can become a midwife, though they are not often willing to get involve in this work. However, when the existing midwives are unable to deliver babies due to their old age, new women who seem to be clever, intelligent and elegant in the society, are chosen and requested by the Karbari to get involved in this work. Then the new midwife starts her new job as an assistant and shares knowledge, skill and experience with the older one. Pregnant women generally meet and consult with traditional midwives at the time of delivery. Midwives also visit women after delivery, though they never visit them during pregnancy. Midwives encourage women to inform them when they reach nine months of pregnancy. One midwife, for instance, reported that *"I suggest pregnant women to count their months and inform me when they are nine months because it is more difficult to deliver when the pregnancies are more than nine months"*. Deliveries are taken place only inside the Kimma room on the floor. Midwife, her

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[11]These traditional village healers are known as Sra in the Mru language and Gonok in the Bengali language. They are also known as fortune-teller, reader or foreteller in the society.

[12]A blanket like thick cloth is tied with two pieces of bamboo and the patient is lain down on it and carried to the hospital by at least four men. This concept is mainly used among people in hilly areas where there is no transportation system.

assistant if any and close relatives, for instance, mother or mother-in-law are present at the moment of delivery. Midwives press on lower abdomen to determine the position of the baby. If the head of the baby is first, it will be easy to deliver as argued by midwives. On the other hand, if the hands and legs first, the midwives put their hands inside and try to pull the head of the baby to help the baby come out which takes usually more time. If the baby is not in right position, midwives hit the lower back a few times as well as also put pressure on the lower abdomen of the women. The same is done when the placenta does not come out normally. In such cases, they only pray to Thurai by killing a chicken or pig. When the placenta comes out, the umbilical cord is cut by dry bamboo strip often collected from the Kimma room. Then the placenta is put in the basket and thrown outside of the village. It is either thrown to the eastern part of the village or hanged on a branch of a tree depending on clan practices rather than putting it under the earth. It is believed that if the placenta is put under the soil, the baby may be died. Finally, the floor is washed with water when delivery is over and fire is lit and hot water is prepared for the mother.

4.1.6.4 Postnatal Care and Practices

After delivery, women have to stay in the inner Kimma room for seven to nine days depending on her birth parity as well as clan practices. Moreover, the woman's husband's family decides how long she will stay inside the room. For the first and second deliveries, women generally stay nine days inside the room, while for the third and consecutive deliveries they stay seven days inside the room. During these days, women sit by the fire, drink hot water, eat burning salt with rice and put hot searing on the lower back (see appendix I, picture 3.2). They believe that drinking hot water and eating salted rice will bring milk to the breast as well as will back their body in the prior position so that they can work in the Jhum field soon. On the other hand, hot searing is important to dry dirty blood quicker and prevent this blood from going up in the body. If the dirty blood goes up into head, women will be mad and ultimately will die. So, in these days women must sit by the fire and often can not even sleep more than one or two hours. In most of the cases, their back skin is burnt due to this hot searing. After seven to nine days they come out from the inner room, but their food intake practices continue for a long time. In the very first month after delivery, they only drink hot water, and this practice continues for four to six months

accompanied by salted rice. After one month, they add only *Felong*[13] leaves with their daily foods that last up to three months. After three month they may eat dry *Churi* [14] fish for six months to one year. Afterwards, they can eat everything whatever they want. In Mru society, everything means rice, vegetables and some kinds of small fishes. They seldom eat meat except on special occasions. They usually do not eat eggs prefering to put them aside for hatching. Here it should be mentioned that instead of oil, Mru people use *Nappi*[15] to cook all kinds of their daily foods. When mother comes out from the Kimma room after nine or seven days, midwives are called upon again and arrange the baby naming ceremony. On the day of ceremony, a small feast is arranged particularly for midwives, and some cloths and a small amount of money are given to midwives as their remuneration.

4.1.6.5 Maternal Mortality

Death during delivery and post deliver is a common phenomenon for women in the Mru society. Women generally pass away during delivery due to excessive hemorrhage, obstructed labour, prolonged labour, obstructed placenta and swelling of the whole body and fever as mentioned by the relatives and neighbours of the dead mothers and key informants. In most of the cases, midwives are unable to handle twin babies which often cause death. When midwives face this kind of complications, they send someone from this household to TVH. Then the sacrificing rituals, for instance killing a pig, chicken or cow, are performed to resolve this problem according to healer's suggestion.Moreover, midwives argue that they refer complicated deliveries to healthy facilities. Ironically however, in almost all cases it is impossible for mothers to reach healthy facilities due to geographic and transportation problems. On the other hand, there is no emergency obstetric care in service centers to handle this kind of complications. Many women die during delivery due to obstructed labour and obstructed placentas that midwives cannot deal with properly. Stillbirth along with both induced and spontaneous abortion is also high in this society, which leads to many deaths to Mru mothers since they work hard during pregnancy. One of the neighbours explained how the women died during her

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[13]*Felong* is a kind of vegetable similar to spinach

[14]*Churi* is a kind of small but slightly long sea fish.

[15] Nappi is a liquid prepared with small dry fish.

delivery, *"During eight and nine months of pregnancy, the whole body of the woman swelled; however, she did not take any treatment or any kind of medicine. On the day of delivery, the midwife tried hard for a long time but she was not able to deliver. The next day, the husband of that woman called upon a village doctor who was also unable to deliver. On that day, the midwife and other relatives of the patient pressed heavily on the lower back and abdomen from various directions and again they failed. In the mean time on the second day, her husband went to the town to call upon a graduate doctor. Before her husband comes back from the town, the midwife inserted a sickle inside the womb and cut the baby and delivers it and argued that the baby had died inside the womb long before. After delivery, the woman became very exhausted. But without taking rest after two or three days she went to the river for fishing. After coming back from the fishing she became serious ill and after few days she also died".*

4.2 Section II

 Access to Health Care Services and Health Care-Seeking Behaviour

4.2.1 Background Characteristics of Respondents

Among the survey respondents 45.5 per cent were from Lama and 35.6 per cent were from Alikadam, while the remaining of the respondents (19.0%) was from Thanchi. The majority (30.2%) of the respondents belonged to the 25 to 29 age group followed by 27.5 per cent and 19.8 per cent in the 20 to 24 and 30 to 34 age groups respectively. The literacy rate among Mru mother was very poor. The majority of the survey respondents (96.5%) did not attend school, of the 3.5 per cent that attended school, only 15.4 per cent had the highest level of 10 of years schooling. On the other hand, 46.2 per cent had completed 5 years of schooling. The Mru people belonged to different religions. 57.2 per cent believed in Buddhism followed by Crama (25.1%), and Christianity (17.6%). Some people also believed in Animism, however, they liked to introduce themselves as Buddhist. Mru women mostly (98.7%) engaged in swidden/jum cultivation and simultaneously household activities were also performed by them. Their main sources of drinking water were river (53.5%), followed by stream (23%), and well (3.7%) as indicated by the respondents. Toilet facilities were extremely poor, where 57.2 per cent had no facilities and 36.9 per cent used open latrine followed by 2.9 per cent hanging latrine and 2.7 per cent pit larine. More than half of the respondents (55.1%) reported that service was provided in the locality by UHC while 28.3 per cent reported were from family welfare center (FWC), 4.3 per cent by SC and 4.0 per cent by traditional village healers(see Appendix I, Table 4.2.1). Some people also visited to the village doctors and local pharmacies.

4.2.2 Access to Health Care Services

In this study, ever visit to service centers was assed in terms of different demographic and socio-economic characteristics of women who had a live birth in the five years preceding the survey. Bivariate analysis (Table 4.2.2) showed that place of residence, religion, school attendance, occupation, husband's school attendance, occupation, place of service provided, distance to the service center and mass media were positively associated with ever visit to the service center (*p*-values are included in the table). The study reported that more than half (53.5%) of the

respondents from Lama visited to service center after marriage, while only 7.5 per cent and 19.7 per cent respondents from Alikadam and Thanchi ever visited to the service centers after marriage respectively. Ever visit to service center was found to be higher among those who belonged to Crama religion (40.4%) as compared to those who belonged to Buddhism (30.4%) and Christianity (18.2%). Ever visit to the service center was lower (16.7%) among teenage respondents and the corresponding values for the next three age groups were almost double than teenagers. Although ever visit to service center was slight lower in the 35 to 39 age group, the corresponding value in the 40 and above age group was again more than double of teenagers.

School attendance had significant association with ever visit to the service center. The study found that only 23.1 per cent of respondents did not ever visit to the service center who had attended school, while 70.9 per cent of respondents who never attended school did not ever visit to service center. Respondents who were service holders were more (80.0%) likely to ever visit a service center relative to those were agriculturalists and housewives (30.1%). Husband's school attendance and occupation had also significant association with ever visit to service center. More than eighty per cent of the women (80.8%) ever visited service center whose husbands attended school, while the corresponding value was only 27 per cent of those husbands who did not attend the school. The study also found that women, whose husbands were involved in business and service, visited the service center more often than whose husbands were involved in agriculture and other works like day labourer. Respondents who had one child were slightly more likely to visit the service center as compared to those who had two or three children. On the other hand, respondents who had more than three children were less likely to visit the service center. The study demonstrated that only 11.7 per cent of respondents visited the upazila health center, while more than half of the respondents visited the FWC and others (traditional village healers, village doctor, and local pharmacy).

Table 4.2.2 Association between Access to Health Care Services and Different Demographic and Socio-Economic Characteristics by Using Chi-square Test

Characteristics	N	Ever Visit the Service Center**	
		Yes (%)	No (%)
Place of Residence (*p*=.0001)			
Alikadam	133	7.5	92.5
Lama	170	53.5	46.5
Thanchi	71	19.7	80.3
Religion (*p*=.011)			
Crama	94	40.4	59.6
Buddhism	214	30.4	69.6
Christianity	66	18.2	81.8
Age (*p*=.371)			
Less than 20	24	16.7	83.3
20-24	103	32.0	68.0
25-29	113	35.4	64.6
30-34	74	31.1	68.9
35-39	46	21.7	78.3
40 and above	14	35.7	64.3
School Attendance (*p*=.001)*			
Yes	13	76.9	23.1
No	361	29.1	70.9
Occupation (*p*=.033)*			
Agriculture and Housewife	369	30.1	69.9
Service	5	80.0	20.0
Husband's School Attendance (*p*=.0001)*			
Yes	26	80.8	19.2
No	348	27.0	73.0
Husband's Occupation (*p*=.0001)			
Agriculture	355	28.7	71.3
Business	5	80.0	20.0
Service	9	100.0	0.0
Others	5	0.0	100.0
Birth Order (*p*=.161)			
1	68	38.2	61.8
2	85	31.8	68.2
3	87	35.6	64.4
4	60	21.7	78.3
5+	74	24.3	75.7
Place of Service Provided (*p*=.0001)			
Upazila Health Complex	206	11.7	88.3
Family Welfare Center	106	51.9	48.1
Others	62	58.1	41.9
Distance (*p*=.0001)			
Within 2 miles	24	91.7	8.3
2-5 miles	108	26.9	73.1
6-10 miles	136	23.5	76.5
11-15 miles	75	40.0	60.0
16 miles and above	31	6.5	93.5
Mass Media Exposure (*p*=.0001)*			
Access to any media	19	73.7	26.3
No access to any media	355	28.5	71.5

Note: N denotes number of frequency
Note: Row percentages under column variable add up to 100%
*Fisher's exact test has been used for school attendance, occupation, husband's school attendance, and mass media variables.
**Ever visited means visit to the service center after marriage.

The study found that respondents who lived within two miles of the service centers, were more (91.7%) likely to visit the service center relative to those who lived more than sixteen miles distance from the service centers, were almost fifteen times (6.5%) less likely to visit the service center relative to those a short distance away. The study also exhibited that 73.7 per cent of respondents who had exposure to any mass media of radio, television or newspaper ever visited the service centers, while only 28.5 per cent of respondents ever visited the service centers who had no exposure to any media.

A binary logistic regression model was fitted to explore the determinants on access to maternal health care services among Mru women (Table 4.2.3). The response variable was ever visited the service center (yes = 1, no = 0). A visit was not considered a visit at any point in their life, rather a visit in the last five years preceding the survey. Women who even visited the service center for general sickness were regarded as having access to the service center.

Table 4.2.3 Logistic Regression Estimates of the Effect of Demographic and Socio-Economic Characteristics on Access to Health Care Services among the Respondents

Independent variables	*B*
Place of Residence (*r*= Alikadam)	
Thanchi	1.417**
Lama	2.981***
Religion (*r*= Crama)	
Christianity	-3.637***
Buddhism	-.418
Age (*r*= Less than 25)	
25-35	-.623*
36 and above	-.895
School Attendance (*r*= No)	
Yes	2.163**
Service Provided in the Locality (*r*= Upazila health complex)	
Family welfare center	2.210***
Others	1.348***
Distance (*r*= Less than 5 miles)	
5-10 Miles	-1.372***
11 Miles and above	-.627
Access to Mass Media (*r*= No access to any media)	
Access to any media	2.371***
Constant	-2.056***

Significance Level: ***$p<0.01$; **$p<0.05$; *$p<0.10$.
r denotes Reference Category

Logistic analysis suggested that respondents from Lama and Thanchi were significantly more likely to have access to health care services as compared to the respondents from Alikadam. Respondents who were Christians were significantly less likely to have access to heath care services relative to those who belonged to the new religion Crama. The study also demonstrated that respondents aged 25-35 were less likely to visit the service center compared to the respondents aged less than 25 years. Respondents who attended school were significantly more likely to visit to service center relative to those who did not attend school. Analysis further suggested that respondents visited FWCs significantly more compared to UHCs. Similar results were found among those who visited other service centers like SC and village doctors. Respondents who lived within 5-10 miles distance from the service center were significantly less likely to visit service centers as compared to those who resided less than 5 miles distance from the service center. Analysis also found that respondents who had access to any of the mass media of radio, television or newspaper were significantly more likely to have access to service center relative to those who had no access to any media.

4.2.3 Maternal Health Care Services in the Study Area

Table 4.2.4 (see Appendix I) presents the maternal health services provided by different service centers as mentioned by the respondents. About one-fifth of the respondents (21.7%) mentioned that "treatment of general diseases" was one of the services offered by these health centers. Other major services offered by these centers included "oral saline preparation" (17.9 %), "iron tablet supply" (14.2%), "health education" (13.9%), "measuring weight of pregnant mothers" (12.8%). Some other services like vaccination of children, vaccination of pregnant mothers, nursing of babies, nursing of pregnant mothers, nursing of lactating mothers, advice for breast feeding, nutrition education and distribution of FP materials were also provided by these centers.

4.2.4 Health Care Seeking Behaviour

4.2.4.1 Treatment Seeking Behaviour

More than half of the respondents (59%) mentioned that women should seek treatment during pregnancy even though they are not sick, while one-third (34%) of the women reported that they did not know whether or not women should seek treatment during pregnancy. On the other hand, only 7 per cent of women reported that women should not seek treatment during pregnancy even though they are sick.

Figure 4.2.1 Women's Perception regarding Treatment Seeking Behaviour
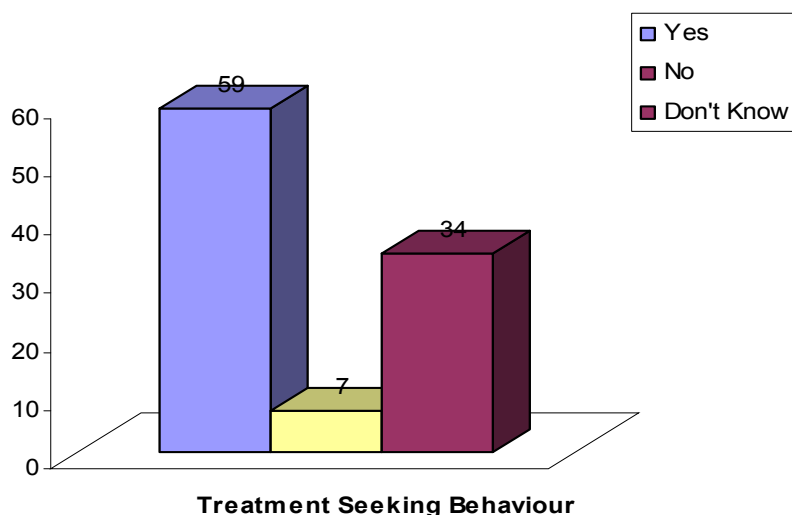
4.2.4.2 Food Intake

About sixty per cent (59.9%) of the study respondents reported that women should eat more food during pregnancy than ever before, while more than one-fourth (27.6%) of the women said they do not know. About ten (9.4%) per cent of women reported that they should eat same food as before while only 3.2 per cent of women said that during pregnancy they should eat less than before

Figure 4.2.2 Women's Perception regarding Food Intake during Pregnancy

27.6

59.9

3.2

9.4

■ More than before
■ Same
□ Less than before
□ Don't know
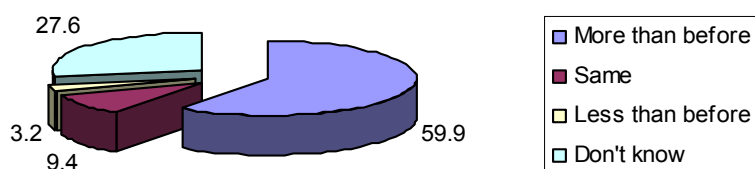
4.2.4.3 Safe Delivery

More than sixty per cent (62%) of women mentioned that safe delivery was possible by taking maternal and child health care service, while 13.4 per cent women argued that safe delivery was very much possible by these services. On the contrary, about one-forth (24%) of the women reported that they did not know whether or not safe delivery was possible by these services.

Figure 4.2.3 Women's Perception regarding Safe Delivery

24

13.4

0.6

62

■ Possible very safely
■ Possible safely
□ Not possible
□ Don't know
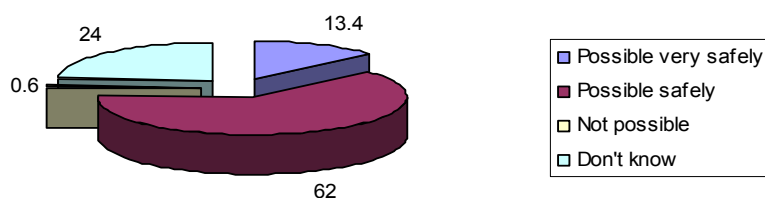
4.2.4.4 Maintenance of Advice

More than half (53.7%) of the women mentioned that they maintained advise given by the FWVs/FWAs and 41.4 per cent of women tried to maintain advise, while only 4.8 per cent of women reported that they did not maintain advise given by FWVs/FWAs.

Figure 4.2.4 Women's Perception regarding Advice
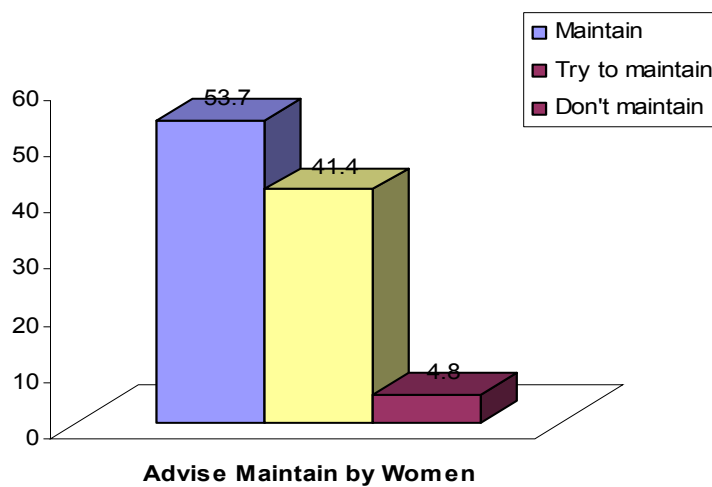
4.3 Section III

Maternal Morbidity and Mortality

4.3.1 Antenatal Care

Table 4.3.1 demonstrates the percentage distribution of women and the association between antenatal care and background characteristics of women who had a live birth in the five years preceding the survey. The study reported that 94.0 per cent of respondents who lived in Alikadam did not receive any care during pregnancy, while the corresponding values for Lama and Thanchi were slight lower. Antenatal care visits were found to be slight higher among respondents who belonged to Crama religion (14.9%) followed by Christianity (10.6%) and Buddhism (9.8%). Antenatal care visits were very low among respondents who belonged to the 25 to 39 age group, while the visit was slight better among those who belonged to less than 25 and more than 40 age groups. The study indicated that there was a positive association between education and antenatal care visits. More than three-fourth (76.9%) of the total respondents who attended school received antenatal care during pregnancy, while only 8.9 per cent of respondents received antenatal care who did not attend school. Antenatal care visits were very high among women who had jobs (80.0%), while about ninety per cent (89.7%) of women who did not receive any antenatal care were agriculturalists and housewives. The study revealed that antenatal care was also positively associated with women's husbands' education and occupation. Only 8.3 per cent of the women sought services during pregnancy whose husband did not attend school, while half of the women sought services whose husband attended school. The study also found that about sixty per cent and eighty-eight per cent of women visited the service center during pregnancy whose husbands were involved in business and service respectively, while the corresponding percentages were very low among women whose husbands were involved in agriculture and other works like day labour.

Table 4.3.1 Association between Antenatal Care Visit and Different Demographic and Socio-Economic Characteristics by Using Chi-square Test

Characteristics	N	Antenatal Care	
		Yes (%)	No (%)
Place of Residence (p=.054)			
Alikadam	133	6.0	94.0
Lama	170	13.5	86.5
Thanchi	71	15.5	84.5
Religion (p=.423)			
Crama	94	14.9	85.1
Buddhism	214	9.8	90.2
Christianity	66	10.6	89.4
Age (p=.770)			
Less than 19	24	12.5	87.5
20-24	103	14.6	85.4
25-29	113	8.0	92.0
30-34	74	10.8	89.2
35-39	46	10.9	89.1
40 and above	14	14.3	85.7
School Attendance (p=.0001)*			
Yes	13	76.9	23.1
No	361	8.9	91.1
Occupation (p=.001)*			
Agriculture and Housewife	369	10.3	89.7
Service	5	80.0	20.0
Husband's School Attendance (p=.0001)*			
Yes	26	50.0	50.0
No	348	8.3	91.7
Husband's Occupation (p=.0001)			
Agriculture	355	8.7	91.3
Business	5	60.0	40.0
Service	9	88.9	11.1
Others	5	0.0	100.0
Birth Order (p=.670)			
1	68	13.2	86.8
2	85	11.8	88.2
3	87	13.8	86.2
4	60	6.7	93.3
5+	74	9.5	90.5
Place of Service Provided (p=.077)			
Upazila Health Complex	206	10.2	89.8
Family Welfare Center	106	8.5	91.5
Others	62	19.4	80.6
Distance (p=.008)			
Within 2 miles	24	33.3	66.7
2-5 miles	108	12.0	88.0
6-10 miles	136	8.1	91.9
11-15 miles	75	10.7	89.3
16 miles and above	31	6.5	93.5
Means of Transportation (p=.022)			
On foot	100	30.0	70.0
Others	15	60.0	40.0
Accompany (p=.157)			
Alone	13	53.8	46.2
Husband	83	33.7	66.3
Others	19	21.1	78.9
Mass Media Exposure (p=.0001)			
Access to any media	19	73.7	26.3
No access to any media	355	7.9	92.1

Note: N denotes number of frequency
Note: Row percentages under column variable add up to 100%
* Fisher's exact test has been used for school attendance, occupation, husband's school attendance, and mass media variables.

Antenatal care was very low among those women who had more than three children, though it was little better among those who had one to three children. More than ten per cent (10.2%) of respondents reported that they received antenatal care from the UHC followed by the FWC (8.5%) and others (19.4%). About one-third of respondents who received antenatal care lived within the two miles distance from the service centers. The rates of receiving antenatal care decreased by the increase of distance in the study area. It was found that respondents who visited service centers on foot had a lower rate (30.0%) of receiving antenatal care as compared to those who visited by other means of transportation (60.0%) e.g. bus, boat, rickshaw. More than half of the respondents (53.8) visited service centers alone to receive antenatal care, while the corresponding percentages were 33.7 and 21.1 who visited with husband and others respectively. The study also found that 73.7 per cent of respondents who had exposure to any mass media of radio television or newspaper received care during pregnancy, while only 7.9 per cent of respondents received antenatal care who had no exposure to any media. All the background characteristics discussed in Table 4.3.1, which had significant association with antenatal care, *p*-values are included.

A binary logistic regression model was employed to explore the determinants on antenatal care visit among Mru women (Table 4.3.2). The response variable was: ever visited for antenatal care (yes = 1, no = 0). Logistic analysis suggested that respondents from Lama were significantly more likely to visit service centers for antenatal care relative to the respondents from Alikadam. Almost similar result was found for respondents from Thanchi. Respondents who belonged to Christianity were less likely to visit for antenatal care. Respondents aged 25-35 group were less likely to visit service center during pregnancy as compared to the respondents aged less than 25 years. Analysis also suggested that respondents who attended school were significantly more likely to receive antenatal care relative to those who did not attend school. Respondents who resided within 5-10 miles distance from the service center were significantly less likely to visit service centers during their pregnancy as compared to those who lived less than 5 miles distance from the service center. Analysis further suggested that respondents who had access to any of the mass media of radio, television or newspaper were significantly more likely to visit for antenatal care relative to those had no access to any media.

Table 4.3.2 Logistic Regression Estimates of the Effect of Demographic and Socio-Economic Characteristics on Antenatal Care Visit among the Respondents

Independent variables	*B*
Place of Residence (*r*= Alikadam)	
Thanchi	1.039*
Lama	1.013**
Religion (*r*= Crama)	
Christianity	-1.470*
Buddhism	-.306
Age (*r*= Less than 25)	
25-35	-1.216**
36 and above	-.455
School Attendance (*r*= No)	
Yes	3.125***
Distance (*r*= Less than 5 miles)	
5-10 miles	-1.122**
More than 10 miles	.281
Access to Mass Media (*r*= No access to any media)	
Access to any media	3.210***
Constant	-2.221***

Significance Level: ***$p<0.01$; **$p<0.05$.
r denotes Reference Category

4.3.2 Delivery Care

Table 4.3.3 presents the distribution of live births in the five years preceding the survey by place of delivery, assistance during delivery and types of delivery. Table 4.3.2 also presents the instruments used to cut the umbilical cord during delivery and the way of removing placenta. Only 1.9 per cent babies were delivered at a health facility among surveyed women, while almost all others delivery occurred at home of which 97.3 per cent were delivered at the respondent's own home and only .8 per cent were delivered at the home of respondent's father. The study reported that most of the deliveries (94.7%) were assisted by traditional midwives while only 2.7 per cent of deliveries were assisted by trained birth attendants and only 1.9 per cent was assisted by medically trained birth attendants, for instance, nurses. Almost all babies born were delivered (98.9%) normally, while very few births were delivered by caesarean section. The study also found in more than ninety per cent (92.0%) of the cases bamboo strips were used as instrument to cut the umbilical cord, while in only 6.9 per cent of deliveries, blades were used to cut it. For 93.3 per cent of deliveries, the placenta was removed spontaneously, while only 6.7 per cent of placentas were removed manually during delivery.

Table 4.3.3 Percentage Distribution of Delivery Care by the Respondents

Delivery Care	Percentage
Place of Delivery	
Own home	97.3
Father's home	0.8
Hospital	1.3
MCH center	0.3
Other	0.3
Assistance during Delivery	
Dai/Untrained BA/Traditional BA	94.7
Trained BA	2.7
Village doctor	0.5
Nurse	1.9
Other	0.3
Type of Delivery	
Normal	98.9
Caesarean section	1.1
Instrument Used to Cut Umbilical Cord	
Blade	6.9
Bamboo strips	92.0
Don't know	1.1
Way of Removing Placenta	
Manually	6.7
Spontaneously	93.3

4.3.3 Postnatal Care

Table 4.3.4 shows the per cent distribution of women and the relationship between postnatal care and background characteristics of women who had a live birth in the five years preceding the survey. The study found that more than ninety five per cent of women both from Alikadam and Thanchi did not receive any care after delivery, while the corresponding value was slight better among respondents from Lama. Again more than ninety per cent of respondents did not receive postnatal care irrespective of religion. The study indicated that those who received no care after delivery those were teenagers, while the percentage was relatively higher (21.4%) among women aged more than 39 years. The study also revealed that there was a positive relationship between school attendance and postnatal care. Only 4.7 per cent of women with no schooling received care after delivery, while 53.8 per cent of those who attended school received care after delivery. Care after delivery was very high (80.0%) among service holders and extremely low (5.4%) among women who engaged in agriculture and household works. A husband's education and occupation were also positively associated with postnatal care. About one third of the women (38.5%) whose husbands attended school sought care after delivery, while the

corresponding value for women whose husbands did not attend school was only 4 per cent. The study also found that the rate of receiving care after delivery was much higher among women whose husbands were involved in business and service as compared to women whose husbands were involved in agriculture and other works.

Only 6 to 8 per cent women who had up to three children received postnatal care, while the corresponding values were slight lower among women who had more than three children. Only 5.3 per cent of respondents reported that they received postnatal care from UHC followed by FWC (3.8%) and others (14.5%). About thirty per cent (29.2%) of respondents who resided within the two miles distance from the service centers received care after delivery, while the percentages were extremely low for those who lived a long distance from the service centers. It was found that respondents who visited service centers on foot had a lower rate (16.0%) of receiving postnatal care, while the percentage was more than double (33.3%) among respondents who visited by other means of transportation e.g. bus, boat, rickshaw. Almost one-forth of the respondents (23.1%) visited service centers alone to receive postnatal care, while 16.9 and 21.1 per cent visited with their husband and others respectively. There was a positive relationship between exposure to mass media and postnatal care visit. The study revealed that more than half of the respondents (52.6%) who had exposure to any mass media of radio television or newspaper received care after delivery, while only 3.9 per cent of respondents received antenatal care who had no exposure to any media.

Table 4.3.4 Association between Postnatal Care Visit and Different Demographic and Socio-Economic Characteristics by Using Chi-square Test

Characteristics	N	Postnatal Care	
		Yes (%)	No (%)
Place of Residence (*p*=.222)			
Alikadam	133	4.5	95.5
Lama	170	8.8	91.2
Thanchi	71	4.2	95.8
Religion (*p*=.279)			
Crama	94	8.5	91.5
Buddhism	214	4.7	95.3
Christianity	66	9.1	90.9
Age (*p*=.065)			
Less than 19	24	0.0	100.0
20-24	103	4.9	95.1
25-29	113	9.7	90.3
30-34	74	4.1	95.9
35-39	46	4.3	95.7
40 and above	14	21.4	78.6
School Attendance (*p*=.0001)*			
Yes	13	53.8	46.2
No	361	4.7	95.3
Occupation (*p*=.0001)*			
Agriculture and Housewife	369	5.4	94.6
Service	5	80.0	20.0
Husband's School Attendance (*p*=.0001)*			
Yes	26	38.5	61.5
No	348	4.0	96.0
Husband's Occupation (*p*=.0001)			
Agriculture	355	3.9	96.1
Business	5	60.0	40.0
Service	9	77.8	22.2
Others	5	0.0	100.0
Birth Order (*p*=.829)			
1	68	7.4	92.6
2	85	5.9	94.1
3	87	8.0	92.0
4	60	3.3	96.7
5+	74	6.8	93.2
Place of service provided (*p*=.015)			
Upazila Health Complex	206	5.3	94.7
Family Welfare Center	106	3.8	96.2
Others	62	14.5	85.5
Distance (*p*=.0001)			
Within 2 miles	24	29.2	70.8
2-5 miles	108	3.7	96.3
6-10 miles	136	3.7	96.3
11-15 miles	75	5.3	94.7
16 miles and above	31	12.9	87.1
Means of transportation (*p*=.105)			
On foot	100	16.0	84.0
Others	15	33.3	66.7
Accompany (*p*=.815)			
Alone	13	23.1	76.9
Husband	83	16.9	83.1
Others	19	21.1	78.9
Mass Media Exposure (*p*=.0001)*			
Access to any media	19	52.6	47.4
No access to any media	355	3.9	96.1

Note: N denotes number of frequency
Note: Row percentages under column variable add up to 100%
* Fisher's exact test has been used for school attendance, occupation, husband's school attendance, and mass media variables.

4.3.4 Complications during Pregnancy, during Delivery and after Delivery

Table 4.3.5 (see Appendix I) exhibits complications that women experienced during pregnancy, during delivery and after delivery in the five years preceding the survey. A list of complications was mentioned during the survey and women were asked what kind of complications they faced during their last pregnancy, during their last delivery and after their last delivery. About half of the women (46.3%) reported that they suffered either from headache, blurry vision or both or high blood pressure during their last pregnancy. Thirty eight per cent of women mentioned that they had either cough or fever or both. Another one-third of the respondents (34.2%) argued that they experienced excess vomiting tendency during their last pregnancy. More than a quarter of the women reported that they did not suffer from any complications, while another quarter suffered from morning sickness. More than ten per cent women mentioned that they suffered from abdominal pain, haemorrhage and palpitation. The study also revealed that about half of the women (49.2%) did not experience any complications during their last delivery as reported by them, while a quarter of respondents mentioned that they faced excessive hemorrhage during their last delivery. Other major complications women experienced during their last delivery were eclampsia (19.0%), premature rupture of membrane (17.6%) and prolonged labor (16.0%). They also experienced complications like obstructed labour, retained placenta, torn uterus and hand/feet came first. The study also found that about forty-four (43.9%) per cent of the respondents experienced severe anemia after last delivery, while more than one-third of the women (37.2%) did not experience any complications after last delivery as mentioned by them. About fifteen per cent (14.4%) of respondents mentioned that they faced leg problems after last delivery. More than eleven per cent women reported perineal tears (11.8%) and hypertension (11.5%) as complications after their last delivery. Few women also experienced some other complications like urinary track infection, uterine prolapse, pelvic infection, postpartum sepsis.

4.3.5 Reasons for not seeing anyone for antenatal care and postnatal care

Figure 4.3.1 (see also Table 4.3.6 in Appendix I) presents the births that did not receive any care during pregnancy and after delivery. Mothers were asked why they did not seek for antenatal and postnatal care. More than fifty-five per cent of the women who did not seek antenatal and postnatal care mentioned that the service

center was too far from their home as the main reason not to seek care. About half of the respondents also reported that they did not seek antenatal and postnatal care due to transportation problem. Another one-third women did not receive any care during pregnancy and after delivery since they did not know that service was needed. The study also found that more than quarter respondents reported that they did not visit the service center because it was expensive. About one-fifth of the respondents mentioned that they did not need care during pregnancy and after delivery. Other reasons for not seeing anyone for antenatal care and postnatal care were "not beneficial", "family didn't allow going service center", "better care at home", "issues related to quality of service" and "religious reason" as mentioned by the respondents.

Figure 4.3.1 Percentage Distribution of Causes not to Visit to the Service Centers before Delivery and after Delivery by the Respondents
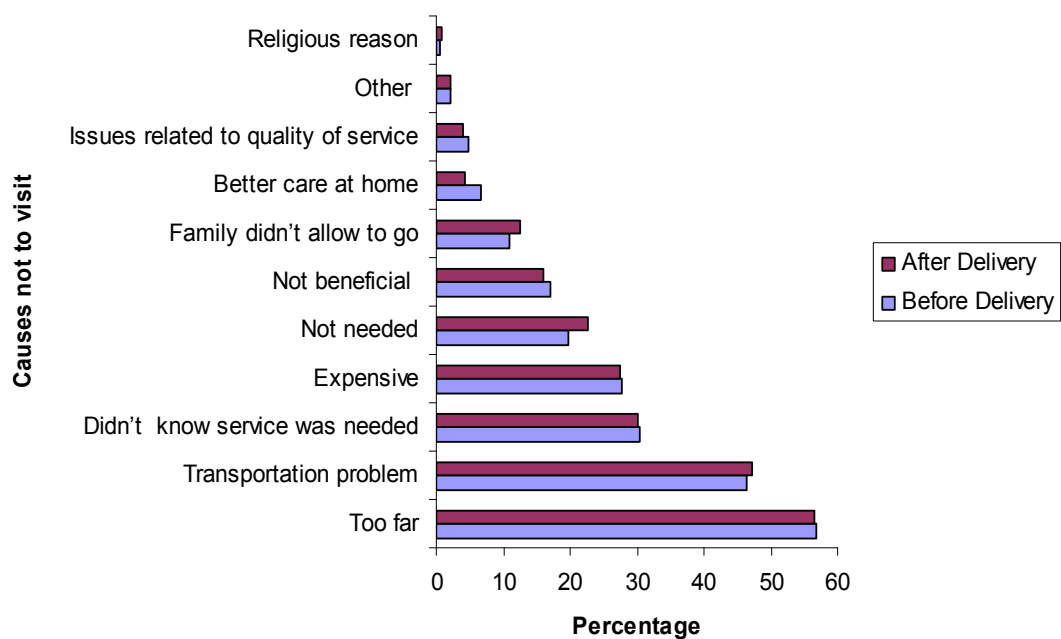
4.4 Section IV

Family Planning and Contraception[*]

4.4.1 Ever heard of family planning

In this study, ever heard of FP was assed in terms of different demographic and socio-economic characteristics of women who had a live birth in the five years preceding the survey. Table 4.4.1 demonstrates that there was a significant association between place of residence and awareness[16] of FP and more than half of the respondents from Lama (51.8%) had ever heard of FP methods/messages, while the corresponding percentages among the respondents from Alikadam and Thanchi were 39.1 and 18.3 respectively. Awareness of FP was found to be higher among respondents who belong to the Crama religion (53.2%) as compared to those who belonged to Buddhism (43.9%) and Christianity (13.6%). Awareness of FP was lower among adolescents (12.5%); however, it was gradually increased with the increase of age, particularly among 20 to 34 age groups.

There was a positive relationship between school attendance and ever hearing of FP. Only 15.4 per cent of respondents who attended school never heard of FP, while t60.7 per cent of those who never attended school had not heard of FP. It was found that all the respondents who were involved in service had heard of FP, while only 40.1% respondents occupied in agriculture and household works knew about FP. The study also found that a husband's education and occupation had significant association with awareness of FP. More than eighty per cent (80.8%) of whose husbands attended school had ever heard of FP, while the following 37.9 per cent of women whose husbands did not attend school had ever heard of FP. More than eighty per cent of women who had heard of FP had husbands who were occupied either in business or service; however, the corresponding values were less than half or half whose husbands were involved either in agriculture or other works, particularly day labour.

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[*]This section of the thesis has been presented as poster at the 11th Congress of the European Society of Contraception and Reproductive Health, The Hague, Netherlands, 19-22 May, 2010.

[16] Awareness of FP has been used here interchangeably with ever heard of FP. To focus more specifically ever heard of FP were used in the questionnaire.

Table 4.4.1 Association between Ever Heard of Family Planning (FP) and Different Demographic and Socio-Economic Characteristics by Using Chi-square Test

Characteristics	N	Ever heard of FP	
		Yes (%)	No (%)
Place of Residence (*p*=.0001)			
Alikadam	133	39.1	60.9
Lama	170	51.8	48.2
Thanchi	71	18.3	81.7
Religion (*p*=.0001)			
Crama	94	53.2	46.8
Buddhism	214	43.9	56.1
Christianity	66	13.6	86.4
Age (*p*=.001)			
Less than 20	24	12.5	87.5
20-24	103	44.7	55.3
25-29	113	45.1	54.9
30-34	74	51.4	48.6
35-39	46	19.6	80.4
40 and above	14	42.9	57.1
School Attendance (*p*=.002)*			
Yes	13	84.6	15.4
No	361	39.3	60.7
Occupation (*p*=.011)*			
Agriculture and Housewife	369	40.1	59.9
Service	5	100.0	0.0
Husband's School Attendance (*p*=.0001)*			
Yes	26	37.9	62.1
No	348	80.8	19.2
Husband's Occupation (*p*=.007)			
Agriculture	355	39.2	60.8
Business	5	80.0	20.0
Service	9	88.9	11.1
Others	5	40.0	60.0
Place of Service Provided (*p*=.002)			
Upazila Health Complex	206	33.0	67.0
Family Welfare Center	106	51.9	48.1
Others	62	48.4	51.6
Distance (*p*=.0001)			
Within 2 miles	24	75.0	25.0
2-5 miles	108	30.6	69.4
6-10 miles	136	38.2	61.8
11-15 miles	75	41.3	58.7
16 miles and above	31	61.3	38.7
Mass Media Exposure (*p*=.004)*			
Access to any media	19	73.7	26.3
No access to any media	355	39.2	60.8

Note: N denotes number of frequency

Note: Row percentages under column variable add up to 100%

* Fisher's exact test has been used for school attendance, occupation, husband's school attendance, and mass media variables.

The study reported that only 33.0 per cent of women had heard of FP from UHC, while the corresponding percentages for FWC and others (satellite clinic, family members, friends/ neighbor) were 51.9 and 48.4 respectively. Respondents who resided within two miles of any health facilities had a greater (75.0%) chance to hear about FP as compared to those lived a long distance from the health facilities. The study also found that respondents with exposure to any mass media of radio television or newspaper were highly aware of FP compared to those who had no exposure to any of the mass media. All the background characteristics discussed in Table 4.5.1 had significant association with awareness of FP (*p*-values are included in the table).

4.4.2 Current Use of contraception

Figure 4.4.1 (see also Table 4.4.2 in Appendix I) demonstrated that the contraceptive prevalence rate (CPR) was much lower (25.1%) among Mru people than the national level (55.8%). Among different modern and traditional methods, the pill ranked the first and about two-third (66.0%) of the currently married women using this method, which was more than two times higher than the national figure (28.5%). The study also reported that injectables were also higher among surveyed Mru women than the national level, while the use of permanent methods was more than three times lower than the national figure. On the other hand, the prevalence of male methods was comparatively lower than the national average. Particularly, condom use among Mru couples was about ten times lower than the national figure, while periodic abstinence was found to be almost identical with the national level. The practice of withdrawal as a FP method was absent among the respondents.

Figure 4.4.1 Current Use of Contraception by Methods among Respondents
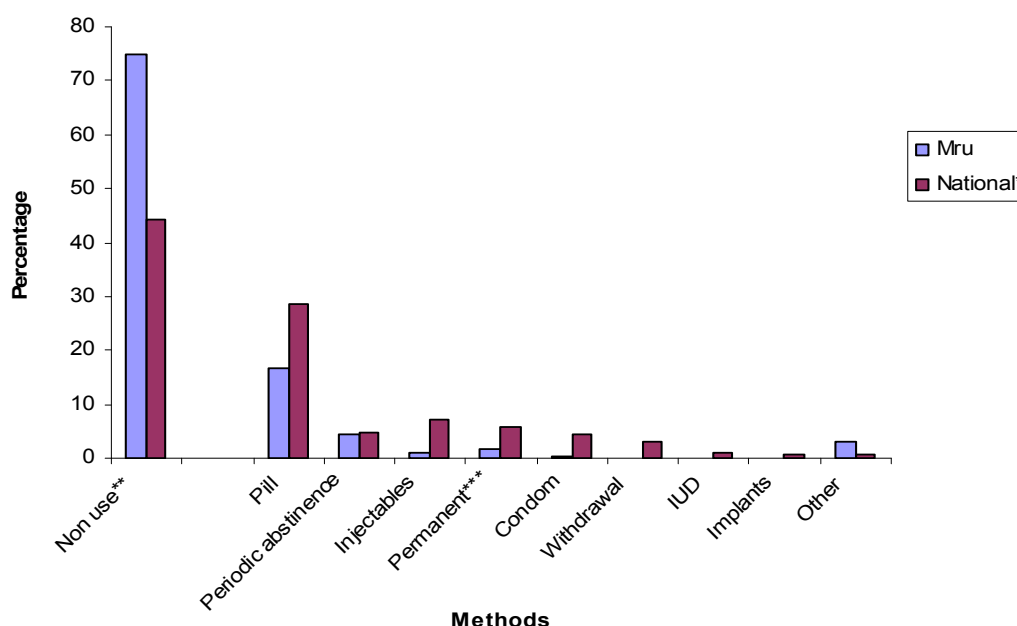
* Bangladesh Demographic and Health Survey, 2007.
**Non use also includes lactating mothers
***Permanent method includes both female sterilization and male sterilization.

Bivariate analysis (Table 4.4.3) showed that religion, school attendance, husband's school attendance, husband's occupation, total number of children, place of service provided, distance to the service center and mass media were positively associated with the current use of contraceptives among Mru women (*p*-values are included in the table). The study showed that three-fourth (75%) of the respondents from Alikadam used contraceptives while the corresponding values for Lama and Thanchi were 61 per cent and 50 per cent respectively. Current use of contraception was found to be extremely higher (100%) among respondents who belong to Christianity than those belonged to Buddhism (63.6.2%) and the Crama religion (61.7%). The practice of using contraception was low (47.6%) among respondents who were less than 25 years old, while it gradually increased with the increase of age and 100 per cent of women used contraceptives who were 35 years of age or older. Current use of contraception was very high (100%) among those who attended school relative to those who did not attend the school (62.7%).

Table 4.4.3 Association between Current Use of Contraception and Different Demographic and Socio-Economic Characteristics by Using Chi-square Test

Characteristics	N	Current Use of Contraception	
		Using (%)	Not using (%)
Place of Residence (*p*=.145)			
Alikadam	52	75.0	25.0
Lama	82	61.0	39.0
Thanchi	10	50.0	50.0
Religion (*p*=.076)			
Crama	47	61.7	38.3
Buddhism	88	63.6	36.4
Christianity	9	100.0	0.0
Age (*p*=.0001)			
Less than 25	63	47.6	52.4
25-35	75	77.3	22.7
36 and above	6	100.0	0.0
School Attendance (*p*=.015)*			
Yes	10	100.0	0.0
No	134	62.7	37.3
Occupation (*p*=.164)*			
Agriculture and Housewife	139	64.0	36.0
Service	5	100.0	0.0
Husband's School Attendance (*p*=.032)*			
Yes	18	88.9	11.1
No	126	61.9	38.1
Husband's Occupation (*p*=.009)*			
Agriculture and Labourer	133	62.4	37.6
Business and Service	11	100.0	0.0
Birth Order (*p*=.0001)			
1	30	36.7	63.3
2	30	60.0	40.0
3+	84	77.4	22.6
Place of Service Provided (*p*=.011)			
Upazila Health Complex	65	75.4	24.6
Family Welfare Center	54	50.0	50.0
Others	25	72.0	28.0
Distance (*p*=.022)			
Within 5 miles	44	81.8	18.2
5-10 miles	50	58.0	42.0
11 miles and above	50	58.0	42.0
Mass Media Exposure (*p*=.034)*			
Access to any media	13	92.3	7.7
No access to any media	131	62.6	37.4

Note: N denotes number of frequency
Note: Row percentages under column variable add up to 100%
* Fisher's exact test has been used for school attendance, occupation, husband's school attendance, husband's occupation and mass media variables.

The study reported that only 64 per cent of women who were involved in agricultural and household activities used contraception, while the corresponding value for the service holder was 100 per cent. Current use of contraception was positively associated with the husband's education and occupation. About ninety per cent women (88.9%) used contraception whose husbands attended school, while the corresponding value was only 61.9 per cent whose husbands did not attend school. The study also found that 100 per cent of respondents whose husbands were involved in business and service used contraception, while only 62.4 per cent of respondents whose husbands were occupied in agriculture and labour works used contraception. Current use of contraception was found to be lower among respondents who had only one child, while the rate of contraception increased with the increase in the number of children. Among respondents who visited UHCs and others like SCs, TVHs and village doctors had a higher rate of contraception use relative to those visited to FWCs. Respondents who lived within the five miles distance from the service centers had higher rate (81.8%) of contraception use than those who resided more than five miles distance from the service centers. Exposure to mass media had significant positive association with current use of contraception. Only 36.8 per cent of the respondents having access to any mass media did not use contraception, while the corresponding value was 76.9 per cent for those who had no access to any mass media.

A binary logistic regression model was used to explore the determinants on current use of contraceptive among Mru women who had only ever heard about FP (Table 4.4.4). The response variable was current use of contraceptive (using = 1, not using = 0). Initially all significant variables of bi-variate analysis were used during the computation of binary regression model. However, respondents' occupation and number of children variables were excluded from the final model due to multi-colinearity of respondents' school attendance and age respectively. Some other variables like religion, respondents' school attendance, husbands' school attendance and access to mass media were not significant in the final model due to highly skewed data, though these variables were found to be significant in the bi-variate analysis. Logistic regression analysis suggested that respondents who belonged to the age group 25-35 were significantly more likely to use contraceptives relative to those respondents who were less than 25 years of age. Analysis further suggested that

respondents who visited FWCs were significantly less likely to use contraceptive compare to those women who visited UHCs. Respondents who visited others, for instance, SCs, traditional village healers and village doctors were also less likely to use contraceptives than those who visited UHCs. The study also found that distance was another significant determinant of contraceptive use in the study areas. Respondents who resided more than 5 miles distance from the service center were significantly less likely to use contraceptives as compared to those who lived less than 5 miles distance from the service center.

Table 4.4.4 Logistic Regression Estimates of the Effect of Demographic and Socio-Economic Characteristics on Current Use of Contraceptive among the Respondents

Independent variables	*B*
Religion (*r*= Crama)	
Christianity	18.968
Buddhism	.209
Age (*r*= Less than 25)	
25-35	1.588***
36 and above	21.942
School Attendance (*r*= No)	
Yes	19.052
Husband's School Attendance (*r*= No)	
Yes	.235
Service Provided in the Locality (*r*= Upazila health complex)	
Family welfare center	-1.327***
Others	-1.467*
Distance of the Service Center (*r*= Less than 5 miles)	
5-10 Miles	-1.795**
11 Miles and above	-1.780**
Access to Mass Media (*r*= No access to any media)	
Access to any media	-.682
Constant	1.581

Significance Level: ***$p<0.01$; **$p<0.05$; *$p<0.10$.
r denotes Reference Category

CHAPTER FIVE

Discussion of the Research Results in an indigenous and historical context

Findings of maternal morbidity and mortality have been presented in this section following the research questions. In this regard, both historical and indigenous perspectives have been taken into account to discuss the findings.

The Mru is the largest small indigenous group and the most underprivileged people living on the hilltops, ravines, cliffs and deep forest areas of the Bandarban district in Bangladesh. Their maternal health is extremely poor and is determined by their distinct cultural practices. However, very few studies have been done which even do not cover all issues of maternal health. No systematic study particularly on maternal morbidity and mortality was found for this community. The present study aimed to explore the maternal health status and how it is related to socio-economic and cultural factors. In this study, maternal morbidity and mortality has been operationalized in terms of access to health care services, problems, complications and visits during pregnancy, during delivery and after delivery and finally about FP and contraception. In this regard, a mixed method approach, combining both qualitative and quantitative forms, has been used in this study that has been discussed in details under the methodology chapter (Chapter Three). A total of 374 currently married women having at least one child aged less than five years were interviewed purposively from three upazilas (administrative sub-districts) of Bandarban district, a part of CHT. On the other hand, a total of 26 in-depth interviews were conducted among people from different strata of the Mru community from those three Upazilas. Finally, the collected data has been presented by using uni-variate, bi-variate and multivariate analyses.

Findings of this study revealed that access to health care services was poor (30.7%) among the Mru community. Both micro and macro level factors were responsible for their low access to health care services. Women work hard and are very busy in their daily work because of their tradition that might impede them to seek treatment. Their poor family income was another reason for their low access to health care services since they could not afford high transportation and maternity cost. Several studies

also found that the poor economic condition was one of the significant determinants of women's access to maternal health care services (Diop et al., 1995; Hodgkin, 1996; Filippi et al., 2006). Lack of road infrastructure was an important structural predictor of their low access to health care services since no vehicles, either modern or traditional, could be used for local transportation in the Mru villages. Moreover, long distance to the service center from their place of residence became a determining factor of their low access to health facilities. A study among inter-ethnic communities in CHT found that about eighty five per cent of the Bengali people had any type of institutionalized health care facilities within five kilometers distance, while the corresponding value of the Mru people was only about twenty five per cent (Ahmed, 2001:168). Another inter-ethnic study revealed that the mean distance of UHC, FWC, SC and NGO health complex were 12.0, 11.0, 11.5 and 12.3 miles respectively for the Mru while the corresponding values were 6.4, 3.6, 3.1 and 2.5 miles for the Bengali people (Rafi and Chakma, 2001:44). However, this study did not say how long it will take to reach these service centers from the Mru villages that would help to understand the road infrastructure and transportation. That means geographic proximity and road communication system were influencing the access to health care services.

The study found that access to health care services was a little higher among the respondents who belonged to the Crama religion relative to Christianity and Buddhism. Since this religion first evolved near to the urban area and was gradually spreading in rural areas, a majority of the followers were living relatively near to the urban areas. Consequently, they are also reasonably near to the service centers, which might be the reason for their slightly higher access to the service center. This study found that teenagers had less access to health care services since they are less exposed to outside areas of the villages. Lack of education was another important determining factor of their low access to health care services. Respondents who did not attend school had lower access to health care services. Respondents and their husbands, who were involved either in business or service, had higher access to health care services relative to those were in agriculture and households works. That was due to their better economic and social status and higher mobility in the society, which is consistent with other studies (Chakraborty et al., 2002; Elo, 1992; Fosu, 1994). Occupation, in fact, determines income that affects health status of indigenous

peoples directly and indirectly. The study showed that the indigenous family income was lower than the non-indigenous family income (Altman, 2003; Frohlich et al., 2006), which was pertinent with the Mru society. Lack of mass media exposure was another significant determinant for their low access to health care services in this study. Respondents who had no exposure to any of the mass media had lower access to health care.

Mru people did not have access to safe drinking water and did not have hygienic toilet facilities that might be a risk factor for high maternal morbidity and mortality. A study in Nigeria found that lack of adequate pipe-born water and low standards of living were the contributing factors of high maternal mortality in the country (Obusanyo, 1989, cited in Ojanuga and Gilbert, 1992). This is due to their rural and remote locations, economic vulnerability and distinct geographical settings. Large numbers of indigenous communities live in extremely remote locations, far from urban cities, formal labour markets, commercial opportunities and access to health care services and such geographic location and rural environments directly affects some aspects of the health status of ethnic population (Altman, 2003; Stephens et al., 2005). This is also pertinent for the Mru society.

Perceived health care seeking behaviour regarding treatment, food intake during pregnancy, safe delivery and maintenance of advice was relatively better among the survey respondents compared to access to health care services and their antenatal and postnatal care seeking behaviour. That happened due to the current awareness programs conducted by NGOs in the study areas. However, their health care seeking behaviour was very low compared to other ethnic groups and mainstream Bangladeshi people (Ahmed, 2001:157; Bangladesh Demographic and Health Survey, 2007; Koenig et al., 2007) which might be due to their rural lifestyles and remote locations. Rural populations generally displayed a greater incidence of less healthy behaviours than those of urban areas (Smith et al., 2008), which resembles the present study.

Antenatal care is very important throughout pregnancy to reduce the risks associated with the pregnancy and at delivery for the mother and child (Bangladesh Demographic and Health Survey, 2005). However, antenatal care visit was more than

five-times lower (11.2%) among Mru women (see Appendix I, Table 4.3.7) than the national level (60.3%) in Bangladesh (Bangladesh Demographic and Health Survey, 2007) of which only 2.4 per cent (only one woman out of 42) visited four times during pregnancy. A recent study in India also found that antenatal care visit was almost three times lower among the indigenous women of Jharkhand than the national figure (Agrawal, 2009:6). My study found that antenatal care visit was somewhat better among respondents from Lama and Thanchi than Alikadam because of a door step awareness program conducted by the NGO in these areas. Education was the significant determinant of antenatal care visit among the Mru women. Care during pregnancy was extremely low among respondents who did not attend school. A study in rural Bangladesh revealed that higher education was associated with higher use of antenatal care (Chakraborty et al., 2002). A study in Southern India also found that women with high school education were more likely to use antenatal care compared to illiterate women in Karnataka (Navaneetham and Dharmalingam, 2002). Respondents' own occupation and their husbands' occupation had positive association with antenatal care. Antenatal care visits were very high among women who had business and job or whose husbands had business and job as compared to agriculture and household workers. In this study, antenatal care visits were also significantly associated with distance to the service centers and exposure to mass media. The study also revealed that common problems the Mru women faced during their pregnancy were headache, blurry vision, high blood pressure, cough or fever, excess vomiting tendency and morning sickness which might be due to their low visit to antenatal care. A study in Malawi found that lack of antenatal care was one of the important risk factors of maternal and perinatal morbidity and mortality (Lule and Ssembatya, 1995:79). Excess vomiting tendency and morning sickness might be due to the genetic reason which is not evident in the present study. However, of late BBC news demonstrated that pregnant women are three times more likely to suffer from severe morning sickness if their mothers did (BBC, 2010).

Delivery in the healthy facilities and hygienic conditions during delivery may reduce the risk of complications and infections which is responsible for maternal deaths or serious illness to the mother (Bangladesh Demographic and Health Survey, 2005). In Mru society, almost all deliveries take place at home assisted by midwives that might increase the maternal morbidity among women since they could not handle

complicated deliveries properly. A study in India also demonstrated that more than ninety per cent of deliveries among indigenous people were conducted at home attended by elderly ladies[17] of the household that produced an increased vulnerability to various infections (Basu, 2000:66). A study in rural Bangladesh showed that pelvic pain, cough or fever for more than three days, headache and weight loss were less frequent among women whose deliveries were assisted by trained personnel (Khanam and Akanda, 2007). The study found that in more than ninety per cent cases bamboo strips were used as instrument to cut umbilical cord which was not boiled/sterilized before using it. This could be a cause of infections and serious morbidity. Excessive hemorrhage, obstructed labour and prolonged labour were the major complications Mru women face during delivery that might lead to some other serious complications. Several studies found that women who had prolonged labuor had a greatly increased risk of sustaining serious complications (Kwast, 1994; Dujardin et al., 1992; Bird, 1978; Philpott and Castle, 1972a and 1972b; Drouin, 1979, cited in Wall, 1998). However, the reasons of these complications were not investigated in the present study which claims further clinical study.

Care after birth is crucial for safe motherhood since most of the maternal deaths occur during the first week following delivery (Campbell et al., 1990; Hurt et al., 2008; Koenig et al., 1988; Li et al., 1996). In the past, the rate was even higher. Data from 1927-1933 revealed that over 90 per cent of deaths occurred before six weeks of the postnatal day (Loudon, 1992:54). However, postnatal care in the Mru society (see Appendix I, Table 4.3.7) was extremely poor (6.4%) and three times lower than the national figure (Bangladesh Demographic and Health Survey, 2007). A recent study among indigenous people in India also found that postnatal care visits were less than half among women of Jharkhand than the national level (Agrawal, 2009:6). Care after birth was very low among the younger respondents than older women because young girls usually do not go outside of the Mru villages. School attendance and occupation had a positive association with postnatal care. Respondents who attended school themselves or their husbands attended school had a greater chance to visit service centers after delivery than those who did not attend school. In terms of

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[17] Its unsure whether these elderly ladies are well trained or without trained, however, most of the cases these ladies of rural villages in Bangladesh are from close relatives or neighbours who had no formal training rather than experiences passed through generation to generation.

occupation, respondents themselves or their husbands involved in business and service, were more likely to visit for postnatal care relative to those were involved in agriculture and households works. It was found that respondents who visited service centers on foot had a lower rate of receiving postnatal care because it is almost impossible for women to walk through ravine and cliff paths in the study areas. This study revealed that mass media had a positive association with postnatal care and respondents who had exposure to any of the mass media of radio television or newspaper had greater chance to visit for postnatal care as compared to those who had no exposure to any of the media. My study also revealed that almost all Mru women suffered from anemia after delivery in Mru society due to their food habits and distinct postpartum care practices. Other studies among indigenous people in India also found same results where malnutrition was pervasive with high prevalence of anemia due to poor pattern of food consumption except green leafy vegetables (Agrawal, 2009:9; Basu, 2000:65). Epidemiological and biological studies also suggested that acute or chronic specific nutritional deficiencies can contribute to severe maternal morbidity (see details in Villar et al., 2003). Though there was no survey on anemia before the 1930s, it is reasonable to assume from numerous data that malnutrition was prevalent and was the underlying cause of high maternal mortality (Loudon, 2000:244). In the Mru society, women's body and legs also swelled after delivery. This might be due to their hard work and lack of nutrition. Prineal tear was another complication Mru women faced after delivery which might be the reason of the midwives' forced delivery particularly when the baby is not in the right position.

Reasons for not seeing anyone for antenatal care and postnatal care in the Mru society could be classified into two broad categories, for instance, practical issues and normative issues. More than half of the respondents did not receive antenatal care and postnatal care due to the practical reasons like transportation problems, long distance to the service center, high cost of transportation and maternity care etc. They did not receive antenatal care and postnatal care also due to the normative issues like the family did not allow it, better care at home, seemed not beneficial or not needed and religious issues. However, the normative issues were less instrumental than the practical issues in the Mru society, while the scenario is reverse in mainstream society where the geographical setting is different (Bangladesh Demographic and Health Survey, 2005; 2007).

Knowledge of FP method is important in Bangladesh because most of the population programs are based extensively on FP programs aiming to control population growth since its independence. Thus, knowledge of FP method is widespread in Bangladesh (Bangladesh Demographic and Health Survey, 2005). However, in the Mru society only about forty per cent of respondents had ever heard of FP method. The study revealed that the place of residence, place of service provided in the locality, distance, mass media, religion, age, school attendance and occupation of respondents and their husbands were the significant determinants for ever hearing of the FP method. A study conducted among different ethnic groups in CHT found that the CPR among the Mru people was extremely low with 3.6 per cent (Ahmed, 2001:169); however, the present study found about six times higher CPR in the study areas. This happened, in fact, due to the awareness programs conducted by the NGOs after 2002; even though the CPR was about three times lower than the national figure (Bangladesh Demographic and Health Survey, 2007). Pill ranked first among different modern and traditional methods among Mru people, which is similar with Ahmed's study. Age, religion, education of mother, husband's education and occupation, parity, place of service provided in the locality, distance of service center and mass media had significant association with current use of contraception in the study community.

The maternal mortality ratio is still unknown in the Mru society; however, it seems to be relatively high in the Mru society due to their low access to health care services, delivery and post delivery complications and practices. Theses deaths happen due to many practical issues which resembled by Ranson and Yinger's four main delays (Ranson and Yinger, 2002). Women and their family members, for instance, did not recognize their life threatening complications during delivery and after delivery. Excessive hemorrhage during delivery and after delivery was the leading complication in the Mru society that might be important cause of their deaths. This might be due to the pernicious practices of midwives in the Mru society. In 1870, Dr. Evan Jones argued that most of the deaths from hemorrhage were due to the most harmful practices of midwives and lack of knowledge about the physiology of the third stage of labour (cited in Loudon, 1992:98-99). A study among indigenous women of Aymara and Quechua groups in Bolivia found that bleeding was seen as a

cleansing process that may be allowed to continue far too long as normal (cited in Ranson and Yinger, 2002). In the Mru society, bleeding was found to be very normal as well and might be seen in the same way. Historical data from the seventeenth, eighteenth and nineteenth centuries also revealed that hemorrhage was one of the most important causes, though not leading cause which was puerperal fever, of maternal death due to separation of the placenta either normally situated or praevia (Loudon, 1986; Loudon, 1992; Loudon, 2000; Spencer, 1927). In Mru society, women also suffered from postnatal sepsis/infection referred to as puerperal fever as argued by Loudon (Loudon, 1992:50); however, it was not reported as main complications or cause of deaths. Death from obstructed labour was the second common complication and cause of maternal mortality in Mru society which is consistent with the cause of deaths in nineteenth century. The study found that death from a ruptured uterus or exhaustion was common and unavoidable, if there was gross cephalo-pelvic disproportion preventing the head from entering the pelvis (Loudon, 1986).

Secondly, they did not seek care even though they recognized life-threatening complications due to the traditional practices, for instance, their initial reliance on local remedies particularly on midwives and healers. This might be another significant predictor of high maternal mortality in the society because they had no education and knowledge which is considered as indispensable for proper practices. Before 1730, midwifery also enjoyed a virtual monopoly by women in western countries of whom many were ignorant, coarse, and superstitious or without education, knowledge, training or character requisite for appropriate practice (Minkowski, 1992; Snapper, 1963:531; Spencer, 1927:853), which is pertinent with the Mru society. Even in 1898, Dr. Elizabeth Garrett Anderson found a direct association between the low status of midwifery and the high rate of maternal mortality (cited in Loudon, 1986), that might be relevant in the Mru society claims further studies. On the other hand, the management of pregnancy and labour was better during eighteenth, nineteenth and at the beginning of twentieth century than the Mru society particularly due to the introduction of trained midwives and better obstetric care (Brouwere, 2007; see details in Spencer, 1927. They did not seek care also due to poor knowledge where to seek treatment and fear about the costs involved in emergency care.

Thirdly, Mru women did not reach health facilities due to their geographical settings, lack of transportation and poor economic conditions. They often had to use human ambulance due to the absence of road infrastructure. In Tanzania, for instance, the most important barrier women faced during obstetric emergencies was ready access to inexpensive transportation (Kouletio et al., 2000, cited in Ranson and Yinger, 2002). Finally, though very few women reached UHC, they did not get standard care since there was no emergency obstetric care in the study UHCs. Even they do not have any gynecologist and sufficient support stuff to deal with the complications that cause ultimate death of the Mru mothers. Still birth and abortion might be another significant cause of maternal mortality in the Mru society that demands further study since other studies found that mortality was substantially higher after an abortion or stillbirth than after a live birth in Bangladesh (Hurt et al., 2008; Rochat et al., 1981). A study also found that maternal mortality was higher among tribal people in India due to unhygienic and primitive parturition practices (Basu, 2000:65). So, delivery practice might be an important factor of high mortality in the Mru community since most of the deliveries were taken place at home by untrained traditional midwives where hygiene was not maintain properly.

From the above discussion we come to the conclusion that the maternal health status of Mru mothers is extremely poor due to the limited access to health care services, cultural practices as well as complete absence of standard obstetric care facilities which is very much consistent with the events of western countries during seventeenth, eighteenth and the beginning of nineteenth century.

CHAPTER SIX

Conclusion and Recommendation

6.1 Conclusion

The present study was conducted among the Mru indigenous people in Bangladesh from June to August 2009. A mixed method approach, combining both qualitative and quantitative methods, was employed to understand the maternal morbidity and mortality of the society. A total of 374 currently married women having at least one child aged less than five years or women having at least delivery experiences were interviewed purposively from three administrative sub-districts of Bandarban district, a part of CHT, Bangladesh. In addition, a total of 26 in-depth interviews were conducted among people from different stratas, for example, leaders, women having at least delivery experiences, relatives of death mothers who died in childbirth, traditional midwives, school teachers, NGO workers, village doctors, FWVs, FWAs, FPI and nurses from those three sub-districts (see details in Chapter Three). Four research question were set out for the study, for instances, i) what is the level of access to health care services in the study community? ii) what are the problems and complications Mru mothers encounter during pregnancy, delivery and after delivery and the factors associated with it? iii) why is high maternal morbidity and mortality taking place in this community? iv) to what extent do Mru mothers use traditional knowledge in their maternal health practices?

This study comes up with the conclusion that maternal health status of Mru indigenous people in Bangladesh is poor. In fact, the situation is much worse than the situation Bangladesh faced after its independence, particularly in rural villages. The present study shows that less than one-third of the Mru women have access to health care services which might be one of the most important reasons of their poor health. They are living in isolated geographic locations where almost all villages are far away from roads and communication facilities, market facilities, education facilities and heath care facilities. This access becomes even more limited when these monolingual women can not explain their maternal problems to the service center due to the language barriers since all doctors and staffs are from other communities.

They also depend on local remedies particularly on traditional midwives, local doctors and village healers rather than going to the healthy facilities. They can not even afford western medical facilities due to their poor economic condition. It could be concluded that their access to maternal health care services is beyond geographical, linguistic, cultural and economic reach.

By and large, major problems Mru women face during their pregnancy are headaches, blurry vision, high blood pressure, cough or fever, excess vomiting tendency and morning sickness. Excessive hemorrhage, obstructed labour, prolonged labour, eclampsia and premature rupture of membrane are the main complications Mru mothers usually encounter during their delivery since most of the deliveries are assisted by midwives who have no formal training or education. Anemia, postpartum hemorrhage, perineal tears and swelling legs and body are the common complications Mru mothers face after delivery. The study demonstrates that one out of every nine women visits for antenatal care while only one out of sixteen women visits for postnatal care in the Mru society. Delivery care and current use of contraception are also low among the Mru mothers as compared to Bengali mothers where one-fourth of the people use contraception. The factors associated with these low cares and contraception use are age, mothers' education and occupation, husbands' education and occupation, religion, place of residence, place of service provided in the locality, distance to the service centers and exposure to mass media of radio, television and newspaper. Maternal mortality also seems to be higher in the community due to the delivery practices done by the traditional midwives. Traditional beliefs and practices after delivery are also responsible for their high deaths rate. However, further research is important to know the rate of maternal mortality among the Mru mothers.

High maternal morbidity and mortality in the Mru society are interwoven with multiple factors that could be categorized into three wide-ranging aspects. First, socio-economic and cultural factors are functioning through their effect on the Mru mothers. All indicators of poor socio-economic conditions, for instance, income, occupational status, quality of houses, food intake, water supply and sanitation lead Mru women to sustained malnutrition and maternal health hazard. They are suffering from minimum subsistence rather than relative deprivation. Their traditional and

cultural practices during entire pregnancy, delivery and after delivery are also responsible for this adverse maternal health condition. Although traditional knowledge has been well adapted to normal deliveries and practices in the Mru society, it has generally little or no use in the event of life-threatening complications. Secondly, spatial factors which include geographic settings and proximity, road infrastructure are perhaps the most significant determinant of their poor maternal health condition. Though they desire to depend on the western medical services at the very critical moment, they can not reach due to the long distance of the service centers and communication problems. Finally, clinical factors that consist of every aspect of obstetric knowledge and education of both women and midwives and availability of care provided by well-trained midwives and medical practitioners are totally absent in the society. Almost all deliveries are attended by traditional midwives who have neither formal training nor even general education. On the other hand, few women visit UHCs, however, these service centers have no minimum obstetric care services.

It is difficult to presume and come to the inference that the determinants of maternal morbidity and mortality in the past in western countries have been functioning in the same way in present Mru society. The maternal morbidity and mortality of western countries in seventeenth and eighteenth century and the events of Mru society in twenty first century is almost similar regarding hygiene, housing, nutrition and general health, albeit the former always seems to be better than the later. However, the demographic scenario changed among the western countries during the eighteenth, ninetieth and twentieth centuries due to their better socio-economic development and better obstetric care, particularly the transformation of standard midwifery by the Midwives' Act of 1902 (Loudon, 1986). On the contrary, the Mru society is still passing through adverse situation regarding their socio-economic condition and standard obstetric care facilities.

6.2 Recommendation

Maternal mortality and morbidity among Mru women is so adverse that urgent implementation of special health care strategies are important. Thus, the following recommendations are intended for the government, NGOs, bilateral as well as multilateral programs. In this regard, both socio-economic and clinical factors should be taken into consideration. However, there is overwhelming evidence that socio-economic condition is a very weak determinant of the levels of maternal mortality, while the standard of obstetric care is a very strong determinant (Loudon, 2000:243) which is very much pertinent among Garo indigenous people in Bangladesh. Their socio-economic condition is not better than mainstream people; however, their maternal health status is much better than the national level due to their better maternal health care services, even though there is no standard obstetric care (see details in Islam et al., 2009; Islam et al., 2009; Islam et al., 2010). Likewise, in 1930, the industrial town of Rochdale in northwestern England decreased maternal mortality rates within a few years from 900 to 170 maternal deaths per 100000 births due to vigorous obstetric care and this low rate was persistent, although its population was poor, deprived, and malnourished (Loudon, 2000:244). Thus, obstetric care and maternal health programs should be more emphasized for the Mru community than socio-economic development. Since Mru women do not leave their villages when they are sick, government and NGO health workers should bring health care services to the community. In such cases, special economic enticement should be provided to the health workers.

Replacing existing traditional midwives by well-trained midwives might be a significant strategy to improve the situation of maternal morbidity and mortality of Mru society. Numerous studies revealed that such development occurred during the eighteenth and nineteenth centuries in the Netherlands, Norway and Sweden and in the twentieth century in Sri Lanka, Malaysia, Cuba and Myanmar in replacing traditional midwives by professionalization of child birth services (Högberg, 2004; Lefèber and Voorhoeve, 1998). Of late, on the international day of midwife 2010, UNFPA and ICM jointly emphasized the importance and role of skilled midwife. They pointed out that midwives can prevent up to 90 per cent of maternal deaths by their decisive full role during pregnancy, childbirth and after birth (UNFPA, 2010). A remarkable service in the history of maternal care was founded by Mary

Breckinridge, in the United States during the 1920s and 1930s where deliveries were assisted by trained midwives at home in a poor rural farming community and the maternal mortality was ten times lower than the urban areas (Loudon, 1992). As a result, the maternal mortality was lower among lower class people than the upper class during this period (Loudon, 2000:243). A study in Inukjuak, Nunavik, Canada also demonstrated that there was an outstanding development of perinatal care among Inuit women due to the unique midwifery services (see details in Houd et al., 2004). Theses kinds of development mostly happened due to the institutionalized care systems where people had access to service centers. On the other hand, in some cases services were brought to the community. The latter is pertinent for the Mru community due to structural constraints. However, it is to some extent difficult, though not impossible, to train up the existing traditional midwives of Mru society because of their language barriers since they speak only in the Mru language and can neither read nor write. In addition, they would not be able to understand the language of trainers.

Community-based collaborative strategy might be another noteworthy approach to improve the situation where both traditional midwives and western medical professional could be incorporated. A study found that there was a significant development of sustainable antenatal care services among indigenous women in the Townsville of Australia through this approach (see details in Panaretto et al., 2007). However, there might be a conflict between midwives and doctors to implement this strategy that took place almost all western countries during nineteenth century since midwives were supported by the population and municipalities (Van Der Borg 1994, cited in Brouwere, 2007:17). In the case of Mru society, there is little chance that this kind of conflict of interest will happen due to the optimistic bahaviour of the community population on the one hand and non-economic profession of traditional midwives on the other. So, there would not be underlying competition between them. In this regard, medically-trained midwives should be brought to the Mru community so that they can work with traditional midwives those are interested. In the study areas, for instance, few primary schools have been developed in recent years where food expenses are partly provided by the students' family, which is the positive attitude towards changes. Thus, similar results could be expected in the case of Mru health care services, if community-based collaborative approach is implemented.

Based on lessons learned from the historical evidence as well as considering the practical constrains in the Mru society, the most decisive and immediate primary recommendation for the Mru community would be to train the young Mru girls as midwives, particularly those are bilingual and educated and provide them to the Mru villages with better economic incentives that will encourage them to continue in this profession and ultimately will unravel the vicious circle of traditional midwives. Though these trained midwives without medical background, will not able to deal with complicated cases, they will obviously be able to reduce the primary maternal problems and complications. They will also be able to refer serious patients to the service centers. On the other hand, a specialized obstetric care section should be developed in UHCs as a secondary recommendation so that mothers can receive better care when they reach the service centers during emergencies and high-risk cases. General education is also important to change overall health care seeking behaviour in the Mru society. Along with this significant strategy, socioeconomic development combined with a Mru language-based maternal health education and family planning programs with a special emphasis on awareness through mass media may have a significant influence on maternal health status of the Mru community.

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CHAPTER TWO

Table 2.1 Socio-economic, Demographic and Spatial Factors by Study Upazila, District and National Level

Socio-economic, Demographic and Spatial Factors	Alikadam	Lama	Thanchi	Bandarban	National
Area (sq km)	885.78	671.84	1020.55	4,479.03	147,570.00
Population	24,782	64,717	18,000	298,120	111.4 (in million)
Population density (sq km)	28	96	16	67	755
Sex ratio	123	117	125	119	106
Villages	86*	80*	54*	1,501	59990
Households	1,251*	1,409*	795*	60,141	19.9 (in million)
Literacy (%)	0.22*	1.98*	1.64*	29.45	32.4
School enrollment (%)	1.82*	6.65*	25.10*	32.41	36.52

*Applicable only for the Mru

Sources: BBS, 1991; BBS, 2001; Rafi, 2001.

Picture 2.1 Geographic Setting of one of the Study Areas, Lulaing, Lama, Bandarban taken during the field work.

Picture 2.2 Typical houses of the Mru People taken during the field work.

CHAPTER THREE

Picture 3.1 This is the most common transportation used by the Hill people known as Chander Gari taken during the field work.

Picture 3.2 Typical postnatal care practices by the Mru women taken during the field work.

CHAPTER FOUR

Section II

Table 4.2.1 Percentage Distribution of Access to Sources of Drinking Water, Toilet Facilities and Health Care Service Centers as Mentioned by the Respondents

Type of Access	Percentage
Access to Drinking Water	
Deep Tube-well and Well	5.1
River	53.5
Stream	23.0
Other	18.4
Access to Toilet facility	
No facility/field	57.2
Open latrine	36.9
Hanging latrine	2.9
Pit latrine	2.7
Other	0.3
Access to Health Service Center	
Upazila Health Complex	55.1
Family Welfare Centre	28.3
Satellite Clinic	4.3
Traditional village healers	4.0
Other	8.3

Table 4.2.4 Percentage Distribution of Maternal Health Services Provided by Different Service Centers as Mentioned by the Respondents

Type of Services	Percentage
Nursing of pregnant mothers	6.4
Nursing of lactating mothers	5.1
Measuring weight of pregnant mothers	12.8
Iron tablet Supply	14.2
Treatment of general diseases	21.7
Nursing of babies	7.5
Vaccination of children	8.8
Vaccination of pregnant mothers	6.7
Distribution of FP materials	2.1
Advice for breast feeding	6.1
Health education	13.9
Nutrition Education	3.5
ORS preparation	17.9

Note: Multiple responses

Section III

Table 4.3.5 Percentage Distribution of Complications during Pregnancy, during Delivery and after Delivery by the Respondents

Type of Complications	Percentage
Complications during Pregnancy	
Did not suffer	26.7
Morning sickness	26.2
Cough/Fever	38.0
Headache/Blurry vision/High blood pressure	46.3
Palpitation	10.7
Hamorrhage	13.4
Pre-eclamsia	3.7
Abdominal pain	13.6
Excessive vomiting	34.2
Septic abortion	0.8
Other	0.8
Complications during Delivery	
Did not suffer	49.2
Excessive hemorrhage	25.7
Eclamsia	19.0
Prolonged labor	16.0
Obstructed labor	4.5
Retained placenta	1.1
Torn uterus	0.8
Premature rupture of membrane	17.6
Hand/Feet came first	0.3
Other	1.1
Complications after Delivery	
Did not suffer	37.2
Pelvic infection	0.3
Urinary track infection	1.3
Uterine prolapse	1.1
Perineal tears	11.8
Severe anemia	43.9
Hypertension	11.5
Leg problems	14.4
Postpartum sepsis	0.3
Other	0.3

Note: Multiple responses

4

Table 4.3.6 Percentage Distribution of Causes not to Visit to the Service Centers during Pregnancy and after Delivery by the Respondents

Causes not to Visit Service Center	Before Delivery	After Delivery
Too far	56.7	56.4
Transportation problem	46.3	47.3
Didn't know service was needed	30.5	30.2
Expensive	27.6	27.5
Not needed	19.8	22.7
Not beneficial	17.1	16.0
Family didn't allow to go	11.0	12.6
Better care at home	6.7	4.3
Issues related to quality of service	4.8	4.0
Other	2.1	2.2
Religious reason	0.5	0.8

Note: Multiple responses

Table 4.3.7 Percentage Distribution of Antenatal and Postnatal Care Visit by Respondents

Type of Visit	Percentage	
	The Mru	National*
Antenatal Care	11.2	60.3
Postnatal Care	6.4	21.3

*Source: Bangladesh Demographic Health Survey, 2007

Section IV

Table 4.4.2 Current Use of Contraception by Methods among Respondents

Method	Percentage	
	Mru	**National***
Non use	74.9	44.2
Use		
Permanent**	1.6	5.7
Condom	.5	4.5
Pill	16.6	28.5
IUD	-	0.9
Implants	-	0.7
Injectables	1.1	7.0
Periodic abstinence	4.5	4.9
Withdrawal	-	2.9
Other	3.2	0.7

* Bangladesh Demographic and Health Survey, 2007.

**Permanent method includes both female sterilization and male sterilization.

6

University of Tromsø, Norway   **Bangladesh Agricultural University**

Hello, my name is Md. Rakibul Islam. I am working as an Assistant Professor at the Department of Rural Sociology, Bangladesh Agricultural University, Mymensingh. Currently, I am doing my MPhill degree in Indigenous Studies at the University of Tromsø, Norway.

I want to invite you to take part in an interview survey for my MPhill research on "**Maternal Morbidity and Mortality among Indigenous People in Bangladesh: A Study on the Community of Mro."** The objective of this research is to use the experience of the mothers so that giving birth can become easier for them in the future. On behalf of me, Mrs…………………………………………………………… would like to talk to you about maternal health care services, health outcomes and health care seeking behaviuor. The interview will take between 40 to 50 minutes. During this time I would like to talk with mothers having child less than one to five years of age.

Your participation in this study is voluntary. If you decide to stop participation at any time you can do so. All individual research results will be kept confidential and you will never be identified.

May I interview you and do you agree to be a part of this study?

…………………………   ……………………………………..
Date

                                        Signature of the interviewer

MATERNAL MORBIDITY AND MORTALITY AMONG INDIGENOUS PEOPLE IN BANGLADESH: A STUDY ON THE COMMUNITY OF MRO

1. Socioeconomic and Demographic Characteristics

1.1	Identification of Recipients		
☐ Serial Number…………………………………..		☐ Tribe's name…………………………………..	
☐ Village………………………………………………		☐ Union………………………………………………..	
☐ Thana……………………………………………….		☐ District……………………………………………..	

1.2	How old are you?	Please Specify in Years………………

1.3	Have you ever attended school?	☐ Yes – 1	☐ No – 0

1.4	If yes, how many years of schooling have you completed?	Please Specify in Years………………

1.5	What is your occupation?		
☐ Agriculture – 1	☐ Business – 2	☐ Service – 3	
☐ Housewife – 4	☐ Others (Please Specify)…………………………………………… – 99		

1.6	Has your husband ever attended school?	☐ Yes – 1	☐ No – 0

1.7	If yes, how many years of schooling has your husband completed?	Please Specify in Years…………….

1.8	What is the occupation of your husband?		
☐ Agriculture – 1	☐ Business – 2	☐ Service – 3	
☐ Others (Please Specify)……………………………………………………………… – 99			

1.9	What is your monthly family income	☐ Please Specify in TK…………..

1.10	What is your monthly family expenditure	☐ Please Specify in TK…………..

1.11	What is your monthly family savings	Please Specify in TK………………..

1.12	Does your household own any land (other than the homestead land)? If yes, how much?	☐ Yes – 1 Acres………	☐ No – 0 Decimals……….

2. Access to Maternal Health Care Services (MHC)

2.1	Where do you get the drinking water from?		
☐ Deep tube well – 1	☐ Well – 2	☐ Pond – 3	
☐ River – 4	☐ Chara (stream) – 5	☐ Others …………………… – 99	

2.2	What kind of toilet facility does your household have?		
☐ No facility/field – 1	☐ Open latrine – 2	☐ Hanging latrine – 3	
☐ Pit latrine – 4	☐ Water Sealed/Slab latrine – 5	☐ Others(Please specify)…………………….. – 99	

2.3	Do you share this facility with other households?	☐ Yes – 1	☐ No – 0

2.4	Where are the MHC services being provided in your locality?	
☐ Upazila Health Complex (UHC) – 1	Family Welfare Center (FWC) – 2
☐ Satellite Clinic (SC) – 3	☐ Traditional village healers – 4
☐ Others (Please Specify)... – 99	

2.5	How far is the service center from your home?	Please write in Miles………………

2.6	Can you contact the service center by phone or other means?	☐ Yes – 1	☐ No – 0

2.7	Did you ever make visit to the service center? (If no; please go to the Q 2.11)	☐ Yes – 1	☐ No – 0

2.8	If yes, how did you go to that service center from your home?		
☐ On foot – 1	☐ Rickshaw/Van – 2	☐ Bus – 3
☐ Boat – 4	☐ Others(Please Specify)............................ .... – 99	

2.9	Who did accompany you to go to the service center?	
☐ Alone (Nobody accompany) – 1	☐ Husband – 2
☐ Others (Please specify)... – 99	

2.10	What are the services that are being provided in that center?	
☐ Nursing of pregnant mothers – 1	☐ Vaccination of pregnant mothers – 2
☐ Measuring weight/height of pregnant mother – 3	☐ Folic acid/Iron tablet supply – 4
☐ Treatment of general diseases – 5	☐ Advice for breast feeding – 6
☐ Nursing of lactating mothers – 7	☐ Nursing of babies – 8
☐ Vaccination of children – 9	☐ Distribution of FP materials – 10
☐ Preparation of ORS – 11	☐ Health education – 12
☐ Nutrition education – 13	☐ Others (Please specify)……………………… – 99

2.11	If answer to 2.7 is no, why you did not visit the service center?	
☐ Not needed – 1	☐ Not beneficial – 2
☐ Expensive – 3	☐ Better care at home – 4
☐ Too far – 5	☐ Did not know service was needed – 6
☐ Transportation problem – 7	☐ Family did not allow - 8
☐ Religious reasons – 9	☐ Issues related to quality of service: - 10 Behavior is not good
☐ Others (Please specify)...................................... – 99	Adequate medicine was not given Treatment is not given attentively

3. Maternal Morbidity

During Pregnancy

3.1	How many pregnancies have you experienced in your entire life?	…………………

3.2	Was there any pregnancy aborted? (If yes, How many? Write in numbers)	☐ Yes – 1 ………………………	☐ No – 0

3.3	Was there any pregnancy Miscarried? (If yes, How many? Write in numbers)	☐ Yes – 1 ………………………	☐ No – 0

3.4	Was there any pregnancy ended as stillbirth? (If yes, How many? Write in numbers)	☐ Yes – 1 ………………………	☐ No – 0

3.5	How many pregnancies were ended with successful delivery?	…………………….

3.6	Did you make visit anywhere during last pregnancy? (If no, please go to the Q 3.11)	☐ Yes – 1	☐ No – 0

3.7	If yes, where did you visit during pregnancy?	
☐ Upazila Health Complex (UHC) – 1	☐ Family Welfare Center (FWC) – 2
☐ Satellite Clinic (SC) – 3	☐ Traditional village healers – 4
☐ Others (Please Specify)…………………………………………………………………… – 99	

3.8	When did you make first visit of that center?	
☐ Within 3 months of pregnancy – 1	☐ From 4-6 months of pregnancy) – 2
☐ From 7-9 months of pregnancy – 3	

3.9	How many times did you visit during last pregnancy?	Please specify in no…………………

3.10	What are the services have been given to you during last pregnancy?	
☐ Nursing of pregnant mothers – 1	☐ Vaccination of pregnant mothers – 2
☐ Measuring weight/height of pregnant mother – 3	☐ Folic acid/Iron tablet supply – 4
☐ Treatment of general diseases – 5	☐ Advice for breast feeding – 6
☐ Nursing of lactating mothers – 7	☐ Nursing of babies – 8
☐ Vaccination of children – 9	☐ Preparation of ORS – 10
☐ Health education – 11	☐ Nutrition education – 12
☐ Others (Please specify)…………………………………………………………………… – 99	

3.11	If answer to 3.6 is no, why did not you visit that center during pregnancy?	
☐ Not needed – 1	☐ Not beneficial – 2
☐ Expensive – 3	☐ Better care at home – 4
☐ Too far – 5	☐ Did not know service was needed – 6
☐ Transportation problem – 7	☐ Family did not allow – 8
☐ Religious reasons – 9	☐ Issues related to quality of service: - 10 Behavior is not good
☐ Others (Please specify)………………………………… – 99	Adequate medicine was not given Treatment is not given attentively

3.12	What are the complications you faced during last pregnancy?	
☐ Did not suffer from any complication – 1	☐ Morning Sickness/Dizziness – 2
☐ Cough/Fever – 3	☐ Headache/blurry vision/H. blood pressure-4
☐ Palpitation – 5	☐ Hemorrhage – 6

☐ Pre-eclampsia/ Oedema – 7	☐ Abdominal pain – 8
☐ Excessive Vomiting – 9	☐ Septic Abortion – 10
☐ Others (Please specify).. – 99	

During Delivery

3.13	How many children have you given birth in total?	Boys	Girls ....

3.14	What was the space between births?

Between getting married and first child ....Months

From 1st to 2nd child…………………………….Months	From 2nd to 3rd child…………………………….Months
From 3rd to 4th child……………………………….Months	From 4th to 5th child……………………………….Months
From 5th to 6th child ……………………………….Months	From 6th to 7th child ……………………………….Months

3.15	How many of your children are alive now?	Boys	Girls ....

3.16	In which week of during pregnancy your last child was born?	Please write in week…………………

3.17	What is the age of your last child?	Years	Months ....

3.18	What was the weight of your last child at the moment of birth?	☐ Please write in Kg………….. ☐ Not recorded

3.19	Where was your last child born?		
☐ Own house – 1	☐ Father's house – 2	☐ Private clinic – 3
☐ Hospital – 4	☐ MCH center – 5	☐ Others(Please Specify) ……………………………………… - 99

3.20	Who did assist you in having the last child	
☐ Dai/unskilled birth attendant – 1	☐ Trained birth attendant – 2
☐ Relatives/neighbors – 3	☐ Village doctor – 4
☐ Nurse – 5	☐ Passed (MBBS) doctor – 6
Others(Please Specify)…………………………………………………………………………………………… … - 99	

3.21	Was your last delivery normal or by caesarean section?	
☐ Normal – 1	☐ Caesarean section – 2

3.22	How many hours was the last labor/delivery?	
Hours………………………………………………	☐ Don't know – 98

3.23	What type of instrument was used to cut the umbilical cord?	
☐ Knife – 1	☐ Blade – 2
☐ Scissor – 3	☐ Bamboo strips – 4
☐ Do not know – 98	☐ Others(Please Specify)………………………- 99

3.24	☐ Was the instrument boiled before the cord was cut?

| ☐ Yes – 1 | ☐ No – 0 | ☐ Do not know – 98 |

| 3.25 | Did you face any problem to remove placenta? | ☐ Yes – 1 | ☐ No – 0 |

3.26	How did your placenta remove?
☐ Manually – 1	☐ Spontaneously – 2

3.27	What was the delivery cost for your last delivery?

☐ For delivery without complications
   Tk …………………………….
	☐ For delivery with complications
	   Tk …………………………….

3.28	Who did pay your last delivery cost?		
☐ Respondent – 1	☐ Husband – 2	☐ Loan – 3
☐ Others (Please Specify)……………………………………………………………………………………………- 99			

3.29	What are the complications you faced with during delivery?
☐ Did not suffer from any complication – 1	☐ Excessive hemorrhage -2
☐ Convulsions/eclampsia – 3	☐ Prolonged labor – 4
☐ Obstructed labor – 5	☐ Retained placenta- 6
☐ Torn uterus – 7	☐ Premature rupture of membrane – 8
☐ Hands/feet came first – 9	☐ Others (Please specify)…………………………- 99

After Delivery

| 3.30 | Did you visit anywhere after the last child was born?
(If no; please go to the Q 3.34) | ☐ Yes – 1 | ☐ No – 0 |

3.31	If yes, when did you visit after the last child was born?
☐ Within 2 days – 1	☐ 3-7 days after delivery – 2
☐ 8-41 days after delivery – 3	☐ Don't know – 98

3.32	Where did you visit after delivery?
☐ Upazila Health Complex (UHC) – 1	☐ Family Welfare Center (FWC) – 2
☐ Satellite Clinic (SC) – 3	☐ Traditional village healers – 4
☐ Others (Please Specify).. – 99	

3.33	What services were provided to you after delivery?
☐ Gave advise to breast feed the baby – 1	☐ Gave advise to feed food side by side with breast feeding - 2
☐ Took weight of the baby – 3	☐ Vaccination the baby – 4
☐ Gave medicine for disease – 5	☐ Gave advise about contraception – 6
☐ Others (Please specify).. – 99	

3.34	If answer to 3.30 is no, why did not you visit after delivery?
☐ Not needed – 1	☐ Not beneficial -2
☐ Expensive – 3	☐ Better care at home – 4
☐ Too far – 5	☐ Did not know service was needed – 6
☐ Transportation problem – 7	☐ Family did not allow – 8
☐ Religious reasons – 9	☐ Issues related to quality of service: - 10 Behavior is not good

☐ Others (Please specify)... − 99	Adequate medicine was not given Treatment is not given attentively

3.35	What are the complications occurred after delivery?
☐ Did not suffer from any complication – 1	☐ Pelvic Infection - 2
☐ Urinary Tract Infection – 3	☐ Uterine Prolapse – 4
☐ Perineal Tears – 5	☐ Severe Anemia – 6
☐ Hypertension (Diastolic >90) – 7	☐ Leg Problems – 8
☐ Postpartume Sepsis/Infections – 9	☐ Others (Please specify).......................... − 99

4. Health Care Seeking Behavior

4.1	Where did you get the information regarding maternal health services?
☐ Did not get information – 1	☐ MCH providers – 2
☐ Mass media – 3 (Radio/TV/Newspaper)	☐ Relatives – 4
☐ Neighbor – 5	☐ Friends – 6
☐ Others (Please specify).. − 99	

4.2	Where did you go first to seek treatment?
☐ Did not seek treatment – 1	☐ GO service center – 2
☐ NGO service center – 3	☐ Traditional village healers/Priest – 4
☐ Others (Please specify).. − 99	

4.3	Who took decisions for treatment seeking?
☐ Respondent – 1	☐ Husband – 2
☐ Parents-in-law – 3	☐ Parents – 4
☐ Other family members (Please specify)... − 5	

4.4	Do you think that women should have a medical checkup when they are pregnant even though they are not sick?
☐ Yes – 1	☐ No – 2	☐ Do not know – 98

4.5	**Do you think safe delivery will be possible by taking MCH services?**
☐ Possible very safely – 1	☐ Possible safely – 2
☐ Not possible – 3	☐ Don't know – 98

4.6	Do you maintain the advices given by the Family Welfare Visitors/Medical Assistants?
☐ Maintain – 1	☐ Try to maintain – 2	☐ Don't maintain – 3

4.7	Do you follow doctor's advice in using drugs?
☐ Use completely – 1	☐ Try to use completely – 2
☐ Partially complete – 3	☐ Don't use completely – 4

4.8	During pregnancy, do you think that women need to eat more, the same, or less than they did before their pregnancy?
☐ More than before – 1	☐ Same – 2
☐ Less than before – 3	☐ Do not know – 98

5. Family Planning

5.1	Do you know about family planning?	☐ Yes – 1	☐ No – 0

5.2	Are you using any family planning method currently?		
☐ Lactating – 2	☐ Pregnant – 3	☐ Yes – 1	☐ No – 0

5.3	Can you name the methods that you are currently using?	
☐ Female Sterilization – 1	☐ Male Sterilization – 2	☐ Condom – 3
☐ Pill – 4	☐ IUD – 5	☐ Norplant/Implants – 6
☐ Injections – 7	☐ Withdrawal – 8	☐ Periodic Abstinence – 9
☐ Others(Please Specify)………………………………………………………………………………………………… - 99		

5.4	Does your husband approve the current method?	☐ Yes – 1	☐ No – 0

5.5	Do you approve the current method?	☐ Yes – 1	☐ No – 0

5.6	Are you facing any complications using the current method?	☐ Yes – 1	☐ No – 0

5.7	Who takes decisions regarding family planning?	
☐ Husband – 1	☐ Wife – 2	☐ Both – 3
☐ Others(Please Specify)………………………………………………………………………………………… - 99		

5.8	Within last three months, did any health worker visit you for family planning?	☐ Yes – 1	☐ No – 0

5.9	Within last three months, did you visit anywhere for family planning?	☐ Yes – 1	☐ No – 0

6. Mass Media and Family Planning

6.1	Have you heard any radio family planning information?	☐ Yes – 1	☐ No – 0

6.2	If yes, how frequently do you hear radio family planning information?		
☐ Monthly – 3	☐ Quarterly – 2	☐ By-annually – 1

6.3	Have you seen any television advertisement regarding family planning?	☐ Yes – 1	☐ No – 0

6.4	If yes, how frequently do you watch television advertisement regarding family planning?		
☐ Monthly – 3	☐ Quarterly – 2	☐ By-annually – 1

6.5	Have you read any news/information regarding family planning from newspaper/magazine?	☐ Yes – 1	☐ No – 0

6.6	If yes, how frequently do you read news regarding family planning?		
☐ Monthly – 3	☐ Quarterly – 2	☐ By-annually – 1

Others

7.1	If a free course is organized for parents about their first child, will you attend it?	☐ Yes – 1	☐ No – 0

7.2	Will your husband attend it?	☐ Yes – 1	☐ No – 0

7.3	What is your religion?		
☐ Islam – 1	☐ Hinduism – 2	☐ Christianity – 3
☐ Buddhism – 4	☐ Others(Please Specify)…………………………………………………… – 99	

7.4	What is your opinion/suggestion to improve the maternal health condition of Mro Women?
☐
☐
☐

<u>Thank You</u>

MATERNAL MORBIDITY AMONG INDIGENOUS PEOPLE IN BANGLADESH: A STUDY ON THE COMMUNITY OF THE MRU

TOPICS FOR IN-DEPTH INTERVIEW WITH WOMEN

<u>**Socio-demographic and Cultural Background of the Respondents**</u>

<u>**Access to Maternal Health Care Services (MHC)**</u>

☐ Access to service center
☐ Service provided
☐ Constraints of services

<u>**Maternal Morbidity**</u>

☐ What type of complications did you encounter during pregnancy?
☐ Did you visit to health centre during complications? If no, why?
☐ What type of complications do you encounter during delivery?
☐ Did you visit to health centre during delivery? If no, why?
☐ What type of complications did you encounter after delivery?
☐ When did you visit to health centre after delivery?
☐ Did you have opportunities to reach appropriate care? If no, why?
☐ Did you receive care at facilities? If no, why?
☐ Decisions
☐ Means of transportation
☐ Constraints

<p style="text-align:center">THANK YOU</p>

CAUSES OF MATERNAL MORTALITY AMONG INDIGENOUS PEOPLE IN BANGLADESH: A STUDY ON THE COMMUNITY OF THE MRU

TOPICS FOR IN-DEPTH INTERVIEW WITH MOTEHR/SISTER OF THE VICTIM

<u>**Socio-demographic and Cultural Background of the Victim**</u>

<u>**Maternal Death/Mortality**</u>

☐ Did you recognize the danger signs?
☐ Did you rely on the local remedy?
☐ Did local doctors/midwives/traditional village healer refer to the hospital? When they referred?
☐ Decisions to seek treatment – who took decisions, when, where and how
☐ Reaching appropriate care – fear and cost – distance – transportation
☐ Receiving care at facilities – obstetric emergency care – lack of skilled staff, supplies and medicines – ethnic discrimination – slow care and long time waiting
☐ Death history – time of death – place of death – causes of death
☐ Dysfunction between community and providers

<p align="center">THANK YOU</p>

CAUSES OF MATERNAL MORTALTY AMONG INDIGENOUS PEOPLE IN BANGLADESH: A STUDY ON THE COMMUNITY OF THE MRU

TOPICS FOR IN-DEPTH INTERVIEW WITH DOCTORS AND NURSES

Personal Profile

☐ In which organization you are working now?
☐ What is your designation?
☐ How long you are working in this organization?
☐ What is the role you are playing in this organization?
☐ Describe your job and day-to-day activities.

Origin, Development and Activities of the organization

☐ Describe when and how this organization was originated.
☐ What are the different services provided by this organization?
☐ Which types of services are provided by this organization – door-to-door or centre based services?
☐ How the The Mru mothers feel about the services provided by the organization?
☐ What services are working well?
☐ What are the constraints/challenges in providing these services?
☐ What areas of work need more development?
☐ Is there emergency obstetric care?
☐ Is there sufficient skilled staff, supplies and medicines?

Maternal Morbidity and Mortality

☐ What type of complications do The Mru mothers encounter during pregnancy?
☐ Do they visit to health centre during complications? If no, why?
☐ What type of complications do they encounter during delivery?
☐ Do they visit to health centre during delivery? If no, why?
☐ What type of complications do they encounter after delivery?
☐ When they visit to health centre after delivery?
☐ Do they have opportunities to reach appropriate care? If no, why?
☐ Do they receive care at facilities? If no, why?
☐ Do you think that they mainly rely on local remedy for their complications? If yes, why?
☐ What are the causes of death?

THANK YOU

CAUSES OF MATERNAL MORBIDITY AND MORTALTY AMONG INDIGENOUS PEOPLE IN BANGLADESH: A STUDY ON THE COMMUNITY OF THE MRU

TOPICS FOR IN-DEPTH INTERVIEW WITH MIDWIVES

Socio-demographic and Cultural Background

Involvement with Delivery Work

☐ What was your age when you first assisted to delivery?
☐ What is your motivation to involve with this work?
☐ Do you have any training for assisting delivery? If no, why?
☐ How many deliveries you have assisted in your life?
☐ Do you visit any pregnant woman before delivery? When?
☐ If yes, what types of advices are given to pregnant women?
☐ Do you know what type of complications a woman generally encounters during pregnancy?
☐ Could you understand the position of the baby before delivery? If yes, how?
☐ Describe the process of delivery.
☐ What instrument is used to cut the umbilical cord?
☐ Do you know what type of complications a woman generally encounters during delivery?
☐ What are the constraints/challenges you generally face during delivery?
☐ How do you solve these problems?
☐ Do you think woman should refer to the hospital if problem is serious? If no, why?
☐ Do you know what type of complications a woman generally faces after delivery?
☐ Do you visit woman and child after delivery? When?
☐ If yes, what types of advices are given to mother and baby?
☐ Do you think that women should go to the health centre for their complications?
☐ If yes, why?
☐ If no, why?
☐ What are the causes of death of The Mru mothers?
☐ Have you ever experience any death while assisting delivery?
☐ If yes, could you please explain it?

THANK YOU

বাংলাদেশ আদিবাসি জনগোষ্ঠীর মাতৃত্বজনিত অসুস্থতা এবং মাতৃমৃত্যুঃ ম্রো সম্প্রদায়ের উপর একটি সমীক্ষা

⅃৭⅃Ⅴ৬ ৷৭ঢ়ঃ ৷ⴹⴴ Ⅽ৭ⴴ ⴹⴴ ৰ৺ⴹ⅃ ⴕ৭৷ ⅭⴲⴹⅭ ⴹⴴৰⴴⅭⴲⴹⅭ ৭ⴹ৷ঢ়, ⴹ৷ⴹⴵ
Ⅽ৬ঃ : ⴹ৭ⴲⴕⴹ Ⅽ৬ঃ ৷ⴹ ৰ৺ⴹ ৷ⴹⴹ

১. অর্থ সামাজিক ও জনমিতিক বৈশিষ্ট্য
২. ৷ⴹⴹ ৺ⴹⅭ Ⅴⴹ⅃ Ⅽ৬ঃ

১.১	উত্তরদাতার পরিচয় Ⅴ৭ⴴ ৷Ⅴ৬ঃ ৷৷ঢ়ⴴ	
ক্রমিক নং................................... ⴕⴹ ⴹⴴঃ ঃⴹⴹ⅃ⴹ৭..................	সম্প্রদায়ের নাম.. Ⴕ৷ঃ Ⴕ৺ⴴ ⴹ⅃....................	
গ্রাম .... ৷ⴲⅭ..............................	ইউনিয়ন............................ ৷Ⅼⴲঃ৷Ⅼⴹঃ..................	
থানা................................... ⴹ৭ঃ৭.....................................	জেলা................................... Ⴕ৷Ⅴ৭..........................	

| ১.২ | আপনার বয়স কত? (নির্দিষ্ট করে বলুন) ৷ঃ ৺ⴹঃ ঃ৷ⴴ ⅃ⴹ৷ⴕⴹ ? (ⴹ-
ঃ৷ⴹ ⴹⴹ ⴲ৷ⴴ ৭ⴹ) | .... |

| ১.৩ | আপনি কখনও স্কুলে গিয়েছিলেন কি? ৷Ⅼⴲ৺⅃ ৷ⴴⴴ ঃ ⴲ৷ⴴ ৰ৭⅃
Ⅴ৷ ⴲ৭ ⅃ⴹ | হ্যাঁ ১
৷ⴴⴴ ৎ | না ০
৷ⴴⴴ ⋀ⴴⴴ |

| ১.৪ | হ্যাঁ হলে, কোন শ্রেনী পর্যন্ত লেখাপড়া করেছেন? (নির্দিষ্ট করে বলুন) ⅃৭⅃
⅃ⴹঃⴹ ⴹⴴঃ ⴲ৭ⴴঃ Ⴕⴹ ৰ৭⅃ Ⅴⴹ? (ⴹ- ঃ৷ⴹ ⴹⴹ ⴲ৷ⴴ ৭ⴹ) | .... |

১.৫	আপনার পেশা কি ? ⴕⴹ⅃ Ⅴ৺⋀ Ⴕⴹ ঃঃ Ⴕ৭⅃ ?			
কৃষি ১ ⅃ⴹঃ Ⅴ৺ⴘ	ব্যবসা ২ ৷৺ঃ Ⅴ৺ⴘ	চাকুরি ৩ ৰ৭৺৭ⴴ Ⅴ৺ⴘ	গৃহিনী ৪ ৷ⴴⴴ Ⅴ৺ⴘ
অন্যান্য (নির্দিষ্ট করে বলুন)..৯৯			

| ১.৬ | আপনার স্বামী কখনও স্কুলে গিয়েছিলেন কি? ঃঃ ⅃৺ⴴ ৷Ⅼⴲঃ⅃ ৷ⴴⴴ
ৰ৭⅃ Ⅴⴹ ⴲ৭ ⅃ⴹ | হ্যাঁ - ১ | না ০ |

| ১.৭ | হ্যাঁ হলে, কোন শ্রেনী পর্যন্ত লেখাপড়া করেছেন? (নির্দিষ্ট করে বলুন) ৰ৭⅃
⅃ⴹঃⴹ ⴹⴴঃ ⴲ৭ⴴঃ Ⴕⴹ ৰ৭⅃ Ⅴⴹ? (ⴹ- ঃ৷ⴹ ⴹⴹ ⴲ৷ⴴ ৭ⴹ) | .... |

১.৮	আপনার স্বামীর পেশা কি? ঃঃ ⅃৺ⴴ ⴕⴹ⅃ Ⅴ৺⋀ Ⴕⴹ ঃঃ Ⴕ৭⅃ ?			
কৃষি - ১ ⅃ⴹঃ Ⅴ৺ⴘ	ব্যবসা - ২ ৷৺ঃ Ⅴ৺ⴘ	চাকুরি - ৩ ৰ৭Ⅽ৭ⴴ Ⅴ৺ⴘ	অন্যান্য...............৯৯ ⴹ৷ⴴ⅃ ⴹⴴ..........ⴻⴻ

| ১.৯ | আপনার পরিবারের বাৎসরিক আয় কত? (নির্দিষ্ট করে বলুন) ঃঃ ঃⴴ⅃
৷ⴴⴴ ৷ⴹ-ঃⴴ⅃ ৷ⴴⴴ Ⅴ৺ⴘ ৭৭ⴴ ⴹⴹⴴঃ ⅃ⴴⴲ(ⴹ- ঃ৷ⴹ ⴹⴹ ⴲ৷ⴴ
৭ⴹ) | টাকা.....................
ⴲ৭⅃৷ⴴ........... |

| ১.১০ | আপনার পরিবারের বাৎসরিক ব্যয় কত? (নির্দিষ্ট করে বলুন) ঃঃ ঃⴴ⅃
৷ⴴⴴ ৷ⴹ-ঃⴴ⅃ ৷ⴴⴴ Ⅴ৺ⴘ ৭৭ⴴ ⴹⴹⴴঃ ⅃ⴴ ৰঃⴹ / ⅃ⴹ৭ⴲ
Ⅽ৷ⴴ (ⴹ- ঃ৷ⴹⴹ ⴹⴹ ⴲ৷ⴴ ৭ⴹ) | টাকা.....................
ⴲ৭⅃৷ⴴ........... |

| ১.১১ | আপনার পরিবারের বাৎসরিক সঞ্চয় কত? (নির্দিষ্ট করে বলুন)
ঃঃ ৷ⴴⴴ Ⴕ৭ⴴ ৷ⴴ ঃঃⴴ⅃ Ⅴ৺ⴘ৭৭ⴴ ৺৺ⴴঃ ⅃ⴹ⋀ ? | টাকা.....................
ⴲ৭⅃৷ⴴ........... |

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| ১.১২ | আপনাদের বসতভিটা বাদে কোন জমি আছে কি? | হ্যাঁ - ১ | না -০ |
| | ৮ঞ ৮৸ঐ ৮Vৃ৺ ৺৸ ৺৺ ৺৸ ৴ঐ৺ Vৃৃ Cঌ৸ ৩৲৸ ৴৸ ? | Cৃ৸-২ | Cৃ৸৸৸৸-০ |

| হ্যাঁ হলে কি পরিমান ? | একর................. | শতাংশ............... |
| Cৃ৸ ঞ৸ ৴ঙ৺ঞ ৴৲ঐ ? | ৮৸৴৭............. | ৳৴Cৃ৴ৈ................... |

২. মাতৃস্বাস্থ্য
ঈ. ৴ঌ৺৸ Cঔ৺C ৮৴ V৴৴ Cঌঞ

২.১	আপনি কোথা থেকে খাবার পানি সংগ্রহ করেন? ৳ঌ৺ ৴ৃ৸ ৩ঔ৸ ৩৴৴ ৴ঐঞ ৴৴ ৮ঞ ৳ঌৃ ৩৴৴৴ ৭৸
গভীর নলকূপ ১ ৩ঔৃ ৭৴৴	কুয়া- ২ ৩ঔৃ ৭৳ঐ	পুকুর ৩ ৮৴ঞঞ	নদী ৪ ২৴
ঝরণা - ৫ ২৴৳৴৴	অন্যান্য (নির্দিষ্ট করে বলুন)...(৴- ঞ৴ৃৃঐ ৴ৃ ৩৸৸ ২৴).........................৯৯		

২.২	আপনার বাসায় কোন ধরনের পায়খানা সুবিধা আছে? ৮ঞ ঞ৸ঐ ৮৸ঐ ৮৴ Cঌ৸ ৭৭ ৳৳ঐ ৩৴৴ ৴৴৴ ৴ঐ ৩৴ Cঌ৸?
কোন পায়খানা নেই ১ ৩৴৴ ৴৴৴ ৴ঐ ৳৴ Cঌ৸ ৸ঌ৸?	খোলা পায়খানা ২ ৳৳৴৴ ৮ঌ৸	ঝুলন্ত পায়খানা ৩ ৳৳৴৴/ ৮ঌ ৮V৴৴
মাটিতে গর্তযুক্ত পায়খানা - ৪ ৮ঌ ৮ঔঞ৴	আধা পাকা পায়খানা- ৫ ৭৴ঞ ৩ঔ৺৴	অন্যান্য...................৯৯ ৴ ৮৮৴ ৴ঌ............ঌৃঌ

| ২.৩ | আপনি কি অন্যান্য বসতবাড়ির/প্রতিবেশীর সাথে পায়খানা ভাগাভাগি করেন? ৮৸ ৴৴৸ ৮৸৴ ৳৯৸ ৩৴ঞ ৩৴-৴ঔC Cঌ৸ ৴-৩৴ ? | হ্যাঁ - ১ Cঌ৸-২ | না - ০ Cঌ৸৸৴ |

২.৪	আপনার এলাকায় কোথায় মাতৃস্বাস্থ্য সেবা দেয়া হয়? ৮ঞ ঞ৸৴ Cঌ৸ ৭৭ ৩Vৃ৴ ৮৴৴ ৴ঌ৴ঌCঔৃC ৭৴৺৭ ৭৴৺৴ Cঌ৸ ৴৴?
উপজেলা স্বাস্থ্য কমপ্লেক্স - ১ ঔঌৃ৩৮Vঌ ৮৴ ৩৴ঞ৸৺ ৭৭-২	পারিবারিক কল্যাণ কেন্দ্র - ২ ৮৸৴ ৴ঔ৴ V৴৴ Cঌঞ – ৴ঔ৴-ঔ	স্যাটেলাইট ক্লিনিক - ৩ ৴৮৩ঌV৮ঞ ৮V৺ঞ৸-২
সনাতন ওঝা/কবিরাজ - ৪ ৩৴৴ ৴৺৭/ ৭৴৺৴ -ঌ	অন্যান্য (নির্দিষ্ট করে বলুন)...........................৯৯ ৴ ৮৮৴ ৴ঌ............ঌৃঌ	

| ২.৫ | আপনার বাসা থেকে স্বাস্থ্য সেবা কেন্দ্র কতদূরে? ৮ঞ ঞ৸৴ ৮৸ঐ ৩৴৺ ৴৭ ৩৴-৭৴৺ ৭৭ Vৃ ৴৴ঞ ৩৴৺ ৩৴? | ....মাইল ৴৯ঌ৴......... |

| ২.৬ | আপনি কি মোবাইল বা অন্য কোন উপায়ে স্বাস্থ্য কেন্দ্রে যোগাযোগ করতে পারেন? ৩৴-৭৴৺ ৭৭ ৩৴ঞ ৴৴Cৃ৴ PVৃ৴ ৮ঞ ৴৭ ৩৴ ৮৭ ৭ঌ ৴৴? | হ্যাঁ - ১ ঞঌ-২ | না - ০ ঞঌ৸৴৴ |

| ২.৭ | আপনি কি কখনও স্বাস্থ্য সেবা কেন্দ্রে গিয়েছিলেন? ৮ঞ ৩৴-৭৴৺ ৭৭ ৭৸৸ ৴-৭৴ঞ ৭৮ঞ ৮৸৴ ৩৴ঞ ৩৴? (উত্তর না হলে ২.১১ নং প্রশ্নে যান)। ঞঌ৸৴ঞ ৴৯৺ ৮৭৭ ৴৴৴ | হ্যাঁ - ১ ঞঌ-২ | না -০ ঞঌ৸৴৴ |

২.৮	হ্যাঁ হলে, আপনি কিভাবে স্বাস্থ্য কেন্দ্রে গিয়েছিলেন? ৮ঌৃ ৳৺ঞৃ ৩৴৴ ৩৴ঞ ৮৴ ৮ঞ ৮ঌ৸২?
পায়ে হেঁটে - ১ ৭৮৺ ৩৴ঞ৴৴ৃৈ ৴৴ ৩৺৭	রিক্সা/ভ্যান- ২ ৭৮৺৴ঌ৭/৴৴ৃঞ৺	বাস- ৩ ৴৴৺	নৌকায় - ৪ V৴২৴
অন্যান্য (নির্দিষ্ট করে বলুন)..৯৯ ৮৮৴ ৴ঌ Cঌ৸ ৸৯৴ ঞ৴ ৸৮৺-------------ঌৃঌ			

২.৯	স্বাস্থ্য কেন্দ্রে যাবার সময় কে আপনার সংগে গিয়েছিলেন? ৩৴ণ৴৮ ণ৭ ৮৴৸ ৸ঽ ৮৴৸ ৸৸৸ ৵৸৭ ৴৭ ৩৴৸ ৮৵ঽ ৸ঽ ৭৸ৄ?		
একা/কেউ সাথে যায়নি ১ ৸ঽ ৴৸৭ ৴৴৸৩৴/ ৴৸৭ ৯৴ ৩৴৸ ৮৴ঽ ৸ঽ ৸৴৸	স্বামী- ২ ৸ঽ ৩৵৭	অন্যান্য...২- ৮৸ঽ৴৸৸..........................৯৯

২.১০	স্বাস্থ্য কেন্দ্র থেকে আপনাকে কি কি স্বাস্থ্য সেবা দেয়া হয়েছিল?৩৴৸৸২৮ ণ৭ ৴৴ঽ ৩৭ ৩৴৸ ৭৴৭৭ ৩৯২ ৴৸৸ ৭৴ ৴৭ ৩৴৸৸২?(প্রয়োজনে একাধিক স্থানে টিক দেয়া যাবে)(৸ঽ ৴৭ ৩৴৸৸২ ৴৸ ৭৴৭ ৴৯২ ৩৴৴৴)		
গর্ভবতী মায়ের সেবাদান ১ ৴-৬৵৵ ৴৴ ৭৸৸৸	গর্ভবতী মায়ের টিকাদান- ২ ৴-৬৵৵ ৴৴ ৭৸৸৸ ৴৴ ৩৸৸৭৺৸ ৴৴৸	
গর্ভবতী মায়ের ওজন নেওয়া - ৩ ৴-৬৵৵ ৴৴ ৭৸৸৸ ৴৴ ৸৴৸ ৷৸৸ ৭৸৸	আয়রণ বড়ি সরবরাহ- ৪ ৭৸৭৸২ঽ ৴৵৭৸ ৸ঽ ৸৭৭	
সাধারণ রোগের চিকিৎসা ৫৴-৩৴৸ ৴৸ ৭৴২৸৭ ৭৴২৮	বুকের দুধ খাওয়ানোর উপদেশ - ৬ ৵-৸৴ঽ ৩৸৸ ৭৸৴ ৸৴৴৴৸ ৴-৭৴ঽ ৭৴২৸ ৸৸২	
দুধদানকারী মায়ের সেবা - ৭ ৴-৩৭ ৸৴২ঽ ৵ ৴৸৴ ৸৴৸ ৭৴২৸ ৭৴২	শিশুর সেবা -৮ ৩৭ ৭৸৸ ৩৴ ৴৸ ৭৴২৸৭ ৸৴৸ ৭৴২৸ ৭৴২	
শিশুর টিকাদান- ৯ ৸৴৸৩ ৮৴৸ ৴৴৸৭৸ ৴৴৸	পরিবার পরিকল্পনা উপকরণ বিতরণ- ১০ ৭৴৭৸৷৭৯ ৭৴৭৸ ৸৴৴৭৴ঽ৭ ৩৴ঽ ৸৭ ৴৴ ৷৴ঽ ৭৸৷	
ওরস্যালাইন প্রস্তুতকরণ - ১১ ৴৸৴৷৸ঽ ৴৴৭ ঽ-৷৴ঽ	স্বাস্থ্য শিক্ষা-১২ ৸৴৸ ৴৴ ৭৷২ ৵৷৴ঽ	
পুষ্টি শিক্ষা - ১৩ ৩৭৸ ৸৵৸, ৴৴ ৸৵৸ ৴-৷৴ঽ	অন্যান্য (নির্দিষ্ট করে বলুন).........................৯৯ ৷৴৸ ৩৭৸ ঽ৴ ৩৸৮.................৴৴	

২.১১	যদি ২.৭ নং প্রশ্নের উত্তর না হয়ে থাকে, তাহলে কেন স্বাস্থ্য কেন্দ্রে যাননি?(৩৴৴ ণ৭ ৮৴৸ ৸ঽ ৩৴৸৸২ ৮৴৴ ঽৢ৵ ৷৴৸ ৴৸?) (প্রয়োজনে একাধিক স্থানে টিক দেয়া যাবে)(৴-৸৸ঽ ৩৴৸)	
প্রয়োজন ছিল না- ১ ৩৴ ৭৸৸ ৴৸৸৸ ৷৴৸	উপকারী মনে হয়নি - ২ ৸৵৸ ৮৴৴৴৸ ৴৴৴ ৷৴৸	
ব্যয়বহুল- ৩ ৴-৬৵৸ ৩৵৭ ৴৭৸ ৮৴	বাসার সেবা ভাল ছিল - ৪ ৮৴৴ ৮৴ ৴৵৴৮৴ঽ ৴৭৸ ৸৵৸	
স্বাস্থ্য কেন্দ্র দূরে - ৫৩৭৸৸ ণ৭ ৴৭৮৴	সেবা প্রয়োজন সেটা জানতাম না- ৬ ৩৭৸৸ ৸৵৸ ৴৸ ৷ঽঽ ৩৵৸ ৷৴৸ ৮৴	
যোগাযোগ সমস্যা -৭ ৴ ৴৭৸ ৴ ৮৭৸ ৸৸ ৴৭-৺	পরিবার থেকে যেতে দেয়নি - ৮ ৮৴৴ ৴৸৷৵৴৩ ৭৴-৮৴৸ ৷৴৸	
ধর্মীয় কারণ -৯ ৮৴৸ ৭৵৵ ণ৭ ৮৴৸	সেবার গুণাগুন সম্পর্কিত বিষয় - ১০ ৴ ৷৸৩ ৴৴৸ ৷ঽঽ-৺০	
অন্যান্য (নির্দিষ্ট করে বলুন)........................৯৯ ৷৴৸ ৮৵৸ ৩৭৸ ঽ৴ ৩৸৮...........৴৴	ব্যবহার ভাল না- ৴ ৮৴৴৭ ৴ ৮৴৭৸ ৸৵৸ ৷৴৸ পর্যাপ্ত ঔষধ দেয়া হয় না- ঽৢ৵ ৴৴৭ ৸৭ ৩৴৸৭৸ ৷৴৸ মনোযোগ সহকারে চিকিৎসা দেয়া হয় না- ৴ ৸৴৸ ৴৴ ৭৴ ৷৴৸	

৩. মাতৃত্বজনিত অসুস্থতা-৴৸৴৸৩৷৵৴৩ ৮৸৴ ৷৴৸ ৴ ৭৷ ৴৴৸ ৷ঽঽ
গর্ভকালীন সময়-৭৸ঽ ৷৸ঽ

৩.১	আপনি আপনার জীবনে কতগুলো গর্ভধারনের অভিজ্ঞতা অর্জন করেছেন? ৸ঽ ৩৴৸৴৴২ঽ ৮৴৸ ৸ঽ ৴৷৸ ৩৵৸-৴ ৴৴৷ ৴৴ ৴৴৷ ৸৭২ ৴৴২ঽ	সংখ্যায় লিখুন............. ৷৵৸ ৴-.................

৩.২	আপনি কি কখনও গর্ভপাত করেছিলেন? ৸ঽ ৷৸ঽ ৭৴ ৷৴ ?	হ্যাঁ - ১ ঽৢ৭- ২	না - ০ ঽৢ৭৷৴ঽ-০

৩.৩	আপনার কি কখনও গর্ভপাত হয়েছিল? h‡ Cd‡ H‡d †9∧]d‡ ⊥9 ?	হ্যাঁ - ১ ‡9- ২	না - ০ ‡9∧d‡-0

৩.৪	আপনি কি কখনও মৃত সন্তান প্রসব করেছিলেন? h‡ PH‡ T99 d‡ 9h‡ 9h h‡d9∧ d×V9‡ Fd‡ T99 Fd]]d-d‡ C9‡]d‡ ⊥d?	হ্যাঁ - ১ ‡9- ২	না - ০ ‡9∧d‡-0

৩.৫	আপনার কতগুলো সন্তান সুস্থ ভাবে হয়েছিল? dd‡ L9]d‡ d-L×] d h‡ L9 PH‡ T99	সংখ্যায় লিখুন.......... 9×h d-..............

৩.৬	সর্বশেষ গর্ভকালীন সময়ে আপনি স্বাস্থ্য সেবার জন্য কোথাও গিয়েছিলেন কি? (উত্তর না হলে ৩.১১ নং প্রশ্নে যান)। d-T×9 dd‡ Fd h‡ d× dh 9h‡ 9hh dfd∧Cdh J9d‡ 99 Fdh h‡ Fd Fdh J9‡ ⊥d?	হ্যাঁ - ১ ‡9- ২	না - ০ ‡9∧d‡-0

৩.৭	হ্যাঁ হলে, কোথায় গিয়েছিলেন? Jd] d‡ J9d‡ 99 Fdh Td h‡ Fd Fdh ?

উপজেলা স্বাস্থ্য কমপেক্স - ১ ×- PdTh∨9 dfddh Fd2h P∨H‡d	পারিবারিক কল্যাণ কেন্দ্র ২ P9∧h19∧h HH‡∧9d	স্যাটেলাইট ক্লিনিক ৩ df9f9∧h FH‡h‡
সনাতন ওঝা/কবিরাজ- ৪ ddd d99	অন্যান্য (নির্দিষ্ট করে বলুন)..........................৯৯ Cdh J9‡ ‡d JHf..............৮৮	

৩.৮	আপনি স্বাস্থ্য সেবার জন্য প্রথম কখন সেবা কেন্দ্রে গিয়েছিলেন? d-Cd‡ 9hh Jd] dh 9h‡ Fd Td h‡ T9d 9h‡ Jd9d ?

গর্ভধারনের প্রথম ৩ মাসের মধ্যে-১ d× ৩ ∨9 dh 9h‡]h	গর্ভধারনের ৪-৬ মাসের মধ্যে - ২ d× ৪-৬ ∨9 dh 9h‡]h	গর্ভধারনের ৭-৯ মাসের মধ্যে-৩ d× ৭-৯ ∨9 dh 9h‡]h

৩.৯	সর্বশেষ গর্ভধারণের সময় আপনি কতবার স্বাস্থ্য সেবা কেন্দ্রে গিয়েছিলেন? h‡ d× dh 9h‡ ddd‡ F9∧ Td Fd Jd 9d2‡ 99 Fd h‡ Fdh ?	সংখ্যায় লিখুন............... ∨×] 9×h..........

৩.১০	সর্বশেষ গর্ভকালীন সময়ে আপনি কি কি সেবা পেয়েছিলেন? h‡ Jd9d2 9h Jd] Ld2] J9P Jd 9d2‡ 9d2 h‡ (প্রয়োজনে একাধিক স্থানে টিক দেয়া যাবে)

গর্ভবতী মায়ের সেবাদান ১ d- d× dh J9d‡	গর্ভবতী মায়ের টিকাদান ২ d× dh Fdh dh19] dh	গর্ভবতী মায়ের ওজন নেওয়া-৩ d× dh Fdh T×h ∧h‡ 9h
আয়রন বড়ি সরবরাহ - ৪৪ 9h9d2‡ T×9h h‡ F99	সাধারণ রোগের চিকিৎসা - ৫৫d- Jd] dh 9d2‡9 9d2‡	বুকের দুধ খাওয়ানোর উপদেশ- ৬ ×-Ld‡ J×h 9d Fdddh d- C9‡ 9d2‡ d9]
দুধদানকারী মায়ের সেবা - ৭ d-T9 Ld2‡ × dhd Fdh 9d2‡ 9d2	শিশুর সেবা - ৮ T9 9h‡ Td dh 9d2‡9 Fdh 9d2‡ 9d2	শিশুর টিকাদান - ৯]dhC Fdh dh19] ddh
ওরস্যালাইন প্রস্তুতকরণ - ১০ dh∨9h‡ ddP ‡-C9‡	স্বাস্থ্য শিক্ষা ১১]×‡ d- 9×9 ×C9‡	পুষ্টি শিক্ষা ১২ T9‡ L×], d- L×] d-C9‡
অন্যান্য (নির্দিষ্ট করে বলুন)......................................৯৯ Cdh J9‡ ‡d JHf...............৮৮		

৩.১১	যদি ৩.৬ নং প্রশ্নের উত্তর না হয়, তাহলে কেন আপনি সর্বশেষ গর্ভকালীন সময়ে স্বাস্থ্য কেন্দ্রে যাননি? (প্রয়োজনে একাধিক স্থানে টিক দেয়া যাবে)

প্রয়োজন ছিল না - ১ Jd-9d‡ ∨9h‡h ∧dh	উপকারী মনে হয়নি - ২ Ld× Fdddh ddd ∧dh Fd
ব্যয়বহুল - ৩ d-d×]×× ∨9h Fd	বাসার সেবা ভাল ছিল - ৪৪ Hd Fd 9d2dh ∨9 L×]
স্বাস্থ্য কেন্দ্র দূরে - ৫9d‡ 99 ∨9Fdd	সেবা প্রয়োজন সেটা জানতাম না - ৬ J9d‡ L×] dh C9‡ J×h ∧dh Fd

যোগাযোগ সমস্যা - ৭ ৰৱৎড় ৲৵৶ৣ ৭৭ ৴৸ৰৱ	পরিবার থেকে যেতে দেয়নি - ৮ ৸ৰৱ ৴৸ৎৰৱ ৲৵৴৸ৰৱ ৲ৱৰ
ধর্মীয় কারণ - ৯ ৸ৰ৴৶ৣ ৭৭ ৸ৰৱ	সেবার গুনাগুন সম্পর্কিত বিষয় - ১০
অন্যান্য (নির্দিষ্ট করে বলুন).............৯৯ ৶ৱৰ ৲৵৴ ৳ৰ ৲৴ৰৱ.............৶৶	ৰ ৴৵ৎ ৴৴৸ ৶৴ ৶ৣ-২০ ব্যবহার ভাল না- ৰ ৴ৱৰ৲ ৰ ৴ৱৣ ৸ৎ ৲ৰৱ পর্যাপ্ত ঔষধ দেয়া হয় না- ৶৶ৎ ৶ৰৣ ৸৭ ৳ৰ৴৭ৣ ৲ৰৱ মনোযোগ সহকারে চিকিৎসা দেয়া হয় না- ৰ ৲ৰৱ ৶ৰ ৭৭ ৲ৰৱ

৩.১২	সর্বশেষ গর্ভকালীন সময়ে আপনি কি কি ধরণের সমস্যার সম্মুখীন হয়েছিলেন? (প্রয়োজনে একাধিক স্থানে টিক্ দেয়া যাবে) ৸৵ ৶৵ ৲ৱ ৴৸৵ ৴৸ ৴ৰৣ ৴৶৸৵ ৲ৰৱ ৳৶ ৶৳ ৶৸ ৴৶ ?

কোন সমস্যা হয়নি- ১ ৴ৱৣ ৭৭৶ ৲৴ ৳ৱৣৎ ৲ৰৱ ৳	প্রাত:অসুস্থতা/মাথা ঝিমঝিম করা ২ ৭৸৭৲ ৲৴৸৲/ ৳৶ ৶ ৳ৱৣ ৭৭ৎ ৳
জ্বর/কাশি- ৩ ৸৭৶ৎ/ ৶৸৲	মাথা ব্যথা/চোখে ঝাপসা দেখা/রক্তচাপ ৪ ৳৶ ৭৭ৎ/ ৴৸ৱ ৲৸ৱ ৲ৰৱ/ ৴৲ ৴ৱৣ ৳
বুক ধড়ফড় করা - ৫ ৴৶ ৲ৱ৭ ৳	রক্তক্ষরণ - ৬ ৲ৱ ৲৴৵
গায়ে কাপুনি দেয়া - ৭ ৸ৰ ৲৶৴৭ ৵৳	তলপেটে ব্যথা - ৮ ৶৵ ৴৴ৣ ৲ৰৱ ৭৭ৎ ৳
অতিরিক্ত বমি- ৯ ৴৶ৰৱ ৶	গর্ভপাত - ১০ ৲৸৵ ৳০
অন্যান্য (নির্দিষ্ট করে বলুন)..৯৯ (ৰ৴ৰৱ ৳ৰ ৴ৱৣ)..৶৶	

প্রসব কালীন সময়(৸ৰ ৲ৱৰ ৲৭)

৩.১৩	আপনি কতগুলো সন্তান জন্ম দিয়েছেন? ৸৵ ৴ৰ ৳৶৴৵ ৴৭ ৴ৱৣ ৳ৰ ৳৭ ৲ৰৱ?	ছেলে .... ৴ৰৣ৭৲ ৶৶৴ৎ ৳৭	মেয়ে .... ৴ৱৰ৴ৎ৶৴ৎ

৩.১৪	আপনার সন্তানদের মধ্যে বয়সের পার্থক্য কত? ৸৵ ৸ৰ ৳৭৵ৎ৶৴ৎ ৶৶৴ ৳৶ ৶ৱৣ ৲ৰ ৳ৰ ৳৭		
বিয়ে এবং প্রথম সন্তান......................মাস ৰ- ৳৭ ৶৶৴৵ .... ৲৭		১ম সন্তান থেকে ২য় সন্তান......................মাস . ৳৭৲ ৴৶ৣ ৳৭.৳ ৳৭ .... ৲৭	
২য় সন্তান থেকে ৩য় সন্তান......................মাস.৶ ৳৭ ৴৶ৣ ৳৭.৳ ৳৭ .... ৲৭		৩য় সন্তান থেকে ৪র্থ সন্তান......................মাস . ৳৭৲ ৴৶ৣ ৳৭.৶ ৳৭ .... ৲৭	
৫য় সন্তান থেকে ৬র্থ সন্তান......................মাস.৶ ৳৭ ৴৶ৣ ৳৭.৵ ৳৭ .... ৲৭		৪র্থ সন্তান থেকে ৫ম সন্তান......................মাস ৶৳৭ ৴৶ৣ ৳৭.৶ ৳৭ .... ৲৭	
৬ ষ্ঠ সন্তান থেকে ৭ম সন্তান......................মাস.৵ ৳৭ ৴৶ৣ ৳৭.৵ ৳৭ .... ৲৭		৭ম সন্তান থেকে ৮ম সন্তান......................মাস. ৳৭ ৴৶ৣ ৳৭ . ৳৭ .... ৲৭	

৩.১৫	আপনার কতগুলো সন্তান এখন বেঁচে আছে? ৳৶৴ৣ ৲৭ ৴ৰ ৸৵ ৸ৰ ৳৭৵৶৴ৰৱ ৳৴ৰ ৲ৰ ৳৭ৰৱ	ছেলে .... ৴ৰৣ৭৲ ৶৶৴ৎ ৳৭	মেয়ে .... ৴ৱৰ৴ৎ৶৴ৎ

৩.১৬	গর্ভের কোন মাসে আপনার সর্বশেষ সন্তানের জন্ম হয়েছিল? ৰ-৳৶ৰ ৸ৰ ৸৵ ৴ৰ ৶৸৵ ৳ৱৣ ৲৭ ৸ৰৱ ৴ৰ ৳৴ৣ ৲৵	মাস........ ৲৭	দিন........ ৵ৱ ....

৩.১৭	আপনার সর্বশেষ সন্তানের বয়স কত? ৸৵ ৸ৰ ৳৭ ৰৱ৴ৰৱ ৳৭৸ ৵৵ ৳৶৴ৣ ৵৸ ৴৶ৰৱ ৳ৰ	বছর...... ৵৵ৣ........	মাস...... ৲৵ৰৱ........

৩.১৮	জন্মের সময় আপনার সর্বশেষ সন্তানের ওজন কত ছিল? ৸৵ ৴ৰ ৳৭ ৰৱ৴ৰৱ ৳৭৸ ৵৵ ৴ৱ ৲৴ ৵৵ৣ ৲৵৴

৭

	ওজন: আপ Tৰ Cৈৰ
কেজিতে লিখুন..........................	ওজন নেওয়া হয়নি

৩.১৯	আপনার সর্বশেষ সন্তান কোথায় হয়েছিল?

নিজের বাড়িতে - ১	বাবার বাড়িতে -২	প্রাইভেট ক্লিনিকে -৩
হাসপাতালে - ৪	মাতৃস্বাস্থ্য কেন্দ্রে - ৫	অন্যান্য..........................৯৯

৩.২০	আপনার সর্বশেষ সন্তান প্রসবের সময় কে সাহায্য করেছিল?

দাইমা - ১	আত্মীয় স্বজন বা প্রতিবেশী - ২	গ্রাম্য ডাক্তার- ৩
দক্ষ প্রসবকারী ৪	সেবিকা ৫	এম.বি. বি. এস. ডাক্তার ৬

অন্যান্য (নির্দিষ্ট করে বলুন)..৯৯

৩.২১	আপনার সর্বশেষ সন্তান নরমাল না সিজার হয়েছিল?	নরমাল -১	সিজার - ২

৩.২২	আপনার সর্বশেষ সন্তান প্রসব হতে কত সময় লেগেছিল ?

ঘন্টায় (নির্দিষ্ট করে লিখুন)............................	জানিন- ৯৯

৩.২৩	আপনার সর্বশেষ সন্তানের নাড়ী কাটার জন্য কি যন্ত্র/বস্ত্র ব্যবহার করা হয়েছিল?

ছুরি ১	বেড ২	কাঁচি ৩
বাঁশের চোচা ৪	জানিনা ৯৮	অন্যান্য.........................৯৯

৩.২৪	নাড়ী কাটার আগে যন্ত্রটি কি গরম পানিতে ফুটানো হয়েছিল?

হাঁ- ১	না- ০	জানিনা - ৯৮

৩.২৫	আপনার গর্ভফুল অপসারণে কি কোন সমস্যা হয়েছিল?	হাঁ - ১	না - ০

৩.২৬	আপনার গর্ভফুল কিভাবে অপসারণ করা হয়েছিল?

হাত দিয়ে - ১	স্বাভাবিক ভাবে - ২

৩.২৭	আপনার সর্বশেষ প্রসবের সময় কত খরচ হয়েছিল?

জটিলতাহীন প্রসবের ক্ষেত্রে......................	জটিলতাসহ প্রসবের ক্ষেত্রে......................

৩.২৮	কে আপনার সর্বশেষ সন্তান প্রসবের খরচ বহন করেছিল?
	Hd OG Ph‡ Jh dJTd TϑL Hd JdJdA

উত্তরদাতা নিজেই ১	স্বামী-২	ঋন করে - ৩
HdϑϑA Tϑ ϑ	Hd JdH ৡ	VϑH OϑHϑ ২

অন্যান্য (নির্দিষ্ট করে বলুন)…………………………………………… ৯৯
Hd JhJdH(dHh ϑd OHϑ Hd)……………………………… ৬৫

৩.২৯	সর্বশেষ সন্তান প্রসবের সময় আপনি কি কি সমস্যার সম্মুখীন হয়েছিলেন?
	(প্রয়োজনে একাধিক স্থানে টিক্ দেয়া যাবে)
	Hd OG Ph‡ Jh d J9CA OdL Td CϑH

কোন সমস্যার সম্মুখীন হয়নি ১	অতিরিক্ত রক্তক্ষরণ ২
OdL 99ϑ Pd CϑJC Adϑ ϑ	Ch JdJA ৡ
গায়ে ঝাকুনি/কাপুনি ৩	প্রসব দীর্ঘায়িত হওয়া ৪
Hd TϑdJ ϑ	Ph‡ Od JVHd‡ J9dϑd ϑ
প্রসব বাধাগ্রস্থ হওয়া ৫	গর্ভফুল আটকে যাওয়া ৬
JdJdH CϑH Jd ϑ	TϑH Od J9J Jd ϑ
জরায়ু ছিড়ে/ফেটে যাওয়া ৭	পানিভাঙ্গা/পানির থলে ফেটে যাওয়া ৮
Ph‡ TϑH Od dHh/ Ph‡ TϑH Od CϑH Hd ৡ	OϑH NϑP PHϑh/ OϑH NϑP OHϑ Hd ৳
শিশুর হাত, পা আগে বের হয়ে যাওয়া ৯	অন্যান্য (নির্দিষ্ট করে বলুন)………………৯৯
JHϑCϑϑdC 9ϑA JdH CϑJ 9dH OϑH JdHd ৡ	Hd JhJdH (dHh ϑd OHϑ Hd) ……………… ৬৫

প্রসব পরবর্তী সময়- Ph‡ HϑJ Hd

		হ্যাঁ - ১	না - ০
৩.৩০	সর্বশেষ সন্তান জন্মের পর আপনি স্বাস্থ্য সেবার জন্য কোথাও গিয়েছিলেন কি? (উত্তর না হলে ৩.৩৪ নং প্রশ্নে যান)।	‡9-ϑ	‡9Adϑ-0
	Hd OG Ph‡ HϑJ Jh H Tϑ Oh 9dϑϑ 99 Hdϑ H‡ Hdϑ O9ϑ Jd		
	(Vϑh P[Vϑ‡ Td HϑAdϑ ‡d ২.২9 ‡ddJd9 Hdϑ Vϑh VϑOϑ‡ O9ϑ CϑH)		

৩.৩১	হ্যাঁ হলে কখন গিয়েছিলেন? Odϑ Jh Td Hd‡ Hd

২ দিনের মধ্যে - ১	৩-৭ দিনের মধ্যে -২
ৡ ‡d Od J99 Hd ϑ	২-9 ‡d Od J99 Hd ৡ
৮-৪১ দিনের মধ্যে - ৩	অন্যান্য (নির্দিষ্ট করে বলুন)……………………… ৯৯
৳-৬২ ‡d Od J99 Hd ϑ	Hd JhJdH (dHh ϑd OHϑ Hd)……………… ৬৫

৩.৩২	সর্বশেষ সন্তান জন্মের পর আপনি কোথায় গিয়েছিলেন?
	Hd OG Ph‡ HϑJ Hdϑ Hd Tϑϑ Od 9dϑ O9ϑ Jd
	(Vϑh P[Vϑ‡ Td HϑAdϑ ‡d ২.২9 ‡ddJd9 Hdϑ Vϑh VϑOϑ‡ O9ϑ CϑH)

উপজেলা স্বাস্থ্য কমপ্লেক্স - ১	পারিবারিক কল্যাণ কেন্দ্র - ২	স্যাটেলাইট ক্লিনিক - ৩
ϑPdTdVϑG Hd OdHdϑ 99-ϑ	HhJ LϑJ VdJ CϑH - LϑJ-ৡ	JdHhVϑh HVϑhHC9-ৡ
সনাতন ওঝা/কবিরাজ - ৪	অন্যান্য (নির্দিষ্ট করে বলুন)…………………………… ৯৯	
Odϑ JϑJ/ 9dHϑ -ϑ	d HhJ dh…………৬৫	

৩.৩৩	সর্বশেষ সন্তান জন্মের পর আপনাকে কি কি সেবা দেয়া হয়েছিল ? (প্রয়োজনে একাধিক স্থানে টিক দেয়া যাবে)
	Hd OG Ph‡ HϑJ Jh Odϑ 9dϑ T99 Td Hd T99 Od9d9ϑ(Hd Od 9dϑ ‡d Jdϑ Jdϑ Hd Hd‡ Lϑ Odh)

শিশুকে বুকের দুধ খাওয়ানোর উপদেশ - ১	শিশুকে বুকের দুধের পাশাপাশি অন্যান্য খাবার
Tϑ Tdϑ‡ CϑH ϑ	খাওয়ানোর উপদেশ- ২

	টি৭ Lব২‡ টি৭ ৮নম টি৭-৭৭ৎ Ph৭ ৮১ম ৫৮ C৯‡ ঈ
শিশুর ওজন নিয়েছিল - ৩	শিশুকে টিকা দিয়েছিল- 4
Jৈ৯C৪৫নম ৷১৮ ∧৮৮ ৭৯ম ২	Jৈ৯C৪৫নম ৱৈ৭Lৈ৭দ নৱম ৭
ঔষধ দিয়েছিল- ৫	জন্মনিয়ন্ত্রন সম্পর্কে উপদেশ দিয়েছিল - ৬
ৱৈ৭৬	P৫৮ Ph‡ ৫৫C৯‡ ৭
অন্যান্য (নির্দিষ্ট করে বলুন)...৯৯	
ৱ- ৭৮Jৈ৮(নৈৱ৮ ৫ৱ ৩৮৮ ৱ).....................................৬৫	

৩.৩৪	যদি ৩.৩০ এর উত্তর না হয়, তাহলে কেন স্বাস্থ্য সেবার জন্য যান নি? (প্রয়োজনে একাধিক স্থানে টিক্ দেয়া যাবে)	
প্রয়োজন ছিল না - ১V৫৮৮৮ ∧ৱম ঈ	উপকারী মনে হয়নি - ২ Lৈ৮ P৫ৱ৮ ৱৱ∧ৱম ঈ
ব্যায়বহুল- ৩ ৱৈ৮ ৷৫V৬৮ ২	বাসার সেবা ভাল ছিল - 4 ৮নৱ ৮ৱ৭ৱ Lৈ৮ ৭
স্বাস্থ্য কেন্দ্র দূরে- ৫ ৩ৱ ৭ৱ৮৭৫ V৮৮ ৫ৱ ৭	সেবা প্রয়োজন সেটা জানতাম না - ৬ ৩ৱ ৭ৱ২ ৮ Lৈ৮ ৮নৱ P৫ৱ৮ ২ৱৱ ∧ৱম ৭
যোগাযোগ সমস্যা - ৭ ৱৈ৩৭৫ P৫৮৭৫ ৮৭৫∧ ৫ৱ ৮	পরিবার থেকে যেতে দেয়নি - ৮ ৮নৱ টি৮৮ C৪৫নম Ph ৮নম ∧নম ৬
ধর্মীয় কারণ - ৯ ৮ৱ২ ৷৫৯ ৭৫ ৮নম ৫	সেবার গুনাগুন সম্পর্কিত বিষয় - ১০ ৱ ৭৮৭ Vৱৱ C৯‡-৮০
অন্যান্য (নির্দিষ্ট করে বলুন).......................৯৯ ৱ- ৭৮Jৈ৮(নৈৱ৮ ৫ৱ ৩৮৮ ৱ).................৬৫	ব্যবহার ভাল না- ৱ ৮V৫P ৱ ৮V৫৷ Lৈ৮ ∧ৱম পর্যাপ্ত ঔষধ দেয়া হয় না- ‡৭C ৱৱ৭ ৮৭ ৭৷৭৫ ∧ৱম মনোযোগ সহকারে চিকিৎসা দেয়া হয় না- ৱ নৈৱ ৫ৱ ৭৫ ∧ৱম

৩.৩৫	সর্বশেষ সন্তান জন্মের পর আপনার কি কি সমস্যা হয়েছিল ? (প্রয়োজনে একাধিক স্থানে টিক্ দেয়া যাবে) ৮‡ ৩৭ Ph‡ ৮Lৈ ৮ৱ ৭৫৷ ৮৭৫৩ ৭ৱ C৪৮ ?	
কোন সমস্যা হয়নি - ১ ৩৫৷ ৮৭৫৩ P৫ C৪৮ ∧ৱম ঈ	শ্রেণীতে সংক্রমন - ২ ৱ৭P৪৮৮ ৱ৫৷৷ ৮৭৫৫‡ ঈ
প্রস্রাবের রাস্তায়/যোনিপথে সংক্রমন -৩ Lৈ‡ ৩৮L / ‡৭C ৩৮L ৮নম ৭৷৮৭ C৫- ২	জরায়ু স্থানচ্যুৎ - 4 ‡৭C ৩৮L ৩৫ ৮V৮ম-৭
দীর্ঘস্থায়ী ক্ষত- ৫৫৭ P৭৮৮৫	রক্তশূন্যতা- ৬ C৮ ৱৱ৫ ৭
উচ্চ রক্তচাপ - ৭ C৮ P৫ৱ‡ ৫৮ ৮	পায়ে সমস্যা - ৮ ৭৷৮ ৭৷৮৭ ৫
প্রসব পরবর্তী সংক্রমন - ৯ Ph‡৮Lৈ ৮নম ৭৷৮৭ C৫ - ৫	অন্যান্য (নির্দিষ্ট করে বলুন).......................৯৯ ৱ- ৭৮Jৈ৮(নৈৱ৮ ৫ৱ ৩৮৮ ৱ).................৬৫

4. স্বাস্থ্য সেবা খোচার আচরণ- ৮ৱ ৭৮∧ Vৱৱ C৯‡

4.১	মাতৃস্বাস্থ্য সেবা সম্পর্কে আপনি কোথা থেকে তথ্য পেয়েছিলেন? ৱ৮৷৮C৪৫নম ৷১৮ ৩৭৷ C৯‡ ৩৫৷ ৷ৱ‡ ৭ৱ ৮‡ ৩৮	
কোন তথ্য পাইনি - ১ ৩৫৷ ৩৫৮৮৮ ঈ	মা ও শিশু স্বাস্থ্য কর্মীদের কাছ থেকে - ২ Jৈ৯C৪৫নম ৫ ৭ৱ৮ ৫ৱ C৪৫নম ৱৈ৫ঈ টি৭ ঈ
গণমাধ্যম-টিভি/রেডিও/পত্রিকা ৩ ৭৯৭ ৱৈ৮৬৭ L৭C ৮৷৮৭/ ৭৮∧ৱ৫/ ৱ৩৫ ৷৮৮ ৫	আত্মীয় স্বজন 4 ৩৫ৱ‡ ৮৮C৪৫নম ৭
প্রতিবেশী ৫	বন্ধু ৬

V৭-৸ V৭J ৸১ ২		৸ ৴J ঽ	V৭-৸ V৭J ৸	

৫. পরিবার পরিকল্পনা ৸৴৫ T৭ ১৴৭৶ ৭৭

৫.১	আপনি পরিবার পরিকল্পনা সম্পর্কে জানেন কি? ৸৴৫ T৭ ১৴৭৶ ৭৭ ৵-৫৳ ৵৴ ঽ৳ ১৴ ১৭ ১৴	হ্যাঁ ১ ১৳৸	না ০ ৵৸৸

৫.২	বর্তমানে আপনি কোন পরিবার পরিকল্পনা পদ্ধতি ব্যবহার করছেন কি? ৸৴৫ T৭ ১৴৭৶ ৭৭ ১৳ ৫৭ ৵৴ ১৴৭৶ T৭৸ ঽ৳ ১৴৭ ১৴৴ ১৴	হ্যাঁ - ১ ঳৭-২	না- ০ ঳৭৵৸৸

৫.৩	আপনি বর্তমানে যে পদ্ধতি ব্যবহার করছেন দয়া করে তার নাম বলবেন কি? ৸৴৫৶৵ ৵৴ ঽ৳ ১৴৭৶৵৸ T৭৸ ঽ৳ ৫৭ ১৴৫ ৸৴৴ ১৴		
মহিলা বন্ধ্যা ১ ৵৸৴৸৫৳৶৸ ৵৴ ১৴J৵৳৶৸ ২	পুরুষ বন্ধ্যা ২ ৸৴T৴৫৳৶৸ ৵৴ ১৴J৵৳৶৸ ঽ	কনডম ৩ ৭৸৫P৸৳৭J ২
খাবার বড়ি/পিল ৪ ১৳঳৳৸J ঽ	আই. ইউ. ডি.- ৫ ৭৸ ঽৎ ৸৸ T৭৸ ঽ	নরপ্ল্যান্ট ৬ ঳৴৭৶P঳৳১ ঽ
ইনজেকশন ৭ ৵৸৷৭J ১৳৸ ১-৵৸৸ T৭৸ ঽ	উইথড্রয়াল/অপসারণ - ৮	পর্যায় বৃত্তিক বিরত থাকা - ৯
অন্যান্য (নির্দিষ্ট করে বলুন).......................................৯৯ ৵- ৸৸J৵৸(৵৸৴ ৵৴ ১৴৴ ৵)...........................৮৮		

৫.৪	আপনার স্বামী বর্তমান পদ্ধতি অনুমোদন করেন কি? ঽ৳ ১৳C T৵৸৭ ২৳঳৳৸৵৳঳ T৭J ১৴৴ ১৴	হ্যাঁ- ১ T৭J ১৴৸	না - ০ T৭J ৵৸৸

৫.৫	আপনি বর্তমান পদ্ধতি অনুমোদন করেন কি? ঽ৳ ৵৭৵ ৵৴ T৭J ১৴৸ ১৴	হ্যাঁ - ১ T৭J ১৴৸	না -০ T৭J ৵৸৸

৫.৬	বর্তমান পদ্ধতি ব্যবহারে আপনি কোন সমস্যার সম্মুখীন হয়েছেন কি? ৸৴৫৶৵ ৵৴ ঽ৳ ১৴৭৶৵৸ T৭৸ ৸৭৵৸৴৴ ১৴	হ্যাঁ- ১ ৸৭৵৸ ৵৴	না- ০ ৸৭৵৸ ৵৸৸

৫.৭	পরিবার পরিকল্পনা গ্রহনের ক্ষেত্রে কে সিদ্ধান্ত নিয়ে থাকেন? ৸৴৫ T৭ ১৴৭৶ ৭৭ ৵৸৸ ১৴৭৶ ৸৴৫৫৸ ৵৸৴T৵ ৭৸৴ ঳৵C ১৭			
স্বামী -১ ঽ৳ ১৳C ২	স্ত্রী-২ ৵৸৵৸঳৳C ঽ	স্বামী-স্ত্রী উভয়েই -৩ ৵৸৵৸ ১৳CL৵ ৸৭৴ ৵৭J ২	অন্যান্য..............৯৯ ৵-৸৸J৵৸..................৮৮

৫.৮	সর্বশেষ তিন মাসের মধ্যে পরিবার পরিকল্পনার জন্য স্যাটেলাইট ক্লিনিক বা স্বাস্থ্য সেবা কেন্দ্রে গিয়েছিলেন কি? ৵-T৴৭ ৳৳৵ V৭ ১৴৴৭৭ ৸৸৸ ৸৴৫ T৭ ১৴৭৶ ৭৭ ৸৸৸ ঽ৳ ৸৸৸৸ ১৭৸ ১৴	হ্যাঁ- ১ ৸৸৸ ২	না -০ ৸৸৸ ৵৸৸ ০

৫.৯	সর্বশেষ তিন মাসের মধ্যে পরিবার পরিকল্পনার জন্য কোন স্বাস্থ্য কর্মী বা পরিদর্শক আপনার বাসায় এসেছিলেন কি? ৵-T৴৭ ৳৳৵ V৭ ১৴৴৭৭ ৸৸৸ ৸৴৫ T৭ ১৴৭৶ ৭৭ ১৳ ৫৭ ১৴঳৭৶ ৵৴ ঽ৳঳঳৸৴ ৸৴৫ ৵৴ C৭J ৸৸৵৸ ১৭৸ ১৴	হ্যাঁ- ১ C৭J ২	না - ০ C৭J ৵৸৸ ০

৬.গণমাধ্যম ও পরিবার পরিকল্পনা

৬.১	আপনি কখনও রেডিও থেকে পরিবার পরিকল্পনা সংক্রান্ত কোন তথ্য শুনেছেন	হ্যাঁ ১	না ০

	কি? হ্যাঁ হলে গভীরে জন্মদান পরিকল্পনা সংক্রান্ত অনুষ্ঠান শুনেছেন কি না জানতে চান।	হ্যাঁ ১	না ০

৬.২	হ্যাঁ হলে, সাধরনত কতদিন পর পর শুনে থাকেন?

প্রত্যেক মাসে ১	তিন মাসে ২	ছয় মাসে ৩

৬.৩	আপনি কখনও টেলিভিশনে পরিবার পরিকল্পনা সংক্রান্ত বিজ্ঞাপন দেখেছেন কি?	হ্যাঁ ১	না ০

৬.৪	হ্যাঁ হলে, সাধারনত কতদিন পর পর দেখে থাকেন?

প্রত্যেক মাসে - ১	তিন মাসে ২	ছয় মাসে ৩

৬.৫	আপনি কখনও পত্রিকায় বা ম্যাগাজিনে পরিবার পরিকল্পনা সংক্রান্ত কোন তথ্য পড়েছেন কি?	হ্যাঁ - ১	না - ০

৬.৬	হ্যাঁ হলে সাধারনত কতদিন পর পর পড়ে থাকেন?

প্রত্যেক মাসে- ১	তিন মাসে- ২	ছয় মাসে- ৩

৭. অন্যান্য

৭.১	প্রথম সন্তান নিরাপদে প্রসব/জন্মদানের জন্য যদি বিনামূল্যে কোন কোর্সের আয়োজন করা হয়, তাহলে আপনি অংশগ্রহণ করবেন কি?	হ্যাঁ- ১	না -০

৭.২	আপনার স্বামী অংশগ্রহন করবেন কি?	হ্যাঁ- ১	না -০

৭.৩	আপনার ধর্ম কি?

ক্রামা- ১	খ্রীষ্টান - ২	বৌদ্ধ - ৩
হিন্দু- ৪	ইসলাম -৫	অন্যান্য.........................৯৯

৭.৪	ম্রো মায়েদের মাতৃস্বাস্থ্য উন্নয়নের জন্য আপনার সুপারিশ/মতামত কি?

আপনাকে অসংখ্য ধন্যবাদ