A QUALITATIVE STUDY OF PRETERM BIRTHS IN BANGLADESH, ETHIOPIA, AND MALI

Exploring the contextual factors that influence risk factors for and experiences of preterm birth in three settings

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List of acronyms

ANC	Antenatal care
BOT	*Born on Time*
CEFM	Child, Early and Forced Marriage
CCP	Johns Hopkins Center for Communication Programs
CSL	Country study lead
DHS	Demographic and Health Survey
FGD	Focus group discussion
GAC	Global Affairs Canada
GC	Global Consultant
IDI	In-depth interview
IPTP	intermittent preventive treatment in pregnancy
IPV	Intimate partner violence
ITN	insecticide treated net
KII	Key informant interview
LINC factors	Lifestyle, infection, nutrition, and contraception-related factors
MNCH	Maternal, neonatal, and child health
Plan	Plan International Canada
PTB	Preterm birth
SBC	Social and behavior change
SBCC	Social and behavior change communication
SEM	Socio-ecological model
TBA	traditional birth attendant
RTI	Reproductive tract infections
SCC	Save the Children Canada
WVC	World Vision Canada

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Chapter One: Introduction

Overview of the Born on Time project

Born On Time (BOT) is a five-year, $30 million (Canadian dollars) public-private partnership project dedicated to the prevention of preterm births (PTB) in targeted communities in Bangladesh, Ethiopia and Mali. Now in its fifth year, BOT is a partnership between World Vision Canada (WVC), Save the Children Canada (SCC), Plan International Canada (Plan), Global Affairs Canada (GAC) and Johnson & Johnson. Together, the BOT consortium has designed a series of interventions that address key risk factors for preterm births associated with lifestyle, infections, nutrition and contraception (LINC) including their gender inequality dimensions. The BOT consortium has identified research as one way of knowledge contribution to the global discussion of risk factors affecting PTB. As part of this goal, BOT aims:

1) To contribute to the BOT Consortium's understanding of the unique characteristics surrounding women and adolescent girls' experience around pregnancy and childbirth, specifically those experiences associated with lifestyle, infections, nutrition and contraception (LINC) risk factors (and their gender inequality dimensions), which are particularly relevant for PTB.
2) To inform future preterm projects with a focus on prevention by contributing to global knowledge.

To support BOT in accomplishing these objectives, CCP, as the Global Consultant, aims to:

1) Explore the individual, family, household, community, and health system-related factors that influence PTB in Bangladesh, Ethiopia, and Mali;
2) Examine the underlying social normative and gender issues influencing PTB in these settings;
3) Examine the social and behavior change communication (SBCC) approaches that have contributed to changes in influencing factors or preventive behaviors that impact PTB.

The study consists of two parts: 1) a qualitative, contextual study of the behaviors, family and household dynamics, gender norms, and social norms related to PTB (Part A) and 2) a mixed methods implementation study of exposure to BOT program activities, LINC risk factors, and PTB (Part B). This report presents findings from Part A from Bangladesh, Ethiopia, and Mali.

Existing knowledge on preterm birth

Preterm birth has emerged as the leading cause of neonatal deaths and death among children under 5 years.[1–8] At the same time, PTB is a major predictor of subsequent morbidity among infants and young children.[1–8] It was estimated that 60-85% of preterm babies around the world were born in south Asia and sub-Saharan Africa, where more than half of all global live births occured.[1,9] However, tracking and reporting on PTB is made complicated by a lack of clarity in definitions of PTB from setting to setting, and quality of data reported. For example, in resource-poor areas preterm infants may be less likely to be registered or could be recorded as

stillbirths even if born alive.[3] Given that most births around the world occur at home and not in a facility, current figures are likely underestimating the scale of the problem.[10] In high- and middle-income countries, decreases in preterm neonatal mortality were attributed to improved management and care of preterm babies, not to reductions in the overall number of preterm births.[11–13] In resource poor settings, however, the equipment and expertise necessary to successfully manage the care of preterm babies might not be readily available. Understanding the factors that contribute to PTB and identifying at-risk women and adolescent girls are therefore essential to initiating risk-prevention strategies that could decrease PTB and avert further child deaths in settings like Rangpur, Bangladesh; Amhara, Ethiopia; and Sikasso, Mali. Research is turning its attention toward improving our understanding of both the scale and determinants of PTB for the design of evidence-based approaches to reduce PTB in low-income countries.[14] This is the first multi-country program focused exclusively on the prevention of PTB, and this research study aims to expand the existing literature on risk factors for PTB in the three study settings: Bangladesh, Ethiopia, and Mali.

Table 1. Preterm birth across the three study sites.

Bangladesh	A report published in 2018 estimated that in 2014 (the most recent data available) Bangladesh had the highest national PTB rate, at 19.1%.[15] If neonatal deaths caused by PTB could be eliminated in Bangladesh, one study estimated that the population-level neonatal mortality rate would decrease by 31%.[16]
Ethiopia	Precise national data on prevalence of PTB in Ethiopia is uncommon. A 2018 study estimated that Ethiopia was among the top-10 countries with the highest number of PTBs, with a national PTB estimate around 12%.[15] A different systematic analysis estimated that 10-15% of live births in Ethiopia were PTB,[9] but other regional estimates varied: among all births in Gondar University Hospital in Northwest Ethiopia, 14.3% of adverse birth outcomes were recorded as PTB[17]; in Mettu Karl Referral Hospital in Southwestern Ethiopia, PTB among mothers having pregnancy related hypertension was 31.4%[18]; in Addis Ababa, 16.5% of neonatal intensive care admissions were for PTB[19]; and in Jimma University Specialized Teaching and Referral Hospital in Jimma Zone, the prevalence of PTB was 25.9% in 2015.[20]
Mali	In Mali, direct estimates of PTB prevalence do not exist or are not readily available. A 2018 analysis estimated regional PTB in 2014 indicated Mali's PTB prevalence between 10-14%.[15] Several grey literature documents report Mali's PTB rate at 12%.[9,21,22]

Risk factors for preterm birth: LINC factors

To reduce PTB in Bangladesh, Ethiopia, and Mali, *Born on Time* targets the risk factors related to unhealthy lifestyles and behavior, maternal infections, inadequate nutrition, and a lack of access to contraception—known as LINC factors. Within each LINC category are several specific factors of interest that may elevate the risk of PTB and therefore provide an opportunity for intervention to reduce PTB. Table 2 details the LINC categories and the specific factors of interest for the *Born on Time* project.

Table 2. Lifestyle, Infection, Nutrition and Contraception (LINC) factors

Group	Factors	
Lifestyle	● Intimate partner violence ● Excessive work/activity ● Child, early and forced marriage (CEFM) ● Exposure to smoke ● Alcohol use ● Open defecation	● Depression ● Previous PTB ● Diabetes ● Hypertension ● Preeclampsia ● Asthma ● Family history ● Cervical incompetence ● Multiple pregnancy
Infection	● Syphilis and gonorrhea ● HIV ● Malaria	● Bacterial vaginosis ● Urinary tract infections ● Periodontitis
Nutrition	● Iron deficiency, anemia, and other micronutrient deficiencies	● Maternal height ● Underweight
Contraception	● Birth spacing (<6 months) ● Birth spacing (>5 years)	● Teen pregnancy ● Advanced maternal age

Lifestyle: Within the set of lifestyle factors, BOT incorporates behavioral and work-related factors related to discriminatory gender norms (e.g. intimate partner violence, child, early and forced marriage, workload,[23–37] as well as other behavioral factors such as substance use (tobacco or alcohol use)[34] and hygiene (e.g. open defecation).[3,38,39] BOT also focuses on other aspects of women's health and well-being, including previous PTB experiences, diabetes, hypertension, preeclampsia, asthma, cervical incompetence, multiple pregnancy, or having a family history of PTB.

Infection: Evidence suggests that 30-50% of PTBs can be attributed to maternal infections in pregnancy, including not only urinary tract infections but also other sexually transmitted infections and malaria.[40–52]

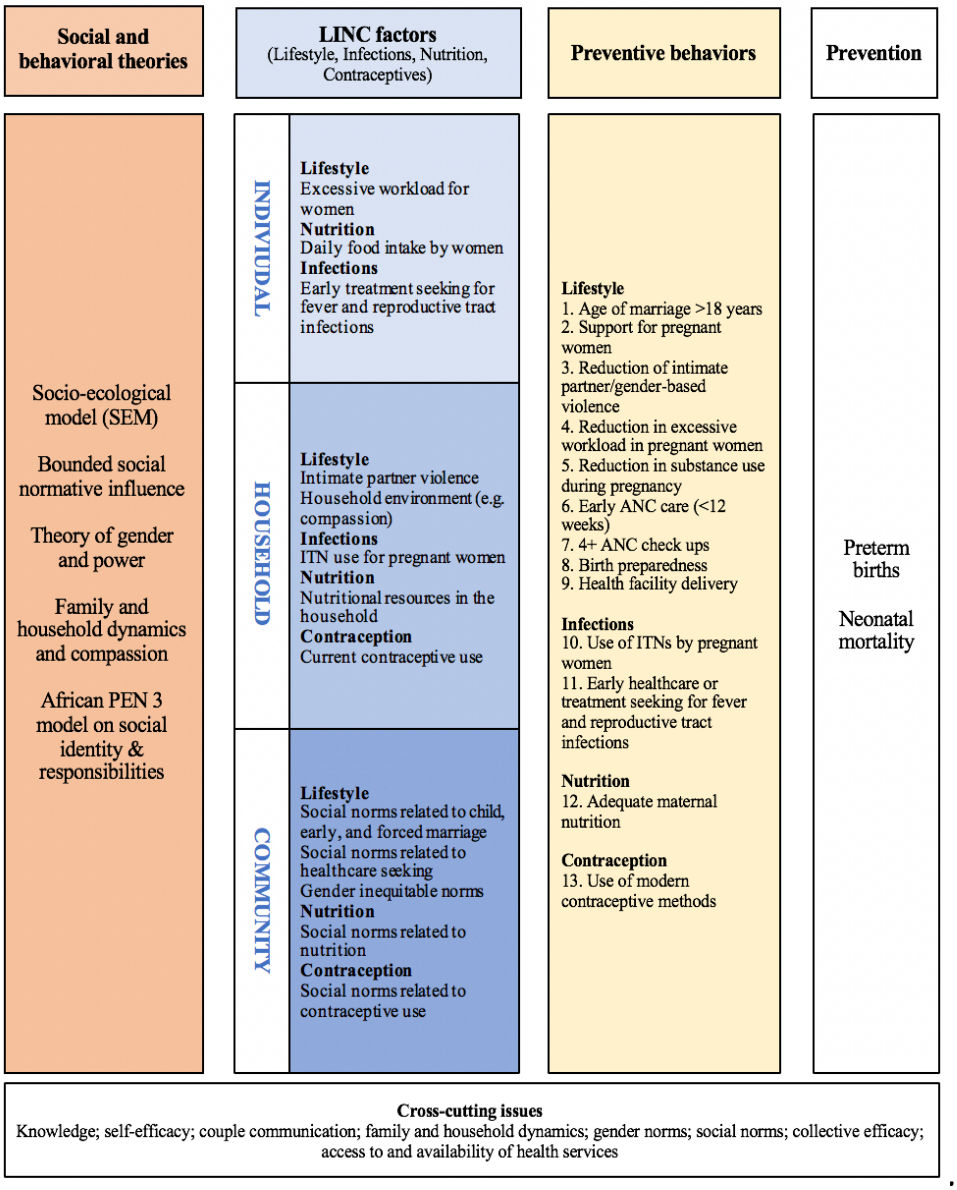
Nutrition: Maternal nutrition remains an important predictor of PTB in settings around the world. Undernutrition and short stature in mothers were both found to be significantly associated with elevated risk for PTB.[53–56] Maternal anemia is also an important risk of PTB.[33,54,57,58]

Contraception: Contraceptive use offers the opportunity to delay first birth and increase birth spacing, which can reduce risk of pregnancy complications that increase the risk for PTB. However, barriers to contraceptive use remain across the three BOT study settings.[52,59,60]

Conceptual framework

Figure 1 shows the conceptual framework informing this multi-country research study. Cross-cutting factors that underpin those LINC factors described above and influence PTB are shown at the bottom and include individual level factors (knowledge and self-efficacy), couple and household-level factors (couple communication, family and household dynamics), community-level factors (gender norms, social norms, and collective efficacy), and health system-related factors (access to and availability of health services).

Figure 1. Conceptual framework for this multi-country research study on PTB in Bangladesh, Ethiopia, and Mali



Outline of the report

This introductory chapter has provided an overview of the objectives of this study, existing knowledge of PTB, and the conceptual framework guiding the qualitative research described here. In Chapter 2, we outline the methodology used to collect and analyze the data gathered across the three countries. The results are organized into nine chapters:

- **Section I**: Understanding the study population (Chapter 3)
- **Section II**: Lived experiences of PTB (Chapters 4 and 5)
- **Section III**: Cross-cutting contextual factors (Chapters 6-8)
- **Section IV**: Pressing issues related to LINC factors (Chapters 9-12)

We conclude the report with a discussion of the key findings and discuss programmatic and policy recommendations to address PTB across study settings.

Chapter Two: Methodology

Study design and populations of interest

This qualitative study aimed to understand the contextual, local nature of risk factors for PTB and people's lived experiences of PTB in three countries: Bangladesh, Ethiopia, and Mali. In order to gather a more robust, nuanced picture of risk factors for PTB and PTB experiences within communities in these settings, the study drew on multiple qualitative methods, including in-depth interviews (IDIs), key informant interviews (KIIs), and focus group discussions (FGDs), with multiple populations of interest.

In-depth interviews: A set of IDIs were conducted with women, spouses/partners of women, and extended family members to collect narratives about their experiences with PTB. Spouses/partners and extended family members can be, but are not required to be, related to the women who are married or in a union and participating in the IDIs. Extended family members included female relatives, specifically mothers-in-law, sisters-in-law, mothers, or sisters.

Self-reported PTB experience was based on responses to a set of three screener questions about the recent pregnancy: 1) whether the child was born early, 2) at what month the child was born, and 3) the baby's size at birth. Responses to at least two of the three questions in a direction suggesting a PTB were used to determine whether a participant was interviewed or not. Due to limitations in the availability of reliable local health facility records in many communities where this research study was conducted, definition of PTB relied primarily on participants' self-reported experience of PTB.

Key informant interviews: In order to gather a more complete understanding of existing community strengths, challenges, and opportunities in communities where IDIs and FGDs are conducted, and to gather more details on the context within which PTB takes place in each of the program countries, KIIs with key influential community members – such as health workers, community leaders, and religious leaders – were conducted.

Focus group discussions: FGDs with community women, spouses/partners, and unmarried adolescent girls were facilitated to gather insights on community social and gender norms that are related to maternal healthcare seeking and PTB.

Inclusion criteria for each population of interest are specified in Table 3 below.

Table 3. Inclusion criteria for each study participant type included in Part A.

Type	Type of study participant	Inclusion criteria
IDIs	Women of reproductive age (20–49) currently married/in union who have had one of the following four experiences in the past two years: ● PTB and the child did not survive (died within 1 month) ● PTB and child survived ● Full-term birth ● Nulliparous and using a modern contraceptive method	Currently married/in union; aged 20–49 years; have had one of the four specified experiences in the past two years
	Spouses/partners of women (15–49) with a PTB in the past two years	Currently married/in union with a woman of reproductive age (15–49 years) who has had a PTB in the past two years; 15 years or older; can be but not required to be married/in union with a woman participating in the study.
	Extended family member of women (15–49) with a PTB in the past two years (mother-in-law, sister-in-law, mother, or sister)	Female family member (mother-in-law, sister-in-law, mother, or sister) of a woman of reproductive age (15–49) who has had a PTB in the past two years; 18 years or older; can be but not required to be related to a woman participating in the study.
	Currently married/in union female adolescents (15–19 years)	Currently married/in union; 15–19 years; if possible, those that have had a PTB in the past two years
	Unmarried/not in union female adolescents (15–19 years)	Unmarried/not in union; aged 15–19 years; female
FGDs	Currently married/in union women of reproductive age (15–49) who are either currently pregnant or have given birth in the past two years	Currently married/in union; women of reproductive age (15–49); currently pregnant or has given birth in the past two years
	Spouses/partners of women of reproductive age (15–49) who are either currently pregnant or have given birth in the past two years	Currently married/in union with a woman of reproductive age (15–49 years) who is currently pregnant or has given birth in the past two years; 15 years or older; can be but not required to be married/in union with a woman participating in the study.
	Unmarried/not in union female adolescents (15–19 years)	Unmarried/not in union; aged 15–19 years; female
KIIs	Key influential community members: Male/female community leaders; male/female faith leaders; traditional birth attendant; facility-based health worker; community health worker	Be one of the specified five key influential community members; 18 years or older

Study setting

This qualitative study was conducted in three countries: Bangladesh, Ethiopia, and Mali. Within selected administrative units in each country (Rangpur, Bangladesh; Amhara, Ethiopia; and Sikasso, Mali), communities where BOT is actively implementing activities were selected for recruitment and data collection. Table 4 shows the selected study sites for each country.

Table 4. Selected study sites across each BOT country.

Country	Study sites
Bangladesh	Gangachara, Mithapukur, and Taragonj
Ethiopia	North Gondar, South Gondar, and West Gojjam
Mali	Kadiolo, Koutiala, and Sikasso

Sample sizes

Table 5 outlines the final sample sizes for IDIs, KIIs, and FGDs for the qualitative study. Sample sizes were determined *a priori* based on suggested sample sizes by qualitative researchers of between 10–20 interviews per participant type.[61] Researchers recommend at least 2–3 FGDs, with approximately 6-8 participants per FGD, be conducted to reach saturation (information redundancy) and to identify most major themes.[61,62]

Table 5. Final sample sizes

	IDIs				KIIs			FGDs			
Country	Women	Men	Adole-scent girls	Total	Women	Men	Total	Women	Men	Adole-scent girls	Total
Bangladesh	35	12	24	71	18	12	30	9	9	9	27
Ethiopia	30	10	18	58	16	9	25	11	9	7	27
Mali	27	11	22	60	20	9	29	9	9	9	27
Total	92	33	64	189	44	30	84	29	27	25	81

Recruitment and data collection

Purposive sampling was used to recruit participants meeting the inclusion criteria outlined above to gather diverse understandings and experiences of PTB. Local influential community members as well as community health workers and health facility workers in each of the three countries were consulted and asked to identify potential participants based on the participant types outlined above. These individuals provided advice about potential women, men, and adolescents who would be willing to participate in the study. Following the identification of a potential participant, an interviewer/facilitator approached the potential participant. The interviewer/facilitator explained the reasons for and purpose of the study and why the person was recommended for/selected for participation. Once confirmed that the prospective participant met all inclusion criteria, the recruitment script was read, and the oral informed consent or assent process conducted. The recruitment and consent/assent process for all participants took place in a private location to allow the interviewer to ensure that participants'

responses remained confidential. Interviews were conducted at a time convenient for the participant and in a private space identified by the participant. Interviewees were given the choice of where to hold the interviews so that no one could overhear the conversation.

All study protocols were approved by the Johns Hopkins Bloomberg School of Public Health's institutional review board (IRB) as well as local IRBs in Bangladesh, Ethiopia, and Mali.

Qualitative interview and facilitator guides

Major components of interview or facilitator guides used during interviews and FGDs are described in the table below. All materials were pretested in a field site similar to the study sites in all three countries prior to beginning data collection.

Table 6. Major components of interview/facilitator guides for Part A.

Data collection type	Major components of interview/facilitator guides
IDIs	Study instruments developed for IDIs included questions that gather insights in the following domains: socio-demographic characteristics and daily activities; nutrition (food consumption, food scarcity, and barriers to adequate nutrition); pregnancy experiences (pregnancy, care-seeking, and delivery); perceptions of pregnant women and PTB; cross-cutting factors (household power dynamics, discriminatory gender norms, gender roles, and couple/household communication); and other LINC factors (intimate partner violence, workload, infections, and contraceptive use).
FGDs	Instruments developed for FGDs included questions focused on community perspectives on: perceptions of PTB, use of ANC services, and place of delivery; norms related to LINC factors (e.g. workload, stress, CEFM, infections, care-seeking, nutrition, and contraceptive use); household power dynamics, discriminatory gender norms, gender roles, and intimate partner violence; and social capital and networks.
KIIs	Instruments developed for KIIs focused on influential community members' roles in the community and existing resources and challenges in communities, with a focus on LINC factors and PTB.

All interviews and focus group discussions were audio recorded, with recordings transcribed word-for-word and translated into English (Bangladesh and Ethiopia) or French (Mali) for analysis.

Analysis

Thematic analysis

Data analysis was conducted with the English and/or French transcripts to encourage comparisons across settings. We conducted an interactive, thematic analysis informed by the framework method.[63] Following an in-depth familiarization with the transcripts, researchers developed the analytical coding framework using deductive and inductive coding approaches that incorporate literature-informed *a priori* and emergent codes. Transcripts were coded

iteratively, using Dedoose software, with emergent codes added to the analytical framework over the course of analysis. Following coding, charting led to summaries for each participant of main themes associated with each code. Critical reflection by the study team and memo writing were integral to this process. Memos were drafted for each code and sub-code. Similarities and divergences across participants' stories were identified during charting and memo-ing to enable constant comparison across interviews.[63–65] This approach was originally designed for rapid, programmatic thematic analysis of qualitative data to inform program design and development. It enables rigorous comparisons between participants' stories and encourages ample researcher engagement with the data.

Our analytical approach was guided by our conceptual framework to explore the multi-level factors that influence risk for PTB and people's experiences of PTB in Bangladesh, Ethiopia, and Mali. Analysis was conducted separately by country. Analysis included a focus on individual-level factors, such as knowledge or self-efficacy, as well as household processes, decisions and behaviors and community-level resources and challenges that influence risk for PTB. Furthermore, this analytical approach explored how theoretical constructs outlined in the conceptual framework (Figure 1; e.g. household power dynamics and discriminatory gender norms, social norms, or shared compassion) varied across populations within each country and across the three countries.

Narrative analysis

In addition to the thematic analysis described above, an in-depth narrative analysis was conducted to understand the lived experiences of women with the following experiences:

- A recent PTB (in the last two years) and the child did not survive,
- A recent PTB (in the last two years) and the child did survive, and
- A recent full-term birth (in the last two years).

A key objective of the study was to understand ways in which women experience PTB and how their experiences compared with women with full-term births. As part of this narrative analysis, we focused on women's full stories to explore the LINC factors that were associated with PTB in the three different study contexts: Bangladesh, Ethiopia, and Mali. Analysis was conducted separately by country.

We explored the role of key cross-cutting factors such as gender norms, household power dynamics, couple communication, and social capital in the lived experiences of women. The in-depth interviews on which this narrative analysis is based were focused on ascertaining the pathways to the three birth outcomes mentioned above. We examine the micro-processes of household interactions such as couple communication and decision-making. The societal rootedness of gender norms was also studied, as well as the role of household power dynamics as a significant producer of ill health. We supplemented these data with interviews with fathers who had a PTB in the past two years and with female extended family members (mothers-in-law, sisters-in-law, etc.) who shared their lived experiences with PTB. The results of this

narrative analysis are presented in Chapter 4 to provide a more complete picture of the causes, prevention, and treatment of PTB in each study site.

In the chapters that follow, results are presented by theme, with emergent findings presented separately for Bangladesh, Ethiopia, and Mali. Similarities and notable differences across settings are highlighted where relevant.

Section I. Understanding the study population

Chapter Three: Overview of participants

This chapter provides an overview of the socio-demographic characteristics of individuals participating in IDIs, FGDs, and KIIs across the three study sites. First, we provide an overview of the numbers of participants by study population and data collection type. Then, we describe participants' ages and education levels.

Introduction to the study population

As outlined in Chapter Two, there were a total of 189 IDIs, 81 FGDs, and 84 KIIs conducted across the three countries. Eight hundred seventy-seven (877) adolescents and adults participated in interviews and FGDs across the three countries. Table 7 outlines the breakdown of interviews and FGDs by participant type across the three countries.

Table 7. Introduction to the study population across the three study sites.

	Numbers of participants/FGDs		
	Bangladesh	*Ethiopia*	*Mali*
Participant type			
Women with no children using an FP method (IDIs)	6	5	0
Women with a full-term birth (IDIs)	6	5	6
Women with a PTB that survived (IDIs)	6	6	6
Women with a PTB that did not survive (IDIs)	6	5	6
Partners of women with a PTB (men) (IDIs)	12	10	11
Extended family of women with a PTB (women) (IDIs)	11	9	9
Community women (FGDs)	9	11	9
Community men (FGDs)	9	9	9
Unmarried adolescent girls (IDIs; FGDs)	12; 9	10; 7	14; 9
Married adolescent girls (IDIs)	12	8	8
Health workers (men) (KIIs)	0	1	1
Health workers (women) (KIIs)	12[a]	9[b]	11[c]
Community leaders (men) (KIIs)	12	8	8
Community leaders (women) (KIIs)	6	7	9
Total	101; 27	83; 27	89; 27

[a] In Bangladesh, health workers included TBAs (n=5), facility-based health workers (n=3) and community health workers (n=4).
[b] In Ethiopia, health workers included health extension workers (n=4) and midwives (n=6).
[c] In Mali, health workers included *agent de santé communautaire* (ASC) or *agents basé au niveau du centre de santé Communautaire* (DTC).

Social locations of participants

Age

Among 877 participants in 189 IDIs, 81 FGDs, and 84 KIIs, 722 were 18 years old or older, and 155 were between 15 and 17 years of age. Table 8 shows the mean age and age range of participants in IDIs across the three study sites. Ages of participants were similar across sites, with women participating in IDIs on average in their twenties; partners interviewed on average in their thirties; and extended family members on average in their forties. Average age for adolescent girls, both married and unmarried, was most commonly about 17 years. Interestingly, there were multiple women (n=6) participating in interviews in Mali who – despite their ages being confirmed during the consent process prior to data collection – were unable to specify their ages. This included not only women from older generations, but also women of reproductive age, as well as married adolescent girls.

Table 8. Average age and age ranges for participants in Part A. [d]

	Ages		
	Bangladesh	*Ethiopia*	*Mali*
Participant type			
Women	23 (18-36)	24 (18-30)	27 (18-37); 2 Don't knows (DKs)
Partners of women with a PTB (men) (IDIs)	33 (18-47)	37 (28-53)	36 (26-48)
Extended family of women with a PTB (women) (IDIs)	46 (25-62)	41 (18-67)	46 (21-68); 2 DKs
Unmarried adolescent girls (IDIs)	17 (15-19)	17 (15-19)	17 (15-19)
Married adolescent girls (IDIs)	17 (16-19)	19 (17-19)	17 (15-19); 2 DKs

Education

Educational levels of participants varied across participant types and country settings. The table below summarizes themes in educational attainment across participants. Adolescent girls had, across the three countries, higher educational attainment than older generations. Mothers-in-law, similarly, rarely reported formal education.

There were clear differences between educational attainment across settings. In Mali, participants' educational attainment was lower than in the other settings; the majority of women and their partners reported no formal education. In contrast, women in Bangladesh and Ethiopia described completing some primary or secondary education.

[d] Note: We have not specified the age ranges for participants in FGDs here. There were multiple transcripts (n=38) for which age was not coded.

Table 9. Educational attainment among participants in Part A.[e]

	Education		
	Bangladesh	*Ethiopia*	*Mali*
Participant type			
Women	Most studied up to class five, with some also completing HSC or SSC; post-secondary less common	Some completed some secondary (through class 10), while others had no education or were illiterate	Majority said no formal education; few said some primary or religious education (Madrasa)
Partners of women with a PTB (IDIs)	Most had some secondary (up to fifth or eighth) or passed SSC Some had no education	Some completed some secondary (through class 8), while others had no education or were illiterate	Most reported no formal education or only some primary
Extended family of women with a PTB (IDIs)	Mothers-in-law often said no school, but went to religious education (Madrasa) Few went to some primary school Sisters-in-law had secondary education	Mothers-in-law reported no schooling or being illiterate; few studied some primary Some other extended family had some secondary education	Mothers-in-law said no formal education
Unmarried adolescent girls (IDIs)	From class nine up to degrees in college	Most had some secondary (from fifth to 10th grade); few reported only some primary (e.g. up to grade three)	Most had some secondary (e.g. up to class 10); some had no formal education
Married adolescent girls (IDIs)	From class nine up to degrees in college	Most had some secondary (up to 10th grade)	Some had primary education, but most mentioned no formal education or leaving school

Conclusion

This chapter provided an overview of the adolescent girls, women, and men participating in IDIs, FGDs, and KIIs as part of this qualitative study. In the following chapters, we draw on the perspectives and voices of these participants to uncover lived experiences of preterm birth, pressing issues related to LINC factors, and contextual factors influencing participants' daily lives and health.

[e] Note: We have not specified the educational levels in FGDs here.

Section II: Lived experiences of preterm birth

Chapter Four: Causes, prevention, and treatment of preterm birth

In this chapter, we first investigate community members' perspectives on the causes, prevention, and treatment of PTB. During interviews and FGDs, community members, including adolescent girls, women, men, health workers, and community leaders, demonstrated multiple belief systems related to PTB. In this chapter, we explore the multi-level factors – both medical and non-medical, associated with known LINC factors and not – that participants considered to be related to the causes, prevention, and treatment of PTB. Then, we present a narrative analysis of pregnant women's lived experiences, comparing women with a recent experience of:

- A PTB and the child did not survive,
- A PTB and the child did survive, and
- A full-term birth.

The chapter presents findings by country. Case studies of women with a recent PTB experience are highlighted to illustrate the ways in which PTB was experienced by women across the three study settings. Evidence across the three sites is then compared and contrasted to identify similarities and differences in local perceptions and experiences.

Bangladesh

Causes

Each demographic group interviewed in Bangladesh generally named the same causes for PTB, whether an unmarried adolescent girl, a partner of a woman who delivered a PTB, or a religious leader. Across participant types, performing physically demanding work and lifting heavy objects during pregnancy, poor nutrition, cigarette smoke, smoke from cooking in the kitchen, and consuming alcohol were frequently cited as causes of PTB.

One significant cause of PTB commonly described in Bangladesh, as compared to Mali and Ethiopia, was violence in the household. Violence was not only emotional and psychological, but also included physical or sexual violence.

> *Perhaps there is peace and discipline in my family, but that doesn't mean every family has the same. So, suppose a woman is pregnant in another family. Perhaps her husband is not that good,*

*maybe he is addicted, he tortures[f] socially, physically, and psychologically. (**IDI, married adolescent girl, Taragonj**)*

Participant: Sometimes a child is born due to the violence and sometimes the mother is tortured after birth.
Interviewer: What kind of violence?
*Participant: For example, cursing. (**IDI, unmarried adolescent girl, Gangachara**)*

*Some mothers are physically tortured, they deliver preterm babies. Husbands are [usually] responsible for physical violence. For example, suppose I am pregnant he tells me that he needs [sex], but I can't give him that. At that time, he gets that thing by force, for this reason preterm babies are born. (**KII, health worker, Gangachara**)*

*In reality, if the pregnant woman is tortured physically, mentally or sexually, or she has to cook in a smoky environment she will give birth to a premature child. (**KII, religious leader, Gangachara**)*

In nearly every usage of the word "torture" or "violence" by research participants in the Bangladesh context, violence was committed against pregnant women by their husbands or the husband's family in the marital home.[g]

Early marriage and early pregnancy were also frequently cited as a cause of PTB. Participants understood early marriage to be a cause because young girls were not yet biologically developed to support a pregnancy. One adolescent girl linked early marriage and violence due to the frustration of a small dowry payment to describe the cause of PTB:

*For marrying at an early age and she has a bad relation with her husband. They quarrel sometimes because of the dowry and because of not giving money they beat her up. She gets tortured by them. (**FGD, unmarried adolescent girls, Mithapukur**)*

Several FGDs with men also described how having sexual intercourse during a pregnancy could result in a preterm birth.

Please see Chapter 5 for further discussion of local beliefs related to causes of PTB.[h]

Prevention

Participants suggested reducing violence, ending child marriage, and reducing heavy workloads or carrying heavy objects during pregnancy as the primary ways to prevent PTB. Particular details on how families could reduce emotional, physical, or sexual abuses in the household

[f] Note: Torture is the word chosen by the translators in multiple places throughout this report, but it would be better translated as "to harass," "to be violent," or similar language.

[g] See Chapter 7 on household dynamics.

[h] As described in Chapter 5, most of the participant groups also mentioned evil spirits, ghosts, or jinns that women and adolescent girls can take on either by going to funerals, being caught in bamboo forests, or in one instance through the ultrasound at an ANC visit. Previous research has highlighted that belief in ghosts and jinns is common among communities in Bangladesh.[70,71]

were rarely discussed. One unmarried adolescent commented on how the relationship between a wife and the mother-in-law in the household was a point of stress and opportunity for intervention:

> *I want to say that, in a family life the mother-in-law should be a bit careful, should be caring like the mother, like the way a mother shows care for her daughter. A wife should also be treated that way. (**IDI, unmarried adolescent girl, Gangachara**)*

Several groups referred to the importance of "proper" preventive treatment and following the "rules and regulations" of treatment to prevent PTB, including receiving care and doctor's orders at ANC visits. Similar to PTB treatment (below), what constituted "proper" treatment was not elaborated, but participants believe that such proper treatment existed, whether or not they had received it.

One unmarried adolescent girl described how poor maternal nutrition is thought to cause PTB and increase stress associated with household finances, underscoring the intersection of local poverty and PTB:

> *Participant: She must take nutritious food, otherwise she may have a PTB. Then her family will be in trouble.*
> *Interviewer: What kind of trouble?*
> *Participant: Her family may face financial crisis, there will be constant quarrels because of this PTB between the members of the family. So, everyone should take care of the pregnant woman to prevent a PTB. (**IDI, unmarried adolescent girl, Taragonj**)*

In addition, several groups expressed how husbands could be more caring, they could stop "torturing," and, according to a group of community men, "husbands should stay by the wife's side." Thus, improved, harmonious relationships between husbands and wives were thought to contribute to the prevention of PTB among research participants in Bangladesh.

Treatment

Treatment suggestions were much more limited in breadth and variety than either causes or prevention, across demographic groups in Bangladesh. Responses were primarily to go to a health center and to follow doctor's orders. Some participants mentioned treating PTB in an incubator at health centers, but most mentioned keeping the baby warm at home.

When describing PTB treatment options at home, there was a strong belief in traditional medicine. Community men and women mentioned visiting "house of Kabiraj"—traditional herbal healers. Others mentioned amulets or talisman to protect PTB babies.[i] One woman with a PTB lamented not seeking care from a shaman earlier:

> *Interviewer: Have you ever gone to any shaman or witchcraft?*

[i] See Chapter 5 on explanatory models of PTB.

> *Participant: Never, it was my big mistake. Because my newborn baby requires treatment from them.*
> *Interviewer: Why do you think so? Is there any reason?*
> *Participant: Villagers said so. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

An extended family member of a woman who had a PTB said:

> *The baby had opened eyes, but it suffered from jaundice in the womb. When it [the child] was born, then we kept it under sunlight regularly. Three days after the birth we gave it herbal medicine. We visited the homeopath doctor. (**IDI, extended family member of a woman with a recent PTB, Taragonj**)*

Aside from demonstrating a reliance on traditional, herbal treatments, this quotation also highlights that whether a baby had opened its eyes was a metric of development or maturity of a PTB baby. A married adolescent girl reinforced this idea, saying that once the PTB baby opened its eyes (after being in an incubator at a clinic or hospital) the baby was ready to be brought home. Similarly, a group of women said, *"Those who have not opened their eyes are kept in the [incubator]" (FGD, community women, Taragonj).*

Once home, or in the case that a baby was born at home and not brought to a health center, most participants agreed that PTB babies should be wrapped in cloth or a warm blanket. Extended family members and women with full-term births or those that experienced PTB all believed rubbing the babies with mustard oil before wrapping them in a blanket was appropriate home treatment to keep the baby warm. While one woman acknowledged the "doctor doesn't give permission for this oil," she continued to say that older generations, such as grandmothers, apply the strategy. Breastfeeding and proper nutrition were also commonly cited treatments for PTB across groups.

Several individuals described the role an affectionate or peaceful household played/had in caring for a PTB baby:

> *The preterm baby who [dies did not] get proper love and treatment at all. That's why they die. Everyone's financial condition is not the same. Everybody cannot afford proper treatment. (**IDI, woman with a recent full-term birth, Taragonj**)*

In this quotation, we see again the role that household poverty plays in perceived treatment options and impact on the wellbeing of individuals in the household.[j]

Narrative analysis of pregnancy experiences

Excessive female workload was an emergent issue among women recently giving birth in Bangladesh. Workload outside the house was primarily linked to levels of mobility of Bangladeshi women. Table 10 compares workload and place of delivery for women with a

[j] See Chapters 7 and 12 for further discussion of household dynamics and economic vulnerability.

recent PTB, whose child either survived or did not survive, and women with a recent full-term birth. Women with a recent PTB had higher workloads (heavy to moderate) compared to women with recent full-term births. Table 10 also shows that several women with a recent PTB were managing dual workloads that included both household and farm work. Farm-related work involved looking after domestic animals, cleaning the barn, and making cow dung cakes. Heavy tasks in the last trimester included bringing water several times a day and washing clothes.

Several trips a day were required to the water source to collect water for household and animal use. Due to mobility restrictions, women prioritized the nearest water source, which could be a pond or a well. Many of the women interviewed refrained from heavy tasks in the final trimester. Several women stopped bringing water for the house and for the animals in the last trimester of their pregnancy. Usually the mother, mother-in-law, or husband helped with this chore. Finally, as shown in Table 10, women with full-term births as well as those with a PTB whose child did not survive had stopped farm work in their pregnancy, indicating that these women reduced their workload in the final trimester. Interestingly, women with a full-term birth also reported lifting heavy objects in their last trimester. Table 10 illustrates that most women reported that they did not lift heavy objects in the last trimester. In fact, two women with a full term were compelled to lift heavy objects in their last trimester.

Table 10. Workload of pregnant women by type of birth outcome in Rangpur, Bangladesh

Type of birth	**Housework in pregnancy**	**Farm work**	**Lifting heavy objects in last trimester**	**Delivery Home/Hospital**
PTB (did not survive)	Light/Heavy/Very heavy	No/Yes	No/Yes	
1	Heavy	Yes	No	Home
2	Heavy	No	No	Hospital
3	Moderate	No	No	Hospital
4	Moderate	No	No	Hospital
5	Moderate	No	No	Hospital
6	Moderate	No	No	Hospital
PTB (survived)				
1	Moderate	Yes	No	Home
2	Moderate	Yes	No	Hospital
3	Moderate	Yes	No	Hospital
4	Moderate	No	No	Hospital
5	Moderate	Yes	No	Hospital
6	Heavy	Yes	No	Hospital
Full term birth				
1	Light	No	No	Hospital
2	Moderate	No	No	Hospital
3	Light	No	Yes	Hospital
4	Light	No	Sometimes	Hospital
5	Heavy	Yes	Yes	Home

Table 11 shows ANC services and nutrition-related factors during women's pregnancies. There was no difference between women with a recent PTB or full-term birth related to the number of ANC visits, but differences in delivery complications were clear: women with a recent PTB nearly all described delivery complications, while women with a recent full-term birth did not. Food scarcity during pregnancy was reported across participant types, while the number of meals in pregnancy appeared similar across women with different birth experiences.

Table 11. ANC services and Nutrition by type of birth outcome in Rangpur, Bangladesh

Type of birth	Number of ANC check ups	Delivery complications	Number of meals in pregnancy	Food scarcity in pregnancy
PTB (did not survive)				
1	4	Yes	3	No
2	4	Yes	3 (small)	No
3	4	Yes	4	No
4	4	Yes	3	No
5	4 (home)	Yes	2	Yes
6	3	No	2	Yes
PTB (survived)				
1	5	Yes	3	Yes
2	4	Yes	3	No
3	6	Yes	4	No
4	6	Yes	4	No
5	3	Yes	5	No
6	4	Yes	2	No
Full term birth				
1	4	No	3	No
2	4	No	3	No
3	0	No	3	No
4	4	No	3	Partial
5	6	No	3	Yes

Table 12 includes infections and lifestyle factors related to spousal support, couple communication, and mobility restrictions. Data showed considerable difference in the levels of morbidity faced by women with recent PTBs compared to women with full term births. Women with a recent PTB suffered significantly from ailments, falls, and reproductive infections (Table 12). In Rangpur, spousal communication for women with full-term births contrasted greatly the experiences of women with a recent PTB, with women with full-term births reporting quality support from their spouses during the pregnancy. Couples with a recent PTB had, by comparison, poorer couple communication. Good couple communication went hand in hand with good spousal support. Finally, mobility restrictions were nearly universal among women. However, they were heightened for pregnant women in those families who believed that

ghosts and jinns can enter the body of the pregnant woman if she is seen outdoors (See Chapter 5).[k]

Table 12. Lifestyle factors and infections by birth outcomes in Rangpur, Bangladesh.

Type of birth	Infections/ Illnesses in pregnancy	Spousal support in pregnancy	Mobility restrictions	Couple Communication
PTB (did not survive)	No/Yes	No/Yes	No/Yes	Poor/Good
1	Yes	Poor	Yes	Poor
2	Yes	Poor	Yes	Poor
3	Yes	Good	Yes	Good
4	Yes	Poor	Yes	Poor
5	Yes	Poor	Yes	Poor
6	Yes	Poor	Yes	Poor
PTB (survived)				
1	No	Poor	Yes	Poor
2	Yes	Poor	Yes	Poor
3	Yes	Poor	Yes	Poor
4	Yes	Poor	Yes	Good
5	Yes	Good	Yes	Poor
6	No	Poor	Yes	Good
Full term birth				
1	No	Good	Yes	Good
2	No	Good	Yes	Good
3	No	Good	Yes	Good
4	No	Poor	Yes	Poor
5	No	Poor	Yes	Good

In conclusion, across this narrative analysis, Tables 11-13 reflect the broad trends emerging out of the lived experiences of PTB and full-term births. In the context of household work during pregnancy, all women who reported PTB either had a moderately heavy to very heavy workload. While those with normal births, at least three had light workloads and one had a very heavy workload. The data indicated that excessive workload was a concern. Table 11 showed that the number of ANC check-ups were not remarkably different when comparing women with a PTB and full-term births, and the number of meals and food scarcity were also not remarkably different in this sub-population. What did differ was that women with PTB suffered from delivery complications. Table 12 indicated that women with PTBs suffered from higher maternal morbidity, had poor spousal support during pregnancy, and had poor levels of spousal communication. All women had mobility restrictions imposed on them.

[k] These findings support previous research highlighting that belief in ghosts or jinns was common among communities in Bangladesh.[70,71]

Below, we present one case study of a lived PTB experience of a young woman Subrata (name assigned) who was married at the young age of 15 years. The case study illustrates Subrata's journey from an early marriage to conceiving prior to 18 years and finally having a PTB where the baby did not survive.

Case Study: Subrata's story
Repeated illness and jinns (evil spirits) lead to a PTB in Taragonj, Bangladesh

Subrata is 20 years old and lives in a village in Taragonj. At the age of 15, she was pulled from Class 6 to marry her now husband, a farmer who also studied until Class 6. Her days are busy with household chores such as cooking rice and sweeping the compound, helping her father-in-law with his milk business, and working in the rice paddies.

Subrata first realized she was pregnant two years ago when she missed her menstrual cycle for two months in a row. It was her first pregnancy. She was filled with excitement and everyone in her family was too. The baby would fill the house with joy and laughter.

At the beginning of her pregnancy, Subrata woke up early every day to prepare and serve breakfast to the family but generally avoided doing heavy work. Like many pregnant women, Subrata experienced morning sickness and found it hard to eat some days. Nevertheless, she did her best to eat meat and fish. At three months, Subrata went for her first ANC visit at the nearby health clinic where she was weighed, her blood pressure was taken, and she was given vitamins and iron supplements. She went back again the next month but was unable to make her 5-month appointment because she was visiting her father in her natal village.

While at her father's house, Subrata fell ill. She was so sick that when she returned home, her husband -- after consulting with the rest of the family -- took her to a hospital in Saidpur instead of the local health facility. The doctor did a blood test, urine test, and an ultrasound and determined that Subrata had some blood issues (possibly anemia?). Subrata sought care on three more occasions, but nothing changed. Her mothers- and sisters-in-law suggested she visit a traditional healer who recommended locking the house. He also gave her holy water and holy oil, but still nothing improved.

Subrata soon came to believe that she had been seized by *jinns* (evil spirits): "*When my mother and father gave me pithas (rice cakes) then it [the jinn] was with me but it did not do any harm to me, when the baby came to stomach then it started to give trouble.*" Others in her community felt she was caught by a jinn when she returned home from her father's at an unsuitable time.

Rather unexpectedly, Subrata went into labor in her 7th month of pregnancy. The heavy rains made it impossible to get to the hospital. Her father-in-law summoned a doctor to the house who upon examining Subrata claimed the baby had died. But moments later, Subrata gave birth to a tiny, baby boy who was breathing rapidly. Using clothes, they wiped the baby down, rubbed oil on him, and then washed him with a warm, wet cloth. They planned to take the baby to the hospital the next day. But it was too late. The baby stopped breathing the following day.

Subrata believes that PTB can be prevented if women only get pregnant after the age of 18 and if both mother and baby are healthy. Subrata and her husband have since had another baby, who is thriving and filling their

Ethiopia

Causes

Participants overwhelmingly reported that the cause of PTB was an illness associated with exposure to the sun. Every group mentioned either *Mitat* or *metat*, indicating being 'hit by/affected by' the sun.[l]

> *If there is a strong sun or high temperature outside, we immediately encounter the problem of Mitat. That will hurt the mother and the fetus. (**FGD, community women, North Gondar**)*

Other groups described *Mitat* as an illness associated with sitting on sun exposed rocks or urinating in the direction of the sun as being a cause for PTB. God's will, bad spirits, spirit worship, or other curses were also mentioned as causes of PTB, suggesting a strong belief in supernatural causes.

Every group otherwise mentioned carrying heavy objects, strenuous workload, laborious work in the fields, and walking long distances to be causes of PTB. One woman's group contextualized why pregnant women may feel encouraged to work hard and move around, as a strategy to avoid difficult labor:

> *Traditionally people say pregnant women should work, carry water with a pot, not sit around, so that they wouldn't face hard labor. But now all these are not done, and we get advice only to follow up with medical care. (**FGD, community women, West Gojjam**)*

This suggested that the longstanding belief was that hard work and activity throughout pregnancy would prevent difficult labor, and so women may feel compelled to continue these activities.

In addition, physical violence during pregnancy was also cited by participants as a cause of PTB. Many groups cited familial stress as contributing to PTB. While some groups mentioned drinking alcohol, only one mentioned the production of local beer or alcohol.

Prevention

The most common strategies to prevent PTB included going to regular ANC visits, following doctor's orders, reducing heavy workloads, and avoiding lifting heavy objects during pregnancy. At the same time, many groups—including those promoting ANC as prevention—also expressed the feeling that prevention was only dependent on God's will.

Proper rest was commonly suggested. One religious leader described how women may feel pressured to continue physical work during their pregnancy. He emphasized the role men could play to encourage women to rest more:

[l] Please See Chapter 5 for further discussion of exposure to the sun.

> *[The husband] should provide her with psychological support, for example she may feel stress because she was resting while he came back from work; she may think, "What would he say of me; he was working while I am resting." To avoid such stress, [the husband] has to provide encouragement to her because stress could cause [PTB]. (**KII, religious leader, man, South Gondar**)*

Among the common prevention strategies, a few groups suggested using contraceptives for birth spacing. See Chapter 11 for further discussion of contraceptive use.

Treatment

A local belief system existed regarding the care and management of a PTB. The primary belief was that a PTB is an "incomplete" baby and must be kept in conditions akin to the womb until it becomes nine months of age. As a result, suggested treatments for PTB often included keeping the baby clean and warm. The PTB was often wrapped completely in soft white cotton cloth until the baby opens its eyes, which was believed to happen when it was nine months old. During this time, the baby was fed through cotton wool, dipped in milk or water. These preterm babies were not shown to anyone, and none of the birth rituals were performed until the child reached nine months.

Only a few groups suggested using the 'heat room' (incubator) to provide warmth. Some groups thought the baby should be washed frequently, others thought not at all.

Exclusive breastfeeding was frequently cited as an important treatment, while some groups suggested soup and eggs should be included in the diet.

A partner of a woman who delivered a PTB recounted a story on how continued treatment was nearly impossible due to local poverty:

> *Because it takes time to sell the ox, I have borrowed 4000 birr from a rich person and paid for her treatment and saved her. The doctor has worked a lot and helped her save her life. My money was finished within five days by buying drugs for her treatment. I requested to take her out of the hospital. The child's eyes were not open at the time. After we come out from the hospital, we let him sleep on the bed. The mother has warmed him and gave him every care it needs, but he passed away [died] at the age of seven days. (**IDI, partner of a woman with a recent PTB, North Gondar**)*

Another man reiterated, *"Children born of poor households have little chance of survival" (*IDI, partner of a woman with a recent PTB, North Gondar). For further discussion of economic vulnerability, see Chapter 12.

Narrative analysis of pregnancy experiences

A comparison of experiences of pregnant women indicated that rural Amhara women had an extremely high workload. This workload includes household work and working on the farm. It also included extra work during the last trimester when women had to prepare for their

delivery. They often make *tella* for visitors, carry flour for baking injera and prepare porridge for their own consumption. For the women who do not have support of female relatives or older children, the workload overshadows the pregnancy and the woman is unable to rest or think about her growing child.

Pregnant women's workload

This analysis examined the LINC factors related to PTB. Table 13 describes the workload patterns during pregnancy and how they vary by birth outcomes. We used four indicators to assess workload: household work, farm work, lifting heavy objects in the last trimester, and brewing *areke or tella* (alcohol brewing). This Table illustrates that mothers who gave birth to PTB babies had much heavier workloads than mothers who had a full-term birth. From 12 PTB births, only one mother had a light workload related to household chores. In contrast, mothers who had full-term births reported a much lighter workload (Table 13). One woman who had a recent PTB, whose child did not survive, said:

> *I was involved in collecting firewood, baking injera, fetching water by yellow container ('bicha' a kind of jar which uses to fetch water). I was carrying it (on my back) without any support/aid. I fetch it three times per day. No, I continue the above listed works. (**IDI, woman with a recent PTB whose child did not survive, West Gondar**)*

The surprising element here was that the same woman reported a health extension worker visiting her home twice and telling her how to prevent a preterm birth.

> *Yes, in 2011 E.C (Ethiopian calendar), they visited me twice and gave advice to attend follow-up, don't carry heavy loads, stay far from the fire, and control hygiene to prevent exposure to heat ('mich'). But, I carry the jar by myself due to the absence of people to help me. (**IDI, woman with a recent PTB whose child did not survive, West Gondar**)*

Almost all the women who had PTBs said the health staff had told them they should not carry heavy objects, they should not expose themselves to the sun, and that they should not expose themselves to fire and smoke, especially while preparing *areke*. Women who had full-term births were also counseled similarly, but they followed the guidance provided by the health center staff or the health extension workers. This finding indicates that the women who were unable to stop heavy household work were the ones who did not have support from others in their families (e.g. husbands, in-laws, or older children). A stoic acceptance of the situation is inevitable as the women in the narrative analysis had no choice but to complete their chores and work on the farm and take care of their children.

Table 13 also indicates that while women with a recent PTB continued with farm work through their pregnancies, women with full-term births took a break from farm work. These women said they listened to the advice of health center workers and stopped farm related work during their pregnancy primarily to avoid *"Mitat,"* which results from severe exposure to the sun.

Another risk factor for PTB was lifting heavy objects in the final trimester of pregnancy. Most women with a recent PTB reported lifting heavy objects even late in the pregnancy (Table 13). Once again, women with a recent PTB said they had no choice but to lift heavy objects because they did not have help for these tasks. For example, water had to be brought every day from the nearest water source. It was considered a "woman's" task, and therefore some men felt awkward bringing water. As a result, the pregnant woman continued with this chore, thereby risking her pregnancy. On the other hand, women who delivered on time tended to avoid lifting heavy objects, especially in the last trimester (Table 13).

An important contextual factor emerging from women's narratives was the brewing of *areke* (a potent alcoholic drink) and *tella* (a local beer) during pregnancy. Many women prepared either of these local alcohols and sold them. The process of preparation entails boiling and being constantly near fire and smoke. Brewing alcohol not only contributed to pregnant women's workload; women who brewed alcohol during pregnancy were also at additional risk of PTB due to inhalation of smoke and proximity to fire. Three women reported preparing alcohol during pregnancy from the PTB cases, while none of the women who had full-term births were involved in brewing alcohol (Table 13).

Table 13 shows trends that excessive household work, too much work on the farm, lifting heavy objects and brewing alcohol during pregnancy are likely risk factors for PTB in Amhara. Brewing alcohol during pregnancy may influence women's risk for PTB not only due to its contribution to women's workload, but also due to women's prolonged exposure to smoke during such work. In the context of such household work, women's work increased in the last trimester – complicated by preparations for guests who would visit her after her child was born.

Table 13. Workload of pregnant women by type of birth outcome in Amhara, Ethiopia

Type of birth	Housework in pregnancy	Farm work	Lifting heavy objects in last trimester	Areke/Tella/Alcohol brewing
PTB (did not survive)	Light/Heavy/Very heavy	No/Yes	No/Yes	No/Yes
1	Very heavy	Yes	Yes	Yes
2	Heavy	No	No	No
3	Heavy	Yes	Yes	No
4	Very heavy	Yes	Yes	No
5	Very heavy	Yes	Yes	No
PTB (survived)				
1	Very heavy	Yes	Yes	Yes
2	Very heavy	Yes	Yes	Yes
3	Very heavy	Yes	Yes	No
4	Light	No	No	No
5	Heavy	Yes	Yes	No
6	Very heavy	Yes	Yes	No
Full-term birth				
1	Light	No	No	No
2	Light	No	No	No
3	Heavy	No	Yes	No
4	Light	No	Sometimes	No
5	Light	No	No	No

ANC services and nutrition

Tables 15 shows health services utilization and nutrition among women with a recent full-term birth or a PTB. Women with a recent PTB or a recent full-term birth had a similar pattern of ANC visits. Most women opted for four visits. The lone exception was a young divorced teenager who was pregnant and did not want anyone to know. As a result, she never went for a single ANC check-up but fortunately had a full-term birth (Table 14).

There was no definitive pattern between the two groups for number of meals. Except for one woman who faced severe food insecurity for most of her pregnancy, women reported eating three times a day during their pregnancies. Data indicated that a larger nutrition-related issue may be related to food diversity. Women in the study reported eating the same food for three meals, repeating a similar cycle day in and day out. Almost all women mentioned a food scarcity season during summer, where households had to make do with less food in a day. Most study participants were of the opinion that the biggest portion of food went to the man, followed by children, followed by the pregnant woman (Table 14). It was important to note that not a single woman whose PTB child did not survive ate more than three meals a day.

Table 14. ANC services and Nutrition by type of birth outcome in Amhara, Ethiopia

Type of birth	Number of ANC check ups	Delivery complications	Number of meals in pregnancy	Food scarcity in pregnancy
PTB (did not survive)		No/Yes		No/Yes
1	2	Yes	2	Yes
2	3	Yes	3	No
3	4		3	No
4	4	Yes		No
5	5		3	Yes
PTB (survived)				
1	4	No	4	Yes
2	3	No	3	No
3	4	Yes	5	No
4	4	Yes	4	No
5	4	Yes	3	No
6		No	3	No
Full-term birth				
1	4	No	4	No
2	4	No	3	No
3	0	No	3	No
4	3	No	4	No
5	6	No	3	No

Lifestyle factors and infections

Finally, we examined spousal support during pregnancy, consumption of *tella* in pregnancy, infection, and couple communication as lifestyle factors that may influence birth outcomes. Table 15 shows that mothers with PTB babies who did not survive had no spousal support (except in one case), indicating that this is a crucial area for further study.

Consumption of *tella* by women was a widespread norm in the Amhara region. It was also considered acceptable for women to drink *tella* during pregnancy. The norm of having *tella* was so strong that most women drank it whenever they got an opportunity. Table 15 indicates that women whose PTB child did not survive and full-term mothers had similar patterns of *tella* consumption, indicating that its cultural acceptance is deeply rooted. A few study participants mentioned that they were told at the health center not to consume *tella*, but for many others, it was an integral part of their lives.

Table 15. Lifestyle factors and infections by birth outcomes in Amhara, Ethiopia.

Type of birth	Spousal support in pregnancy	Consumption of Tella in pregnancy	Couple Communication	Infections/ Illnesses in pregnancy
PTB (did not survive)	No/Yes	No/Yes	Poor/Good	No/Yes
1	No	No	Poor	Yes
2	No	Yes	Poor	Yes
3	No	Yes	Poor	Yes
4	No	Yes	Poor	Yes
5	Yes	Yes	Good	Yes
PTB (survived)				
1	Yes	Yes	Poor	No
2		Yes	Poor	Yes
3	No	No		Yes
4	Yes	No	Good	
5	No	No	Poor	Yes
6	Yes	Yes	Good	No
Full-term birth				
1	Yes	Yes	Good	No
2	No	Yes	Poor	No
3	Yes	No	Good	No
4	Yes	Yes	Good	No
5	No	Yes	Good	No

On the other hand, Table 15 showed a distinct pattern related to couple communication and birth outcomes. Pregnancies that resulted in PTB were characterized by poor couple communication, indicating that it is an area that needs improvement. In contrast, full-term births were associated with good couple communication (Table 15). One woman mentioned that she did not tell her husband after childbirth that she had started using contraceptives. When asked why, she said he did not spend much time at home and hardly talked with her.

For infections and illnesses, mothers whose PTB children did not survive suffered from the highest amount of morbidity during pregnancy. Physical distress included falls, headaches, severe stress, malaria, pre-eclampsia, RTIs, UTIs, back aches, etc. See Chapter 9 for further discussion of illness during pregnancy.

Across these narratives, the trends related to excessive household work and PTB were evident in Ethiopia. Pregnant women were, in general, doing more work in the last trimester. Also, women who had PTBs reported lower levels of spousal support and poor couple communication, highlighting the potential role of male engagement.

Below, we present "Asrasu's story" as a detailed case study of lived PTB experience. The case study illustrates the multiple challenges faced by some rural women where excessive workload during the third trimester compromises the pregnant woman's health.

Case Study: Asrasu's story
Excessive workload and severe mental stress lead to a PTB in North Gondar, Ethiopia

Asrasu (name assigned) 27 years old, works relentlessly at her household chores and sells tella, coffee, and bread. The same routine continued during her most recent pregnancy. She's uneducated and lives with her husband, 30 years old, and two children. Her husband, too, is non-literate. The household often faces shortages of oil, grains, and other food supplies. Consequently, Asrasu borrows food supplies from a nearby grocer and regularly cooks with very little oil.

Asrasu was very careful about her diet, ANC visits, and general well-being during her recent pregnancy. She went for her first ANC check-up with her husband at 3 months. The staff at the health centre were good and told her to eat well and not to lift heavy objects. However, since Asrasu had no help at home, she continued with strenuous work all through her pregnancy.

Unfortunately, tragedy struck Asrasu at the beginning of her last trimester when her father suddenly passed away. She was grief stricken and had to help her mother with the funeral rituals too. She had to carry sacks of grain on her back to a grinding mill for her father's funeral rites. At the same time, she was bending over and washing clothes and carrying water on her back several times a day. In fact, there was too much work at her mother's house due to the demise of her father.

Asrasu knew the health staff had told her not to lift heavy objects in her last trimester. She describes her final trimester as, "***I*** *did household chores. I washed clothes. I made food for breakfast and was cooking 3 times. I didn't have a helper. In the meantime, my father passed away. I was in intense sorrow due to my father's death. The PTB was caused by too much work. I made and sold tella. I went to my parents' housed and assisted them. I got grains ground for them. They have no helper."*

Asrasu suddenly experienced the onset of labor at the end of the 7th month. She was rushed to the nearby health centre. Health workers attended to her delivery and her baby died almost immediately after birth. However, a problem occurred. Her placenta could not be expelled, and she started bleeding profusely. Asrasu was taken by ambulance to a hospital in Gondar, two days after she delivered her child where her retained placenta was removed. Her baby was buried at the hospital ground.

Asrasu actually had a very heavy workload in her third trimester. Ethiopian rural women are expected to "prepare" for their post pregnancy period by grinding adequate flour to feed the family. "*I made dabokolo, small pieces of bread.* ***I*** *prepared flour to make porridge, and injera for delivery. I bought butter*." Her main area of stress and quarrels with her husband were related to lack of money. She found it difficult to manage her house then.

Tragedy struck Asrasu a third time when a month after the loss of her newborn, some unknown men came to her house and shot her husband dead. She is trying to put the pieces of her life together again.

Mali

Causes

Each demographic group interviewed in Mali generally named the same causes for PTB, whether an unmarried adolescent girl, a partner of a woman who delivered a PTB, or a religious leader. Across participant types, performing physically demanding work, lifting heavy objects and poor nutrition were frequently cited as causes of PTB. "*Tozo gnimi*" was also commonly cited across participants.[m]

Physical violence was also cited by most groups. One group of adolescent girls described how physical violence during pregnancy was a principal cause of PTB, but then later described how husbands had the right to hit their wife if she did not listen to him, underscoring the normalcy and pervasiveness of physical violence in communities despite acknowledgement of adverse consequences.

Both men and women described how women refused to follow health worker's advice or orders to stop working in the fields, as well as women's refusal to take prescribed medicines as causes of PTB. In these cases, women were considered responsible for, or perhaps even blamed for, PTB.

> *"There are cases where the woman is sick, and you bring her to the health center and the husband buys medicine for her, but she doesn't take them. Well, we don't know the reasons why, because if you don't monitor the woman and you ask if she's taken the medicine, she says yes even though she took out the capsules from the packet and threw them away. For me, certain women think the medicine smells bad and it makes them vomit. And if after everything you, the husband, commands that she takes the medicine, and, in your absence, she takes the medicine and throws it away. When you return to the house you see that the medicine is missing, and you say that she has taken the medicine when she just threw it away. …what's more they make her vomit. You tell her to continue to take them because you know it's good for them." (**FGD, community men, Sikasso**)*

Men, women, adolescent girls, health workers, all believed that malaria infection during pregnancy could cause PTB. For further discussion of Malaria, see Chapter 9.

Only in a minority of cases did people, including religious leaders, describe causes of PTB as "God's will," indicating that they perceive PTB to be something able to be influenced by their own actions and interventions.

Prevention

Prevention strategies were listed as direct opposites to the causes: *tozo gnimi* should be treated; pregnant women should avoid lifting heavy objects; pregnant women should reduce

[m] See Chapter 5 for further discussion of these causes.

their workload. One men's group described how the use of contraceptives and family planning could be effectively used to space births, which would prevent PTB.

Nearly all groups cited early and regular antenatal care visits as a preventive measure to be taken. ANC visits can screen for "stomach illness," treat *tozo gnimi* and malaria, or prescribe other interventions to prevent PTB.[n] Together, participant responses indicated confidence in the health system and health service providers:

> *We must bring the person to the health center to receive healthcare if she is sick. It's the health workers who can find the way. You should always apply the instructions from health agents in regard to nutrition and work. If they tell you to decrease the amount of work, you do as they say. You should always bring [the person] to the health center, and whatever they tell you to give them, you give them that. (**IDI, married adolescent girl, Sikasso**)*

However, adolescent girls participating in FGDs reiterated that certain women refused to take medicine prescribed by the doctor or refused to decrease the work that needs to be done in the field. In this case, adolescent girls suggested that physical violence could be an appropriate reaction. One said, "*If the health workers demand that the woman rests, if she doesn't respect the advice, the husband can try to hit her*" (FGD, unmarried adolescent girls, Sikasso).

While participants agreed that physical violence is a cause of preterm birth and to be avoided, a subtle distinction was made between 'abuse' and routine 'discipline', allowing for continued physical violence during pregnancy.

Treatment

The preference among nearly all participants was to go immediately to the nearest health center or referral hospital for doctor's orders and treatment, demonstrating faith in the health system and health agents. At least one participant from each participant type (although not all individuals interviewed) cited "*la verre,*" the incubator, as a treatment for PTB.

According to participants, preterm babies must be watched over, protected from other children who may hurt them, protected from the wind and cold, and kept clothed and close to their mother's chest to share body heat. These beliefs were reflected in local terms such as "*siturou"* a Senufo term describing the practice of keeping a preterm baby clothed for a month and "*finikonon"* a Bambara term used in the context that babies should be wrapped in clothes, which again alludes to the practice of keeping the baby extra warm. These beliefs and terms demonstrated an understanding that the survival of a preterm baby hangs in the balance. However, several groups described how local poverty[o] is prohibitive to purchasing treatment or using the incubators, despite the best intentions of both the doctor and the patients:

[n] See Chapter 8 for further discussion of ANC.

[o] See Chapter 12 for further discussion of economic vulnerability.

> *In my opinion, we salute the matrone because she's doing her best for the treatment … it's a problem of money. There are lots of people who suffer from illness and if we treat it, it will finish, but we don't have the money. Otherwise, you go to the matrone and she does her best, she knows the medicines, she prescribes the medicines, but if she prescribes the medicines and they're expensive you can't buy them. There are lots of people who buy the medicines one time but the second time they can't continue. (**FGD, community men, Koutiala**)*
>
> *If the child is born here, we don't have the solution to guard them. It's money that we have to [pay] to bring them to Koutiala. It's the people [doctors] in Koutiala that can keep the baby in the incubator… if you don't have the money you can't bring [the baby] … it is 150,000fCFA [about $350 CAD] so if you don't have 150,000fCFA it is difficult. You can bring them, and they'll do the first treatment as a function of the amount of money you have. (**FGD, community men, Koutiala**)*
>
> *It's a problem of money because the incubator in which we put [the babies] has to be paid for, so those who don't have the means to pay refuse to bring their child. (**KII, health worker, Koutiala**)*

In treatment, more than either causes or prevention, participants responded that the outcome of treating a PTB was "God's will." Others described using traditional medicine either alongside modern medicine or as a second-line defense, but these accounts were in the minority among study participants.

Narrative analysis of pregnancy experiences

In Mali, the pregnancy experiences of women who had a PTB who survived, who had a PTB who did not survive, and who had a full-term birth are more similar than they are dissimilar.

Pregnant women's workload

Women in Mali juggled a sizable workload with most undertaking both housework and farm work and engaging in physically arduous tasks. Table 16 suggests that women who recently gave birth to a PTB baby had to take on more work in the house or in the field than women who had a full-term birth. Similarly, far more women who had a PTB baby reported lifting heavy objects such as fetching water, cutting and carrying wood, and pounding millet as compared to women who had a full-term birth.

We also analyzed whether and how women's workloads changed over the course of their pregnancy. Workload reductions during pregnancy were common across the three categories of pregnant women. For example, a woman who had a full-term birth described how during pregnancy she no longer fetched water, rode a bicycle, harvested shea fruit, or did other difficult work (IDI, women with a recent full-term birth, Kadiolo). Children, husbands, and extended family members took on additional chores to support pregnant women. Men and boys often relieved women of physically demanding chores. One husband took the millet to the mill instead of having his wife pound it by hand (IDI, woman with recent PTB whose child survived, Kadiolo) and a son helped his pregnant mother by irrigating the field and fetching water (IDI, women with a recent PTB whose child did not survive, Koutiala). Female family members assisted with simpler tasks such as washing dishes or cooking. While the experiences

across women were similar, women who had a PTB who did not survive appeared to receive less support in going about their daily routines than other recently pregnant women (Table 16).

From the women's narratives, it is clear that workload reductions did not start until later in pregnancy. One woman mentioned that she stopped cutting wood when she was six months pregnant (IDI, woman with a recent PTB whose child did not survive, Koutiala). Another woman said she did no household chores during her third trimester and instead spent her time in a hammock at the health worker's home in town (IDI, woman with a recent PTB whose child did not survive, Sikasso). These actions suggest that individuals understood the risks associated with heavy work during pregnancy, but that they saw those risks as being most relevant during the second and third trimesters.

Even when women reported that their workload decreased and/or that they received support from others, pregnant women's daily routines continued to include physically demanding tasks, especially fetching water and pounding millet. One woman who had a PTB that survived described how she stopped doing fieldwork and other physical labor as her pregnancy progressed, yet she continued to fetch water and pick up sugar (IDI, woman with a recent PTB whose child survived, Sikasso). Such chores involved lifting heavy objects, standing for long periods of time, and bending repeatedly at the waist,[66,67] all of which can increase the risk of PTB.

Of the 18 women interviewed, only seven were counseled by a health worker during an ANC visit to refrain from doing physical labor -- specifically fetching water or firewood -- and lifting heavy objects. This experience was the same across the three groups of pregnant women. These findings suggest there is a need for capacity building of ANC providers to disseminate prevention messages earlier in pregnancy and to encourage women and their spouses to make more substantial workload adjustments in order to protect the health of both mother and unborn child.

Table 16. Workload of pregnant women by type of birth outcome in Sikasso, Mali

Type of birth	Housework in pregnancy	Farm work	Lifting heavy objects in last trimester	Workload Level
PTB (did not survive)	Light/Heavy/ Very heavy	No/Yes	No/Yes	More/same/ less
1	Heavy	Yes	Yes	Less
2	Light	No	No	Less
3	Heavy	Yes	Yes	
4	Heavy	No	Yes	Same
5	Heavy	Yes	Yes	Less
6	Heavy	No	Yes	Less
7	Light	No	Yes	Less
PTB (survived)				
1	Heavy	No	Yes	Less
2	Light	Yes	Yes	
3	Light	Yes	Yes	Same
4	Light	Yes		Same
5	Heavy	Yes	Yes	Same
Full-term birth				
1	Light	Yes	No	Less
2	Very heavy	No	Yes	Same
3	Light	Yes	Yes	Less
4	Heavy	Yes	Yes	Same
5	Light	No	No	Less
6	Heavy	Yes	Yes	Less

Nutrition during pregnancy

Women understood the importance of good nutrition during pregnancy and justified eating more or specific foods because they were eating for two:

> *[Nutrition] is something linked to pregnancy. Therefore, you eat those delicious meals so that you get vitamins and so that the baby in your womb will also benefit. (**IDI, woman with a recent full-term birth, Kadiolo**)*

Nevertheless, there was ample variability in the quantity and quality of pregnant women's diets (Table 17). Women with full-term births consistently ate more meals and more varied diets during pregnancy as compared to women with PTB. Women with full-term births described eating as many as six times a day and consumed nutrient-dense foods including fish, eggs, offal, and fresh fruits and vegetables. Women with a PTB who did not survive reported eating the same during pregnancy as they did before. Their diets generally consisted of three meals involving staple foods such as porridge, tô, and rice. The diets of women with PTB who did survive varied without any discernible pattern.

Women who had a PTB who survived openly acknowledged food insecurity during pregnancy more so than the other women. However, food insecurity was a widespread issue (See Chapter

12). Women may not have perceived their households as being food insecure if there was always something to eat, even if it was the same food for every meal. When asked why their diets remained unchanged during pregnancy, women spoke candidly about poverty. "*I ate the same things because we were short on money*" (IDI, woman with a recent PTB whose child did not survive, Koutiala).

> *It's poverty. We don't have money. If you don't have money, you can't eat snacks. Here, at our house, you can't buy snacks without money. You can't find snacks without money and we don't have money. (**IDI, woman with a recent PTB whose child did not survive, Koutiala**)*

These financial barriers (See also Chapter 12) may also explain why women rarely mentioned eating meat or offal despite the fact that these foods were recommended by health workers. In contrast, food insecurity did not emerge as a key explanation for why certain women ate less during the first and second trimesters. Rather, women explained that they experienced a loss of appetite, aversions to certain foods, or difficulty keeping food down.

Timing and number of ANC visits

Most women who had a full-term birth or who had PTB who did not survive received four or more ANC visits (Table 17). In contrast, only one out of five women with a PTB who survived received the recommended four or more ANC visits. For some women who went into labor early, the baby's birth may have occurred before they could complete the fourth ANC visit. A couple of women did not start ANC until they were in their second trimester, which may also explain why they did not receive four ANC visits before they went into labor.

> *In our family, if you see a pregnant woman go to the health center, she is up to six months pregnant. Or at least four or five months along, then you go to the health center…* (IDI, woman with a recent PTB whose child did not survive, Sikasso) Women with PTB who didn't survive, 25-26, woman, IDI, Sikasso).

Birth experience

All but one woman gave birth in a health facility. The one woman who had a home birth intended to deliver at the hospital, but the birth occurred very quickly when she was in her ninth month:

> *I had labor pains so I went to tell my husband who told me to prepare my things so we could go [to the hospital] but before I could finish getting my clothes ready, I gave birth…after the umbilical cord went back inside [me], we went to the hospital to weigh the baby. (**IDI, woman with a recent full-term birth, Koutiala**)*

Like the excerpt above, narratives of the birth experience often began with women talking about the sudden onset of abdominal pains or contractions. Premature contractions were the primary delivery complication experienced by women who had a PTB. As soon as abdominal pains began, most women went to the health center immediately. Three women, all of whom had PTB, delayed going to the health facility straight away because they were unsure if they were going into labor. One woman with a PTB who did not survive waited four days – until the

pain became intense – before going to the health center (IDI, woman with a recent PTB whose child did not survive, Sikasso). These women may have delayed going to the health center since abdominal pains are not uncommon during pregnancy and these women were not due for another two or three months. However, contractions that come and go before the 37th week are one of the danger signs in pregnancy.

For two women with PTB who survived, labor was clearly provoked by physical work they had been doing during the day:

> *I went to fill the jerrycan at the well. I tried to lift the jerrycan to put it on my head, when I felt stomach pains which shocked me. So, I left the jerrycan and didn't try to lift it again…I thought it was a miscarriage because not all the months had passed…Since the stomach pains didn't go away, [my husband] took me to the health center where I gave birth.* (**IDI, woman with a recent PTB whose child survived, Kadiolo**).

> *We came back from the cotton fields at around 17:00. I went back to the house, I wanted to lay down after dusk and I started to feel abdominal pains, but I wasn't sure if I was going into labor. I went to the Matron's house to have her check on me, but she said to go to the health center because she didn't have any gloves at home. When I arrived at the health center, the person who checked on me said I couldn't go back home that I had started going into labor. (**IDI, woman with a recent PTB whose child survived, Koutiala**)*

For other women who experienced PTB, there was no clear event or experience in their narrative that may have triggered the onset of premature contractions and labor. Three women with a recent PTB experienced bleeding, unconsciousness, and prolonged labor that resulted in the need for a cesarean section.

> *Suddenly, I started to feel abdominal pains and then I started bleeding. When I started bleeding, [my husband's older brother] took me to the health center… When I arrived there at around 16:00, I was bleeding and the health workers did everything they could to get me to deliver, but they couldn't. There is a man in town, they called him and when he arrived, he said there was too much blood. So, they put me in the vehicle to take me to the new health center in Sikasso…They checked me out…They saw the [baby] was already dead and they went ahead and operated... I couldn't give birth." (**IDI, woman with a recent PTB whose child did not survive, Sikasso**).*

In contrast, none of the women who had a full-term birth experienced any complications during delivery (Table 17).

Table 17. Nutrition, ANC services, and birth experiences by type of birth outcome in Sikasso, Mali

Type of birth	Number of meals a day in pregnancy	Food scarcity in pregnancy	Number of ANC check ups	Type of Delivery	Delivery complications
PTB (who did not survive)	#	No/ Yes	Suboptimal (<4)/ Optimal (4+)	Home/Hospital	No/Yes
1	3	No	Optimal	Hospital	Yes
2	3	No	Optimal	Hospital	Yes
3	3-4	No	Suboptimal	Hospital	Yes
4	3	No	Suboptimal	Hospital	Yes
5	3	Yes	Optimal	Hospital	Yes
6	2	No	Optimal	Hospital	Yes
7	3	No	Optimal	Hospital	No
PTB (survived)					
1	1	No	Suboptimal	Hospital	Yes
2	3		Suboptimal	Hospital	Yes
3	5 or more	Yes	Suboptimal	Hospital	Yes
4	2-4	Yes	Optimal	Hospital	Yes
5	2	Yes	Suboptimal	Hospital	Yes
Full-term birth					
1	2-4	No	Optimal	Hospital	No
2	4	No	Optimal	Hospital	No
3	3-6	Yes	Optimal	Hospital	No
4	2-3	No	Optimal	Hospital	No
5	3 or more	No	Optimal	Hospital	No
6	3	No	Suboptimal	Home	No

Infections and lifestyle factors during pregnancy

Malaria is endemic in Sikasso, thus it was not surprising that malaria emerged as the most common illness experienced during pregnancy.[68] Bouts of malaria during pregnancy were mentioned more often by women who had full-term births and women with PTB who survived. Five women experienced infections or blood pressure issues. Otherwise, women experienced common ailments of pregnancy such as occasional headaches, vertigo, morning sickness, mild abdominal pains, digestive issues, and light spotting (Table 18). Only one woman who had a PTB baby who did not survive mentioned having tozo gnimi during her pregnancy (IDI, woman with a recent PTB whose child did not survive, Sikasso).

Most women with a recent pregnancy, either full-term or preterm, described being worried about their baby during pregnancy, especially women who experienced a PTB. Women's worries revolved around when the baby would be born, its size, its health, and whether it would survive (See Chapter 7). For two women this worry was rooted in past pregnancy losses:

> *I was worried. I had two unsuccessful pregnancies so when I became pregnant for the third time, I was worried because the other two didn't survive... I didn't know if this one would go well or not. (**IDI, woman with a recent PTB whose child did not survive, Koutiala**)*

For others, experiences of illness during pregnancy made them worry about how that would affect their unborn child: "*You know the pregnancy will not go well unless you are healthy*." (IDI, woman with a recent PTB whose child survived, Kadiolo). A couple of women who were expecting twins were worried about how they would give birth to both babies, and whether they would survive.

In Sikasso, all but one woman reported receiving support from their spouse during pregnancy. Spouses primarily provided the necessary funds to cover the costs of ANC and any required tests or medications. To a lesser extent, spouses encouraged women to seek ANC, accompanied their wives to ANC visits, or arranged for transportation to the health facility. Most women described talking openly with their spouses about various health topics. It was less clear whether women felt they could turn to their husbands for emotional support and to discuss any worries they had about the baby during pregnancy. Women who recently had a PTB who survived seemed to describe poorer couple communication as compared to other recently pregnant women.

Table 18. Lifestyle factors and infections by birth outcomes in Sikasso, Mali.

Type of birth	Infections/ Illness in pregnancy	Spousal support in pregnancy	Couple communication
PTB (did not survive)	No/Yes	/Yes	Poor/Good
1	Yes	Good	Good
2	Yes	Good	Good
3	No	Good	Good
4	No	Good	Good
5	No	Good	Good
6	Yes	Good	Poor
7	Yes	Good	Good
PTB (survived)			
1	Yes	Good	Poor
2	Yes	Poor	Poor
3	Yes	Good	Good
4	Yes	Good	Poor
5	No	Good	Good
Full-term birth			
1	No	Good	Good
2	Yes	Good	Good
3	Yes	Good	Good
4	Yes	Good	Poor
5	Yes	Good	Good
6	No	Good	Good

Summary of key trends

It is clear from this narrative analysis that the workload of pregnant women in Mali is high and especially so for women who experienced a PTB. The combination of housework and farm work coupled with physically demanding tasks emerges as a pressing and actionable risk factor for PTB in the Malian context. Moreover, efforts to reduce women's workloads already exist suggesting there is space to build upon this local knowledge and practice. Similarly, women understand the importance of nutrition during pregnancy, but women who experienced a PTB tended to eat fewer meals, less nutritious foods, and live in food insecure households. Far more women who experienced a PTB attended fewer than four ANC visits than women who had a full-term birth. Efforts to link pregnant women with care early and consistently are warranted. Some of the positive trends from the data include nearly all women delivering in a health facility, good spousal support during pregnancy, and good couple communication. There may be ways of leveraging these practices to encourage the adoption of other behaviors to reduce the risk of PTB.

Case Study: Fanta's story
Excessive workload and malaria lead to a PTB in Koutiala, Mali

Fanta is a married, 25-year-old mother of four living in Koutiala. She is usually at home looking after the children, doing housework, and picking cotton in the fields and occasionally sells cakes at the local market. The household often faces food shortages at the start of the rainy season. During these difficult times, Fanta and her 35-year-old husband will prioritize feeding the children with millet purchased from the nearby mill.

Even though Fanta knew that physical labor can provoke a preterm birth, she worked extremely hard throughout her most recent pregnancy. Every day, Fanta would wake up early to prepare breakfast for the family. From eight in the morning until five in the afternoon, she worked tirelessly bending and picking cotton only to rush home, prepare dinner, and then wash up. Despite having four children and a husband, no one helped Fanta.

Since she was working so hard and eating for two, Fanta was conscientious about the foods she ate. She went out of way to prepare nutrient-rich foods and those recommended to her such as broth, porridge, ground nuts, fish soup, meat, and milk. She tried to eat five to seven meals a day.

Fanta went for her first ANC visit at three months accompanied by her husband. They heeded the health worker's advice setting aside 75,000 francs, attending two more ANC visits and delivering in a healthy facility. During her pregnancy, Fanta experienced some light spotting and abdominal pains. She also had a bout of malaria but did not seek care for it promptly. In hindsight, Fanta attributed this to her PTB experience: "*it's the malaria that causes the PTB, if malaria is chronic in the body then it can cause PTB, when I had malaria, I didn't seek care immediately and before arriving at the hospital the baby had already left it's place."*

One day, seven months into her pregnancy, Fanta started experiencing labor pains. At first, she stayed home for a couple of days, but then the pain became too intense and on the third day she was taken to a health facility in Oula. From there, she was transported to another health facility although she was unconscious at the time. With her mother-in-law by her side, Fanta gave birth to a baby boy who weighed no more than 1 kilo 4 grams. By the next day, he weighed just 1 kilo.

When discharged from the hospital, she and her husband were given a syrup-based medication for the baby and instructed not to leave the house with the baby for three months. Fanta took these instructions seriously, explaining: "*the mother has a big role to play because if you have this type of baby you cannot do anything else but take care of this baby until he is six months.*"

When asked who in the community is responsible for preventing PTB, Fanta was quick to single out doctors. Doctors, in her view, can lead community meetings with both women's and men's groups and will be listened to by both. She explained: "*if you only tell women [to change their behavior], they will not be able to, therefore*

Similarities and differences across the three study settings

Participants across of all types in the three study sites cited with ease causes of PTB such as: excessive workload during pregnancy; lifting heavy objects during pregnancy such as when fetching water, working in the fields, or chopping wood; poor maternal nutrition; and breathing in smoke while cooking. All three countries' participants discussed physical violence committed against pregnant women as a cause for PTB. In Bangladesh, more so than either Ethiopia or Mali, participants discussed the impact of emotional violence in the household on PTB. Women,

men, and adolescent girls in all three countries also described how local poverty restricted access to preventive treatments and treatments after delivering a PTB.

The major difference between countries in relation to causes were specific, local beliefs. In Mali it was the illness "*tozo gnimi;*" in Ethiopia it was the effect of sun exposure during pregnancy, "*Mitat;*" participants in Bangladesh did not specify a single local belief but spoke generally of evil spirits and curses. Each country first and foremost cited going to ANC and following doctor's orders to prevent PTB. Similarly, going to the clinic for delivery or immediately after delivery (if a home-based birth) and following the doctor's orders were the most commonly mentioned treatments.

There were some differences that emerged between countries in regard to treatment. Across demographic groups in Mali, the incubator was the most commonly cited treatment. Participants in both Ethiopia and Bangladesh more frequently discussed home treatments including wrapping the newborn PTB baby in cloth, washing them with herbal remedies, or rubbing them with oils before wrapping them. In Bangladesh, participants more so than in either Mali or Ethiopia discussed treatment as being up to God rather than an intervention through which health workers or doctors could intervene.

Similarities and differences across narratives of recent birth experiences

The narrative analyses revealed several stark differences between the experiences of women with a recent PTB and women with a full-term birth. While specific differences across groups were context specific, lifestyle factors such as workload, couple communication, or spousal support varied across narratives. Mobility restrictions were highest in Bangladesh, while women in Ethiopia did not report any restricted mobility for their pregnant women. Lifestyle issues could be a compelling approach to the prevention of PTB and could contribute to improving outcomes related to other LINC factors (e.g. infections, nutrition, or contraceptive use) as well. Women across the three settings during pregnancy had an unacceptably high burden of household work. While women with a recent full-term birth in Bangladesh reported reducing their heavy work during pregnancy, and pregnant women in Mali had lower workloads than when not pregnant, this was not universal across women with recent birth experiences. Finally, other cross-cutting issues – such as nutrition during pregnancy – should be addressed across countries. Economic vulnerability and poverty constrained nutrition for pregnant women, with pregnant women in food insecure households facing more acute challenges to eating a diverse diet.

Conclusion and recommendations for practice

This chapter explored causes, prevention, and treatment for PTB as perceived by community members in Bangladesh, Ethiopia, and Mali. A narrative analysis explored the implications of emergent themes for women's lived experiences. In general, each country reported similar perceived causes of PTB, without noticeable differences across groups. Differences that emerged between countries tended to be culture specific, such as "*tozo gnimi*" in Mali, sun exposure in Ethiopia, or evil spirits in Bangladesh. Similarly, reported treatments were similar

across countries and participant types: go to the nearest clinic and follow the doctor's orders. Mali more than Ethiopia and Bangladesh cited the incubator as treatment for PTB, while Ethiopia and Bangladesh more commonly cited home treatments.

Recommendations building on the findings related to causes, prevention, and treatment of PTB for projects working to improve maternal, neonatal, and child health (MNCH) include:

1. Excessive workload in the final trimester was highest in Ethiopia. However, women in Bangladesh and Mali also had high workload. Social and behavior change (SBC) approaches to improve support – be it instrumental or emotional – for pregnant women either by her husband or extended family are needed. Interventions involving men should take gender transformative approaches to address men's engagement in household help during women's pregnancy.
2. Couple communication should be actively promoted in Bangladesh and Ethiopia. Couples with PTB reported poor couple communication.
3. Consider how to reorient perceptions to emphasize that PTB can be caused by people's actions and behaviors, and not solely by the supernatural. In Bangladesh in particular, as well as in Ethiopia, spirits and curses were frequently cited as causes for PTB, alongside others like workload.
4. Reframe all violence as unacceptable. In Mali, routine disciplinary physical violence was tolerated and expected by men and women alike, leaving open the escalation to more severe violence, which can have serious implications for women's health and well-being.
5. Engage traditional birth attendants and traditional health practitioners to recognize risks associated with PTB and refer patients to the nearest health facility. There is still a reliance on traditional remedies and healers to prevent or treat PTB, either exclusively or in parallel to modern medicine.
6. Encourage parents and family members to bring newborns to the clinic. Participants in each country described wrapping the baby in blankets at home and keeping the baby out of view of the public until their condition improved. These findings suggest that parents were committed to protecting the health of their preterm baby. Health providers or community health workers could provide additional advice for ways to improve preterm babies' survival in such contexts.
7. Improve home-visit post-natal care for newborns and PTBs with more community health worker outreach. Train community health workers to identify post-natal complications and to monitor babies born in clinics once they are brought home.

More broadly, household poverty cut across multiple findings presented in this chapter. Improved access to financial resources that are either reserved for health or available for other household needs could relieve financial stresses and/or enable people to purchase necessary medicines and treatments, delay early marriage, and purchase diverse nutritious foods.

Chapter Five: Explanatory models of preterm birth

The chapter examines a set of explanatory models that local communities have built around PTB, particularly the meanings associated with PTB and its causes, in the three countries. An explanatory model is the local notion about a health condition such as PTB. Kleinman suggests that community perceptions about a condition may be completely different from medical perceptions also held by those individuals. Arthur Kleinman posited that explanatory models shared by "patients" and their caregivers can provide insights on how to manage and prevent illnesses. His notion of "explanatory" models has been expanded from understanding an individual "patient's" perspective to that of a cultural perspective that can guide prevention and management efforts.[69] The goal of eliciting an emic view (from the local community or local culture itself) is to better understand the meanings and causes associated by the community with PTB.

Mapping explanatory models using qualitative data permits the construction of a distinct contextual schema related to PTB in each country. Explanatory models represent a community's perceptions of preterm birth beyond the medical explanations that exist. It is important to note that each of the explanatory models described below intersect with existing medical explanations and understandings of health, pregnancy, and PTB in people's lived experiences and perceptions that were described earlier in Chapter 4. These explanatory models do not reflect all participants' perspectives, but highlight important, locally contextualized perspectives that continue to exist, and complement medical understandings of PTB and its causes, within communities where this study was conducted.

Analyzed holistically, explanatory models give us a better understanding of community perceptions, beliefs, and behaviors around PTB. They also provide an opportunity to compare explanatory models across countries while also identifying common features in each country setting. The purpose of identifying explanatory models is to be able to design programs that resonate within a community. At the end of this section, we discuss how the explanatory models compare across the three countries.

Bangladesh

Local terms for "preterm" varied based on the age of the study participants in Bangladesh's Rangpur region. Young people, primarily unmarried adolescents, were more likely to use the local name "jala" for PTB, which was promoted by the BOT Project in Rangpur. A related term for PTB was "upajala:"

> *Participant #1: Yes. People here call them upajala (a local term for preterm baby in Rangpur).*
> *Participant #2: It is said out of ridicule.*
> *Participant #1: It shouldn't be said like this, but still it is said. (**FGD, community men, Mithapukur**)*

The term “jala”/"upjala” holds a slight sense of rebuke. The term “jhala” was mentioned by women, adolescent girls and key informants such as religious leaders and health workers.

People also associated preterm birth with the month of pregnancy when the delivery occurred. A married adolescent girl from Taragonj said,

> *Suppose a child is born in the 7th month (of pregnancy), we call this saat maisher bacha (7 month child). If it is an 8th month baby, it will be called 8th month child (aat maisher bacha). We usually talk like this locally. (**IDI, married adolescent girl, Taragonj**)*

Preterm babies were also called “kochi” (small), referring to their small size, and “opurta” (incomplete), referring to their early arrival.

Ghosts, spirits, and women’s mobility: Blaming pregnant women

A local belief system that includes “*bhoots*” (ghosts),[p] *jinn* (spirits), *evil eye,* and *women’s mobility* predominated the thinking of some people in rural areas. Previous research has highlighted that belief in ghosts and jinns is common among communities in Bangladesh.[70,71] Several study participants alluded to the existence of a parallel system of ghosts, or “poris” (angels), that take over the pregnant woman.

> *They think ghost-witch has performed tricks (on the mother); these are like the usual talks of village people. No, it’s like they say, the mother has been conjured, for that reason the baby inside the womb had been eaten. That’s the way village people talk. (**IDI, extended family member (sister-in-law) of a woman with a recent PTB, Mithapukur**)*

The woman is usually blamed for having a PTB. One main cause of PTB was that ghosts and spirits “seized” the woman and “ate” her child, due to which she goes into early labor. Pregnant women have numerous restrictions on their mobility, which include not going out in the evening, not visiting certain areas, etc. Violation of these restrictions on mobility could lead to PTB. In the excerpt below, a sister-in-law of a woman who had a PTB explains the relationship between mobility and this explanatory model of PTB:

> *… she might have a fault. Like, she might have come back from some place during the evening or they say like, her hair was loose during the evening. Or sometimes they say to her, not to go outside at noon or not to go visit some particular area where such problems might occur. So when that problem happens, they mention these things by saying, I forbade you (to go out) but yet you wandered around like that, that’s why you were conjured. That Ghost-Witch has eaten your baby. Such talk happens here in our village area. (**IDI, extended family member (sister-in-law) of a woman with a recent PTB, Mithapukur**)*

Participants described stereotypes that exist against women. According to one FGD with women, if a woman delivers a PTB, then people say it is her fault because she crossed a dreadful path, which led the ghost to “capture” her. A similar sort of story was shared based on

[p] See Chapter 4 for discussion of ghosts as a cause of PTB.

the experience of a neighbor, who encountered "the devil" who lived in the coconut tree near the house, which led to a PTB.

To prevent recurrence of a PTB, women are taken to "*kabiraj"* (faith healers) *or "shaman"* (medicine man) and are given an amulet to wear to ward off evil spirits. An unmarried adolescent girl explained the mobility restrictions that govern the life of a pregnant woman. She said,

> *We all know about this belief; I see it in every home they (pregnant women) are not allowed to go outside. When someone is pregnant, they are not allowed to go outside the house. Because they think ghosts will cast a spell, if the ghost cast spell then the child will be ruined. That's why they are not allowed. They (villagers) believe such things; I saw that in every family. (**IDI, unmarried adolescent girl, Gangachara**)*

Explanatory model of PTB in Rangpur, Bangladesh

The data indicated unequivocal consensus that the primary fault with producing a "jala" child lies with the mother. It was either linked to the "fault" of violating mobility restrictions or, as one mother-in-law of a woman with a recent PTB explained, to the fact that the woman married early. She said,

> *Everything happened because of the mother's fault. They get married at younger ages. They get pregnant between one year that is why "jala baccha" can be born*. (**IDI, extended family member (mother-in-law) *of a woman with a recent PTB*, Mithapukur**)

The gender angle to "blaming women" therefore comes full circle, reflecting the challenges faced by women, especially young women. Mobility restrictions are a way of controlling women's movement by their husbands and families. Violating mobility restrictions are then seen as directly linked to causing something as serious as a "jala" birth.

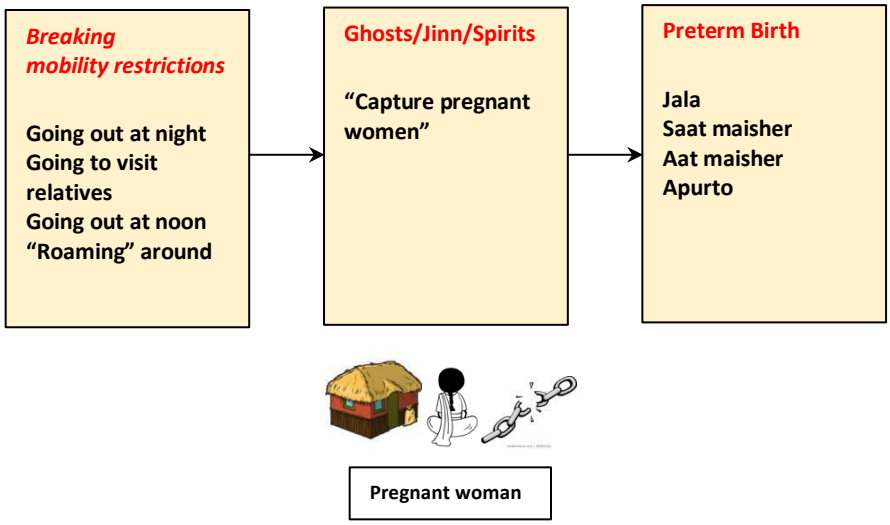


Figure 2. Explanatory model of preterm birth in Rangpur, Bangladesh

Figure 2 shows the explanatory model of PTB in Rangpur, Bangladesh. This explanatory model of PTB is focused on pregnant women, explaining how if they cross boundaries of restrictions, unfortunate events will happen to them. Synthesized into an explanatory model, the three main components include:

1. breaking mobility restrictions,
2. being "captured" by a spirit or a ghost, and
3. having a resulting preterm birth.

The data also mention "leaving your hair loose at night" as another violation of restrictions, primarily focused on reigning in freedom of movement of women and women's autonomy to do what they want.

This model is largely rural, and younger adolescents participating in this study observed it occurring in their communities but did not always endorse it. Although this explanatory model of PTB exists, not everyone participating in the study believed in it. While permission was often required, study participants stated that pregnant women went for regular ANC check-ups and followed the advice of health staff. While about half of the study participants mentioned this explanatory model, the majority mentioned lack of ANC care, lack of nutrition, illness during pregnancy, etc. as causes of PTB. As a result, there were participants who described both the explanatory model of PTB as well as other causes (See Chapter 4). Excessive workload was also mentioned as a cause of PTB, but it was not stated in the context of the "bhoot/jinn/ghost" discourse.

Ethiopia

Ethiopia has vast cultural systems around the PTB construct. About seven local terms for PTB, with varying meanings, were identified in the data. Across these local terms, PTB was categorized as "pejorative" with different terms having varying levels of "insults."

Ethiopian culture has several specific terms that fall under the umbrella of "preterm births." These terms are described from a scale of low to high-level slurs. The first term is for a baby who is born one day early (a few days early): "*kenqeresh*" (Table 19). This is followed by "*workeresh,*" which means a baby who is born one month earlier than the due date. A family member of a woman with a recent PTB described the baby as follows:

> *We call the child workeresh, literally means premature. … is also referred to as a child who is born before time. It is also called Godolo or not full. They call the child Hewok or hindered. (**IDI, extended family member of a woman with a recent PTB, North Gondar**)*

Both *godolo* and *hewok* have a more negative connotation than *workeresh* (Table 19).

The remaining few terms in Table 19, such as *chingaf* and "half fetus," are more direct insults, indicating the stigma and negative perceptions associated with PTB. According to one traditional birth attendant from North Gondar,

> *Yes, we called them "chingaf." Even after they grow-up, they are insulted as chingaf. They are belittled. They are considered inferior to their friends. And their body structure is also relatively emaciated. The term "chingaf" is considered an insult (**KII, traditional birth attendant, North Gondar**)*

Ethiopia has an evolved cultural system built around PTB and its consequences. PTB is well recognized and has a nuanced set of terms associated with it. In fact, there were even specific terms for an animal giving birth prematurely. One mother-in-law said, *"…when a cow gives birth before her time, it is said 'chenegefech'"* (**IDI, extended family member (mother-in-law) of a woman with a recent PTB, South Gondar**).

Table 19. Local terms for preterm birth

Kenqeresh One day short	Wokeresh One month short	Godolo Not fully formed	Yalekenu yetwlde "Go away; you born not on his date"	Chingafe Born prematurely; not fully formed	Hewot Hindered	"የእኩል ሽል" "half fetus"
Acceptable term	Acceptable term	Insult	Insult	Strong insult	Strong insult	Very strong insult

Excessive workload

Data indicated that a well-developed explanatory model of PTB exists in rural communities of Amhara. This model identified the contextual pathway to PTB with causes and consequences. Fundamental to this explanatory model of PTB is the role of excessive workload in women's daily lives, even during pregnancy. Excessive workload during pregnancy was identified as a major cause of PTB. Excessive workload during the third trimester included lifting heavy weights on the pregnant woman's back so that she is completely bent over. It also included fetching water several times a day on a pregnant woman's back. Sacks of grains or injera flour were also carried on the backs of pregnant women. In fact, pregnant women were described to have had a greater workload in the last trimester as they prepared for their delivery. This workload included making "*tella*" (a local Ethiopian beer), grinding of a large amount of flour, and making porridge, all of which are to be consumed by the family in the post-delivery period. *Tella* is prepared for visitors who may come to see the newborn.

Almost every participant in the study mentioned that excessive workload was a trigger to early labor. The vast amounts of work at home and on the farm continues unabated in the third trimester. In the following excerpt, the partner of a woman with a recent PTB, whose child survived, explained how he regretted the amount of work his pregnant wife did.

> *…She brings water, gets grains ground, makes Injera and tella. All these activities can distort her pregnancy. My wife was having too much workload during her pregnancy. In my opinion too much workload might have caused the child to be born early. If it were not for excessive workload the child would be born on time…She brought me food to the field at night when I was*

> *threshing crops…. She brought a donkey to the field and carried sack of grains to storage (**IDI, partner of a woman with a recent PTB, North Gondar**)*

A religious leader explained the linkage between excessive workload and PTB, saying:

> *It sometimes happens because of excessive workload, and by carrying heavy objects. The woman was taken to health center and delivered her baby there. But the child didn't survive. Early labor happened because of excessive workload. (**KII, religious leader, North Gondar**)*

A young woman from North Gondar decidedly placed the cause of her early labor on working too much.

> *For example, I delivered too early because of my workload. I work on different activities like I fetch water more than 4 times a day, I bake "Injera," look after the children, prepare alcohol (areke and tella) and so on. (**IDI, woman with a recent PTB, North Gondar**)*

Women in the study displayed a sense of inevitability vis-à-vis the quantity of work they were expected to complete in their final trimester of pregnancy. Women who described their experiences with PTB seemed to have accepted their workload as something they "had" to do, something about which they had little or no choice. However, they were aware of the inequality that existed between women and men. A religious leader described what women discussed among themselves, saying:

> *They discuss wokeresh (preterm). They also discuss the effects of too much workload on pregnancy. They discuss how to influence men to assist their wives in household jobs when they get pregnant…They speak about the dominant role of men and subordination of women. They chat about how oppressive men are. (**KII, Religious leader, North Gondar**)*[q]

Men spoke about their wives' enormous workload but did not seem to see a role for themselves in assisting their wives. The gender roles related to household work, as well as work such as preparing "tella" or "areke," was singularly seen as "women's" work.[r]

Mitat and Mich

The explanatory model around "*wokeresh*" or PTB is deeply linked with compounded workload during pregnancy. Hardships during work lead to a condition known as "*Mitat,*" which is caused by "*Mich*" or extreme exposure to the sun. The local belief system is constructed around the harmful effects of excessive work during pregnancy especially under a harsh and hot sun.

> *People here are farmers; always on farm work; weeding, rooting out weeds and grass during ploughing; during that time she could encounter Mich…having to work exposed to the sun; also*

[q] It is possible that, in this quotation, the religious leader was referring to what had been discussed in the women dialogue groups supported by the BOT project, as this qualitative study took place within the intervention areas where the BOT project was working.

[r] See Chapter 6 for more discussion of the gender inequitable norms surrounding workload.

> *she has workload….When she is sick with Mich, even if 10 days is left to nine month, the baby will not survive. (**FGD, community men, South Gondar**)*

"Mitat" means "hit by" or affected by *"Mich."* "Mich" refers to excessive exposure to the hot sun, often performing arduous tasks related to farming or household work (e.g. carrying water) in the unforgiving heat of the sun. A mother from North Gondar, with a child less than two years said, "*Mitat is something bad a pregnant woman gets when she is exposed to sunlight, and we say she aborted due to Mitat*" (IDI, woman with a recent full-term birth, North Gondar).

Often "*Mitat*" was used by itself, but it continued to mean "hit by/affected by *Mich.*" Several study participants alluded to "*Mich*" being the cause of early onset of labor, and that *"Mich*" is associated with spending a great amount of time under the hot sun in the low lying areas. A midwife, 26 years old from South Gondar, described the process through which pregnant women get exposed to the sun and are then hit by "Mitat." She said,

> *…the area is low lying…they are given advice here; but when you see them they sit and work in the sun; as you can see it is sunny here even like now which is winter; they sit for many hours in the market; they don't have rest at home; they carry objects lifting and twisting (to put on their back); they carry milled flour on their back… It is due to heavy workload they start labor before their time. That is what we take as reason… They also do farm work like weeding; their feeding (nutrition) is not good…" (**KII, midwife, South Gondar**)*

In the excerpt below, men participating in an FGD in South Gondar responded to the question, "what is Mich?" They said,

> *Participant #1: They (pregnant women) may not wash their bodies on time; their focus is on their work. Due to that their body becomes dirty. Due to the dirt the sun affects them. Mich means the sun…When sun heats up their body, due to that they become sick. And this could affect the fetus.*
> *Participant #2: Because their clothes have holes [shows his armpits to indicate where the hole is] the sunlight enters through that. Then they are exposed to Mich…. (**FGD, community men, South Gondar**)*

The above quotation illustrates that the men in the focus group perceive that pregnant women face excessive workload to the extent that they have no time for their own cleanliness and hygiene. Women were so fatigued and overworked, according to participants, that they continued to wear the same torn clothes. It was through this that "*Mich*" was thought to enter pregnant women's bodies. The "holes" in their clothes resulted in greater exposure to the sun.

In the same FGD, men described how "*Mich*" was manifested in the body. They said,

> *Participant #1: Their (pregnant women) skin hives; it becomes hot…. [Another participant: Their urine color changes.] Their body is hot to touch.*
> *Participant #3: As he said now, farmer rushes to her work; even when she is pregnant, she cleans the barn, she cooks food for her husband. And her clothes are not washed on time, she wears that, and it has holes [indicates his arm pits]; and when she is exposed to the sun she encounters*

> *Mich. Mostly, there is no Mich in highland area. Mich is more in low lying areas – where there the sun is hot… (**FGD, community men, South Gondar**)*

These participants believed that the pregnant woman's body experienced several changes due to "*Mich."* These included skin rashes, temperature (fever), change in urine color, etc. The men reiterated that "*Mich*" occurred primarily in the low lying areas, where the sun's rays are severe and harmful. Some participants mentioned that when pregnant women sit on a "hot" stone, or they sit on sun exposed land, they are affected by *"Mitat."*[s]

Explanatory model of PTB in Amhara, Ethiopia

This in-depth exploration of the concepts of "*Mitat*" and "*Mich*" implies a fundamental connection between excessive workload, "*Mitat*" and early labor and suggested a local Ethiopian model for "*wokeresh*" or PTB. Several study participants believed that once a pregnant woman was hit by "*Mitat*," it was only a matter of days until the onset of early labor.

Figure 3 shows the linkages between heavy workload for pregnant women, specifically in the third trimester, exposure to the sun, and early onset of labor. Early labor results in the birth of preterm babies, some of whom survive and some of whom do not. Almost all study participants across the spectrum of women, men, adolescents, health workers, and community leaders articulated the linkage between extra work and PTB. A new perspective that emerged from this analysis was the linkage between workload and "*Mitat*," a condition acquired from excessive exposure and work under the severe heat of the sun. *Mitat*'s linkage with PTB was articulated by several study participants, especially in the context of the lowlands of the Amhara region where the sun's rays can be unforgiving.

The explanatory model in Figure 3 also shows a direct relationship between excessive workload, specifically lifting heavy objects, and the onset of early labor. These heavy objects include carrying heavy things on the backs of pregnant women as well as bending low to wash clothes during the third trimester. As one woman participating in an FGD said, "*The baby was born early due to "gerefta" (same as "Mitat"), lifting heavy weight, sickness, and imbalanced food*" (FGD, community women, North Gondar). Study participants also mentioned other causes of PTB, including poor nutrition, lack of ANC services, smog, and morbidity during pregnancy. These are discussed in more depth in the previous chapter (Chapter 4).

[s] For further discussion of the intersection between "Mich" and illness during pregnancy, see Chapter 9.

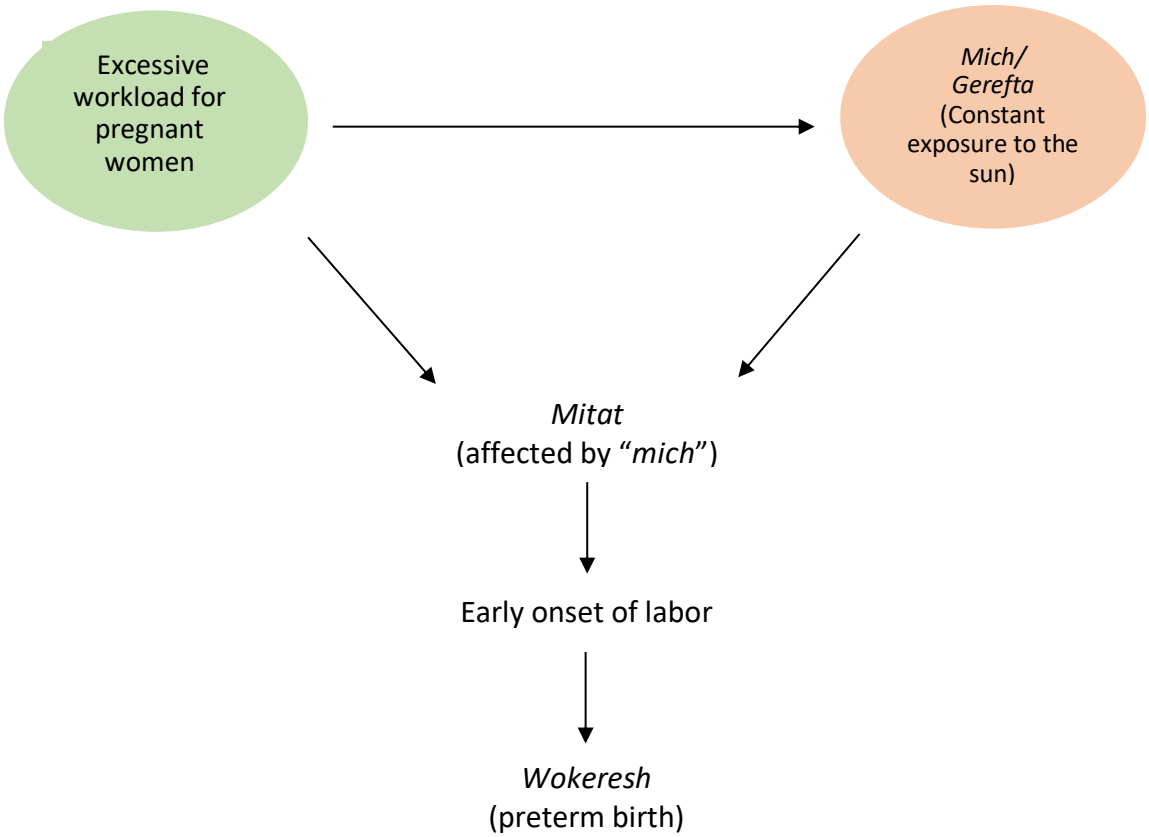


Figure 3. Explanatory model for preterm birth in Amhara, Ethiopia

Mali

In Mali, most people agreed that a PTB was a baby born before nine months, but the specific language used to talk about a PTB birth varied. The timing, development, and size of the baby emerged as key aspects of how individuals understood and talked about PTB. Some participants described a PTB as a baby born before its time or before the pregnancy is carried to term: "*If you give birth before the normal time, we call it a preterm birth. But if the birth occurred when the pregnancy reaches full-term, we say it is a normal birth*" (IDI, married adolescent girl, Sikasso). This focus on timing was reflected in local terminology such as "*kalodafabaliya,*" which meant it that the normal number of months for pregnancy were not complete, and "*ntiantiangui wa fôwouni,"* which translates to a baby who is born a few days short of his/her due date.

Other participants used language that focused on the baby's developmental progress, emphasizing that premature babies were born before they are fully developed. As a married adolescent explained, "*We use the term premature baby when the baby is not well formed at birth*" (IDI, married adolescent girl, Koutiala). Local terms such as "*ounalèmè," " tionalèmè,*" and "*woutionalèmè*" all mean that the baby was not ready or fully grown.[t]

[t] The French translation of interviews were peppered with the words *mature* and *mûr*. In English, these words can take on multiple meanings including mature, ready, grown, or ripe. This poses some challenges when translating

Participants explained that the normal length of pregnancy is nine to ten months. In contrast, there was great variation with respect to the participants' ideas about the duration of a preterm pregnancy, with responses ranging anywhere from two to eight months. A lively conversation in an FGD with community men captured how many of the men thought PTB occurred during the second and/or third trimesters:

> *Participant #1: We call a preterm birth a baby who is born before it is full term.*
> *Facilitator: The baby is born before it is full term?*
> *Participant #1: Yes, the baby is born before nine months.*
> *[…]*
> *Participant #2: A baby born at six months, five months*
> *Facilitator: Participant #2 says it is a baby that is born at six months, five months. This is what Participant #2 is saying.*
> *Participant #2: Yes.*
> *Facilitator: Anyone else have anything to add?*
> *[…]*
> *Participant #3: It's a baby that is born at seven months, eight months, that is a premature baby. (**FGD, community men, Kadiolo**)*

The responses of most participants fell within the ranges mentioned in the men's discussion (between five and eight months). A more unusual perspective came from a mother-in-law of a woman who had experienced a PTB who said that preterm babies were born at two months (IDI, extended family of a woman with a recent PTB (mother-in-law), Kadiolo).

Unlike medical professionals who use gestational weeks to distinguish between miscarriage, stillbirth, and preterm births, participants generally viewed these pregnancy events as interconnected and even overlapping. Sometimes participants used these three terms interchangeably. As one woman who had a full-term birth explained:

> *If the baby is born at eight months, it is not complete. It is born prematurely, it is stillborn, but there are some who are mature, but the date has not been reached. Hence, it is born prematurely. There are others still who are not as advanced, but generally that is a case of a miscarriage. (**IDI, woman with a recent full-term birth, Kadiolo**)*

This quote illustrates how both a baby's timing and development could be used to differentiate between a miscarriage, stillbirth, and preterm birth, but that the distinctions were not clear cut. Miscarriages were generally believed to occur earlier in a pregnancy between conception and seven months, whereas preterm births were believed to occur late in the second trimester and into the third trimester. In the French translation of transcripts, the word "*gâté,*" meaning spoiled or bad, emerged several times as a euphemism for death in discussions about miscarriage or preterm birth. This was especially true among participants who believe that PTB

excerpts from French to English. To overcome this, two English terms have been provided in order to give the wide possible meaning.

babies cannot or rarely survive. As one male leader claimed, "*If a woman gives birth to a premature baby…the baby is already dead or in danger. When you give birth to a premature baby, it is finished for him*" (KII, community leader, man, Sikasso). The term "*gâté*" was also used to describe other physical deformations or sequelae among PTB babies.

Several women who had given birth to a premature baby that died, as well as partners and extended family members of women who had a PTB, found it difficult or were unable to define a PTB despite their personal experience. Male partners in particular claimed they knew nothing about PTB. When asked what a PTB was, one partner claimed, "*I am not proficient in those things*" (IDI, partner of a woman with a recent PTB, Koutiala) while another stated "*I don't know what preterm baby means because you have to have experience with that thing [to know what it means]*" (IDI, partner of a woman with a recent PTB, Kadiolo). Some of this confusion was cleared up when the facilitator rephrased the question or provided clarification, although sometimes the facilitator defined PTB for the participant making it ambiguous as to whether a participant understood what the term preterm birth meant.

Explanatory model of PTB in Sikasso, Mali

When asked to define preterm birth, it was common for participants to jump straight into a discussion of what they believed were its causes as in this example from a focus group with unmarried adolescents:

> *Facilitator: What do you consider a preterm birth to be?*
> *Participant #1: Early marriage of a young girl provokes preterm birth. There is also hard work that pregnant women do that can cause a premature birth, as can exposure to smoke when cooking.*
> *Participant #2: Often it is due to early marriage, there are people who are married before the age. So all of that can be the cause of preterm birth, which is an immature/unready pregnancy.*
> *Participant #3: When the uterus is fatigued before birth, that is what causes preterm birth.*
> *… [facilitator encourages others to respond]*
> *Participant #4: When the young woman walks too much or when she does not watch her language [i.e. not talk back or talk like men; "elle ne matrise pas son langage"].*
> *Participant #3: Living in fear can cause [PTB] in a young woman or even when she is hit, too. When a pregnant woman does heavy work or even does laundry, that can cause preterm birth.*
> *(**FGD, unmarried adolescent girls, Kadiolo**)*

As this excerpt illustrates, participants in Mali drew upon a wide range of explanations for PTB. For most, these worldviews highlighted medical explanations for PTB. At the same time, a local explanatory model also emerged in select interviews and FGDs with women and men. This integrated understanding of PTB is reflected in Figure 4. Figure 4 shows that a pregnant woman does a great amount of household work, some of which includes lifting heavy objects. At some stage of her pregnancy, she experienced a condition called "tozo gnimi" which refers to multiple symptoms (Figure 4).

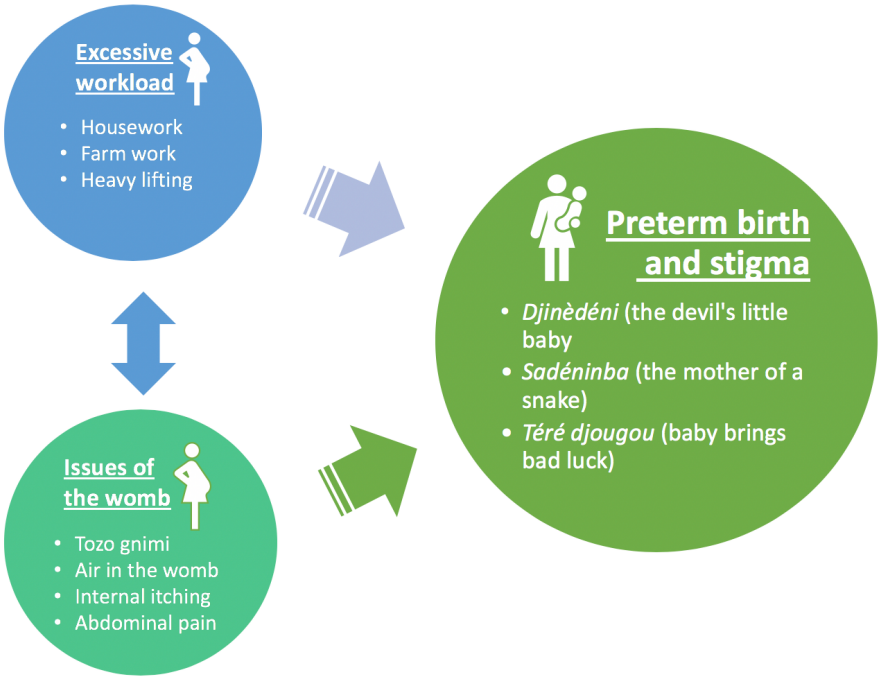


Figure 4. Explanatory model for preterm birth in Sikasso, Mali

Participants consistently identified issues of the womb with PTB, including "*tozo gnimi*," internal itching, abdominal pains, or having air in the womb. "*Tozo gnimi*" was cited by multiple participants but was not necessarily used to mean the same thing. In some interviews, it was described as a condition of the womb or uterus, while in others it was linked with the placenta.[u]

However, "tozo gnimi" was believed to be the trigger for the onset of early labor.

> *If you see that women give birth to premature babies, it's because of 'tozo gnimi' [illness of the uterus] for some. When you are sick with tozo gnimi, you can give birth to a premature baby. (**FGD, unmarried adolescent girls, Koutiala**)*
>
> *"It's something that installs itself in the uterus of the woman and slowly eats the organ." (**FGD, community men, Sikasso, Mali**)*

In addition to tozo gnimi, it was also explained that if air got into a woman's womb, the baby became uncomfortable and provoked early labor. The causes for PTB in Mali are deeply rooted in "tozo gnimi," a condition that triggers early labor.

Stigma against PTB was also strong in Mali, with PTB children being seen as "not fully human" and as a "snake." Local terms used to describe preterm babies and their mothers provided

[u] This differs from the Country Study Lead (CSL)'s description, which was that *tozo gnimi* referred to toxoplasmosis. Further clarification of how *tozo gnimi* is understood locally and how it maps on to medical concepts is needed.

further insights into supernatural explanations of PTB that exist in Mali. Preterm babies were thought to be unlucky, cursed, or associated with the devil or witchcraft. Some participants explained how preterm babies were not human, but rather snakes or other wild animals. As shown in Figure 4, after the PTB occurs, the child is described in multiple ways such as *djinèdéni* (the devil's little baby); *téré djougou* (baby brings bad luck); and *sadéninba* (the mother of the snake). These terms are Bambara words that refer to specific consequences of preterm birth (e.g. malformations of the head and other physical injuries suffered by the baby). The term *sadéninba* is used to describe a child who suffered during childbirth and is unable to walk: ''sa'' refers to snake and references the fact that they crawl. At the same time, the language used carries important meanings that reflect existing attitudes and beliefs related to PTB.

In addition, religion is an important lens through which participants understand events that occur in their lives. In discussions with women who experienced PTB, leaders, health workers, and community men, God's will was frequently cited as an explanation for experiences of PTB. Together these beliefs about PTB suggested that some of the explanations for why PTB occurred may be outside of a woman's control. It was unclear from the data whether these references to spirits, the devil, and other wild animals imparted blame on the pregnant woman for the PTB.

Similarities and differences across the three study settings

Across Bangladesh, Ethiopia, and Mali, explanatory models of PTB identified contextual factors considered important by community members. Consistent across settings was the important role of gender inequality – be it restrictions on women's mobility in Bangladesh, excessive workload in Ethiopia, or the intersection of workload, child marriage, and violence in Mali – in explanatory models of PTB. However, the process through which gender inequalities caused PTB differed in each setting. In both Bangladesh and Mali, supernatural explanations related to ghosts or spirits were described. In Bangladesh, violating restrictions on mobility led to PTB. In contrast, these local beliefs in Mali appeared to move the locus of control for responsibility of PTB away from women's wombs. In Ethiopia, excessive workload was intimately linked with exposure to heat and sun (*Mitat)*, which provided a clear pathway by which "women's work" led to early labor and, subsequently, PTB. Finally, participants in Mali highlighted the condition "tozo gnimi," which is believed by certain community members to be a root cause of PTB.

Conclusion and recommendations for practice

This chapter explored community perceptions of PTB to develop explanatory models of PTB. The explanatory models presented reflect, while in diverse ways, the fundamental role of discriminatory gender norms in pregnant women's lived experiences and risks for PTB. In the following chapter, we build on and expand these explanatory models to consider the full picture of the causes, prevention, and treatment of PTB discussed by participants in each setting.

Explanatory models can be used in each country for the prevention of PTB. These models allow us the opportunity to build on existing cultural or local knowledge to frame and craft prevention messages and strategies. Recommendations for MNCH programs include empowering individuals, families, and communities to act on the knowledge they have already, be it based on medical concepts described in Chapter 4 or those explanatory models described in this chapter, to prevent PTB. For example:

1. In Bangladesh, the focus could be on "compassion" towards the pregnant woman, which could be part of a larger gender transformative approach to address existing mobility restrictions.
2. In Ethiopia, the condition "Mitat" could be leveraged to prevent pregnant women from doing arduous work in the sun during pregnancy.
3. In Mali, *tozo gnimi* could be used to motivate families to help pregnant women seek timely healthcare services during pregnancy. As outlined in Chapter 4, participants in Mali identified child marriage, workload, exposure to smoke, and violence as key cause of PTB. These, in addition to *tozo gnimi,* could serve as entry points for addressing PTB.

Section III: Cross-cutting contextual factors

Chapter Six: Discriminatory gender norms

Gender norms provide scripts for what is considered appropriate or inappropriate behavior for women and men, girls and boys in a certain place and time, and influence community attitudes and expectations. Unequal power dynamics, reinforced by discriminatory gender norms, can have real-life consequences for women's and girls' health and well-being. Evident in earlier chapters was the fundamental role of discriminatory gender norms in not only risk factors for PTB, but also women's experiences of PTB. In this chapter, we explore further the intersections of gender norms, LINC factors, and PTB in Bangladesh, Ethiopia, and Mali. We focus on the following emergent themes:

- Women's and men's household roles
- Gender norms and nutrition
- Gender norms and sexuality
- The intersection of gender and age: Child marriage

Bangladesh

Women's and men's household roles

Gender norms influence the work that women and men do and the roles they play in the household. In Bangladesh, women's expectations within the household included responsibility for domestic life. As outlined in Chapters 4 and 5, this included activities like caregiving, cooking, or retrieving water. Some activities, such as searching for water, were considered heavy work. Women's workload did not consistently change during pregnancy. As women in an FGD in Gangachara said, "*we do the same work [during pregnancy], there is no difference*" (FGD, community women, Gangachara). While some women continued to get water during pregnancy, others described avoiding such heavy work. This was related, as the following comment suggests, to the lack of assistance available to women: "*What to say about other people? But my husband goes outside in the morning and he has no time [to help]*" (FGD, community women, Gangachara). Please see Chapter 7 for further discussion of help women receive within their households.

Participants emphasized, for men, the importance of taking care and providing for one's family and wife. As providers, men were expected to have money, which allowed them to get food, medications, contraceptive methods, or other materials for their spouses and their families. One woman from Gangachara said:

> *Husbands bring many things for [their] wives and say, "Here, I brought these for you. You should keep yourself healthy so that our child in [the] womb can be healthy as well." My husband tried his best to support me. [He] brought fruits and meats. He sends me to visit the doctor every month. Actually, my husband loves kids. Whenever I had my baby in my womb [was pregnant], he became very happy. Being happy, he took extra care of me and even borrowed money from others for my regular health checkups. Actually, my husband loves me. [from here she began to cry]… He always takes care of me. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

During pregnancy, men would often accompany their wives to the health facility for ANC visits (See Chapter 9). The following excerpt provides a clear example of a husband's engagement during pregnancy.

> *Participant: There was no problem handling [the pregnancy] with the blessings of almighty Allah.*
> *Interviewer: Did you take her for her check-ups?*
> *Participant: Yes… I took her for check-ups, brought food for her…I used to buy vegetables and all those [foods] that are nutritious.*
> *Interviewer: Where did you go for check-ups?*
> *Participant: I took her to the community clinic…I and my mother escorted her….It is about two kilometers from here…There are many people in the clinic; one doctor, one visitor, and many more…. It didn't cost much…A very little amount…It costs only 10 taka [$0.16 CAD]…We got many services there, it costs nothing. If I did not come here, I would go to the hospital during pregnancy. They do C-section deliveries. It would cost a lot; the mother of the baby would suffer a lot. So, I took her to the community clinic. If they couldn't help, then I would take her to the big hospital (**IDI, partner of a woman with a recent PTB, Taragonj**)*

Please also see Chapters 4 and 5 for discussion of the prominent role of women's workload in relationship to PTB.

Gender norms and nutrition

Most women and adolescent girls explained that gender differences in nutrition, such as the quantity or quality of food provided, no longer existed. This "traditional," in the words of participants, practice was intrinsically linked with the nature of women's and men's work. As men worked outside of the home, rather than staying at home as women did, they were considered to need more food.

> *The society does not support that males gets more good food than females. It is a tradition that males will get more food and females will get less food compared to males. Males will get more food because they need more strength. We [women] will get a smaller amount of food. That means males will get some steps forward…The tradition is that males need more strength because they work outside the house and females need less strength because they stay at home (**IDI, unmarried adolescent girl, Mithapukur**).*

However, some women and adolescent girls emphasized that this practice continued in their families or their communities. Women and adolescent girls emphasized that they would eat less, or after men, particularly in times of food insecurity.

> *Yes. This happens often. Boys are served a bit more food than girls… It is said that boys or men do work and spend long hours outside. They give more labor. Therefore, more food is served to men. Women stay at home. They may eat rice with some salt and a chili. In an impoverished family, it happens. We also have scarcity. For the last two years, we are facing crisis. I had to go through a lot misery when I became pregnant with my last baby. Money had to be spent then. But we middle-class people can't do nothing. Poor people can stretch their hands to others. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

> *Food will not be provided less to the children. Mothers will eat less. People will take loans in case [they] don't having anything [to eat]…the mother will suffer more, and they cook rice less. They maintain their family by taking loans, and most families don't face hunger. (**IDI, woman with a recent PTB whose child did not survive, Mithapukur)***

As these women described, this discriminatory gender norm, whereby in the context of food scarcity women eat less than men, reinforced inequitable access to resources for women at the household level.

Gender norms and sexuality

Behaviors that suggest adolescent girls are sexually active, s such as contraceptive use or pregnancy before marriage, violated locally established gender norms. There was widespread lack of acceptance of adolescent girls getting pregnant before marriage or using a contraceptive method. If an adolescent girl got pregnant or used a contraceptive method before marriage, it affected the social standing of the entire family and had long-term implications for a woman's marriage prospects.

> *Participant #1 and #2: They say that your girl's character is very bad.*
> *Participant: #3: Some people tell the parents; you couldn't take care of your child, and that's why she did it. Parents become victims of their children's behaviors.*
> *Interviewer: How do the villagers treat them?*
> *Participant: #3: Very badly. Like people called them "bad girl, your face is not good for us." And there is a possibility of never getting married. On the other hand, for their marriage, parents have to pay a big amount of money for dowry. (**FGD, community women, Mithapukur**)*

For married women, contraceptive use was considered a woman's responsibility. In light of men's negative attitudes towards condoms, women took it upon themselves to use a contraceptive method. Woman elaborated on this responsibility in an FGD in Taragonj by delineating the responsibilities of women as compared to men. According to them, men worked outside the home to earn money. In response, it was women's responsibility to use contraceptive methods to "let [their] husbands be well."

Facilitator: Do the husbands use [contraceptive] methods?
Participant #1: No, they go outside [of the community] for work.
Participant #2: We use methods, let our husbands be well.
Participant #3: I don't let my husband take [contraceptive] methods, rather I take [them].
Participant #4: We use the [contraceptive] methods.
Participant #3: They earn money for the family, feed us. (***FGD, community women, Taragonj***)

The intersection of gender and age: Child marriage

Poverty and discriminatory gender norms emerged as key drivers of child marriage in Bangladesh. Across groups, participants described how girls and boys[v] from poor families were more likely to get married at a younger age. Parents facing economic hardships saw marriage as a solution to their problems, making good marriage offers hard to turn down. As one Family Welfare Visitor from Taragonj who works on child marriage prevention said:

> *If we advise them not to marry their daughters so early, they reply, "You have money, your daughter can continue studying. Later you can marry off your daughter with high dowry. We don't have such advantages." It is really hard to delay such marriages.* (**KII, health worker, woman, Taragonj**)

The choice to delay marriage was viewed by some as a luxury afforded to the rich, not the poor.

Participants repeatedly mentioned that parents worried that if they delayed marrying their daughter, future marriage proposals they received would not be as good. An unmarried adolescent girl from Gangachara captured this well when she said: "*They were struggling with poverty. They thought that this was the right time to find a groom for their daughter. If it's too late, they will not be able to find a good husband. They have this sort of mentality*" (IDI, unmarried adolescent girl, Gangachara). While this participant and others believed child marriage to be wrong, they did acknowledge that parents were simply trying to secure the best future for their child, as best as they knew how. Other participants commented that younger girls are more desirable, and this preference may be linked to notions of purity and chastity.

The decision to marry one's daughter was also influenced by a girl's character which was judged in part by who a girl interacts with. Parents often arranged marriages when girls started going out, interacted with boys, or had relationships with boys. The parents' thought process was well summarized by a woman from Taragonj, who said, "*Suppose the girl roams from here to there, talk with boys over the phone, is involved in a relationship. If such things are noticed, then they marry her off. [They] don't consider her age*" (FGD, community women, Taragonj). Parents either arranged a marriage between the girl and her boyfriend or with a good potential groom. This quote illustrates a view shared by participants young and old: girls who go out at night or interact with boys are viewed as breaking away from established gender norms and locally established expectations for girls.

[v] Most conversations around child marriage and examples of child marriage focused on girls. Boys were mentioned more explicitly in the context of elopements and self-initiated marriages.

Participants described how parents feared that a girl's "bad character" would undermine the quality of marriage offers they received and bring shame to the family. In this light, child marriage was viewed as a means of preserving a family's reputation.

> *They become afraid that their daughter will have an awkward incident before marriage. Then it would be hard to marry the girl. So, they try to give away their daughter as fast as possible. (**KII, community leader, man, Mithapukur**)*

> *It is seen that a 15-year-old girl has engaged with a boy. Then, when parents think that something bad may occur if it continues for some more days, at that time they decide to marry off the girl. (**FGD, community women, Mithapukur**)*

> *Early marriage doesn't happen due to financial constraint now-a-days. Most of the early marriages happen out due to love affairs, to protect family honor. (**FGD, community men, Mithapukur**)*

Child marriage was perceived to help families avoid negative outcomes such as unwanted pregnancy, as well as social sanction such as poor marriage proposals, gossip, and rumors.

Gender norms about the value of a girl were also central to discussions of child marriage. Beliefs that girls are a burden to their parents and that girls do not need to be educated were common in Bangladesh, although not all the participants who mentioned these beliefs shared these views. Education and child marriage had a complicated relationship. If a girl did not perform well in school and/or if school fees were too expensive, participants believed that parents saw this as an indication that the girl should be married. One unmarried adolescent shared a personal story in which the parents' views on educating their daughter shifted:

> *Earlier the parents said that they would let her complete the HSC examination. Then, when she failed to graduate to class nine, her parents said they would arrange a marriage for her. (**IDI, unmarried adolescent girls, Taragonj**)*

Poor academic performance and/or an inability to pay school fees can make a girl more vulnerable to child marriage, especially if other alternatives for girls do not exist. At the same time, participants understood the benefits of keeping girls in school and noted efforts to educate parents of the long-term benefits of education. One such example came from a health worker in Gangachara:

> *Due to poor socio-economic conditions, parents married their girls by thinking that they could do anything. In addition to educating the girls, money is needed. It will take more money to marry an educated girl. They are doing it due to misunderstanding, but we are trying to explain to them that a girl can do the same as a boy can do, so [they] need to prepare them like a boy. If we can educate a girl, she can live on her own income. (**KII, health worker, woman, Gangachara**)*

In this excerpt, we see the interconnections between financial needs, discriminatory gender norms, and education all coming to a head.

At the same time, participants were also keen to share their own positive experiences and stories of educated girls. For instance, a traditional birth attendant from Gangachara talked about her educated nieces with great pride. She said,

> *From 2003, the early marriage has stopped. One of my nieces got married after her honors, her husband is 30-32 years old and works in the Dhaka airport. The other two of my nieces are 23 and 25 years old, but they are unmarried…They are studying. (**KII, traditional birth attendant, Gangachara**)*

Other views about girls and child marriage also appear to be shifting. Some male leaders considered early marriage to be the burden, not the girl. As one religious leader expressed,

> *Earlier, when a girl was 13-14 years old, people thought she should marry, as girls need not study much. But nowadays, early marriage became a burden as the married girls face challenges like physical and mental health, early pregnancy, even the risk of losing their lives. (**KII, community leader, man, Taragonj**)*

Another religious leader also emphasized the harmful consequences of early marriage, including PTB and household conflicts between the young wife and her husband and her mother-in-law (KII, community leader, man, Taragonj).

Case Study: Strong will and compassion delay a child marriage in Gangachara, Bangladesh

Aditi, an unmarried adolescent living in Gangachara, Bangladesh, recalled the story of her friend, Ramana, who successfully prevented her own marriage. Back when Aditi was a student in Class 9, Ramana's father and uncle arranged for Ramana to marry a man living in Dhaka. Ramana was only 14 or 15 years old at the time and was eager to continue with her studies. She had no desire to marry, especially this particular groom who was not a good person and used drugs regularly. But because he came from a wealthy family, Ramana's family turned a blind eye and consented to the marriage. Ramana had other plans. As Aditi recounted, *"[Ramana] asked the maternal grandfather of the groom if he had a granddaughter of his own, and if he could marry her off even if she didn't agree*." The grandfather answered no. Ramana spoke to him about her desire to study so she could become an independent woman and to marry when she was ready. All this time, her family continued to pressure her until Ramana broke down and burst into tears in front of both families. Her desperation moved the grandfather of the groom. He pulled Ramana's father aside and after much discussion, the two decided to call off the wedding.

Case Study: The challenges and successes of child marriage prevention in Taragonj, Bangladesh

Jamila is a vibrant adolescent girl living in Taragonj, Bangladesh. Through her participation in activities at Pollisree, a local NGO, she has learned about the negative consequences of child marriage: "*They said if a girl marries at an early age, she will give birth early and her children will be weaker. A girl should be 18 years old to get married. She will be able to have a baby when she will be 19 years old.*" Empowered with this knowledge, Jamila has already made an impact in her community. When Jamila's neighbors started arranging their daughter's marriage, Jamila and others sprang into action: "*We called the number given by Pollisree. They came and made the parents understand that early marriage is not good. Then the marriage was cancelled*." To this day, Jamila and her neighbor continue to study for exams together.

But not all of Jamila's efforts have been successful. Imrana, a girl from Jamila's community, was married when she was only in Class 9. Jamila and her friends tried to convince the parents to delay the marriage, but they would not listen. The parents said it was a private matter and none of their business. Imrana's parents pushed ahead with the marriage and convinced the groom's family to let Imrana live with her parents until she was old enough to have a baby.

Jamila was obviously hurt by this failed experience and spoked candidly about the challenges of this work: "*Sometimes, we don't know about that marriage. The marriage took place in private. Sometimes if the parents of the girl get bridegroom from a wealthy family, they don't want to think further*." Nevertheless, Jamila's resolve to end child marriage remains unshaken.

There was ample discussion about self-initiated marriages, also called elopements or love marriages. These were often described as relationships among boys and girls during puberty that resulted in marriage before the age of 18. Participants did not look favorably on these types of relationships, and the responsibility of these marriages fell solely on youth. This was true even among adolescent participants. As one unmarried adolescent said during an FGD, "*Nowadays boys and girls make mistakes, they run away from home and get married. Parents do not marry them at early age"* (FGD, unmarried adolescent girls, Mithapukur).

It was less clear from the data what exactly is driving elopements. Youth may be using self-initiated marriages as means of exercising choice and taking control of the lives. Male leaders, partners, and members of the community blamed mobile phones, Twitter, Facebook, television for exposing youth to ideas of love, sex, and marriage. One partner of a woman who experienced a PTB noted how easily accessible such content was:

> *Now there are lots of mobiles in hand. They [youth] started to be bad people. Their characters have become rotten [because of the] phones. Number 1 due to watching blue films [pornography], number 2 due to dish antenna, Star Jalsha[w]. That's why this incident [elopement] is happening. (**FGD, community men, Taragonj**)*

Other men agreed that mobile phones made it easy for youth not only to access content, but to communicate with each other thus enabling relationships between teenagers.

[w] Star Jalsha is a television channel based in Kolkata, India that airs daily soap opera programs. It is widely watched by women and men in Bangladesh.

Ethiopia

Women's and men's household roles

As described in Chapters 4 and 5, women's workload, particularly during pregnancy, was a major issue highlighted by participants. Particularly for those living in rural areas, lack of available help with household work led women to continue heavy work during pregnancy – despite health workers' recommendations. In the following quotation, one health worker from South Gondar explains the link between the gendered expectations of women within the home and the lack of available help.

> *Most who live here in urban areas put into practice what we advise them… But pregnant women from rural areas don't; they say they have no one to help them. We think that it is because of their living conditions…Husbands say it is because of their living condition…that they have no other person, other than his wife, to work… (**KII, midwife, South Gondar**)*

Men highlighted the importance of helping women with work and providing psychological support during pregnancy, particularly in light of the potential negative effects of excessive workloads on women's pregnancies (See also Chapter 7).

> *Generally, a pregnant woman should make follow-up appointments starting from the time she gets pregnant to go to the health center; this is the main thing… The other is the man should help his wife decrease her workload; she too should discuss with him and decrease her workload…he should provide her psychological support, for example she may feel stress because she was resting while he came back from work; she may think, "what would he say of me; he was working while I am resting." To avoid such stress, he has to provide encouragement to her because stress could cause an abortion [miscarriage]. (**KII, religious leader, South Gondar**)*

However, these expectations did not necessarily always manifest in men helping their wives. As one health worker from North Gondar explained,

> *Every man knows that he should assist the woman. But this is not the case. She is the only one in the house who prepares food for the entire family. The man doesn't take care of the children. (**KII, health extension worker, North Gondar**)*

The gendered nature of household tasks meant that, according to participants, men were not able to take on all of women's responsibilities. This meant that help was not always available or, as one woman in an FGD in West Gojjam said, only available to women if they were able to hire help.

> *Participant: Husbands try to do what they are capable of. But it is impossible for them to do the household chores because they are incapable of doing women's tasks, so the hired help will do that.*
> *Facilitator: What exactly do the husbands do to help?*
> *Participant: They do what they can do. For example, if there is cereal to be crushed or ground using a wooden mortar and pestle /ሙቀጫ/, he will do this. Or cereal that needs to be taken to*

> *the grain mill house, he will be responsible for this. Or he fetches water with a jerrycan. He will do such kind of works to comfort his wife.*
> *Facilitator: What about cooking, preparing Injera?*
> *Participant: No till now no husband has tried that.*
> *Facilitator: Roasting cereal to prepare 'Tella' or 'Areqi' /ደረቅ መቁላት/?*
> *Participant: Those will be done by the hired help. (**FGD, community women, West Gojjam**)*

If there is another female member in the household, such as a female sibling or other young girl, work was also passed on to them instead of to the husband/male partner of the pregnant woman.

Gender norms and nutrition

Women were responsible for cooking – including food such as injera or alcohol such as *tella*, as well as feeding children. However, as in Bangladesh, women, men, and adolescent girls described the existence of discriminatory gender norms that led women to eat less than – and after – men, particularly during periods of food insecurity. This norm was intrinsically linked to the nature of women's work, which was thought to be less physically demanding than men's. As one traditional birth attendant explained:

> *…but women believe that men should eat more than women do because they exert a lot of energy preparing their land. But women stay in the house during the day. (**KII, traditional birth attendant, North Gondar**)*

Adolescent girls on both South Gondar and West Gojjam emphasized that men had greater appetites than women, leading their hunger to be prioritized over women's. As one man in an FGD said "*Culturally women are expected to eat food after the man does. They do not eat any food in the absence of their husband*" (FGD, community men, North Gondar).

Gender norms and sexuality

Sexual activity before marriage among adolescent girls was not accepted by community members. These restrictions on adolescent girls' sexuality were consistent with community perceptions of what it meant to be a good woman. As men in an FGD in North Gondar explained, virginity was as important an expectation as was knowing how to make injera and *tella*:

> *Participant #1: To be a good girl, she must keep her virginity until she is legally married. She must be inexperienced in sexual intercourse.*
> *Participant #2: To be a good woman, she must have sound relations with her neighbors. She must not have extra-marital sex.*
> *Participant #3: To be a good woman she must be skillful in making injera, and tella. People admire this type of woman. (**FGD, community men, North Gondar**)*

The threat of women's sexuality differed from accounts of men's extramarital affairs, which seemed a statement of fact rather than a commentary on such behavior. Instead, men's sexual behavior was framed within a larger discussion of women's health risks. As one midwife

explained, "*Husbands having Gulit (mistresses) is the main reason for [women's] HIV infection*" (KII, midwife, South Gondar).

The threat of women's sexuality, however, came in direct conflict with the risk of sexual violence for adolescent girls. While one community leader emphasized that sexual violence had reduced in his community as a result of the implementation of laws, gender norms that reinforce adolescent girls' submissiveness often meant, as the following quotation illustrates, that adolescent girls were forced into sex at an early age.

> *Facilitator: How common is violence against adolescent girls in this community? Are adolescent girls, especially female students, ill-treated in your community?*
> *Participant: Yes, it is a serious problem in our community. Most girls even can't refuse when asked for sexual intercourse. They use a contraceptive [method] and become submissive.*
> *Facilitator: what if someone asks her today and another asks her another day?*
> *Participant: If she has a boyfriend, no one will attack her. It is best to have a boyfriend early.*
> *Facilitator: Now I understand that adolescent boys ask girls to become their girlfriend and use force to possess her. What will happen if a girl insists and stands firm?*
> *Participant: I don't think she could do that. She couldn't withstand it…The problem starts as soon as she becomes around 15 years old…They [the parents] can protect her as long as she reports it to her parents. But most of the time girls don't want to inform their parents about these kinds of issues. (**IDI, woman with no children and using a contraceptive method, North Gondar**)*

The intersection of gender and age: Child marriage

In Ethiopia, fewer participants engaged in a discussion of the reasons underpinning child marriage. The responses in this section reflect the views of unmarried adolescents, community men and women, health workers, and male leaders. As in Bangladesh, participants described poverty and discriminatory gender norms as key drivers of child marriage. Parental desires to see their daughters get married before they died, and child bride abductions emerged as unique drivers of child marriage in the Ethiopian context.

The persistence of child marriage in Ethiopia was thought to continue primarily out of financial necessity. For families facing economic hardship, child marriage was both a short- and long-term solution to their problems. Child marriage is seen as a means to address acute financial constraints, as an unmarried adolescent from South Gondar demonstrated from personal experience. She said, "*The reason [that my uncle married his daughter] is shortage of finances for bearing payment for school*" (FGD, unmarried adolescent girls, South Gondar). But child marriage was also seen as an opportunity for parents to forge alliances with other families, which served them in the long run. As a religious leader from West Gojjam explained, *"the marriage is not marriage between a boy and a girl, but it is a marriage between the two families"* (KII, community leader, man, West Gojjam). Thus, child marriage is perceived to allow families to expand their social networks, which is seen as important during difficult times as families with larger social networks have more people to turn to for resources and support.

Not all participants saw child marriage as an opportunity to alleviate financial constraints. A traditional birth attendant said, "*It was a culture, we all have also married early, but currently*

everybody stopped weddings because of economic crisis" (KII, health worker, South Gondar). In her opinion, child marriage increased in times of economic prosperity, not in times of crisis.

There was a clear link between child marriage, education, and discriminatory gender norms. As in Bangladesh, parents may marry a daughter if they cannot afford to pay school fees or if she was not performing well in school. But the cost of educating a girl was not the only way that education intersected with child marriage. Underlying the financial barriers to education were discriminatory gender norms that girls cannot be educated or that girls did not need to be educated.

> *Their family decided to marry because they believe that girls cannot achieve education. (**FGD, community men, South Gondar**)*

> *The second [reason] is families don't have the vision that they could educate their girl daughter and she will become self-reliant. There are instances [when] they interrupt her education and give her away for marriage; there are instances of giving her [the daughter] away due to living conditions [i.e. being poor]… For example, we have asked families in Aquashumoch why they do that. What they said is they don't have the financial capacity to send her to school. (**KII, health worker, South Gondar**)*

Here again, we can see that economic hardship coupled with discriminatory gender norms can motivate the decision to pull a girl from school. But we also see that child marriage was reason enough to end a girl's education. The latter may be triggered by the presentation of a marriage offer or if the parents deemed the girl to be mature enough for marriage.

As in Bangladesh, child marriage in Ethiopia was also seen as a way of dealing with girls who were not conforming to societal expectations of how girls should behave. As this excerpt from an FGD with men from South Gondar indicates, child marriage was seen as a way of nipping bad behavior in the bud:

> *Families fear their daughter may get pregnant before she marries. They observe her behavior, and if they suspected her, they make her marry to be safe…. But if she is well behaved and is attending to her education very well, they don't want to make her get married. (**FGD, community men, South Gondar**).*

This quotation also suggests that the same parents can hold discordant views on the importance of education and that their final stance can depend on the actions of the girl. If she conforms to social expectations and does well in school, she can continue to be educated. But if she should stray from what is expected of her, then her marriage will be arranged.

To a lesser extent, participants also said child marriage occurred because parents lacked knowledge and believed that girls who married at an older age were more likely to divorce. Finally, child bride abductions were mentioned by an unmarried adolescent and a traditional birth attendant, both of whom lived in North Gondar. While not a dominant driver of child

marriage across the three Ethiopian study settings, the traditional birth attendant suggested that the practice was common in that area:

> *Participant: We asked her why she intended to force her child to marry without her consent. She told us that because she [the mother] is single [no male head of household], she feared that someone may spoil the life of her child. She added that because she is a female and if someone comes to her home and takes the girl without her consent. She complained [that] no one will help her.*
> *Interviewer: Is this type of practice [the practice the mother of the girl complained about] common?*
> *Participant: Yes, it is common. If he [a man] needs her, he may abduct her forcefully.*
> *Interviewer: Isn't there anybody who will stop this, for example, if she cries loud? Isn't there any one to help her?*
> *Participant: No one will help her. Unless the relatives, no one will come out of the house and help her. The neighbors also will not go out for help unless they are close relatives. Even if a person is killed, no one will ask who the killer is in this area. This area is so sorrowful.*
> (**KII, health worker, woman, North Gondar**)

This particular story, while an extreme example and not commonly shared by other participants, demonstrates how child marriage was linked to other forms of violence, suggesting that responses to child marriage must address all of these forms in order to bring about holistic change. In addition, child bride abductions cultivate an environment of fear that is further exacerbated by the lack of social support and intervention described by the woman.

Case Study: The hardships of child marriage in South Gondar, Ethiopia

Afia is a 17-year-old adolescent from South Gondar, Ethiopia. When asked if she knew of any instances of child marriage from her community, she promptly recounted Diarra's tragic story. Last November when Diarra was only 15 years old, her parents began making marriage arrangements. Diarra did not want to get married. She had never even spoken to or met the groom. Her parents, especially her mother, were putting a lot of pressure on her and she felt she had no choice in the matter. Feeling scared, Diarra reached out to her school principal in the hope that he would be able to intervene. Much to her dismay, he was unable to convince her parents to keep her in school. The school principal then told the police about the parent's intentions. The police spoke to the parents and put the groom in jail for a day. Despite these efforts, the marriage was held in secret with no family and friends to celebrate what should have been a joyous occasion. Since then, Diarra's life has been filled with more hardship. Pregnant and divorced, Diarra is now living at home with her parents.

Case Study: Adolescent school club prevents child marriage in South Gondar, Ethiopia

In a small village in South Gondar, Ethiopia the practice of child marriage is slowly dwindling. And adolescents are one of the forces of change. Not two years ago, most girls in the community would have been married by the age of 15 or 17 as their mothers and grandmothers would have been. But thanks to the work of adolescent girls from the local school club things have started to change. These girls are on a mission to protect their peers from child marriage and they are not scared to speak up. As one of the members described, "*We are screening girls who are ready for early marriage with our teachers and report to [the] police. Then they forced [the] girl's family to stop the marriage*." The girls also keep an ear out for discussions within the community about families making marriage arrangement for their underage daughters. These girls, their teachers, and the police demonstrate how communities can work together to plant the seeds of change.

Mali

Women's and men's household roles

Emergent across interviews and FGDs was the expectations of work for women both before and during pregnancy (See Chapters 4 and 5). Certain work was considered an obligation, and women had to do it regardless of pregnancy. This was explained by one man in an FGD in Kadiolo, who said:

> *Here when it's the wife's turn to cook, she must do it. She is obligated to do it, it's like an obligation. Normally if it's not an obligation, she won't do it…here, pregnant women have to work because if there are three women in the family, the two women go to work, and you who are pregnant, you have to go "into the bush" (to the field) with them to go to work. There is no instance where you stay at home until the day of delivery…unless you go to work today, get sick and they take you home… in that situation maybe you can stay at home the following day. If not, you go to work. (**FGD, community men, Kadiolo**)*

According to one group of women in Koutiala, unless one was sick, nothing changed in terms of workload – even during the last few months of pregnancy.

> *Participant #1: if you are not sick nothing changes*
> *Participant #2: It is the same thing, nothing changes.*
> *Participant #3: After the rainy season they do not rest. if it is the dry season, they do market gardening, so they do not rest.*
> *...*
> *Participant #2: … If you are your husband's only wife, except in the case of illness, otherwise you cannot stop working. Or if you have a child to help you. (**FGD, community women, Koutiala**)*

The consequences of such local gendered expectations were described frequently by participants. In the following excerpt, a man in an FGD in Sikasso explained how a pregnant woman went to the field to work the same day she gave birth.

> *I saw a case recently, she went "into the bush" (to the field), came back and gave birth along the way. If she knew it was time to give birth today, would she go into the bush? We've got that*

> *problem. A woman who's given birth, two or three children already, she must know what's going on in her own body. (**FGD, community men, Sikasso**)*

This story suggests the extent to which pregnant women in Mali went to fulfill their work obligations. Fear of community members' judgments, including those of other women, led pregnant women to continue to work to avoid being seen or considered as lazy (See Chapter 10, "Causes and consequences" section for additional discussion of the relationship between illness, women's workload, and fears of being considered lazy). However, as the man in the FGD above suggested – and as was echoed by community women, adolescent girls, and community leaders – women were also considered responsible for PTB.[x]

Men's engagement and support during pregnancy was equally influenced by gendered roles within the household. Men saw themselves as providers that took care of their families. In one example, this expectation led a man to prioritize his wife sleeping under a bednet. While he knew that he had the autonomy to go immediately to the health facility if he had a health problem, his wife did not. In his opinion, his wife and children lacked the autonomy to travel to the hospital themselves. As a result, he thought that it was better to give his wife priority.

> *Why I do this, the woman and the children, I have to protect them because if I have a problem I can run to the hospital to treat myself but they can't go to the hospital on their own unless I help them by bringing them to be taken care of. (**FGD, community men, Koutiala**)*

Men often provided financial support or material resources, rather than actual help. According to one health worker in Sikasso, it was rare to have men that care for children. "*Here it's rare for men to carry the child on their backs, and with the woman alone it's not easy, that's the problem*" (KII, health worker, Sikasso). A man echoed this sentiment, explaining that he did not provide support for his wife. Rather, he bought food for her:

> *Interviewer: When she couldn't eat, what help did you give her so that she could eat well?*
> *Participant: I didn't help her; my role was to bring food home.*
> *Interviewer: You didn't help her at all?*
> *Participant: Maybe sometimes if I have had a lot of profits, I can buy her some meat or fish. (**IDI, partner of a woman with a recent PTB, Koutiala**)*

Men's engagement in care-seeking varied (See Chapter 9). For some, engagement took the form of giving permission and paying for healthcare services or medications:

> *If she's healthy, she'd leave on her own, but if she's sick, I'd send someone to take her…I can't find out [what happens] because I go to work. They come give me the prescription and say, "this is how much it costs for the medication." (**IDI, partner of a woman with a recent PTB, Koutiala**)*

Others considered it important for men to accompany their wives.

[x] See Chapter 4 for further discussion of responsibility for PTB.

> *Participant #1…It's the husband who accompanies her, he will go to borrow an ride to be able to bring her for her prenatal consultation… If it turns out that the woman has a problem, we try to treat it.*
> *Participant #2: How the woman gets there, if the woman has to leave, the man accompanies her or the man asks one of his relatives to take her to the hospital for her prenatal consultation to go and get the medicines.*
> *Participant #3: Everyone must accompany his wife for her prenatal consultation, no one else can bring her to the prenatal consultation. This is my understanding because it is possible that the wife can receive information. You who is her husband, you stayed at home and told another person to accompany her. The information that was given to the wife, that person, he will not be able to understand all the indications like you. Most of the time if the husband is there, if the wife forgets something, he will be able to fill in this information, you complement each other like that, this is my understanding. (**FGD, community men, Koutiala**)*

In the quotation below, a man explained the important role of the larger family, as well as the husband, in supporting pregnant women when attending the health facility. At the same time, he suggested that women could not be trusted to go to the health facility alone and share the information gathered with their husband upon return:

> *In my opinion if a woman has to go to the hospital her accompaniment should not be left to the husband only if there is another person who can accompany her. If you look at it…sometimes the one who accompanies the wife understands things better than the husband even. Some can be managed like that. Sometimes you will find in the family there are brothers, if it is the older brother's wife who has to go for her prenatal consultation the older brother has not had time to go. The little brother can accompany his wife. And also the information cannot be hidden if the information has been given to the wife and to the brother. He will come to give the information at home. The accompaniment of the wife must not be left to the husband only because sometimes if you leave it only to the husband and if he does not have the time, and if she has not been entrusted to another person to bring her, the day of the prenatal consultation will pass. (**FGD, community men, Koutiala**)*

Evident in this quotation is men's perception that women cannot be trusted to go alone to the health facility and share the information that she has received with her husband. As a result, this participant emphasizes the need for another man, such as a younger brother, to take the place and accompany a woman if necessary (See Chapter 9 for further discussion of who accompanies women when they go to the health facility).

However, community norms influenced the nature of men's involvement. For example, men would accompany their wives to seek care or deliver, but their presence during the delivery was not necessarily socially acceptable. Instead, female family members played an important supportive role during delivery. "*If the woman goes into labor, the men are not accepted there, it is the old women who stay with her or takes her to the hospital*" (FGD, community men, Koutiala).

Although there were exceptions, women's reliance on money from their husbands, as well as their permission to go to the health facility or their presence to accompany them, were

commonly cited. This lack of financial autonomy and restrictions on mobility could prevent women from being able to seek healthcare services for themselves or their children if necessary (Chapter 9).

Gender norms and nutrition

Adolescent girls in Mali highlighted differences in food consumption between girls and boys. During an IDI with an unmarried adolescent girl in Sikasso, one participant explained that boys eat more than girls because "*girls do not do the work that boys do*," illustrating the connection between women's and men's work and nutrition, particularly for adolescents. A participant in an FGD with unmarried adolescent girls in Sikasso furthered this discussion, explaining how in the field, boys eat first. "*When we are in the field, the boys eat first, giving the rest to the girls*" (FGD, unmarried adolescent girls, Sikasso).

In the face of food insecurity, one adolescent explained that household heads and children were prioritized. They thought that women had an advantage during periods of food insecurity as they were able to get their own food. In comparison, boys were not. As a result, boys were given more food:

> *Interviewer: Why is it that the head of household and the children are the priority?*
> *Interviewee: Because if the woman prepares, even if it's not much, you have to give [food to] the head of household and the children first.*
> *Interviewer: So, if they are satiated, it's after [that] the old women have to eat?*
> *Interviewee: Yes…We have to give a big amount to the boys…because women can look for food for herself, while the boys can't do that. (**IDI, unmarried adolescent girl, Koutiala**)*

While only cited by one FGD, another rule governing food available to women related to the consumption of meat. Women were not, according to the group, supposed to eat meat from a pregnant animal that had been killed. "*For example, if you slaughter an animal and find that there was a calf in its belly, you ask the woman not to eat the meat of that animal*" (FGD, community men, Sikasso).

Gender norms and sexuality

As in Bangladesh and Ethiopia, adolescent sexuality before marriage – expressed through adolescent pregnancy – was widely rejected by community members. Adolescent girls described rejections from family, insults, and violence experienced by unmarried adolescents who became pregnant. Such reactions to women's sexuality were reinforced by men's perspectives of contraception as leading to women's infidelity.

> *What I also notice is that the person who uses a contraceptive method no longer remains faithful. She is no longer with one person because she already has in mind that she is not going to get pregnant. They couldn't stay faithful to their partner… (**KII, religious leader, Koutiala**)*

Adolescent girls faced pressure to behave well from an early age. Failing to do so led to serious consequences for adolescent girls' futures.

Facilitator: Why do they feel pressure to be a good woman?
Participant: Because many people ask them to look after the children, to give consideration to marriage.
Facilitator: So, is it someone who puts pressure on them or is it herself who feels the pressure?
Participant: Well there are some who feel the pressure from childhood, it's in their education. You can see that young girls get pregnant, it's very rare to see a girl get pregnant today. We tell them if you don't use the implant or if you don't control yourself, when you get pregnant, it's going to affect your studies a lot. That's why they feel pressure to be good women like their mothers.
Facilitator: But are there any disadvantages if a woman is not a good woman?
*Participant: There are consequences, they are the ones who will pick up the broken pieces. How are the consequences, we are on premature birth, it can be the cause of premature birth. Right? It can cause early marriage. It can play with her future; it can play with her education. (**FGD, community men, Koutiala**)*

The intersection of gender and age: Child marriage

As in Ethiopia, the discussion around the reasons for child marriage were limited to inputs from adolescents, community members, health workers, as well as leaders.

In Mali, participants overwhelmingly mentioned how child marriage was a means of protecting a family's honor and was intrinsically linked to gender norms and expectations of girls. A religious leader from Koutiala explained how child marriage was justified in the context of keeping girls chaste:

> *If you see that we keep a girl at home, it is because she does not yet have a husband. Rather than keeping the girl in your home, instead she is doing the things she should be doing in marriage. So, if someone comes asking for her hand in marriage, you have to give her away to be married. It is better to give her away to be married so she can do what she wants to do there instead of at her father's house. That is the reason why girls are given away to be married. If there is already someone who can guide her who is her husband, you must give her to him instead of letting her enjoy herself. (**IDI, religious leader, man, Koutiala**)*

Participants described how parents would marry their daughter to stop them from going out with boys and to ensure girls do not cause problems for parents (e.g. getting pregnant and bringing shame on the family). There were also instances where participants described how parents used child marriage as a means of dealing with girls who became pregnant outside of marriage. The predominance of these views among unmarried and married adolescents demonstrates just how ingrained these gender expectations and norms were. In the words of one unmarried adolescent from Sikasso:

> *You should be married before having a baby, otherwise if you find [yourself] with a baby before marriage, your mother will be humiliated. She will not be able to talk in the company of others; your father will no longer be able to talk in the company of others. (**FGD, unmarried adolescent girls, Sikasso**)*

Concerns about what girls do when they go out and when they are in the company of boys were widespread. Participants described girls negatively calling them "*unstable,*" "*restless*" or "*spoiled,*" and girls were blamed for the problems they caused. As one female leader remarked, "*It is the parents who are responsible, that is why they marry them early*" (KII, community leader, woman, Kadiolo). For parents, child marriage allowed them to no longer be responsible for their daughters' actions. By extension, girls could no longer bring shame to the family. One male community member went so far as to say, "*if the child has a certain behavior, is it even worth keeping her?*" (FGD, community men, Sikasso).

This same community member noted that fathers can be humiliated if they did not marry a daughter who is of marrying age (FGD, community men, Sikasso). This and other comments suggested there were beliefs about when a girl was ready to be married. For some, readiness was linked to a specific age (e.g. 15 or 16 or 18 years). For others, a girl's maturity was a better sign of whether she was ready to be married.

Similarities and differences across the three study settings

Women's workload, especially during pregnancy, emerged as a major issue in conversations in all three countries. Locally established norms leading to women working, often late into their pregnancies, could have serious health implications, including PTB. While men were expected to support women during pregnancy, either in their household chores, in seeking care during pregnancy, or taking care of children, stories of such support varied. While some participants explained that men provided various forms of support to pregnant women, others described how they did not. If men did help, such help was often – although not always – influenced by gender norms that reinforced men's roles as providers. Men would frequently provide financial or material resources, rather than perform roles considered "women's work." While gender norms related to nutrition were identified in all three settings, they were most commonly discussed in Bangladesh. Considered a traditional Bengali practice that was increasingly less common, women and girls might eat less or eat after men and boys – particularly within the context of food insecurity. Concerns about adolescent girls' sexuality were common across settings, intersecting with other perspectives that reflected efforts to control women's and girls' sexuality and exercise of their sexual and reproductive rights. Sexual violence emerged as a major concern in Ethiopia for adolescent girls in particular. Child marriage was described across all three countries and intersected with gender normative expectations related to marriage, education, sexuality, and empowerment. For adolescent girls, child marriage was often the result of household financial concerns, linked with efforts to control girls' sexuality, or considered to prevent negative social consequences of unintended pregnancy. While concerns about elopement emerged in Bangladesh, child marriage intersected with violence in Ethiopia and parents' desires to no longer be responsible for their daughters' actions in Mali.

Conclusion and recommendations for practice

This chapter explored emergent themes at the intersection of gender norms, LINC factors, and PTB in each study setting. With a focus on women's and men's household roles, gender norms related to both nutrition and sexuality, and child marriage, this chapter provides context

necessary to understand the multiple, complex ways – highlighted in chapters throughout this report – in which discriminatory gender norms influence health behavior, risk factors, and PTB.

Recommendations for practice include:

1. Women described their inclination to continue working during their pregnancy as a way to demonstrate that they were not lazy, or they were strong, to show that they contribute to their family. Programs could use a gender transformative approach to reconsider or reframe the concept of a "strong woman" and expectations and risks during pregnancy in relation to excessive workload.
2. While examples were highlighted across settings for men who provided support, be it emotional or instrumental, to women during pregnancy, women, adolescent girls, and men themselves also described instances where women did not have such support. A gender transformative approach that promotes positive masculinity – and the ways in which it embraces men's engagement in household work as well as care-seeking and childcare – could be used to increase men's roles as sources of support for women.
3. To address community concerns about adolescent girls' sexuality, programs could work to foster girls' empowerment. At the same time, SBC programs working with adolescent girls should acknowledge the important role of key influencers, such as parents, elders, or peers, in reinforcing locally established expectations and restrictions that aim to control girls' sexuality. Activities designed to improve parent-child communication could help strengthen understanding between adolescents and their parents, which could address some of the fears conveyed by parents about their daughters. Gender transformative approaches are needed to create safe spaces for parents and children to engage in critical and reflective discussions about gender norms and sexuality. Furthermore, gender transformative approaches that address those discriminatory gender norms that reinforce the need to control girls' bodies and sexuality will enable adolescent girls and their parents to be more open about adolescent girls' sexuality.

Across all three country settings, financial concerns and discriminatory gender norms and expectations emerged as the leading drivers of child marriage. Families often viewed marriage as a potential solution to economic hardships and as a means of protecting the family's honor and control girls' sexuality. In light of these findings, recommendations for SBC programs working to address CEFM include:

1. Gender transformative interventions can create safe spaces for individuals and communities to deliberate and challenge existing gender norms that discriminate against women and girls, redefine notions of masculinity and femininity, and promote the value of the girl child. Interventions promoting community dialogue have had success in changing discriminatory gender norms around HIV (e.g. Tchova Tchova in Mozambique[72]), family planning,[73] and domestic violence (e.g. SASA! In Uganda[74]). Life skills education for unmarried adolescents is also known to delay age at marriage.[75]
2. In Bangladesh and Ethiopia where the relationship between child marriage and education was complicated, it is critically important to create alternative roles for girls and women in society that go beyond being a wife, mother, or studying in school. Interventions could focus on creating other economic opportunities and social roles for

girls and women to fill (e.g., vocational training, political participation) and could spotlight girls and women who are already doing this so that they can serve as role models and mentors for others in their community.

3. Future efforts should also consider leveraging the storytelling power of entertainment-education, an approach that offers the opportunity to role model equitable gender norms, positive attitudes and behaviors towards child marriage prevention, and address the interconnections between child marriage and other forms of violence as well as other health issues such as preterm birth.
4. Finally, data from all three countries included positive examples of individuals and groups who have delayed marriages. A positive deviant approach would showcase these change agents and amplify their actions for others to follow.

Chapter Seven: Household power dynamics

In this chapter, we focus on the larger household environment in which women live, both before, during, and after their pregnancies. We focus on 1) kindness, support, and help,[y] 2) communication and power dynamics, including couple communication and decision-making[z] as well as communication with other household members 3) strictness and anger, and 4) stress and tension within the household. In each country, we compare and contrast perspectives of women, men, and adolescents. Then, we highlight similarities and differences across the three study sites.

Bangladesh

The majority of participants – be it women or men, married or unmarried adolescent girls, health workers or community leaders – described their households and household environments in their communities in positive ways. When asked to rank the kindness in their households from one to ten, it was almost always dominated by kindness. Within their descriptions of their households also emerged more complicated dynamics. As one woman from Taragonj, who recently had a PTB that survived, illustrated so well, anger and love were not necessarily distinct. In fact, the same person or people often fulfilled more than one role in the household.

> *Interviewer: Who loves you most here in this family? Who can you tell about your problems?*
> *Participant: My husband, he beats me but loves me also. (**IDI, woman with a recent PTB whose child survived, Taragonj**)*

[y] Kindness was understood as support or help by many across the three settings. Such support included not only provision of financial or material resources, but also sharing advice or recommendations. Help or support within the household took the form of four primary types: help or assistance with work (e.g. household chores), financial support or provision of material resources, sharing advice or recommendations, or engagement during healthcare seeking (e.g. accompaniment to health facility, help during women's illness, seek medical advice, etc.). Please see Chapter 6 for a more detailed discussion of the gender dynamics and norms related to support and male engagement in care-seeking during women's pregnancy.

Given the frequency with which participants focused on help or assistance with work (e.g. household chores), and the important role of workload in pregnant women's risk for PTB, we focus in particular here on help or support related to household work.

[z] The study explores the role of couple communication in the decision-making process related to health including LINC factors and PTB. We examined couple communication through the lens of household power dynamics and focused on unequal flows of discussion from a husband to a wife, male initiated dialogue, and deference on part of women. Couple communication in rural communities has been often dominated by asymmetry, reflecting an unequal balance of power between the spouses reflecting male directed, male-controlled couple communication.

As we analyzed the data, we understood that couple communication and decision making are inextricably linked on a continuum that leads to action. As a result, we present the couple communication and decision-making together for Bangladesh, Ethiopia, and Mali.

Help with women's household work

Help within households was both gendered and hierarchical. Female relatives, particularly women's mothers-in-law, sisters-in-law, and aunts, as well as their husbands were often the source of help and support for younger women and adolescents. Adolescents also mentioned their siblings as sources of support and help. For older women, like mothers-in-law, help came from their daughters-in-law and sons.

Mothers-in-law and husbands were not uniformly supportive of pregnant women. In the example below, a mother-in-law from Taragonj explained how she took care of her pregnant daughter-in-law due to the health issues she suffered. She said,

> *She was sick, so I have to do all the work. [My] daughter-in-law could not do anything. She had to lay down due to pain. The doctor also forbid [her] to perform any heavy (labor-intensive) duties. Even I have to bathe her sometimes. I had to wash her clothes. (**IDI, extended family member (mother-in-law) of a woman with a recent PTB, Taragonj**)*

There were several examples of husbands helping with chores during pregnancy. Women, including those with a recent full-term birth and those with a recent PTB, described how their husbands helped them when they were pregnant. In the following quotation, for example, a partner's attention to the health and well-being of his wife, both during and after pregnancy, is evident. This meant that he prevented her from doing any household work/chores, even after pregnancy.

> *Interviewer: Did you help your wife?*
> *Participant: Yes, I did. Even at present I do also. After delivery, for almost three months I prevent her from [doing] any kind of work. Now she cooks sometimes as is her wish and cleans house when she wants. We also used gas stoves, so there is not extra smoke, which is hazard for the health of a pregnant woman. I do not have a smoking habit either. Sometimes I take betel leaf after having a meal, that's it. So, in this sense she lives in a pollution free and hazard-free life. (**IDI, partner of a woman with a recent PTB, Taragonj)***

In contrast, some husbands also explained how they did not assist their pregnant wives. For example, in Gangachara, one partner of a woman recently experiencing a PTB said, "*I have no one to take care of her; my mother or any sister. She took care of herself. Her mother lived far from here*" (IDI, partner of a woman with a recent PTB, Gangachara). In Mithapukur, another partner shared a similar sentiment. "*No, I don't do this. My elder daughter does these things as we don't put extra pressure on her with work like cooking*" (IDI, partner of a woman with a recent PTB, Mithapukur).

Relatives and spouses described that pregnant women should not do too much work and that family members provided help. One mother-in-law from Taragonj said,

> *Interviewer: Did your daughter-in-law [who has experienced a PTB] ask for any help? Participant: She didn't need to ask. I did all her work. During that time, I hardly rested for two hours. My son also took very good care of her.* ***(IDI, extended family (mother-in-law) of a woman with a recent PTB, Taragonj)****.*

On the other hand, women also faced pressure to continue working during pregnancy, particularly from their mothers-in-law (See *Conflict with one's mother-in-law* section below).

Communication and power dynamics in the household

Couple communication was assessed by the following characteristics: who initiates discussions, how equitable the dialogue flow was, how much one partner deferred to the other's opinion, and how prescriptive the discussion was.

Three distinct patterns of couple communication emerged from data from Rangpur, Bangladesh. The first pattern was characterized by restricted spousal communication, where discussion among couples was limited. Second was a spousal communication pattern characterized by quarrels. Third was a dialogue-based, open communication pattern.

Restricted spousal communication

Some couples in the dataset had minimal discussion with each other. Of these, Amina (name assigned) had recently delivered a preterm baby who survived. Since the baby arrived early and was small in size, Amina's mother suggested that she start using contraceptives to avoid another pregnancy. Upon her mother's suggestion, Amina started a daily oral pill after dinner. When asked if she had consulted with her husband, Amina said, "*No, not at all. No one will believe that I couldn't consult him. He always passes his time outside the home" (IDI, woman with a recent PTB whose child survived, Mithapukur).* Amina opted for secret use of contraceptives after her PTB.

Sometimes, men talked with their wives with a fault finding tone that instructed them to perform certain tasks. Rafique (name assigned), whose wife was pregnant said to her, "*Eat at the right time, sleep and take a bath on time….keep hot water as cold water is harmful during pregnancy*" (IDI, partner of a woman with a recent PTB, Mithapukur). Here Rafique's tone was authoritarian and directive.

A young woman from Taragonj, whose preterm baby did not survive, said she never discussed her health issues with her husband. She said she did not talk and then she forgot about her problems. She also mentioned that he did not ask her about her well-being. If he were to ask, maybe she would share her health problems with him.

A married adolescent from Mithapukur described her communication with her husband after marriage regarding contraceptive use and when to have a child. The married adolescent girl could not initiate a discussion about contraceptive use. Neither did her husband.

> *Interviewer: So, did you discuss it with your husband? About conceiving a baby or using family planning method?*
> *Participant: No.*
> *Interviewer: Did your husband want to know whether you want to conceive or not and whether you want to use a method or not?*
> *Participant: He didn't say.*
> *Interviewer: He didn't say and you didn't say also?*
> *Participant: No.*
> *Interviewer: Why you didn't say? Participant: I didn't say (she said with smile) (**IDI, married adolescent girl, Mithapukur**)*

The above examples of restricted communication suggested a pattern where communication was constrained and couples, especially women, did not have a chance to express their thoughts and feelings to their spouses.

Couple communication interspersed with quarrels

The second pattern of spousal communication as seen in the Rangpur data was one where couples sometimes quarrelled. In this pattern of communication, often male-directed conversations predominated. Discussions were usually started by men and managed by them, with the wife acquiescing to her husband's wish. A woman from Mithapukur said she preferred to talk less to avoid conflicts. But with her husband, she did have clashes. *"I talk a little, that's why I don't have problems with anyone. At times I have problems with my husband. Then suppose we quarreled for 3 days, then I'll be sullen for 4 days" (IDI, woman with no children currently using a contraceptive method, Mithapukur).*

Often the reason for a fight was lack of money. Nusrat (name assigned) lost her preterm baby recently and described her situation, saying, *"Yes. Of course. I told my husband what my boy and my girl like to eat. I told him to bring the items. But sometimes it also causes disputes. Sometimes my husband doesn't have sufficient cash in hand" (IDI, woman with a recent PTB whose child did not survive, Gangachara).* Nusrat's position was further exacerbated because mobility restrictions prevented her from leaving her home and she was dependent on her husband.

Meanwhile, Rahima (name assigned), who recently had a PTB, talked about how she occasionally fought with her husband. She said:

> *Until now I didn't quarrel with anyone but sometimes with my husband I had a quarrel and his older brother tried to solve it. He insults me all the time, he demands some ornaments which I own since marriage. (**IDI, woman with a recent PTB whose child did not survive, Mithapukur**)*

Women often lacked agency during fights, and the man's wish usually prevailed (See the decision-making section below).

Open communication

The third couple communication pattern was about open communication, dialogue, and consensus building among the couples. Both women and men shared their experiences with how they communicated with their spouses. Hafiza, (name assigned), a married adolescent from Taragonj said that she always told her husband when she was unwell and vice versa. When asked if any of their discussions deteriorated into a quarrel, Hafiza said,

> *No, we don't have anything like this. Whatever we do, we do it out of love. Sometimes I become angry and sad, then I don't go to him, he comes to me and wipe out my tears. We don't have any difference in opinion. He wants whatever good for me. (**IDI, married adolescent girl, Taragonj**)*

Open communication implies that couples discussed many different topics. One husband said that now as years have passed, the couple was familiar with each other and his wife always told him she had excessive "white discharge" and other reproductive health problems.

We asked young married adolescent girls how they broached the topic of contraception for the first time after marriage. Latifa (name assigned), told us how she initiated the topic. "*Yes. I did,*" she said. When the interviewer asked if she can have a free discussion with her husband, she said, "*He accepted it very normally. Actually he also wants to know about that. Actually he likes what I like. He always accepts what I like."*

Married adolescent girls and couple communication. A trend that emerged in the Bangladesh data was that a few adolescent girls after marriage were initiating dialogue with their husbands. Momina (name assigned), a married adolescent from Gangachara, said she attended a health meeting where they discussed contraceptive use for newlyweds. She shared everything with her husband, and he was in agreement with what she said. Momina also stated that she mentioned to her husband the severe back pain she experienced during menstruation. Momina's husband went to a doctor and bought medicine for her. This instance illustrates that although young couples are communicating, mobility restrictions still prevent women from directly accessing care from a health provider.

Meanwhile for Sharifa (name assigned), another married adolescent girl from Taragonj, it was her husband who initiated the topic of contraceptive use four months into their marriage. He had met with a family planning provider and obtained information related to different methods. He told Sharifa privately (after closing the door) that she was too young to conceive a child and that he would use condoms. He said his grandmother was anxious that they have a baby, but that she should not get upset about it. He also told Sharifa that she could continue with her education.

Decision-making

While several participants said they had "open communication" with their spouses, women continued to say that decision-making lay squarely in the hands of men. Women's decision-making is often constrained by discriminatory gender norms that influence not only household roles, but also mobility. This results in women being dependent on their male family members

for going outside their home and seeking health care. Often, these restrictions were invisible to women themselves.

Evidence from interviews and FGDs suggested that the decision-making process was not straightforward in households. Women's role in decision-making was limited as they were not permitted to go outside their homes. Men were accorded a superior position for making decisions, while women deferred to them.

Male-dominated decision-making. The decision making data was dominated by men making most of the decisions. The few exceptions were in the area of family planning. When Arifa (name assigned), who lived in a joint family, was asked who made the decisions in her house, she replied,

> *Participant: His father.*
> *Interviewer: Is his father the eldest?*
> *Participant: Yes.*
> *Interviewer: Who takes decision after him?*
> *Participant: The brother-in-law who came here to take betel leaf.*
> *Interviewer: After that who else?*
> *Participant: And the youngest brother-in-law who isn't married yet.*" (***IDI, woman with a recent full-term birth, Mithapukur***)

The above example suggested that male decision-making followed an age hierarchy, with the eldest man being consulted first, followed by those who were younger.

An unmarried adolescent girl from Mithapukur described the decision-making process in her home. When asked about whose opinion prevails during decision-making she replied, "*My father's. At first it is my father. My mother can't talk, so her opinion is not considered important. Then my brother's. They decide. Women don't get that much importance" (IDI, unmarried adolescent girl, Mithapukur)*. The adolescent girl verbalized with clarity that "*women don't get that much importance.*" In her case too, the age hierarchy of decision-making among men is also evident.

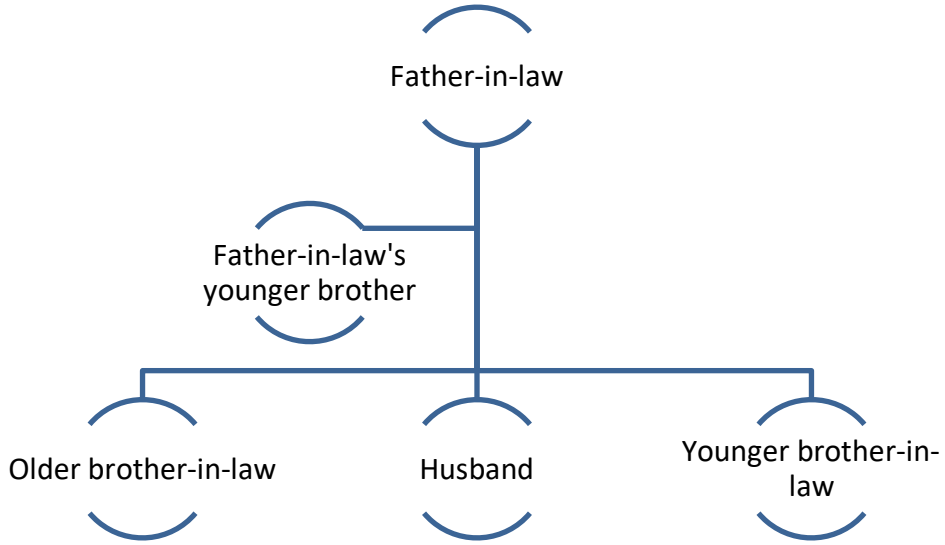


Figure 5. Age hierarchy in male decision-making in select households in Rangpur, Bangladesh.

It is important to note that in some households, the hierarchy of decision-makers did not include women. Or, if it did, women were last after the youngest male member in the household.

Family planning decision-making. The family planning decisions were ones where women did have a voice. For example, a couple in Mithapukur lost their preterm baby. Fifty days after the loss of the child, they had a discussion on which contraceptives to use. They spoke and decided that the husband would use a condom. Her husband accepted her suggestion of condom use. In the following quotation, another male partner described the decision-making process that led to his wife and him using a condom, which was influenced by multiple negotiations with his wife. The man was not happy using condoms, and the woman started using oral pills. However, she experienced nausea and headaches with the oral pills and switched to injectables.

> *She used oral pills. Then again we went for SMC Soma-Jet injections. After the injection, her hand started hurting. After a few days the pain continued to increase. So, she stopped having SMC Soma-Ject injection. She started using oral pills. Sometimes I use condom. I mean using condom does not give the normal satisfaction. (**IDI, partner of a woman with a recent PTB, Mithapukur**)*

Asking for permission?

We asked a married adolescent girl from Mithapukur whose opinion was most valued while taking a decision. She said, “Parents-in-law, followed by husband,” she said (IDI, married adolescent girl, Mithapukur). A theme that emerged from analyzing the decision-making data was that women needed to ask for permission from either an older in-law or the husband if they wanted to go out of the house. Actually, “asking for permission” was a gendered construct that applied only to women as men did not have to ask for permission to go outside the house.

As a result, men were in charge of seemingly small decisions such as buying soap due to restrictions on women's mobility. An unmarried adolescent girl from Taragonj, for example, said that she needed permission from her father to be able to go out and buy some soap. Similarly, among community women participating in an FGD in Gangachara, six of the eight participants said they required permission if they had to step outside the house, even to run small errands. Most of them were not permitted to go out alone. The women said their ability to go out was contingent on the permission granted by either a male relative or a mother-in-law. One woman said outright that she could not go out alone and was usually accompanied by either a female or male relative. Their voices are highlighted below.

> *Participant #1: Permission should be taken from my mother-in-law.*
> *Participant #2: I need the permission of my husband and my mother-in-law. Sometimes my husband drops me at college, sometimes my brother-in-law.*
> *Participant #3: There is no chance of going alone after marriage. I go where my husband takes me. My husband drops and picks me. My husband has doubts (is suspicious) when I go alone.*
> *Participant #4: I don't go anywhere without my husband.*
> *Participant #5: I need permission to go outside.*
> *Participant #6: My husband takes me if I need to go somewhere. (**FGD, community women, Gangachara**)*

Men in an FGD from Mithapukur echoed what these women said. In their opinion, women needed permission to go to the market, to someone's home, or to a health clinic. The requirement of "asking permission" serves to control women's mobility and limits their decision-making powers. Men, too, took it as normal that women were required to take permission. They said.

> *"Participant #1: [She who] is obedient to her husband, she has to take permission to go outside of her home. Like to the market, to relatives' home, and hospital. They must get permission.*
> *Participant #2: If it is close then no permission is needed for going outside the house, but if it is a far distance from the house, then they must get permission.*
> *Participant #1: The husband, the mother-in-law take [her] for the (ANC) checkup. (**FGD, community men, Mithapukur)***

Communication with other household members

As with help, communication within the household was both gendered and hierarchical. Women described talking with other women – their mothers, sisters, sisters-in-law, or mothers-in-law – about personal issues or problems. Health issues, including family planning, were discussed with other women, rather than other men. Adolescent girls talked to their parents about their problems but clarified that conversations about health issues or menstruation took place with their mothers or sisters.

Communication within the household was, however, not unrestricted. Women mentioned restraint and not sharing all of their secrets with their families out of fear of what might be said.

In the following quotation, a woman explained how she planned not to share with her mother-in-law that she was using a contraceptive method.

> *Interviewer: Suppose that, don't you think ever that you should have let her know about the pills you are taking? When will you let her know?*
> *Participant: I think I will never let her know…She will get angry…*
> *Interviewer: Do you think your husband can manage her then?*
> *Participant: Definitely, She will be ok if he can make her understand. (**IDI, woman with no children currently using a contraceptive method, Taragonj**)*

Household communication dynamics were also influenced by a woman's age. In an FGD with men in Mithapukur, participants explained how a daughter-in-law's age intersected with her hierarchical role within the house to influence her openness with her in-laws.

> *Another major reason is child marriage. Young married girls feel hesitant to be open with their husband. They also need to tell their mother-in-law as well. Young brides feel very shy to share such matters [pregnancy and early antenatal care-seeking] with anyone in their in-law's home" (**FGD, community men, Mithapukur**)*

Younger women were less able to talk freely within the household compared to older women.

Strictness and anger in the household

Strictness and anger were related not only to gender, but also to hierarchy within the household. Mothers-in-law and men, including women's husbands, brothers-in-law, or fathers-in-law, were often considered to be household members who were most strict or angry. Being angry or quarrelsome was, particularly for men, considered to be part of a person's personality or related to their role in the household. As one man from Gangachara said, "my *father is the rudest, but he has to be, he is the guardian,*" reinforcing the link between fatherhood, providing, and being rude (IDI, partner of a woman with a recent PTB, Gangachara). Anger was the product of departures from expectations. Frequently framed as errors, anger was seen as the reaction of household members to an individual's mistake. As one married adolescent girl from Mithapukur said, "*if I make a mistake, they are angry*" (IDI, married adolescent, Mithapukur).

Quarrels were not commonly reported. Descriptions of household quarrels were often minimized, with participants saying that it was natural for households to have arguments. As one adolescent girl said, "*Yes, sometimes it's happened. But I think it is very natural as we are living together*" (IDI, married adolescent, Gangachara).

Strictness was understood as a denial of opportunities, restriction of mobility, or impingement on freedom, particularly by adolescents. Such strictness was often associated with a woman's in-laws. In the example below, the participant from Gangachara contrasted her life at her in-laws' home with her life in Dhaka. She said,

*My mother-in-law likes wearing the Hijab and praying five times in a day. Sometimes I do work, or something else, or going out for an occasion. She told me to wear Hijab. I do like shari. Then she gets upset as I reject her advice, and you know that now this is a modern era. So [it is] things like this with her. (**IDI, woman with a recent full-term birth, Gangachara**)*

Stress and tension in the household

Discussions of stress and tension within the household were often linked with women's dynamics with their in-laws. While a minority across households in Bangladesh, some household environments were particularly toxic and characterized by psychological or emotional violence, with more difficult dynamics influencing women's mental health. The following quotation, while difficult to read, reflects the severity of the experiences of some daughters-in-law. The participant, from Gangachara, recently experienced a PTB and the child did not survive.

Interviewer: Among these 14 family members, how many are strict or rude?
*Participant: All are rude. No one considers that I live far away from my family. Most of them can't even tolerate me. Sometimes they create such a situation that I can't even get out of my room. I feel so much shame. I feel so much disgust. I feel like I should end my life by hanging or pouring poison down my throat. [She began to cry from this moment]…My husband was in Chittagong, in Dhaka. I was here with my children. I don't know if I should tell [you] this. But I would never forget how badly I was treated by my in-laws. My mother-in-law told me that they didn't know me. I had no value here. She even threatened to kill me by poison. She even told me that she was going to make me mad by giving me anti-rabies…They said that I had no one here, so if they killed me no one would know. I only stayed here for my two children. They are angry because I had an affair with my husband and married him. Even they dragged me out of the house and locked the door. My mother-in-law is a dangerous person. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

We explore women's conflicts with their mothers-in-law in more depth below.

Conflict with one's mother-in-law

Tension between the daughter-in-law and mother-in-law was frequently cited by all participant types. While some leaders emphasized that the situation had improved, tensions between daughters-in-law and their mothers-in-law emerged often in conversations. Tensions related to women's workload – even when pregnant – were common. Other topics included decisions about having kids, whether to use a contraceptive method, or where to give birth. Multiple examples were shared of critiques mothers-in-law made of their daughters-in-law. In the conversation below, women explained how mothers-in-law would draw comparisons to their own experiences to justify their criticisms of their daughters-in-law.

Participant #1: Village people. Mothers-in-law say taking rest all the time is not good. Working is good for [your] health…
Participant #2: In the past they said, "We delivered babies while breaking the paddy in the pile."
Participant #3: People say, "Now mothers go to the hospitals, do C-section delivery because they don't do heavy works."

> *Participant #2: They say, "Now, mothers need to go to the health facility, get checkups, get ultrasounds. We didn't do any [of that] in our time." (**FGD, community women, Gangachara**)*

A woman recently experiencing a PTB whose child did not survive echoed this point. She said,

> *The problems are mine, so I get my husband. But it causes household problems. Suppose my husband helps me do something while I'm sick. My mother-in-law remarks like, "We always did our task by ourselves, no matter what the situation was. I never saw that man do household chores. I did my job even if I might die." (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

Such comments could have a tangible effect on women's well-being. In the following quotation, a participant – who suffered from multiple PTBs – explained the effect the comments of her mother-in-law had on her. She said:

> *Yes. They do [say things]. It makes me sadder…They said something that makes me more distressed…Sometimes they said unintentionally. But sometimes they said such things only to hurt me. (**IDI, woman with a recent PTB whose child did not survive, Mithapukur)***

She also explained how husbands were often pitted between their wives and their mothers in arguments. Disputes would occur as a result.

> *Suppose a woman lives with her in-laws. One day there is a dispute between her and her mother-in-law. Later the husband must learn who is to blame, who has done wrong. When the man beats his wife listening to his mother, everybody says the man only listens to his mother. On the contrary, if the man supports his wife, people say that he only listens to his wife.*
> *Interviewer: Do this cause family disputes often?*
> *Participant: Yes. (**IDI, woman with a recent PTB whose child did not survive, Mithapukur**)*

Violence, as described in the quotation above, was often the product of such disputes within the household.

Stress and tension during pregnancy

Despite stories of families and husbands supporting pregnant women to reduce their workload, pregnant women also felt pressure to work during pregnancy.

> *Participant #1: Yes, they say that. "Can't you work, so what if you are pregnant? You spend all day only by laying down and sitting…" They gossip. They also say the mother [is] good if she works during pregnancy…*
> *Participant #2: Yes, they say [these things]…*
> *Participant #3: Yes. They say that, those who are involved in work, they will not face any problem; but who don't work, they will have to have C-section. (**FGD, community women, Taragonj**)*

Stress and tension within the household during pregnancy was often discussed in relation to women's health, worries about the delivery, and the health and future of the baby. While

mentioned infrequently, the sex of the baby also emerged as a source of stress in the household. Financial concerns were also mentioned by men in an FGD in Mithapukur:

> *Participant: After the birth of the baby, they remain tense thinking about what would happen to the baby if they don't stay alive. They ask to pray for them. Everyone in the women's family stays tense.*
> *Interviewer: Why does they stay tensed?*
> *Participant: Many families remain worried if the husband wants a boy and it turns out to be a girl. Many quarrels happen in between the families. And they also remain worried about financial matters as well. (**FGD, community men, Mithapukur**)*

Stress related to pregnancy could lead to quarrels within the household.

Ethiopia

As in Bangladesh, most households were reportedly supportive and kind according to participants. Strictness was a minority, with participants weighing strictness as one out of four hands or characterizing only one or two households out of ten as strict.

Help with women's household work

Sources of help and support for women in their household work were highly gendered. Mothers were, for both women and men, overwhelmingly described as the most kind or compassionate person in the household. One married adolescent girl from West Gojjam explained, "*She is always there for me, she fills the gaps I have and because I tell her everything, she tries to fulfil what I want and support me as much as she can*" (IDI, married adolescent girl, West Gojjam).

Women in general, including mothers, mothers-in-law, sisters, and daughters-in-law, were mentioned as sources of support, help, or kindness. Women's husbands also offered their wives support, particularly during pregnancy. Multiple examples shared by women, extended family members, and spouses of women that experienced a recent PTB illustrated the ways in which men supported their wives.

Despite these sources of support, there were cases where women did not have access to help. Married adolescent girls in particular emphasized not having help with their work. "*Nobody helps me*," one said (IDI, married adolescent, North Gondar).

Communication and power dynamics in the household

The Ethiopian rural couple communication context suggested that women's and men's interactions were constrained by the quantum of physical work done by both, but especially women. Women, in addition to their household chores, have to look after children, take care of farming tasks, and also take care of domestic animals. Pregnancy further added to the workload of women as they had little or no assistance.

Discussions around contraceptive use

Couples communicated in different ways about contraceptive use. Women and married adolescents both indicated a willingness to start contraceptive use at the onset of their married lives or soon after the first birth. Data indicated that disagreements arose between couples over the necessity of using contraceptives and wanting another child. Women often said that they skipped discussing this issue with their husbands for fear of rebuttal and instead opted for a surreptitious route to using contraceptives. For example, a married adolescent girl from north Gondar described her conversation with her husband on use of contraceptives. Her husband initiated the conversation and said he wanted a baby, but the young wife disagreed. She said she was too young for motherhood and that they did not have enough money. As a result, she preferred to use contraceptives. She also added that her husband talked more than she does, but she does express her opinions.

Another example related to spousal discussion around contraceptive use was that of Abeba (name assigned), a married adolescent from South Gondar who delivered a baby about three months prior to data collection. Her husband was eager for her not to use contraceptives so soon after the birth of their child. "It will change the mood," he said. But Abeba went ahead and started using contraceptives. She was not ready to conceive so soon again. As a result, she went ahead and started contraceptive use on the 85th day after her child's birth.

Another married adolescent said she used contraceptives secretly as she did not trust her husband. She feared what might happen if he said "no to contraceptive use." She said, "*I don't trust my husband; he may refuse my contraceptive utilization. He wants to have a child, but I don't trust him because he may divorce me" (IDI, married adolescent girl, North Gondar)*.

Restricted spousal communication

A few couples exhibited a pattern of limited or restricted communication. There was minimal discussion and sometimes even lack of trust from women's perspectives. Our data suggested that often couples who had a PTB did not communicate effectively. For example, a woman from North Gondar had a preterm baby that did not survive. Her sister-in-law said:

> *My sister-in-law was pregnant most recently. During her pregnancy she made injera, and wot, she also looked after their domestic animals. Then she got sick and was taken to the health center. She was treated. She had fights with her husband. He is very authoritarian. He oppresses her. She is always afraid of him. She is easily terrified (IDI, extended family member of a woman with a recent PTB, north Gondar).*

Some husbands used a commanding and prescriptive tone in their interactions with their wives. This is illustrated in the quotation below.

> *I tell her to give food to the child on time. I also tell her to make the child get adequate sleep. We discuss these issues every day. We discuss the need to get the child treated in time when he gets sick. (**IDI, partner of a woman with a recent PTB, North Gondar**)*

We observed that restricted communication occurred in households that were characterized by a stressful environment. Men admitted to sometimes verbally abusing their wives. As the following partner of a woman with a recent PTB said,

> *When I come back home from work, I may see household goods scattered here and there. I will ask her why she remained indifferent when chickens scattered the grain all over the ground. She may complain of too much work. But immediately both of us get cool and come to our senses. Sometimes it is natural to disagree. You can be angry when you are tired. You may feel tired of working in the field, such as preparing the land, threshing, mowing, and harvesting. At that time, you may be tempted to say some offensive things to her. (**IDI, partner of a woman with a recent PTB, North Gondar**)*

The three examples of restrictive communication described above were from households that experienced a preterm birth. The promotion of couple communication could have a major role in providing women with the support they require at the household level.

Open communication

Open communication between couples was also described during interviews and FGDs. In these instances, the woman felt free to initiate discussions, to voice her opinions, and often was able to make decisions. We provide an example from North Gondar of a woman who had a normal delivery for her most recent child. She discussed her children's illnesses with her husband. She said,

> *When we sit down by chance while resting during night time, for instance, whatever it is, be it flu, or when our kids get hurt, we discuss about where to take them, we discuss to which health centers to take the children when they get sick. (**IDI, woman with a recent full-term birth, North Gondar**)*

This quotation illuminates how when this woman's daughter developed a severe skin infection on her head, they immediately took her to a health center. An immediate referral to Dabat resulted in child's complete recovery from the infection.

Decision-making

As described above, we asked study participants who the primary decision-maker was for major decisions (e.g. contraceptive use, when to have a child, taking an ill child to the health center, or buying new clothes for children) and minor decisions (e.g. buying soap, buying vegetables, or deciding what to cook for dinner). Unlike in Bangladesh, where many decisions were influenced by discriminatory gender norms such as limited mobility or having to take "permission" from one's husband, evidence from Ethiopia demonstrated that women did not need to take "permission" to go out. Pregnant women and women with a child under two years from West Gojjam said in an FGD that they had freedom to go out alone and that they go where they want.

> *Facilitator: Do women or girls usually go to places you want to go, freely and alone?*
> *Participant #1: Yes we do*

Facilitator: Are there places that are risky for you?
Participant #1: No, in the past, we used to be afraid. Because back then there were bushes and trees, and around those places there could be many bad boys who wanted to rape little girls. But now there is nothing that worries us, that place is cleared and it is a field now, so we travel as we want.
Facilitator: So you can send your daughters away to different places? Alone?
*Participant #1: Yes they can go." (**FGD, community women, West Gojjam)***

Similarly, several men in an FGD from South Gondar, for example, said women that did not require permission.

Facilitator: When they go, must they get permission from their husbands?
Voices: No…
Participant #1: If she gets sick and I am not around…she can go….
Participant #2: He (the husband) would also go if she is sick – let alone asking for permission – I go with her….
Facilitator: This is in your household. But generally as a community, how is it?
*All: It is the same. (**FGD, community men, South Gondar**)*

Decision to use a contraceptive method

Family planning decision-making was complex. there were several instances in Ethiopia where women and men were both involved, or women made the decisions themselves. For example, a woman described how she and her husband discussed contraceptive use immediately after their marriage. At first, her husband said that they should wait, but later when she said she would like to start immediately, they visited the health center the same day. She started on injectables and visits the health center routinely.

In contrast, other participants described a changing trend was evident among young couples. Several couples described preferring to use contraceptives before their first pregnancy despite existing social norms that encouraged them to give birth immediately after (See Chapter 12). As a young married adolescent girl told us:

I married on a Sunday, and I took the contraceptive method before the ceremony on Tuesday." Did she consult her husband? "*No I didn't, because he wasn't available at that time*. (***IDI, married adolescent girl, North Gondar***)

Disagreements within the couple related to contraceptive use. In one instance, a couple who had recently had a PTB whose child did not survive disagreed on using contraceptives immediately after the loss of their preterm baby. Hiwot (name assigned) described her situation when she had a PTB and her husband started to ask for another baby. Hiwot disagreed with her husband and wanted to start using contraceptives. She said,

No, because I know the problem and the pain, I refused accept his idea. However, he is repeatedly asking me to have a child. I planned to use the birth control. However, when he [her husband] talked to me to replace with a child we saw, because the child is in my eyes, within my

> *heart, I want to give birth. Therefore, I am halfhearted. I did not decide yet. (**IDI, woman with a recent PTB whose child did not survive, North Gondar**)*

Hiwot was confused as she became emotional about the child. She says she had not decided what to do and was now "halfhearted" about using contraceptives.

Men as the main decision-makers of contraceptive use. Apart from disagreements, a few men felt that their preferences should prevail and that their wives must follow their wishes. A husband of a PTB child, when asked by the interviewer if he would permit his wife to contraceptives secretly, said "

> *That is forbidden. She has to consult me. She will tell me that she needs to use injectables but she will do the same only if I allowed to her. If I told her that we have to have an extra child, which is a must. She will give birth. (**IDI, partner of a woman with a recent PTB, North Gondar**)*

Similar stories were shared by women and extended family members interviewed as well. For example, a mother of a PTB from North Gondar said that she was not keen on conceiving right after marriage and wanted to use contraceptives. She felt that she was too young for motherhood and wanted to study. However, her husband wanted a baby soon and finally she relented and conceived. After her recent PTB, now she and her husband are discussing the use of family planning methods. As an extended family member of a woman who had a PTB said:

> *Participant: It is usually the husband who decides on contraceptive use. Because he has to decide this based on their lives. He is a farmer, he lives on what he gets from his farm, so he has to think about the situation and may say that they have to wait a bit to have a child. So he will tell her to use contraceptives.*
> *Interviewer: So, it is because he is the one who is making money?*
> *Participant: Yes, after two or three days of discussion, she will go to the health post and get the injection*. (***IDI, extended family member of a woman with a recent PTB, West Gojjam***)

Decision-making and control over money

As suggested by the above quotation, the person who had control over money was more likely to be the main decision-maker. Often it was men, but there were women who earned an independent income and made independent decisions. A woman in an FGD from North Gondar said:

> *I have poultry in my home. I sell chickens and their eggs and buy [things] myself. I don't ask him for small things. I ask him when I want to buy big things like buying cereals. (**FGD, community women, North Gondar**)*

"*I can also get money easily. I prepare and selling 'Tella'. I can use my money for anything I think is necessary without his consent. It is my money*," said another woman from the same FGD.

However, many women reported small decisions such as buying soap for the house as being taken by men as they controlled the money. *" I couldn't get money. So, he was the decision maker always. I tell him to buy [things] and he does it by himself*," said a woman participating in an FGD in North Gondar.

Strictness and anger in the household

Strictness was highly gendered. Men were, overwhelmingly, considered to be the most strict members of the household. While few households were characterized by severe strictness, women and adolescent girls understood strictness to be a restriction on women's mobility, independence, or opportunities. According to one unmarried adolescent girl in West Gojjam, her household was strict because she was denied the opportunity to go to school as a result of expectations of her in the household:

> *Interviewer: Ok, then how much would you rate your household compassion on a scale of 1 to 10 or percentage?*
> *Participant: I would give 80 out of 100 [for compassion]…Because always I get my meals properly and on time, I don't feel pressured, but I deducted 20% from it [because] sometimes I wasn't allowed to have time of my own to study my courses as a student. I have to do my share of tasks in the family. For example, sometimes I would go to look after the cattle or dig out potatoes or take care of the plants. When all the chores keep me busy, I don't get that much time to study so I get sad about this. That's why I assigned 20% for strictness and 80% for the compassion and supportive environment (**IDI, unmarried adolescent, West Gojjam**)*

Strictness was also associated with expectations that women do specific work within the household. When such household expectations were violated, household members got angry.

Stress and tension in the household

Community leaders and household members explained that stress and tension within the household was often caused by poverty, lack of resources, and issues related to land inheritance. One health extension worker explained this by explaining how limited resources prevented all households from being helpful to one another. She said, "*All of them are helpful to one another if they have the resources*" (KII, midwife, North Gondar).

Conflict with one's mother-in-law

Some local stakeholders, including health workers and community leaders, explained that while there were households where mothers-in-law were strict with their daughters-in-law, this was not as significant an issue as it used to be.

> *Previously mothers-in-law were very strict… they looked at their daughters-in-law as their own daughter…. Thus, they reprimanded and ordered them as they like…. But nowadays, they know their daughter-in-law has a right… they fear she might go away feeling hurt because of what they say to her. (**KII, religious leader, South Gondar**)*

However, there were multiple cases where mothers-in-law and daughters-in-law did not get along. It was emphasized, during conversations, that this happened occasionally. One such

example is highlighted below. In the following excerpt, one woman who recently had a full-term birth from South Gondar explained how she disagreed with her mother-in-law about where to give birth when she was pregnant.

> *My mother-in-law said, 'Why is this generation insisting on going to health center. Why don't you give birth at home? We gave birth to seven, eight children at home.' I replied, 'That was in your time; there was no health service near you like at present. To get a healthy baby and to be healthy, one should give birth at the health center'… (**IDI, woman with a recent full-term birth, South Gondar**)*

A health worker in North Gondar also highlighted how mothers-in-law would, drawing on their own lived experiences, advocate for practices such as home delivery despite other recommendations to deliver in a health facility.

> *Some mothers-in-law are strict with their daughters-in-law. They are very much resistant to institutional delivery. They want their daughters-in-law to deliver their baby in their house. The problem is still persistent/continual. We need to do more to change the way of thinking in the community. (**KII, health extension worker, North Gondar**)*

Alcohol use

Women linked men's alcohol consumption with conflict, insults, and violence that they experienced within the household. The following quotation highlights how one woman's husband would insult her upon returning home drunk. Such behavior happened during her most recent pregnancy.

> *Participant: Yes, when I was pregnant during my fifth month of pregnancy. Being insulted is common. He drinks alcohol and Areqi. His insulting is countless.*
> *Interviewer: Did he get drunk?*
> *Participant: Yes*
> *Interviewer: Does he get sloshed sometimes or daily?*
> *Participant: Had it been sometimes, it would not be a problem. He gets sloshed every day.*
> *Interviewer: Did he get sloshed with tella he buys or with tella you prepared at home?*
> *Participant: He gets sloshed with tella he buys. (**IDI, woman with a recent PTB whose child did not survive, North Gondar**)*

Stress and tension during pregnancy

According to adolescents, women, and men, pregnant women were often concerned about their own health and the health of their baby. Unintended pregnancies or those with short birth spacing were often the cause of increased tension. Pregnant women were, according to participants, worried about what would happen to their family if they were to suffer during pregnancy.

> *Participant #1: Yes, they get stressed…At the beginning when they become pregnant nausea happens and this stresses them. Secondly, they think that they are in the hands of God and will think a lot about their due date and when they will get some rest after all this… […]*

> *Participant #2: Firstly, if they have children, they worry saying "What if I die, what will happen to my children, or who will take care of them." Secondly, they worry about the unborn child, whether he/she survives then they think about what would happen to their father and mother, and their husband. (**FGD, community women, West Gojjam**)*

Stress was also linked to women's workload. As one woman said in an FGD in West Gojjam, "*If we do easy works there is nothing to worry about*" (FGD, community women, West Gojjam).

Men in an FGD in North Gondar voiced a distinct concern that echoed larger stressors within the household: finances. During pregnancy, these men considered households to be under stress because not all needs could be met.

> *All members of the household are under stress. We wish her a good delivery of her child. Not all her needs are being met because of economic reasons. Not every type of food recommended by the health worker can be offered to a pregnant woman. As a result, the couple is coming under severe stress. For instance, we frequently eat injera made from sorghum. This is not enough for a pregnant woman. Now many of the young people here in our neighborhood are landless. They cannot grow vegetables because of a lack of arable land. For instance, we supplement our small income by working as a daily laborer. We cannot meet all the requirements of our partner with minimal income. Because of this problem we are under constant anxiety. But economically rich households can fulfill the needs of the woman and make her free of stress. Ill-health and stress are caused by poverty. (**FGD, community men, North Gondar**)*

Mali

In Mali, households were often described as kind. While strict households existed in the communities where this study was conducted, they were less common. Instead, households often had certain members that were understood to be angry or strict by participants.

Help with women's household work

Women's in-laws – including their brothers-in-law, father-in-law, sisters-in-law, and mother-in-law – were all mentioned as helpful. Such support was not just helping women with household work, but also going to the facility for birth. The importance of this support was highlighted as men's obligation or responsibility. One man during an FGD in Koutiala said, "*the man is obliged to help the woman because you can't bring the woman from her parents' house and not help her*" *(FGD, community men, Koutiala).*

However, not all women reported receiving help at the household level. Help with work appeared to differ by age; adolescent girls, particularly those married and living with their in-laws, said that they did not receive help with their work. Unmarried adolescent girls echoed these sentiments. In their opinions, if unmarried girls did receive help it was from other women or children.

Communication and power dynamics in the household

Restricted spousal communication

Narratives from both married women and men in Mali brought to light several ways in which spousal communication was restricted: 1) no communication whatsoever; 2) minimal communication; or 3) male-dominated communication. Some couples did not discuss health matters at all and any health-related decisions were made by the husband. This was true of Moussa, a husband from Kadiolo:

> *Facilitator: Does your wife usually speak to you about a health problem?*
> *Participant: No*
> *Facilitator: Do you, yourself, ask your wife about her state of health?*
> *Participant: No.*
> *Facilitator: So when she is sick, she will tell you?*
> *Participant: Yes.* **(IDI, partner of a woman with a recent PTB experience, Kadiolo)**

Later on, when asked whether he discussed specific health topics with his wife, Moussa simply responded no. He expected his wife to bring any health problems to his attention and anyone who was sick would be taken to the health center. There was no expectation of spousal communication. In these types of marital relationships, husbands and wives operate in separate realms circumcised by clear gender roles: women must manage the house and children without making a fuss, while husbands are responsible for making household and economic decisions.

For other couples, conversations were limited to some but not all health topics. Of all the health topics we explored, couples talked less openly about contraceptive methods. Some couples did not broach the subject because one or both spouses felt uncomfortable or disapproved of contraception. This was the case for Animata, a married adolescent from Koutiala:

> *Interviewer: With whom do you talk to about using contraceptive methods?*
> *Interviewee: I don't talk to anyone about that.*
> *Interviewer: You don't talk to your husband about that?*
> *Interviewee: No, he doesn't want to. He doesn't approve of us talking about contraceptive methods.* ***(IDI, married adolescent, Koutiala)***

Even among couples who seemed to discuss a range of health issues, husbands could dominate the conversation. When asked if he and his wife talked about the family's health, Ousmann, a husband from Sikasso, replied: "*Yes, but generally it's me that talks to her about health.*" (IDI, partner of a woman with a recent PTB, Sikasso). In their household, conversations do not flow in two directions, but rather he talks and she listens. When the conversation turned to family planning, a stricter and more authoritarian side of Ousmann emerged:

> *Interviewer: You said that your wife did not use family planning at the moment because you would like to have children, correct?*
> *Husband: Yes, that's right.*

Interviewer: Was that your decision or did you both decide it was not the right time to use family planning?
Husband: The decision was mine.
Interviewer: Did you talk to someone about it?
Husband: No, it was my thought.
Interviewer: But what was your [wife's] reaction after that decision, was she ok with it?
Husband: I didn't talk to her about it.
Interviewer: And if she does it despite you telling her not to?
Husband: That's not a problem for me.
Interviewer: Will she be ok with listening to you when you tell her not to do it?
Husband: Yes, she listens to me and if I tell her not to do something, she won't do it.
(**IDI, partner of a woman with a recent PTB, Sikasso**)

Open communication

There were several examples of couples who spoke openly and freely with each other. Amadou mentioned that he and his wife had a good discussion not long ago about some dental issues she was experiencing. He recalled that they both spoke calmly and that neither one spoke more than the other. When asked how satisfied he was with the conversation, Amadou said "*During our conversation, I was very satisfied because a conversation between a husband and his wife is blissful*" (IDI, partner of a woman with a recent PTB, Kadiolo).

The interviews also provided glimpses of tender and compassionate interactions among couples, especially among married adolescents. Mariam, a married adolescent from Sikasso spoke effusively about her husband, "*he told me that if I am sick to tell him...to tell him when I am sick, that he'll take care of me.*" (IDI, married adolescent girl, Sikasso). And her husband is a man of his word: "*when he knows I am sick, he takes care of me before I get even sicker.*" Similarly, Amata, a married adolescent from Kadiolo described how during her most recent pregnancy her husband was the first to notice that she was not well and possibly suffering from malaria: "*When it started, he asked me, but I told him it was nothing. Two days later I realized that I was getting worse and told him*". They then went to the health center together to find out what was wrong. (Married adolescent, IDI, Kadiolo)

It is clear that these relationships are based on love and respect for the other which in turn facilitates trust and openness. At the same time, these couples did not necessarily talk about all the health topics we probed about. For instance, Amata and her husband have not discussed family planning, did not discuss where she would give birth, and have not talked about their children's health. Amata did not explain why she has not had such conversations with her husband, especially given their trusting relationship. Similarly, Amadou said that he and his wife have talked about their children's health but none of the other health topics because " *if the children are suffering, then the parents will suffer, too*."(Partner of PTB, IDI, Kadiolo). It is therefore important not to conflate openness with willingness to discuss everything.

Couple communication around contraceptive use

In light of the hesitancy around contraceptive use, we explored how couples navigated this topic. Some women expressed a desire to use contraceptives but were not allowed to by their

husbands. Five years ago, health workers recommended Fatouma use a contraceptive method. She recalled how her husband flat out refused when she brought this up with him: "*he said because I don't yet have a child, I couldn't use a contraceptive method now*" (IDI, woman who had a recent PTB whose child did not survive, Sikasso). Authoritative and direct, Fatouma's husband made no attempt to consult his wife and understand her wishes. While Fatouma's husband does not seem completely opposed to using contraceptives, he has not communicated with his wife about when he thinks they should be used or solicited her inputs. Women could get around spousal opposition to family planning by using contraceptives in secret, although if a husband found out, it could lead to quarrels (FGD, community women, Koutiala).

Not all husbands were unsupportive. Seydou, whose wife recently had a PTB and whose child survived, reacted very differently when his wife asked him if she could get an injectable contraceptive method after having her first child. He was very supportive of her wish:

> *When she told me that she wanted to use a contraceptive method, I told her it was not a problem and that birth spacing is a good thing for the father who is calm and for the mother who will also be calm*. **(IDI, partner of a woman with a recent PTB, Koutiala)**

Nevertheless, Seydou's wife felt the need to get his approval. This was a consistent theme in the narratives from Mali and demonstrates the influence of gender norms on the communication dynamics between couples.

Decision-making

In Mali, men were the primary decision-makers within the household. Decision-making tended to fall along age and gender lines. In some households, the hierarchy of decision-makers started with the eldest male, often the husband's father, and worked its way down to the youngest male member before crossing over to the female side of the family. In other households, the hierarchy was based more heavily on age than gender, with the husband's father being the first in line to make decisions followed by the husband's mother. Within a household, the same set of individuals were often responsible for making all types of decisions and purchases.

Men held more power within the households because they controlled the money. The narratives make clear that as men, it is their responsibility to provide for the household and manage household expenses. While the burden of this responsibility falls primarily on the head of the household, it can be shared by other men:

> *Facilitator: If a child is sick, who decides if the child should receive treatment?*
> *Interviewee: If the child is sick, you take the child to the head of the household who will go find treatment for the child. If the head of the household's treatment doesn't work, then the husband has to go find treatment for the child.* **(IDI, married adolescent girl, Sikasso)**

A fair number of women that we interviewed reported being able to make small purchases such as soap, food, and clothing for children. Women were often able to do this if their husbands were not at home or if their husband had given them permission to do so. A unique example

comes from Amadou (described earlier). In his household, a woman did not need permission from anyone in the household to go buy soap, food, and condiments (IDI, partner of a woman with a recent PTB, Kadiolo).

Despite several accounts of open communication, couples rarely made decisions jointly. When probed further about these co-led decisions, it became apparent that men held more power:

> *Interviewer: You had a baby. Or rather you want to have a baby, who gives permission for that?*
> *Interviewee: The two of us.*
> *Interviewer: The two of you, you and your husband?*
> *Interviewee: Yes. It's the husband who gives that [the permission], right?*
> *Interviewer: The question is for you. Who gives permission?*
> *Interviewee: The husband.* **(IDI, married adolescent girl, Kadiolo)**

Communication with other household members

Women were not uniformly comfortable being open with their families. In Mali, several women with a PTB described living in households where people were guarded with their families. As one woman said, "*we don't tell the members of the household everything, we put up with it*" (IDI, woman with a recent PTB whose child did not survive, Koutiala).

These dynamics contrast those described by other women, such as the woman with a full-term birth below.

> (*Laughs) I really don't have a problem with anyone in our household…well there is no strict person, our head of household is there, he likes the truth, he doesn't like things that are not clear, everything that happens you have to tell him the real version. Otherwise he doesn't like things that are not clear." (**IDI, woman with a recent full-term birth, Koutiala**)*

Strictness and anger in the household

It was common for participants of all types to identify one or two people in the family who got upset or angry quickly. If they clarified who these people were, it was often the mother-in-law, household head (not necessarily the participant's husband), or a generalized other. While getting angry easily was sometimes considered an aspect of someone's character, it was also seen as the response to mistakes or people not following the rules.

> *They don't talk too much, well if someone doesn't talk too much, at the slightest mistake by another person, he gets angry. Because he gets it in his head that he doesn't make that mistake, so he doesn't want others to make that mistake either. (**IDI, partner of a woman with a recent PTB, Sikasso**)*

Stress and tension in household

Spouses and mothers-in-law were the principal sources of stress and tension for women. According to one community leader, it was the younger generation of women that was the source of tension.

> *Participant: It's the children who cause these stresses/tensions. Between the women themselves, there is the problem there, if not with the mothers-in-law, it's easy at that level.*
> *Interviewer: Is it easy with mothers-in-law?*
> *Participant: Yes. It's between the women themselves that there is always the problem…Otherwise with the mother-in-law if she does something wrong, you explain it to her even if she's not happy, one day it will pass. It's between them that there's tension, you talk, and they don't listen to you, that's the problem. Otherwise for the mother-in-law side, it's very easy. (**KII, community leader, woman, Sikasso**)*

These conflicts are explored in more depth in the following section.

Conflict with one's mother-in-law

Perspectives of community leaders, men, and mothers-in-law differed from daughters about the nature of the daughter-in-law/mother-in-law relationship. Multiple community leaders, for example, perceived conflict in the daughter-in-law/mother-in-law relationship to be a minimal issue now. Multiple mothers-in-law chose their daughters-in-law as the kindest or most helpful to them, citing the work the daughter-in-law did in the household each day. One mother-in-law from Kadiolo said, for instance, "*Since she got married, I have never done any laundry. No, never. She washes my clothes. If she asks me for a favor also and if I can do it, I do it*" (IDI, extended family member (mother-in-law) of a woman with a recent PTB, Kadiolo).

In contrast, daughters-in-law themselves – and some of their partners – described the issue as persisting in their daily lives. Tensions with one's mother-in-law lingered in conversations with many daughters-in-law. These are demonstrated in the excerpt below, where the emotional effects of a mother-in-law's critical comments on a pregnant woman were clear.

> *Participant: Now I say this after the birth of the third premature baby, she said I'm hurting her and her son. That her child says that every year they spend money, when he didn't say that. That's why I say that she is complicated...she says that I make her and her son suffer, every year expenses...it makes me cry...I tell myself that it's not my will...*
> *…*
> *Interviewer: Now before you gave birth you were afraid to give birth without the child being full term?*
> *Participant: yes*
> *Interviewer: You were worried, why?*
> *Participant: [About] what my mother-in-law was going to say. (**IDI, community woman with a recent PTB whose child survived, Sikasso**).*

Stress and tension during pregnancy

Pregnant women described stress and pressure related to both family members (e.g. their husbands or other family) and work. Both adolescent girls and women emphasized the need to ease work to reduce the stress felt during pregnancy. In one FGD with community women, participants said, "*When you are [helped with your] tasks…with the help of a few people in work (young girls, co-wives), pregnant women are relieved. Childbirth can ease the pressure*" (FGD, community women, Sikasso). According to one FGD with community men in Sikasso, pregnant

women were more susceptible to stress. As such stress could be bad for the baby, it was important to be careful what one said.

> *You already know that when a woman is pregnant, she's not in the mood. So, if she's not in the mood, you shouldn't say anything shocking to her given that she's pregnant. Often when she gets angry, it can cause her problems that are not good for her. (**FGD, community men, Sikasso**)*

Similarities and differences across the three study settings

Across study sites in Bangladesh, Ethiopia, and Mali, participants emphasized that strictness and anger in the household was less common than kindness and help. However, households characterized by kindness and support also contained individuals that were strict or angry. While strictness or anger were sometimes considered attributes of someone's character, they were often gendered and hierarchical. Mothers-in-law, especially in Bangladesh, were often considered strict. In Ethiopia, men were overwhelmingly those individuals identified as strict or angry. In Mali, conflict between daughters and their mothers-in-law was considered less of an issue in households today by community leaders, men, and mothers-in-law, but underlying tension remained from the perspectives of women and some men. Dynamics were particularly challenging for younger women, across the three countries, with adolescent girls frequently citing in all three settings lack of help with work, restrictions on opportunities and mobility, and mistakes leading to anger in the household. Women in all three settings also described work or workload as a principal source of stress or tension during pregnancy.

Contextual differences emerged across settings. In Ethiopia, financial stress and alcohol use were contributing factors of conflict within households. While tension between daughters-in-law and mothers-in-law emerged as a cross-cutting issue across all settings, women in Bangladesh emphasized more often the harmful effects of such disputes. In Ethiopia and Mali, community leaders, men, as well as mothers-in-law themselves highlighted that relationships between daughters-in-law and mothers-in-law had improved over time. However, in both settings participants – women, men, as well as health workers or even some community leaders in Ethiopia, for example – continued to cite examples of ongoing tensions and conflict between daughters-in-law and mothers-in-law.

Couple communication patterns seemingly varied across couples across the three countries, but the focus remained primarily on male-directed dialogue and communication in all three countries. In Ethiopia, due to constraints of work, participants seemed to have lower levels of communication while younger couples in Bangladesh showed more discussion between spouses. Mali exhibited a couple communication pattern where the gender roles of couples were so distinct that one man did not expect to have any discussions with his wife. For example, couple communication in Mali was reported to be much less compared to Bangladesh and Ethiopia. Each country provided insights on the context specific characteristics of couple communication, with all countries showing at least one pattern with underlying male dominance.

The decision making patterns, however, overwhelmingly demonstrated men's control over decision-making. In Bangladesh, restrictions on women's mobility severely hampered women's ability to make independent decisions. The lone exception was in the area of family planning, where women did have some voice and decision-making powers. Women's decision-making was hampered by having to ask for "permission" to go somewhere or do something. In Ethiopia, decision-making was characterized by excessive workload for women and therefore there was little time for anything else. However, younger women and married adolescents were taking the leading in adopting contraceptives prior to their first birth. Similarities between Bangladesh and Mali include the gender-age male hierarchies, which gave older and younger men the power to decide for women.

Conclusion and recommendations for practice

This chapter explored the household contexts, characterized by kindness, support, strictness, anger, or stress, in which women live. Similarities across the three study sites suggest that strictness, anger, quarrels, and stress emerge in all households. Dynamics between spouses, or between daughters-in-law and their mothers-in-law, are an important cross-cutting factor that characterizes many household contexts. Gendered constructs, including mistakes and workload, as well as financial concerns and alcohol consumption also influenced dynamics within households – all with real-world implications for women's lives. Together, these factors suggest that a complete understanding of a pregnant woman's lived experience requires not only an understanding of stress and tension experienced during pregnancy, but also the larger household context in which she lives.

Examining couple communication and decision-making processes through a gender lens in the three countries provided a nuanced understanding of the micro-processes at the household level. This approach highlighted the complex interplay that often resulted in women either deferring to men's decisions or men outright making decisions on their behalf. We have identified four characteristics of couple communication which can help design interventions that promote women's decision-making.

Recommendations for practice include:

1. Promote equitable communication among couples where persuasive SBCC materials model women-led and women-directed conversations around key health behaviors. Entertainment education could include storylines that role model gender equitable relationships characterized by open spousal communication and equitable decision-making.
2. Promote discussion within the family around health behaviors in SBCC material sand interactions by including messages to discuss thee content with spouses, family, friends, and other key influencers.
3. Skills-building activities on open communication at the dyadic level, complemented by activities designed to foster women's empowerment, could encourage improve communication and more equitable decision-making among couples.

4. Use audience segmentation techniques to identify “at risk” households characterized by stressful household environments for intensive programming.
5. Work with men as well as mothers-in-law to develop a compassionate environment within the household including helping with household chores during pregnancy. This can be done in the following ways: 1) demonstrating positive role models in SBCC products and materials; 2) conducting interactive half day workshops with men, mothers-in-law, and other key influencers on this topic; and 3) working with community stakeholders on how the household can be the producer of good health if it has an equitable and compassionate micro-environment.
6. Develop SBCC materials that model different ways of resolving conflicts non-violently, promoting a peaceful and compassionate household environment.
7. Media campaigns should include a theme related to “compassionate households,” which will in turn induce a supportive micro-environment for health behavior change.

Chapter Eight: Other contextual factors

Economic vulnerability

Household economic vulnerability represents a significant challenge to preventing or treating PTB or accessing ANC services across study sites, as described in Chapters 5 and 8. However, when participants were asked about economic vulnerability in their communities, opinions were split, with several participants across study sites describing how most households do not experience poverty, or other households who experience conditions of poverty regularly. This section explores community perceptions of economic vulnerability or scarcity in each country.

Bangladesh

Several participants, whether a community leader or health worker, described how there were more job opportunities now than ever in Rangpur. One health worker described how "*many hundreds of women*" were working in garment factories, and a community leader described how there was less poverty now than when he was younger. Community leaders and other community members discussed according to their perceptions the reduction of community poverty through estimations of how many children and adolescents now go to school as compared to the past. However, despite the apparent job or educational opportunities that did not exist in previous years or decades, several health workers estimated that poor households outweighed both rich households and middle-class households, although these groupings were according to their own perception and not an official standard:

> *Out of one hundred, about 60 are poor 40 are rich. Rich doesn't mean they are very rich. It means they can manage well somehow. Here high society isn't high enough. Most of the people are poor. Maybe they have land. Maybe they have food. Nothing more than that. So poor are about 60%.* (***KII, health worker, Mithapukur***)

Other community leaders estimated poor households to be between 60% and 70% of the community. In another example from an interview with an adolescent girl, being poor was described as being landless. A community leader estimated 30% of families to be landless.

Participants described how many farmers did not have work during the kartik month (typically overlaps October and November). Without being able to farm, these community members cannot earn money. It was noted that there was not a lack of food in this time, only a scarcity of money. Nevertheless, some participants described how more and more community members participated in other various income-generating activities during the months when they were not farming. The poorest classes were described to be day laborers. The richest members of the local communities were shop owners in local markets. One community leader described how the middle-class often experienced the harshest economic conditions because unlike their poorer neighbors, they did not receive any financial assistance from the government (e.g. "*ration cards, allowance cards, cards for widows and so on*" (Community leader, male, Gangachara). Also, one participant described how middle-class pride prevented these

community members from accepting day labor jobs or pulling a rickshaw, which more vulnerable people were reported to readily accept.

Ethiopia

Research participants in Ethiopia did not frequently discuss community-wide poverty and its influence on community members. One health worker described how government social services helped poor households:

> *Some of them are daily laborers. Secondly, some of them are beneficiaries of safety net programs. They get assistance from the government. They entirely depend on safety net programs for their living. The assistance is hand-to-mouth. (**KII, health worker, North Gondar**)*

A community leader described the services that the government provided to families experiencing economic hardship, saying "*The government identifies them and provides supports such as free health services, hen breeding support, and loan support."* (KII, community leader, man, West Gojjam). However, in the context of Chapters 5 (causes, prevention and treatment of PTB) and 8 (perceptions of ANC), no participants reported that they received free health services as part of a government program. Perhaps awareness of these government programs was not widespread.

A community leader described how his community coordinated to help poorer families with farm equipment to prepare their land.

> *Also, no one is marginalized because of his economic status. Poor households who have no oxen are allowed to use their neighbors' oxen to prepare their land for crops or gardening. Additionally, their neighbors mobilize the community to prepare land for poor households. The poor household in return will help his neighbors by collecting their crops from the field. Poor households are not obliged to contribute money for religious ceremony. (**KII, community leader, man, North Gondar**)*

The "Iddir Social Network" was one community group mentioned that helped poor families to manage funeral ceremonies. The church was also reported to lend poor families loans without interest in times of need, as described in this passage relating to community assistance available to plant crops:

> *For instance, I may be running short of seed. Then, I will request someone to lend his hands to me. Next, he will lend me some seed. But I must pay back the seed in kind or cash. Or I can borrow money with or without interest. But if the lenders charge interest on loan they will be considered as heartless. Poor households also can borrow money from the church without interest. (**KII, community leader, man, North Gondar**)*

Mali

Whether or not the national policy is that preventive services such as ANC are free of cost, or whether treatments available for PTB are free, community participants overwhelmingly believed that healthcare services were too expensive for them to afford.

One male participant described how ANC services offered were a function of the amount of money you can pay. Another male participant summed up the difficulties that pregnant women experienced as being attributable to poverty in its broadest, most general terms. He said, "*It's poverty that makes them suffer*" (FGD, community men, Kadiolo).

Frequently, questions would be asked, and participants would redirect the answer to the more pressing issue of the financial deprivation that prohibited them from obtaining care. In the following example, the participant referred to the prohibitive costs of treating either fever or PTB:

> *Interviewer: Are there beliefs in your community about preterm babies?*
> *Participant: We have some beliefs, but we are requesting your help in reducing preterm births because those who have already been born [early], each time they have a fever, some also have to be taken to a place where they can be kept [in an incubator]. We don't have the money to do this… We keep them [the preterm babies] in Koutiala, but at Koutiala we really don't have the money. … Often you can pay 150,000 francs per month [roughly $348 CAD]. We are really looking for help. (**FGD, community men, Koutiala, Mali**)*

In the context of low employment and food scarcity, the probability of households having access to large sums of money was low. In the example below, another participant described how even relatively lower sums of money to regularly purchase prescribed medicines were scarce.

> *The Matrone prescribes medicines, but if we are prescribed medicines and if they are expensive, you cannot buy them, there are a lot of people who buy medicines one time but the second time they can't continue [paying]. (**FGD, community men, Koutiala**)*

While men described household poverty affecting their ability to pay for services for their wife, women similarly described the impact of poverty in terms of the inability of their husbands to pay for the services. Women rarely possessed their own money with which to use for their own healthcare. If they did describe having disposable income, it was small amounts, as in this story.

> *Often your husband doesn't have money, so when you find 50 francs, you have to save 25 francs and you eat [spend] the 25 other francs. Now, when you know you are pregnant, you take that money and give it to your husband so that together you can go for antenatal care.* (***FGD, community women, Sikasso***)

This female participant illustrated how her husband may not have money to pay for her services. If the woman herself found money, she saved amounts of money roughly equivalent to five cents USD. In this way, saving five cents USD at a time is far, far less than the cost of most medicines in Mali.

However, when asked to estimate how many households in the local community would be considered poor, many participants reported that poverty was not common in their

community. Health workers and community leaders all reported that they could think of less than ten households that would be considered poor in their community, but that it was rare. One health worker described that individuals in families may be poor, but due to the nature of households that have numerous people, someone could lend that individual money in a time of need.

Similarities and differences across the three study settings

Participants across study sites similarly described community-wide poverty as less common. When prompted to estimate the numbers of households who suffered economic hardships, the majority of participants in Ethiopia reported numbers of households below 10. However, in Bangladesh, some health workers and community leaders estimated that community poverty ranged from 50% to 70%. In Mali, participants simultaneously described economic vulnerability as uncommon and cited lack of access to resources as a major barrier to seeking healthcare (See Chapter 9).

Food insecurity

This section explores community perceptions of and experiences with food insecurity. This section does not focus on food insecurity during pregnancy explicitly but may include some participant accounts of food scarcity during this period. Rather, this section describes periods of the year when, or frequency with which, households commonly experience shortages of food and why.

Bangladesh

Participants nearly unanimously described food insecurity occurring during the "kartik" month, which spans October and November. During this time, farmers reportedly go through financial hardship and struggle to afford food. Some participants also described how both the cost of food and unemployment rises during this period. The kartik months are between harvesting and sowing, so opportunities for day labor disappear. One adolescent girl explained that some families only have one person bringing in an income for a large family during this period:

> *Participant: Yes, this is normal, this happens often.*
> *Interviewer: Why is this normal?*
> *Participant: Because their family has a lot of members but only one of those members earns money for the family. Only one person provides for everyone in the family. So obviously around this time is very difficult for them. No work is available around this time, they are unemployed. How will the family run?*
> *Interviewer: Then how do you survive during this time?*
> *Participant: Well you do whatever small work is available. They make just enough to get by somehow. (**IDI, unmarried adolescent girl, Gangachara**)*

Another participant described reducing the amount of food eaten per day to just enough to live. During this period families were reported to take loans from neighbors until another harvesting or sowing season offers more employment opportunities:

> *There are people who help out many families. These families ask for food and money from other families saying that they will return the money when they start cultivating again. This means people are fulfilling their debts on time and that is how they are living. Otherwise it wouldn't be possible to be alive. (**IDI, unmarried adolescent girl, Gangachara**)*

Other than borrowing from neighbors, some community members sold goats or hens or ducks to be able to afford food. One woman described that harvesting jobs may still be available during the months of October and November:

> *Most people look for work on a farm. Women go to harvest potatoes. They go to households that produce crops, especially rice, and find jobs in rice processing. They remove weeds from eggplant fields for money. They even work soaking in rain. Many women don't mere sit inside the house [during] this time. They get jobs in road construction or road repairing as day labor. In the time of monga [local term for lean season] people who don't find sufficient jobs beg. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

Ethiopia

Several of the adolescent girls said there was no food scarcity in their households, but they had heard about it around the community anywhere between July and October. Many participants described similar periods of food scarcity. Summer is the planting season and may coincide with the depletion of food stores until the next harvest in the fall.

> *This is the time when all the crops are not yet ready for harvest. What [people] do is during the harvest times around January and February, people sell crops for the purpose of other expenses and the rest for the consumption. Because of that people may face food shortages after that for two or three months. (**IDI, woman with a recent full-term birth, West Gojjam**)*

In order to meet other financial needs, some families sold portions of their food stores to other people going through food hardship. Consequently, these families eventually also experienced food shortages.

Families decreased the quantity of food eaten or resorted to eating and preparing food reserves, such as from their potato fields. As one woman said:

> *Even if it isn't enough food, we eat small amounts. Filling [your] stomach is impossible at this time. At summertime a family may eat potatoes, or drink milk or eat cereals and can pass the day.* (**IDI, woman with a recent PTB whose child survived, North Gondar, Ethiopia**)

Other participants described selling sheep or cattle strategically to time with the next harvest. Once their food and financial resources ran out, they would sell enough sheep to buy food until the next harvest.

> *Potatoes are found all year round, most of the time. But in the case of other crops, during those time already collected grains will be used and about to end. The remaining will be sowed. Then*

> *the sowed and planted crops may not be ready for harvest. Because of this, we may experience food shortage. […] There is always another type of asset like cattle or sheep. So, we sell sheep or cattle and buy sorghum or barley then we use that very wisely and try to make it through till the time the harvest is ready. (**IDI, married adolescent girl, West Gojjam**)*

If facing food insecurity, some women harvested and sold wood in the market to be able to afford food. Others took jobs as day laborers pulling weeds for people or construction. Others decreased the quality of food they bought in order to buy more quantity. Still others borrowed money from neighbors to be able to buy grains at the market.

Mali

Most community and religious leaders, health workers and women said that households did not commonly experience food insecurity.

> *Interviewer: But is there food shortage in your family at a certain time in the year for example during winter, the dry season?*
> *Participant: It is very rare.*
> *Interviewer: At what times during the year?*
> *Participant: It is very rare.*
> *Interviewer: No food shortage?*
> *Participant: No.* (**IDI, woman with a recent PTB whose child did not survive, Sikasso**)

However, women may not have perceived their households as being food insecure if there was always something to eat, even if it was the same food for every meal. Among the households that experienced food insecurity, it was reported that they could borrow grains from a neighbor. One participant described food shortages being common preceding a harvest season.

Many of the adolescent girls in particular described food shortages around the community. For example, one adolescent girl from Kadiolo estimated that eight out of 10 households in her community did not have enough for dinner five days of the month. Another adolescent girl reported that her household experienced food insecurity one day a week each month. One woman described that during periods of food insecurity her family did not eat breakfast, but they still ate meals at lunch and dinner.

Similarities and differences across the three settings

The majority of participants across study sites said food insecurity might exist in their communities, but it was not common. Very few individuals in either country said their households experienced food scarcity. Participants in all countries, particularly in Ethiopia and Bangladesh, described widespread food insecurity as occurring during the summer and fall during either sowing season or preceding a harvest. In Bangladesh, such accounts were nearly unanimous. Several participants described how families experiencing food insecurity could seek help from neighbors.

Conclusion and recommendations for practice

This chapter explored both economic and food insecurity from participant perspectives across study sites. In both cases, participants reported that neither economic nor food insecurity were common in their communities. However, as described in Chapters 5 and 9, household poverty was frequently cited as a significant barrier to accessing ANC services or preventive treatments for PTB, or even as a cause of PTB. Thus, there may be a difference between community definitions of normal, day to day financial scarcity and poverty. In either case, few participants described widespread poverty of food insecurity.

Recommendations for practice to address economic vulnerability in MNCH programs include:

1. Promote low cost foods at study sites during the food scarcity period.
2. Identify economically marginalized households and link them to available safety nets of social benefits as part of existing SBCC materials and events.
3. Making available affordable food assistance during non-harvesting months could alleviate household and community food insecurity.
4. Make linkages to existing community resources (such as Iddirs in Ethiopia) using SBCC materials to assist families in terms of health care costs and food costs.
5. Health services for a preterm baby are very expensive, and specific low-cost facilities could be identified where women who experience preterm labor can be taken.

Section IV: Pressing issues related to LINC factors

Chapter Nine: Antenatal care

This chapter investigates community members' perspectives in Bangladesh, Ethiopia, and Mali on antenatal care (ANC) services. First, we explore perceived barriers and facilitators to seeking ANC in each country. Then we investigate country perspectives on when women seek ANC during their pregnancy. Following early ANC, we explore community perspectives and experience with frequency of ANC visits. Finally, this chapter explores who accompanies pregnant women to ANC services in each country.

Barriers and Facilitators to ANC

Bangladesh

Barriers

Both male and female participants commonly reported that there were no barriers to ANC services unless it was due to households lacking the financial resources to go to the clinic for care. Some groups, both male and female, said that women did not go to the clinic for ANC because nurses came to perform home visits, without specifying which services were offered. However, some FGDs with women said that men refused to give permission to their wives to go to the clinic and also refused nurses to provide services in the home. The primary reasons why some men refused to let their wives go to the community health center were related to restrictions on women's mobility that confined them within the four walls of their homes. Here the discriminatory gender norm related to mobility prevented women from getting crucial ANC care.

One group said that if a man did refuse to allow their wife to seek care, the husband then became responsible for purchasing medicine:

> *If a husband forbids her, then he must buy medicine for her, only then the wife will not go. If they want to go, they must inform their husbands. We have many [men] in our area who buy medicine for their wives. They say that "I will manage everything, what will you go for?" (**FGD, community women, Taragonj**)*

While many women's groups said it was uncommon that a husband or in-law refused women the right to go to ANC, women still had to seek approval. In the Bangladesh context, where early marriage is common, one barrier to seeking ANC services early in pregnancy was related

to the reluctance of young mothers to disclose their pregnancy to either their husband or his family:

> *Another major reason is child marriage. Young married girls feel hesitant to be open with their husband. They also need to tell their mother-in-law as well. Young brides feel very shy to share such matters [pregnancy and early antenatal care-seeking] with anyone in their in-law's home." (**FGD, community men, Mithapukur**)*

Other women were said to skip ANC services because they felt in good health, they could feel their baby moving, and Allah would take care of them. Some participants otherwise said older family members convinced them that they never sought care and still had healthy babies, so the new mother did not need to go now.

One woman who delivered a PTB baby described how her financial situation prevented her from receiving full services at her ANC visit:

> *Due to [our] financial crisis. We had to take out loans if I wanted to get an ultrasound. To pay the loans by installments was not so easy for us, that's why I told my father not to take out loans and keep faith in Allah. If needed in an emergency, then I told him to borrow from someone, that's why I didn't get an ultrasound. (**IDI, woman with a PTB and survived, Mithapukur**)*

Facilitators

Health agents were frequently cited as facilitators to accessing ANC services. In most cases, participants described how health workers first visited women in their home to perform a basic checkup and scheduled a first ANC (or follow-up) visit at the health facility. Participants in an FGD with women appreciated home visits from health workers as reminders of their next ANC appointment. An appointment book was particularly helpful:

> *Nurses of the village tell us to go there at a particular date. At first, they come and then we go there, then they tell us about the next date to go. They give us a book. There is our name, date, and the upcoming date in this book. (**FGD, community women, Gangachara**)*

Participants in an FGD with men described the benefit of having contact information for health workers as one means to address any health issues immediately and arrange for a visit to the clinic as needed:

> *Now people are aware. They save [the health agent's] phone number in their mobile phone. If needed, they give [them] a call. Health workers go there immediately. If the condition deteriorates, they take mothers to the clinic. (**FGD, community men, Mithapukur**)*

While "mother meetings" were not mentioned by the individual women interviewed, local female leaders described such meetings as opportunities for mothers to learn about nutrition, ANC services, and the timing of attending such services. One female community leader said that they either sent the women to their checkup or accompany them:

> *We tell them to go to community clinics. We give them advice and suggestions regarding the results of the checkups. This way they remain aware about the important things. What food must the mother eat, when should she eat, we tell them about all these things. And they maintain those suggestions. They do their checkup every month. We send them for those checkups or take them with us. And those who do not know, we inform them. (**KII, community leader, woman, Gangachara**)*

This community leader also mentioned that local nurses in the local clinic knew who she was. Thus, a strong relationship between community leaders, educators, and the local health staff could provide a broader support network for pregnant women to feel cared for and monitored throughout their pregnancy.

Mothers-in-law and sisters-in-law were frequently cited by women who had experienced PTB as being supportive and encouraging of their decision to seek ANC care (see Chapter 7). In most cases, participants were referring to seeking care at a health facility, but in some cases such family members recommended traditional caregivers such as a *kobiraj*. Perhaps more frequent home visits from health center staff could encourage households toward health centers instead of traditional services.

A partner of a woman who experienced PTB described how he accessed YouTube videos to learn more about pregnancy when his wife started going into labor:

> *My mother and my grandma were at home. I had a task, for that I went to the market. Still then I called my sister, she got angry then, said like, "Normal delivery would require up to six hours and do not hurry." I was avoiding all the tips. You know this is the age of YouTube, anything you can search. I had watched my related videos that contained tips. Yes, if I search for a particular thing, I will have found that immediately. (**IDI, partner of a woman with a recent PTB, Gangachara**)*

Several groups previously discussed financial constraints to receiving a full course of ANC services such as ultrasounds. By extension, one facilitator of accessing care was the availability of loans from neighbors or friends.

Ethiopia

Barriers

A major theme that emerged from the Ethiopia data was that some women kept their pregnancy secret as long as they could and therefore delayed seeking ANC services. One group suggested that women felt ashamed to disclose their pregnancy:

> *Women in the rural areas feel ashamed to make their pregnancy public/ known by the community. They cover their stomach as if they have done something wrong. (**FGD, community men, North Gondar**)*

Men participating in an FGD in North Gondar suggested that women kept their pregnancy secret from their husbands out of consideration for scarce household financial resources (See Chapter 7 for further discussion of disputes over finances):

> *They don't know that those services are offered for free. The women have no awareness when they get pregnant for the first time. Therefore, she will keep silent if her husband has no money to give to her. (**FGD, community men, North Gondar**)*

Women might also delay seeking ANC services because of their obligation to perform household chores, even during pregnancy (See Chapters 4, 5, and 6 for further discussions of workload).

Women who delivered their first child at home without complication were described to be confident that subsequent births would also be safe if delivered at home. These women would not consider seeking ANC. One group suggested that if these women had more contact with health facilities, the health extension workers could better communicate the risks of not attending ANC services and benefits of delivering at a facility. However, participants described how the rugged, roadless terrain of rural Ethiopia could prevent these women from accessing care or delivering in a health facility, with one participant saying the nearest health center was a three-hour walk. Others suggested that since the clinics were so far, women would not go to them unless they were ill—ANC services in good health were not enough of a reason to make the long journey.

> *Interviewer: Ok, what prevents pregnant women from receiving four or more ANC checkups in your area?*
> *Participant: Being healthy. If they didn't feel sick and if the pregnancy is comfortable for them, they would say they should go only when they get sick as there is no use in making repeated trips to the health facility. So, they won't go. (**FGD, community women, West Gojjam**)*

Other women did not go for ANC because they did not want to walk alone:

> *They say they cannot come alone. "what if we fall? We should come with another person." They say [things] like that. Most mothers come for ANC on Holy Saints day because on these days the men are resting; they come accompanied by them. (**KII, health worker, South Gondar**)*

If a woman did make the journey, either alone or with a partner, some of the participants doubted that the health extension worker would be in the clinic for her arrival:

> *Sometimes HEWs will be available in the health post. They go out for a campaign to carry out some other duties elsewhere. As a result, no one will be around the health post to help out pregnant women. […] Usually HEWs aren't available in their office. They are using different pretexts not to be present on duty. Sometimes they aren't working for more than a month. At that point in time the women cannot get the required services. (**FGD, community men, North Gondar**)*

Facilitators

The identification of ANC facilitators in Ethiopia was limited. Health extension workers were commonly cited because they proactively made home visits to check in on pregnant women and made recommendations to visit ANC. A religious leader elaborated that the Health Development Army performed home visits to identify or monitor pregnant or recently delivered mothers and provided free transportation to clinics:

> *We always do home-to-home visits to assess pregnant and delivered mothers with the Health Development Army, or the Health Development Army told us who is pregnant or delivered and we advised pregnant mothers to go to health center before the starting of labor and wait up to two weeks until the labor comes. This is a free service including transportation. (**KII, religious leader, North Gondar**)*

A man participating in an FGD in North Gondar described how his community saved money to contribute to delivery-related costs for pregnant women:

> *People in our neighborhood contribute money. We would like to see the women deliver their baby in the health facility. They also want to get skilled delivery. The physician informs the women to arrive in the health center three weeks before their expected day of delivery and stay in the waiting room. They get food from the heath center. We will give them the money we have contributed. Therefore, the woman is having ANC check-ups until they deliver their child. (**FGD, community men, North Gondar**)*

Mali

Barriers

Nearly all groups in Mali, whether women or men, adults or adolescents, were well aware that ANC care-seeking should start before the third month of pregnancy. Three interrelated barriers emerged in Mali that prevented women from accessing ANC services: spousal permission, shame, and household poverty. Almost universally, women were at least expected to inform their husband if she wished to start ANC services. Women were said to be ashamed to disclose their pregnancy and men were ashamed to expose their lack of financial resources to care for their family, which subsequently resulted in denied permission to seek care. These themes are described below.

Responses were mixed on whether women required their husband's authorization to seek ANC care. Some groups said unequivocally yes, because it was the husband who paid. Others said that if the woman had her own money, she could make her own choice. Still others said that even if the woman had her own money, she still needed male authorization because of the family and social structure in Mali:

> *When a woman asks her husband for permission to go to ANC, if the husband has no money he can say to wait a little because he has no money but if the woman even has a little bit on her, she*

> *can tell him that "I have some money. With your permission I can go with that" and he gives his permission. (**KII, traditional birth attendant, Kadiolo**)*

Several women's groups said that husbands would wait up to the eighth month of pregnancy before bringing their wife to ANC services. In one FGD, a woman said that instead of waiting for her husband to decide to allow her to go to ANC services, she demanded permission. She said, "*For me if the husband does not make the decision to seek antenatal care, you who are pregnant must ask permission to seek antenatal care visits"* (FGD, community women, Koutiala). However, health workers, men, and women described women's own reluctance to go to ANC visits. Several groups explained that some women preferred to hide their pregnancy and were ashamed to have to disclose to anyone that they were pregnant. As a result, they would delay going to ANC as long as possible. Others made excuses to attend ANC secretly:

> *What prevents a woman from going for ANC even before three months is that some women are ashamed. They say they're ashamed and if she goes to have ANC, everyone will know they're pregnant. (**FGD, community women, Koutiala**)*

> *Some say that if you leave early for the first consultation people will know you're pregnant, so they prefer to wait until the pregnancy progresses. If you ask some, they say they're going on an errand and they leave to do the consultation, some husbands tell their wives that she can't leave early [for the consultation]. (**FGD, community women, Koutiala**)*

> *"The woman must start her prenatal visits. But she never tells their husband she's pregnant and they don't start their prenatal visits until five months later." (**KII, health worker, Sikasso, Mali**)*

In a different FGD, one participant recounted how he pleaded with his wife to go to ANC, but only after a home visit from the local midwife did she agree to go. In yet another group, participants revealed that a basic misunderstanding of what ANC care entailed could be a barrier to seeking such care at the appropriate time.

> *There are some women who say they thought that when you say prenatal consultation, they put you on the scale to take your weight. They say that's not it; they say it's that they put a finger in the vagina, that's why they're ashamed to go to prenatal visits. (FGD**, community men, Koutiala**)*

Both men and women said many women were not at all aware they were pregnant and often found out later into their pregnancy. Other FGDs with women and men described that it was difficult for women to know when they were pregnant if they did not go to the clinic to be tested, but that men would not send their wives to the clinic unless they were sick. If they were not sick, they did not go to the clinic, and they would not have a pregnancy test conducted to know whether to start ANC. In other cases, women who still had a nursing child but became pregnant were ashamed to be seen visiting the midwife at the clinic, or to be seen by other people entering the clinic for ANC. As a result, they would refuse to seek ANC services.

Health workers, women and men all described that men did not permit their wives to go to ANC services or to deliver at a clinic if they did not have the money to pay for transport or delivery-related costs to avoid shame in front of the doctor:

> *If we go to the hospital there are fees to pay, and if you don't have those fees you'll be ashamed. It's a shame for you because if the doctors don't know you they won't give you credit. That's why some people can't bring their wives to the hospital early unless there's a complication. (**FGD community men, Koutiala**)*

Participants in another FGD elaborated that sometimes men without money refused to ask for "credit" (a loan) from neighbors in their village.

Male participants discussed the benefits of early ANC but still described how a lack of financial resources either prevented them from sending their wives to ANC services or led them to send them later than they would otherwise prefer.

> *It's the lack of means of us men because people don't have the same means. You'll find that some have the means to provide for these needs and for others it's difficult. Before you go out and get the money it feels like time has passed; it feels like time has passed. (**FGD, community men, Koutiala**)*

> *If you have money, you'll have to take her to the health center. They tell us that, but it's the money problem that's there too. When a woman receives proper antenatal care, she is more likely [a mille chances de] to not have complications during childbirth. (**FGD, community men, Sikasso**)*

Male participants in one FGD discussed the challenge of deciding whether to spend a large sum of limited resources on proper care, thereby reducing disposable income for other household expenses, versus doling out smaller sums for lesser healthcare but budgeting for general household expenses. As one man said,

> *Why do they take so long to start prenatal care, because what you have to bring to get care, you don't have, it's hard. It's what's in your pocket. Otherwise it's better to start little by little than to spend a lot of money. If you see that the person is managing in a global way, it means that the person couldn't afford to start in time. (**FGD, community men, Sikasso**)*

In more rural communities, distance became a significant barrier to seeking care. Not only was the journey far and potentially arduous, but it took time away from household chores the woman was still expected to perform. Gas was also costly.

> *The difficulty we're having is that the men don't want to spend on pregnant women because to leave Perasso to go to Kebeni if they look at the money they put into the fuel for the bike, most say it's too much so they don't bring the women for ANC. (**FGD, community women, Kadiolo**)*

Facilitators

The identification of ANC facilitators in Mali was limited. Women who experienced either a full-term birth or a PTB described how spousal support was instrumental in seeking ANC services, particularly with transport to health services and paying for health services.

> *Well, he used to give money when I was at the health center here, twice he gave me money. Then he said he can't anymore, at the Sikasso stage he would take me on a motorcycle and take me to Sikasso and he would pay the money.* (**IDI, woman with a recent PTB whose child survived, Sikasso**)

In another example, one man unsuccessfully attempted to explain why ANC was important, but his wife did not want to go. It took a home visit intervention by a local health agent to convince the women to attend ANC services. A health worker in another community agreed, saying "*It's negotiation. For example, if a woman refuses to do ANC, we go to her house to raise awareness, to get her to come and do ANC"* (KII, health worker, Kadiolo).

Few people in Mali suggested traditional healers as resources for prevention or treatment of PTB, and in this example, a woman who experienced a PTB illustrated how traditional birth attendants could be allies in the promotion of ANC services at health centers. She said,

> *Interviewer: Have you ever been to the traditional birth attendant in the village?*
> *Participant: No; even if we went to see her, she wouldn't accept because she says there is a health center in the village, so she refers us to the health center. (**IDI, Woman with a recent full-term birth, Sikasso**)*

Similarities and differences across the three settings

Household poverty was the most commonly cited barrier to accessing ANC services across study sites. Whether it was for transport or treatment, participants expressed their struggle to afford health services. In both Bangladesh and Ethiopia, participants also described how women only sought health services if ill. If they felt in good health—even when pregnant—they did not see the need to seek ANC services.

Women in all three countries were also said to delay disclosing their pregnancy out of a sense of shame as well as for financial scarcity. In consideration of reluctance to disclose a pregnancy, a deeper exploration of where this shame comes from and elucidating a more precise definition of 'shame' would be interesting. In Mali one woman described that the goal was to conceal the pregnancy until it attained a more advanced stage. In the context of high child mortality in Mali and a strong belief in the will of God, perhaps women preferred to keep their new pregnancy private until they could be as confident as possible that the baby might reach full term and not miscarry, or as a way not to 'tempt God'. In some cases, the word "shame" may have been used to convey feelings of shyness or timidity, and not strictly 'shame' as embarassment. Nevertheless, we kept the word shame whenever it was translated from Bangla, Amharic, or Bambara, since there is another example from Bangladesh that expressed the idea of 'shyness'

when others used ‘shame’. Therefore, the difference, while nuanced, may be important between when ‘shame’ was translated from local languages as opposed to ‘shy’.

In Mali, husbands were more frequently reported to withhold permission for their wives to seek care. In Bangladesh and Ethiopia, most participants agreed that women could seek care if desired. Distance and the rural setting were only described in Ethiopia as a significant barrier to accessing care.

Health workers in all sites were described as the most influential facilitator to accessing care. Health workers were available in clinics, but importantly conducted home visits to identify or encourage pregnant women and their families.

Early ANC

Bangladesh

Women with either a full-term birth or a PTB reported going to ANC earlier than did participants in FGDs. Most women having had a birth said they went to ANC around two months after knowing they were pregnant. Men almost unanimously agreed women attended their first ANC consultation between the fourth and sixth month of pregnancy. Women said between three and four months of knowing they were pregnant. In many cases, a first consultation while pregnant only occurred when a health worker visited the woman in her home. These visits did not appear to have been scheduled by the woman, but perhaps during a routine walkabout by the health worker independent of the woman’s pregnancy status or schedule. Which tests or services were provided during the home visit were not elaborated, but typically the health agent then encouraged the women to go to a health center to perform blood and urine tests. In other examples, if women suspected they were pregnant, they would wait for a period of time after their menstruation had stopped before deciding if they should go to care—two women waited for 45 days—or some women delayed care-seeking until they felt nauseous and vomited, thereby suspecting that they may be pregnant. At this time, the women might consider whether to go for care, or as described for the barriers to seeking care, or hide their pregnancy as long as possible, thus delaying the first ANC visit.

Ethiopia

Participants thought women went for their first ANC services from anywhere between three months to six months of pregnancy. Participants in one FGD suggested that at around three months, women started to feel ill because of the pregnancy. This was provided as the reason why they went to the clinic – not necessarily for ANC, but to seek care. At the clinic, they were administered a pregnancy test and discovered they were pregnant, and subsequently received ANC services they did not originally intend to seek. This suggestion agreed with reported barriers to seeking ANC care: if women are not sick, they will not go to the clinic. But if they are sick, then they will seek care.

> *The women feel sick when they are three months pregnant. At this time they go to health facility to have ANC check-ups. But after six months of pregnancy they are having ANC check-ups frequently. (**FGD, community men, North Gondar**)*

Participants in another FGD agreed, with more detail:

> *They would know that they are pregnant in their 40th day. Their appetites would be lost and there is nausea. At this time, we believe we feel sick and go to the health facility to get examined, and then they will tell us we are pregnant. After that we will get appointments for checkups. (**FGD, community women, West Gojjam**)*

Otherwise, many respondents said women sought care after they noticed that they had stopped menstruating.

The women who expressed the most ease at attending care early or regularly did so were those with a clinic near to them. The rural nature of many Ethiopian communities and rugged terrain were previously identified by participants as barriers to care-seeking.

Mali

Nearly all groups interviewed in Mali agreed that it was important to seek the first ANC services during the first trimester. Most women interviewed who had experienced either a full-term birth or PTB also reported that their first ANC visits had occurred before three months of their pregnancy had passed. However, as described in the section that discussed barriers and facilitators to ANC seeking behaviors, the ability to attend ANC services in the first trimester depended on knowing one is pregnant or one's willingness to disclose that they are pregnant.

Some community men doubted whether women reliably knew when they were pregnant in order to be able to seek early care. They supposed that women should be able to determine whether they might be pregnant by counting the days since their last menstrual cycle, but not all women did such calculations. For those that monitored their cycles, one FGD participant in Kadiolo said women would seek care "*if they have doubts*."

> *You're used to seeing your period, so if you go a month without seeing anything, it means there's something wrong. The woman can tell right away that it's a pregnancy. They go to the health center. So, the health workers can say if they're one or two months pregnant. (**FGD, community men, Sikasso**)*

Other men thought that only by becoming ill, such as with malaria, would women discover their pregnancy. Indeed, one woman described how she learned of her pregnancy only when seeking treatment for presumed malaria infection.

> *Interviewer: How did you find out you were pregnant?*
> *Participant: Before I found out, I got sick with malaria.*
> *Interviewer: But who told you that you were pregnant?*

*Participant: When I went to the health center, they told me I was pregnant. (**IDI, woman with a recent full-term birth, Sikasso**)*

As described in the Barriers and Facilitators section above, many women preferred to hide their pregnancy until it was more advanced, thus delaying when they started ANC services.

Similarities and differences across the three settings

Many participants across study sites reported that ANC services should be sought roughly around three months of pregnancy, but that women actually sought care anywhere from two to eight months of pregnancy. Across study sites, the ability to seek early ANC care depended on knowing one was pregnant. Often women sought care for another illness, such as malaria or nausea, and a pregnancy test was administered. There were examples from all study sites describing women's reluctance to disclose their pregnancy, thereby delaying ANC services further. In general, participants in Mali reported earlier ANC seeking than in either Bangladesh or Ethiopia.

Frequency of ANC

Bangladesh

Across participant types, from adolescent girls to men, the majority of participants in Bangladesh reported that women should seek four ANC visits before their delivery. It was also common for women with a birth experience, whether full-term or PTB, as well as partners, and other community members to describe seeking care every month. Reports of fewer than four ANC visits were rare. One male participant in an FGD described the schedule of care his partner received:

*The first checkup is done at the fourth month of pregnancy. The second checkup is done at five months. The third one is at eight months and the fourth checkup is done in the nine month of the pregnancy. (**FGD, community men, Gangachara**)*

When community women were asked to estimate how many visits other women follow, most women estimated that the majority of women in their location followed four visits, with minor variation.

Interviewer: How many times do pregnant women go for checkups in your area?
Participant #1: Four times.
Participant #2: Some are going, and some are not [if they] have work in house. It depends actually.
Interviewer: How many mothers out of ten are going for four checkups at least?
Participant #1: Ten out of ten because the clinic is very near the house.
Participant #3: I think eight out of ten.
Interviewer: all agree with this?
*Participant: yes. (**FGD, community women, Taragonj**)*

Ethiopia

The majority of participants in Ethiopia reported a minimum of three or four ANC visits. One woman in an FGD detailed the sequence of events from the first ANC visit through the fourth, and the moments preceding delivery, with confidence:

> *The first thing to do is going to the health facility around the 40th day. They will examine us and will give us an appointment on the fourth month. And when the due date is approaching, around the seventh month, they may tell us to return in two weeks' time. They will examine us and tell us that we will give birth at the health facility. When we go into labor, an ambulance car, or traditional ambulanc,e will take us to the health center and we will give birth there. If the women's house is far away from the health center, they will have to come a month or weeks early for their last appointment and get admitted to the facility and stay to give birth there. (**FGD, community women, West Gojjam**)*

However, in another example there was some uncertainty. Men might not always be aware of when or if their partners have sought ANC care and therefore might not be as certain of the recommended number of visits. Others believed it was up to the discretion of the health worker, who could potentially request visits every month up to the delivery date.

> *Participant #1: Starting from the second month, she is told to come every month. She goes and does the follow up.*
> *Participant #2: They go every month, and also there are times [when] they go every three months. Totally we say they may go four, three times.*
> *Participant #1: As stated now, it is based on what the health workers told them. It is difficult for us to say how many follow-ups they do, because they may go to the health center when they go to the market. (**FGD, community men, South Gondar**)*

In other examples, participants discussed up to seven or nine visits. Some FGDs with women also described seeking ANC services every month, starting from the third month through delivery.

Several extended family members did not know for certain how many visits the related pregnant woman had followed, indicating a lack of communication and broader involvement in her prenatal care:

> *Interviewer: How many antenatal check-ups did she have?*
> *Extended family member: I think she had five. But I didn't ask her. It is a guess." (**IDI, Extended family member of a woman with a recent PTB, North Gondar**)*

Some partners of women who experienced PTB also expressed uncertainty as to the exact number of visits their partner had followed but were confident that the women had been seeking care.

Mali

While the majority of participants reported that women should follow a minimum of four ANC visits throughout their pregnancy, starting after confirmation of pregnancy, it was not uncommon that male participants suggested women could have up to eight or nine consultations:

> *I can talk about my case, when my wife started, she had eight prenatal consultations until she gave birth. (**FGD, community men, Koutiala**)*

> *It's eight. When you get pregnant at one month, on the second month you have to go to the first prenatal visit. When you get prenatal care at two months, then the third, fourth, fifth, sixth, seventh, eighth. And ninth month will be your delivery. (**FGD, community men, Koutiala**)*

Across participant types, people reported that it was at the discretion of the health worker to determine the number and frequency of ANC visits.

> *This number depends on the agents in charge of the prenatal consultation. When you go there, they have to tell you which month, which day, you have to go back to the center." (**FGD, community men, Kadiolo**)*

A minority of participants thought that the health workers should schedule ANC visits every month or, in one case, every 15 days up until the delivery date.

If women did not have at least four ANC consultations, it was reportedly because they did not start early enough. In the context of women's reluctance to report their pregnancy or their preference not to go to the clinic unless ill, as reported above, many women would delay their first ANC visit until later in their pregnancy.

Similarities and differences across the three settings

Participants across study sites reported similar experiences and opinions about frequency of ANC services, with little variation. Most people reported that four ANC visits were preferred. Still, some described seeking care every month. Very few participants in any country described fewer than three ANC visits.

Who Accompanies Women to ANC[aa]

Bangladesh

Men and women reported that husbands often accompanied their wives to ANC, and if husbands were not available the mother-in-law accompanied her, or perhaps an available neighbor:

[aa] Please see Chapters 6 and 7 for further discussion of men's engagement in household work and care-seeking.

Interviewer: Who brings you there for [your] checkups?
Participant #1: If my husband can't then my mother-in-law goes with me.
Participant #2: We can go with neighbors.
Participant #1: We need to get permission from [our] husband and mother-in-law.
*Participant #3: If [our] husband can't then he tells [us] to go with one of neighbors who is going there. (**FGD, community women, Gangachara**)*

Extended family members seemed to express that anyone who was available could accompany the woman. Preference was toward the husband or mother-in-law, but in their absence, anyone could accompany them. Mothers-in-law especially reported that husbands accompanied their wives to ANC care. Many of the partners of women who had recently experienced a PTB reported accompanying their wife, sometimes with the mother-in-law, to seek ANC services. Indeed, the majority of women with a recent birth experience, whether PTB or full term, reported that their husband accompanied them to ANC services:

Interviewer: Who was with you when you went there the first time?
Participant: My husband.
Interviewer: Your husband, did he support and assist you in this regard?
Participant: He assisted me in every aspect.
Interviewer: Anyone from your family? Who assisted you from here?
*Participant: Then there was no one. (**IDI, woman with a recent full-term birth, Gangachara**)*

Men and women both suggested that in the absence of a family member, pregnant women would attend ANC visits with other pregnant women from their neighborhood so as not to go alone:

Interviewer: Didn't your mother go with you?
Participant: No, my mother was always busy.
Interviewer: So, you went with your sister or yourself.
*Participant: Yes, or there were many other pregnant women. I went there with them. (**IDI, woman with a recent full-term birth, Gangachara**)*

While the majority of women with a recent birth experience, whether full-term or preterm, reported being accompanied by someone (e.g. husband, mother-in-law, other pregnant women) some women interviewed reported going to ANC services alone.

Ethiopia

Adolescent girls and extended family members that were interviewed frequently reported that women would attend ANC services alone. Most community men, however, said that they would not allow their wives to go to ANC alone. In their absence, husbands sent someone with their wife.

*In some neighborhoods such as ours, men not only give permission to their wives but also accompany them to the health center. (**FGD, community men, North Gondar**)*

> *He [the husband] doesn't send her alone. If he cannot go, he sends her with someone. (**FGD, community men, South Gondar**)*

Among women with a recent birth experience who were interviewed, whether full-term or preterm, most reported that they were accompanied by their husbands.

Mali

Men and women in Mali reported that it is the husband's responsibility to go with their wife to ANC services.

> *If the woman has to leave, the man accompanies her, or the man asks one of his relatives to take her to the hospital for her prenatal consultation to go and get the medicines. (**FGD, community men, Koutiala**)*

Several women confirmed that in practice their husband accompanied them to their ANC visits:

> *Interviewer: When you started your ANC visits, your husband supported you?*
> *Participant: It was my husband himself who accompanied me.*
> *Interviewer: Was he the one who brought you?*
> *Participant: We used to leave together and come back together.*
> *Interviewer: He bought the prescriptions?*
> *Participant: Yes, he buys the prescriptions.* (IDI, woman with a recent PTB whose child did not survive, Kadiolo)

One man went further to describe that sometimes husbands did not have the time to accompany their wives. If their husband did not offer someone else, such as a brother, to accompany their wife they may miss their ANC appointment (See Chapter 7). In other examples, particularly among extended family members such as mothers-in-law, as well as partners of women who experienced a PTB, participants reported that women went alone to ANC services. One partner of a woman who experienced PTB said that if his wife was in good health, she would go by herself to ANC, but if she were sick, he would confer responsibility to another member of the family to accompany her, as described above. Few women with birth experiences reported having gone to ANC alone.

Conclusion and recommendations for practice

This chapter explored community members' perspectives in Bangladesh, Ethiopia, and Mali on ANC services. First, we explored perceived barriers and facilitators to accessing ANC services in each country. Barriers and facilitators were similar across study sites and across participant types. Women's workloads, which continued during pregnancy, led to delays or prevented women from seeking ANC. Household poverty, concepts of shame or embarrassment, and delayed disclosure of pregnancy were common across countries. Health workers were indispensable resources, either at the facility or through home visits, that facilitated care-seeking. Spousal support was also identified as a facilitator, particularly in Mali.

This chapter also explored knowledge and reported behaviors related to early ANC care-seeking and frequency of ANC visits. Participants across study sites generally shared similar opinions on the preferred timing of care versus actual practice. Care was often delayed because women did not know when they were pregnant or because they delayed telling anyone they were pregnant. However, most participants agreed that seeking ANC services in the first trimester was important. Similarly, the majority of participants across study sites, with little variation, reported that four ANC visits were recommended and followed. Several participants in each country described seeking care every month, but not all. This suggests that the new recommendations of eight ANC visits[76] may not be uniformly implemented across settings. The vast majority of participants described how husbands of pregnant women were expected to accompany their wives, and often did accompany their wives in practice. There were accounts of women going alone, but most often if a husband could not accompany them, then the husband would confer responsibility on someone else, such as a brother or mother-in-law.

Recommendations for SBC programs include:

1. In each study country, participants described how women did not often go to the clinic unless they felt ill. SBC campaigns need to emphasize the need for pregnant women to attend at least four ANC checkups, or perhaps more following local and global guidelines, even if a woman is feeling well.
2. Continue ongoing work to formalize relationships with local community leaders or associations and the health center so that the community leaders can identify pregnant women that might not go to the health center on their own and disseminate specific messages related to the importance of ANC relevant to those populations.
3. Formalize and strengthen relationships between traditional healers and health practitioners.
4. Establish, reinforce, or make more widely available access to money lending for health care (e.g. via village savings and loan associations or via other income-generating activities). Several participants discussed the need to take loans from neighbors and friends to be able to access ANC services, but they were often reluctant to do so out of pride or concerns about the social reproductions of being seen as someone not able to provide those resources.
5. Continue to reinforce the practice of first ANC checkup in the first three months. Most participants knew that ANC should be sought in the first trimester, but many participants did not describe this being a common practice.
6. SBC approaches should work with local leaders and families to permit the relaxation of mobility restrictions on pregnant women for completion of 4 ANC checkups.

Chapter Ten: Infections and illness during pregnancy

This chapter investigates the symptoms, illnesses, and infections experienced by pregnant women in Bangladesh, Ethiopia, and Mali. The chapter first explores the connections women and men made between pregnancy and illness. Then, it examines the specific symptoms and illnesses described by women, men, adolescents, and key stakeholders across the three sites. The next section explores the causes, and potential consequences, of the illness women face during pregnancy. In the final section, a spotlight is put on malaria to assess whether malaria was considered a concern during pregnancy, preventive behaviors, and treatment.

Pregnancy and illness

Emergent across multiple interviews and group discussions in each setting was a connection between pregnancy and illness. Participants – adolescents, women, men, health workers – all highlighted common symptoms pregnant women experience: nausea, vomiting, loss of appetite, headache, and dizziness. According to participants in all three settings, these symptoms occurred early in their pregnancies and often improved after three or four months. As one health worker in Gangachara, Bangladesh, said, "*At first they are vomiting, dizzy, [have] trouble moving, etc.*" (KII, health worker, Gangachara). In Ethiopia in particular, illness – specifically fever – was considered a natural aspect of pregnancy. In one FGD with community men in South Gondar, Ethiopia, men explained:

> *Participant #1: Here, the illness pregnant mothers encounter is, first their body becomes hot (fever). Second, they encounter headaches, leg pain…The illness varies. Some, when after they get pregnant, don't have appetite to eat food at all for the first two, three months. Some don't have appetite towards the end of their pregnancy. They have different behaviors. But their main illness is their body becomes hot (fever).*
> *Facilitator: Could you elaborate what you mean [by] hot?*
> *Participant #1: It just gets hot.*
> *Participant #2: It feels hot to touch.*
> *Facilitator: What is the reason? Is there malaria?*
> *Participant #1: No. We say it is due to nature.*
> *Facilitator: What type of disease is it?*
> *Participant #1: We consider it as a natural occurrence during pregnancy.*
> *Facilitator: What do they do at that time?*
> *Participant #3: They go to the health center. they get treatment and they improve, and then come back home. (**FGD, community men, South Gondar**)*

This connection between pregnancy and illnesses was echoed in Bangladesh and Mali. In Bangladesh, one woman with a PTB that survived from Taragonj said, "*During pregnancy things like this happen*" (IDI, woman with a recent PTB whose child survived, Taragonj). While one mother-in-law emphasized that "*Anyway, a woman when she gets pregnant, she will get sick one day*" (IDI, extended family member (mother-in-law) of a woman with a recent PTB, Sikasso). Pregnant women were described as weak and vulnerable by men in FGDs in Ethiopia and Mali, which explained why – in their eyes – they were more susceptible to illness.

> *Weak…if his wife is pregnant it is said traditionally that "my wife is weak." [This is because] …. Mild illness she could have resisted had she been not pregnant, [but] she gets ill when she is pregnant. For example, the common cold. (**FGD, community men, South Gondar**)*
>
> *Plus, today, the pregnant woman is a bag of problems. If I say a bag of problems, that is to say that they're always sick when they get pregnant. If you take them as a whole, a lot of women give birth with health problems. So that's the reason why many go to the health center to give birth. (**FGD, community men, Koutiala**)*

In the following section, we unpack this association between pregnancy and illness to explore the symptoms and illnesses experienced by women during pregnancy in Bangladesh, Ethiopia, and Mali.

Signs, symptoms, and illnesses experienced by women during pregnancy

Participants described a number of symptoms, illnesses, and complications that women faced during pregnancy. Below, we describe these by country and draw comparisons.

Bangladesh

Illnesses

Common illnesses described by participants are shown in the table below, categorized by general symptoms, symptoms related to the reproductive tract, and specific illnesses.

Table 20. Signs, symptoms, and illnesses experienced by pregnant women and reported by participants in Bangladesh.

General (more commonly mentioned)	General (less commonly mentioned)	Reproductive tract-related (more commonly mentioned)	Specific
Headache	Bleeding	Itching	Anemia
Dizziness	Convulsions	Frequent urination	High blood pressure, hypertension, or pre-eclampsia
Fever	Dysentery or diarrhea	White vaginal discharge	Low blood pressure or hypotension
Abdominal/stomach/waist pain	Pain in legs and arms	Infections	
Back pain			
Eye issues, blurry vision			
Swelling of legs and arms			
Fatigue/weakness			

Symptoms associated with reproductive tract infections, including itching, frequent urination, and vaginal discharge were described as common among pregnant women, and women in general, by participants in Bangladesh. As one mother-in-law said, "*Everyone suffers from vaginal itching*" (IDI, extended family member (mother-in-law) of a woman with a recent PTB, Taragonj), suggesting how common this symptom was. Such symptoms were not always treated with medications. Sometimes they were not treated at all or were treated with traditional or homeopathic medications. In other cases, women were given creams or medications.

A comparison of symptoms and illnesses among women recently giving birth to a full-term baby to women with a PTB suggested that women with full-term births were less likely to report reproductive tract infection symptoms like itching or vaginal discharge. The only woman with a full-term birth who had experienced itching during her pregnancy had taken medication to ameliorate the problem. Women with a recent PTB described a constellation of health issues – anemia, malnutrition, itching, high blood pressure – experienced during their most recent pregnancy.

Men whose wives had a PTB shared multiple stories of complications their wives experienced during pregnancy. Often, these stories described the intersections of multiple symptoms or illnesses – infections, high blood pressure, fever, or bleeding – that women had endured.

> *After being pregnant for two months, she was bleeding lightly. And my wife was having pressure at that time. As the pressure was high, we didn't try to deliver the baby at home where it could be a normal birth… Many time white discharge occurred. I mean with urine. Many times, I have noticed that white discharge occurs with urine…It happened before conceiving too. And at the end of the pregnancy period when it was six or seven months, frequent urination happened with white discharge. (**IDI, partner of a woman with a recent PTB, Mithapukur**)*

However, not all men voiced knowledge of the health issues women faced when pregnant. According to one man in an FGD,

> *Participant: Various types of sicknesses. They don't let us listen to what kind of sickness. After asking, they say pain in stomach or something else.*
> *Interviewer: They don't say the real fact [issue]?*
> *Participant: What am I saying that they don't say the real fact [issue]. That's kind of private talk. Do I leak my house's private talk? (**FGD, community men, Taragonj**)*

Although a rare perspective shared during conversations with men about health issues women encounter when pregnant, the concept of privacy and openness when discussing health issues emerged during other moments of these conversations. Please see Chapter 7 for a more in-depth exploration of the ways in which gender influenced women's and adolescents' willingness to discuss health problems with their male family members.

Causes and consequences

The health problems described by participants in Bangladesh were not distinct from other LINC factors discussed during the interviews. Illnesses intersected in fundamental ways with gender normative expectations around women's workload or nutrition. One way to prevent health issues during pregnancy was, according to one mother-in-law, to avoid doing heavy work. Conversely, pregnant women suffering from the symptoms and illnesses described above were often unable to do work expected of them. For a minority of women, such work was necessary despite illness:

> *Yes. After three months of pregnancy. When this tormenting experience started, I could not carry on much work, yet I worked. It is the other's home [meaning the in-law's family was not her own], I had to do. Who would do it for me? So, I worked very slowly. I did something during this hour, [something during] that hour. I slowly carried out all duties. (**IDI, woman with a recent PTB whose child did not survive, Mithapukur**)*

Sex and intimacy during pregnancy were also mentioned by a minority of community members, including an adolescent girl and a partner of a woman having a PTB, as a cause of infection during pregnancy. Health workers explained that men's engagement in extramarital affairs led to pregnant women's infections as well.

Care-seeking

Pregnant women sought care for health issues from both traditional healers and health workers. Some sought care from one, or perhaps started with one approach and tried the second once the first approach failed to treat the health issue. Still others would use both medicine from a traditional healer and a health worker.

Ethiopia

Illnesses

Common illnesses described by participants in Ethiopia are shown in the table below.

Table 21. Signs, symptoms, and illnesses experienced by pregnant women and reported by participants in Ethiopia.

General (more commonly mentioned)	General (less commonly mentioned)	Reproductive tract-related (more commonly mentioned)	Specific
Headache	Swelling of extremities	Itching	High blood pressure or hypertension
Morning sickness (little appetite, not eating, vomiting)	Illness caused by overexposure to heat/sun (mich)	Urinary tract infection	Anemia
Back pain	Bleeding	Bladder issues	STIs/HIV
Stomach aches/pains		Vaginal discharge	Syphilis
Fatigue/weakness			Yellow fever
			Malaria

Women with full-term births tended to report no health problems or stopping daily activities and work once told to by a health worker. One participant from South Gondar explained that she stopped doing daily work once she was told she had anemia:

> *I was feeling sick…up to my third month; I was not eating well; I was feeling dizzy….I was feeling nausea; and when I vomit, material that looked like egg yolk was coming out. Immediately after that, I went to the health center and informed the health worker. He told me, "Get examined and let us see what it is." I got examined…and then he told me, "You have anemia, don't do heavy work." After that, I did not do heavy work. At that time, there was farm work like hoeing. I stopped doing this work but only light works…After, I continued like that. The health worker told me, "You are now ok; your baby's weight is also ok." (**IDI, woman with a recent full-term birth, South Gondar**)*

In comparison, women who had PTB reported more health issues, including urinary tract infections or other illnesses (e.g. yellow fever or anemia), or did not stop daily activities during their most recent pregnancy. For one woman in North Gondar, while she experienced multiple health issues during her pregnancy, she kept silent about her health issues:

> *I was shivering, Later on when I went for check up at the sixth month. I was sick and they [health professionals] told me that I had yellow fever. They prescribed 11 tablets to be taken four times a day, two tablets at each time [QID]. When they ordered such tablets, I told them that I am pregnant, taking 11 tablets per day may create a problem for me as I do not eat food appropriately. They told me that I have to take it as it will not create harm. When I took it, a shivering sign went off. I was examined at Worhala health center. I suspected the professionals could not identify my pain and I went to Arbaya health center. There, health professionals from Arbaya health center gave me another tablet to be taken: one in the evening and one in the morning [BID]. I also showed them the drug prescribed for me previously. They told me that the*

*drug I took was correct, but I had anemia too. After I took the tablet they gave me, I went back to my home and I felt the same symptoms the next morning. Because I was used to it, I kept silent while I was sick. The illness was aggravated, and I was restless. I was too sick; I do not know whether the tablet helped me… I gave birth immediately at three o'clock local time. (**IDI, woman with a recent PTB whose child did not survive, North Gondar**)*

Causes

Illnesses experienced by women during pregnancy intersected with other LINC factors. Multiple participants explained how working too much led women to get sick. Exposure to heat and the sun, or *mich*, was described as a major problem faced by women during pregnancy. During an FGD with men, illnesses caused by the sun emerged. Men said:

Participant #1: Especially, they are affected by mich. As we said earlier, they fall ill with mich due to the work they do on the farm and with fire – [it is] related with cleanliness and exposure to heat…Most of the time they encounter mich… It is heat…when they work exposed to heat or sun – like when they bake injera, make enkuro (works that require fire) or work on the farm – during that time they sweat. And when they catch cold air at that time, mich occurs…. For example; a non-pregnant woman's and a pregnant woman's risk to mich exposure is not the same when they do similar work like making enkuro. The pregnant woman is more exposed than the non-pregnant woman…. [Mich illness has signs such as] feeling cold (i.e. chills), its signs are similar to malaria… [Another participant interjects: it is sweat]…Yes; it has rheumatic pain. Their body cannot resist it…
*Participant #2: For example, my wife, one time, when she was pregnant, she was crouching/sitting on her heels and tending the potato farm. At that time, the ground was hot; she caught mich – affecting the fetus. Then she became sick. I took her to the doctor (hakim). The doctor (hakim), after examining her, told me the fetus's body has become darker…. When the baby was born, like the doctor said, "His body (skin) is affected."… And today, that boy's skin is darker where he has been affected while he was a fetus. He sometimes asks me "What happened to me?"… There are such problems; I have seen it myself…. (**FGD, community men, South Gondar**)*

Men also linked malnutrition to illness faced by women during pregnancy. Furthermore, ANC visits were understood as an important way through which women prevented illness. As one unmarried adolescent noted, pregnant women would get sick if they did not attend their ANC visits.

Care-seeking

According to participants, pregnant women in Ethiopia overwhelmingly sought treatment for health issues faced during pregnancy. While barriers existed, including distance to the health facility (men described having to carry their wives on foot in South Gondar) or lack of health insurance, such treatment seeking was commonly reported.

Mali

Illnesses

Common illnesses described by participants in Mali are shown in the table below.

Table 22. Signs, symptoms, and illnesses experienced by pregnant women and reported by participants in Mali.

General (more commonly mentioned)	General (less commonly mentioned)	Reproductive tract-related (less commonly mentioned)	Specific
Headaches	Blood/vitamin deficiencies	Itching	High blood pressure
Vertigo	Dehydration	White vaginal discharge	Anemia
Back aches	Bleeding	Urinary problems (e.g. burning when urinating)	Tozo gnimi (described as a problem/infection of the placenta or uterus)
Abdominal/stomach aches/pain			STIs
Nausea or vomiting			Malaria
Fever			
Fatigue/weakness			

Malaria during pregnancy was a major concern for pregnant women. Women with a full-term birth as well as those experiencing a PTB reported having malaria during their pregnancies. While STIs and symptoms of reproductive tract infections were not commonly described by participants as a problem faced by pregnant women, women with PTB reported these symptoms. Comorbidities were common among women with PTB. In the following interchange with the interviewer, one woman from Kadiolo, Mali, who had a preterm birth where the infant survived, described having stomach pain, itching (related to a reproductive tract infection), and malaria. She said:

> *I was always sick even so... I was thinking if this pregnancy becomes a miscarriage because of an illness, people won't understand. When you get treatment even if it leads to a miscarriage, you can say it's God's will. So, if the treatment has not been done as it should be, they will say it is your fault. That's what I was thinking… Apart from the stomach aches, I did not have high blood pressure. The stomach aches and the malaria made me very tired… Yes, I had those [infectious] diseases. I was itchy. I told my husband; they prescribed medicine and gave me the injection. Since childbirth, I haven't not had these diseases again. (**IDI, woman with a recent PTB whose child survived, Kadiolo**)*

In contrast, women with a recent full-term birth either did not report such problems during their most recent pregnancy, or they shared stories of seeking treatment or making efforts to stop hard work and, as a result, avoid illness.

Many partners of women with a PTB highlighted examples of symptoms or illnesses their wives had experienced during the pregnancy. However, one dissenting viewpoint came from a man living in Kadiolo, Mali, who explained that women's health issues were "women's business." He said,

> *Frankly I can't know that because you know that in women's affairs, a man can't try to know everything that goes on in there. It's the women themselves who know these things; you know, if the woman says she's sick, she goes to the prenatal consultations. Or if she's sick, the most important thing for you is to pay for the medicines, otherwise the rest, I don't know anything about that. (**IDI, partner of a woman with a recent PTB, Kadiolo**)*

Causes and consequences

Participants in Mali commonly linked illnesses or health issues during pregnancy with PTB. Illness was described as a major cause of PTB by adolescent girls, men, women, extended family members, community leaders, and health workers. One adolescent girl explained the connection clearly, stating, "*The mother's illness could be the cause the premature birth of the infant*" (FGD, unmarried adolescent girls, Koutiala). Others explained that specific symptoms (e.g. stomach aches) led to women delaying care-seeking when pregnant, which could lead to PTB. ANC visits were considered a way to identify the illnesses women have when pregnant – and, by extension, prevent PTB. As one community leader from Sikasso said, "*So I ask people to take women to the health center to find out what they are suffering from. They are in the best position to know*" (KII, community leader, woman, Sikasso). Multiple participants explained the importance of following health workers' recommendations when sick.

In addition, illness during pregnancy was linked, as in Ethiopia and Bangladesh, with other LINC factors. Pregnant women got sick (e.g. general blood/vitamin deficiencies or anemia) due to not consuming sufficient food. Health workers linked symptoms like vertigo and fatigue/weakness to nutrition.

Illness during pregnancy was also connected with women's workload. Hard work was described as a cause of illness, leading one woman who had a full-term birth to avoid heavy work to prevent illness when she was pregnant. Illness also had social consequences for pregnant women. One FGD with community women in Kadiolo described the social pressure pregnant women may face if they did not work. They explained how pregnant women who were ill who did not work would be accused of being lazy, but that some would understand that they were sick.

> *Participant #1: People will say that you are lazy…They will say that you don't like to work. (Respondents laughed)….*
> *Participant #2: Families are not the same. Otherwise the day you can't work, they will know that you are sick. (**FGD, community women, Kadiolo**)*

Care-seeking

Care-seeking for health issues faced when pregnant involved not only women, but also their husbands and extended family members. Husbands played an essential mediating role. Women described first telling their partners about their symptoms, then going to the clinic. Men paid for services and medications as necessary. One FGD with men in Koutiala described how pregnant women may not take their medications, making them less inclined to buy medicine for their wives in the future:

> *If you see a man who refuses to pay his wife's expenses it's because the first time it didn't work because when you buy the medicines and she refuses to take them – here you often see the medicines in the toilets, in the animal yard – so it means that she doesn't take the medicines so when you get sick again even if there is money we don't buy the medicines. (**FGD, community men, Koutiala**)*

This comment by a participant in an FGD in Koutiala provides an important example of how gendered power dynamics can influence women's access to healthcare services and medications. Further discussion of these issues can be found in Chapters 6 and 8.

Similarities and differences across the three settings

Across the three study sites, participants described multiple symptoms and illnesses faced by women during pregnancy. While many symptoms were similar across sites (e.g. headache, fever, nausea, bleeding), others differed. Swelling of the extremities, eye issues/blurry vision, and symptoms of reproductive tract infections (e.g. itching, urinary problems) were described more commonly in Bangladesh than in other settings. Malaria was the dominant concern among participants in Mali, while it was less often discussed in Ethiopia. Malaria was not asked about in Bangladesh as it is not endemic to the area. Some other infectious diseases were discussed in Ethiopia (e.g. yellow fever, HIV) but not in Bangladesh or Mali. *Tozo gnimi* was commonly described in Mali but not in the other two sites.

Women in all study sites experienced obvious co-morbidities. Qualitative comparisons of women experiencing a recent PTB in each setting suggested that they had experienced multiple symptoms or health issues during their pregnancies – often at the same time. Women with a PTB appeared to have more symptoms, particularly symptoms of reproductive tract infections. While this qualitative investigation does not suggest an association, these observations demand further quantitative exploration of the comorbidities and symptoms experienced by pregnant women living in these three countries.

Participants in all three sites linked pregnant women's health to nutrition as well as workload. While exposure to heat and the sun (*mich*) was unique to Ethiopia, heavy work was considered to be linked with women's illnesses in all three settings. However, it was only in Mali where illness was described – among nearly all sub-groups – to be an important cause of PTB.

Malaria during pregnancy

Malaria emerged as a health issue facing pregnant women in Mali and Ethiopia. In this section, we elaborate on concerns about malaria and malaria prevention during pregnancy.

Ethiopia

Is malaria a concern during pregnancy?

Malaria was not considered a problem throughout all of Ethiopia. Instead, it was only thought to be a risk for those living in lowland communities as well as those traveling to those areas. As a result, participants did not agree whether malaria was a problem for pregnant women. There was disagreement even in the same area (e.g. in North Gondar) as to whether malaria was a problem.

While some participants described malaria as an illness women could have while pregnant, most said it was rare or that people got it when they went to the lowlands/hot areas. Those that did report getting malaria said they sought and received treatment for it.

Malaria prevention during pregnancy

In general, participants in places where malaria was a concern said that pregnant women slept under bed nets. Use of bednets was an important topic during ANC visits, and health workers distributed bednets to pregnant women and their families. Pregnant women's use of bednets was reported by family members or women themselves and described generally during FGDs. However, there were respondents that highlighted how bed nets were not always used, were used imperfectly, or perhaps were repurposed – especially if malaria was not considered an issue in their community, if it was not considered malaria season, or if there were no mosquitos.

Pregnant women as well as women and children were thought to be prioritized for bed nets in households. Such prioritization was linked with the need to protect pregnant women. As one unmarried adolescent said, "*Because she is pregnant, if the mosquito bites her, her pain will be worse*" (IDI, unmarried adolescent girl, South Gondar).

In addition to bed nets, intermittent preventive treatment in pregnancy (IPTP) also serves as an important mode of prevention of malaria. IPTP was rarely discussed by participants. While one health worker in South Gondar said that IPTP is taken, this was not widespread or echoed by participants.

Mali

Malaria a concern during pregnancy?

Nearly all women who were pregnant as well as their families said that they had suffered from malaria when pregnant – for some, multiple times over the course of their pregnancy. For most, the illness lasted between two days and one week. Malaria itself was considered a cause of PTB

by health workers as well by adolescent girls, women and men. As one participant in an FGD explained:

> *I think it's due to illness. In the case of malaria, it's related to mosquito bites. It is during pregnancy that the mother gets sick from malaria and it also affects the baby because it feeds on the mother's blood. So, when the baby is uncomfortable in the womb, it can […] come out [preterm birth]" (**FGD, community men, Sikasso**).*

Malaria prevention during pregnancy

While malaria was a common illness that pregnant women experienced, participants reported widespread bed net use among pregnant women. Women said they used nets when pregnant despite the fact that they got malaria. While most partners agreed that their wives had used a bednet when pregnant, some explained how they did not use or only used after they had been bitten by a mosquito.

Health workers were the primary source of bed nets, distributing them to pregnant women during ANC visits. However, despite widespread agreement that pregnant women slept under nets, one unmarried adolescent girl in an FGD said that pregnant women did not receive insecticide-treated bed nets until later in pregnancy. She said:

> *But where we live here, until the pregnancy reaches six months, we don't give the pregnant woman the mosquito net. According to what people say, the pregnant woman must start using the net from the first month of pregnancy. But here, until the pregnancy reaches six months, we don't give her the net. They give simple mosquito nets; they are not insecticide-treated mosquito nets. (**FGD, unmarried adolescent girls, Kadiolo**)*

The vast majority of participants said that pregnant women were prioritized for bednet use. Pregnant women, as described above, were considered weaker. Furthermore, they were "not alone" as they were also protecting the fetus when they slept under a bednet.

As in Ethiopia, IPTP was not commonly discussed. While it was taken by some participants, not all women reported taking IPTP when pregnant.

Similarities and differences across the three settings

The prevalence of malaria in Mali, where nearly all women reported having malaria when pregnant, and Ethiopia differed greatly. Malaria in Ethiopia differs from community to community, with communities in the lowlands facing a greater burden of malaria than those at higher altitudes. In Mali, there was significant discussion of malaria's role in PTB, which may be the product of the prevalence of the illness in all communities where the study was conducted.

Despite these differences, social norms related to pregnant women's bed net use and prioritization of pregnant women for bed net use were strong in both Ethiopia (specifically in those regions of Ethiopia where malaria was considered a concern) and Mali. It was widely perceived that pregnant women slept under bed nets. Women themselves also reported

sleeping under a bed net during their last pregnancy. Pregnant women were considered to be a priority group – along with mothers and children – for bed nets in both settings. Discussion of IPTP was limited in both settings.

Conclusion and recommendations for practice

This chapter explored the symptoms and illnesses affecting pregnant women in Bangladesh, Ethiopia, and Mali. While common symptoms were reported across each site, pregnant women in Bangladesh appeared to suffer more from symptoms associated with reproductive tract infections, while malaria affected women disproportionately in Mali. While women in Ethiopia suffered many of the same health issues as those in Bangladesh and Mali, exposure to the heat/sun as well as other infectious diseases were unique concerns in this setting. Illnesses were, across all settings, linked with other LINC factors described elsewhere in this report including nutrition, workload, and ANC. Participants in Mali more often linked maternal infections and illness to PTB.

Recommendations for SBC programs include:

1. In each study country, participants described how women did not often go to the clinic unless they felt ill. SBC approaches could be used to reframe the importance of care-seeking from something needed only when ill, to also important during pregnancy even if healthy. Or, alternatively, programs could work with health extension workers or community health workers to strengthen their capacity and mandate to provide essential ANC services during routine door-to-door home visits.
2. SBC programs should consider health providers – either facility- or community-based – to be key audience. A checklist could be designed, using a human-centered approach, that highlights key signs and symptoms for health providers to ensure that all potential health issues are covered during each visit.
3. In Mali, SBC programs designed to address the risk factors for PTB and other maternal health outcomes should focus on malaria during pregnancy by partnering with net distribution programs or focusing on uptake of IPTP.

Chapter Eleven: Nutrition

In this chapter, we explore food frequency, food diversity, and adequate food consumption during pregnancy to understand eating patterns during pregnancy. In addition, we investigate the role of contextual realities – food scarcity, gender inequality, and compromised decision-making – in maternal nutrition. First, we explore these topics by country. We conclude with a comparison across settings.

Bangladesh

Eating patterns during pregnancy (frequency, quality, quantity)

Women overwhelmingly reported that they more or less ate the same food in pregnancy as they did during their pre-pregnancy period, indicating that life continued as "normal" during pregnancy. The challenges they face vary from restricted mobility to food scarcity to being financially dependent on their spouses. Almost all women interviewed did not hold wage-earning positions, and many helped with managing farm animals in addition to doing all the household chores. We identified three eating patterns during pregnancy that illustrate how women coped with varying situations which often were not under their control.

Eating twice a day or less

The first eating pattern identified is when women had two or less meals a day during their pregnancy. At least two women who had PTBs had severe food insecurity problems during pregnancy. For one mother, this problem occurred for the larger part of six or seven months of her pregnancy. She had two or fewer meals a day during that time. There were days when she ate nothing, and it could sometimes stretch to two or three days. She faced a problem because her husband had no income and her mother-in-law asked the couple to live on their own. The woman says she would pick leafy vegetables that grew by the roadside to eat. Most times, she was hungry throughout her pregnancy.

> *I couldn't have food in morning. I used to have food at evening and night. That's it. We are so poor. My husband was not so caring about me. That's why, I used to pick spinach from roadside, I used to take arum spinach, gourd spinach. He didn't have any income. (**IDI, woman with a recent PTB whose child survived, Taragonj**)*

Another study participant, with a recent PTB, described her struggle with lack of food during pregnancy as follows,

> *I didn't get any nutritious foods to eat then. Usually eat edible roots (Taro roots), and other vegetables found locally. I try to walk regularly. My brothers sometimes bring meat and fish for their family, they gave me some from their share. As my father was poor, he couldn't buy such foods. Food suffering was much that time. (**IDI, woman with a recent PTB whose child survived, Mithapukur**)*

In comparison, a third woman who had a PTB that did not survive said that she simply could not eat any food during her pregnancy. Instead, as she could not eat much due to loss of appetite during her pregnancy, she survived on light snacks. She said, *"Yes. When I could not eat much, I used to eat light snacks. I ate various fruits, cake and biscuit/cookies. Besides I ate all that I could eat,"* (IDI, woman with a recent PTB whose child did not survive, Mithapukur).

A fieldworker reported that she counseled husbands to prioritize their pregnant wives when it came to eating adequately. Another traditional birth attendant said that she specifically requested pregnant women from landless homes to save a fistful of rice whenever possible. She then asked the pregnant women to "sell" the rice to their husbands so that with the money they received (very small amount) they could buy what they wanted to eat. However, women were constrained from eating what they wanted as most were unable to go to the market to purchase the groceries or food they wanted.

Eating thrice times a day with minimal food diversity

The second eating pattern identified was when pregnant women are able to eat three times a day, but the overall intake lacks food diversity. Most study participants said that the common eating pattern in households was three meals per day. Usually families ate rice three times a day with either little fish or dal (lentils) or vegetables. The same eating pattern held true during pregnancy. Women in an FGD said that food items consumed during pregnancy, were lentils, egg, water spinach, red spinach, arum spinach, and turtle leaves. Green leafy vegetables were available in abundance.

Some women reported that they continued eating three times a day during pregnancy, indicating no change in their daily routine. Below, one woman described her eating pattern during pregnancy. She said:

> *I ate the same quantity of food (as before pregnancy). In the morning sometimes bread was bought for me, I ate it one by one . I ate rice after taking bath at noon. I ate rice with pulse, vorta (mashed potato or vegetable) or little meat at lunch. (**IDI, woman with a recent full-term birth, Mithapukur**)*

Similarly, a woman from Taragonj who had a PTB and the baby did not survive explained how she routinely had three meals a day throughout her pregnancy. The food remained the same with no variety. She cooked twice a day and ate vegetables with rice for breakfast and at noon. This was followed by dinner, which was also vegetables and rice.

In Bangladesh, more than the number of meals, the issue of food diversity emerged as a major problem. For example, a pregnant woman's diet was limited to rice (at least three times a day), a few vegetables like carrots, potato and green leafy vegetables, and meats such as chicken and beef and fish. There was no significant variety in terms of dairy foods such as milk, yogurt, buttermilk, etc. Similarly, the choice of vegetables was limited, and the quantities of fish and meat were also restricted.

Eating four times a day with adequate quantities

The third eating pattern observed in women during pregnancy was one of eating four or more times a day. Here, women felt free enough to eat what and how much they wanted. Women were free to snack when they wanted to do so. One woman said,

> *I took 4 meals. We need to eat frequently when child is in the womb, isn't it? Then I drank more water than before. His father (her husband) advised me to drink more water. Otherwise the child could become dry. On those days, I ate 4 to 5 meals. I mean after eating I went to bed. Then his father came and said, ``Did you eat?"… So, he said that 'you wake up, I will feed you again.' (**IDI, woman with a recent full-term birth, Mithapukur**)*

Some women preferred eating smaller, but more frequent, meals during their pregnancy. A woman from Gangachara said she managed to eat more frequently in her most recent pregnancy compared with her previous one. She said,

> *I drank too much water, I got thirsty, and that time was the season of mango, so I ate many mangoes and litchis. I ate rice three times in a day and couldn't eat much, but I took snacks multiple times, two or three times. I ate in smaller quantities as I couldn't eat much at once. Suppose, I ate a banana and then I would go chatting and return to my room and eat something else, I ate like this. (**IDI, woman with a recent full-term birth, Gangachara**)*

The three eating patterns discussed above illustrate that several women with a recent PTB ate less food during pregnancy, with some of them belonging to food insecure households. Another important learning was that several rural women had minimal food diversity in their daily diet during pregnancy. Few women were able to eat any "special foods" or foods they desired.

Food beliefs

We explored beliefs related to diet and taboos around food in the Rangpur area. Many taboos existed around food. In the quotation below, a TBA from Gangachara provided a list of fruits that were forbidden. She said,

> *Now, papaya is forbidden during pregnancy… the mothers stop eating papaya, pineapple and jackfruit. They (can) eat banana, egg, small fishes, ox liver, lady fingers, red amaranth, fruits, pulse, sweets, toast biscuits. There is acid in papaya, pineapple and jackfruit which is harmful for the baby. (**KII, traditional birth attendant, Gangachara**)*

Several other study participants supported this belief, indicating that it was a commonly held local tradition in rural Rangpur.

An entirely different set of foods were not allowed for women after delivery. As a women with a child under two years said in an FGD,

> *Murobbis (older people) say many things about what should be eaten and what should not, for healthy baby. Participant 7 : Cabbage, cauliflower, beans, calabash (bottle gourd) these are forbidden. They forbade us to eat this after delivery. Child might catch a cold. And during 8th and*

> *9th month duck meat, duck eggs, fried rice are forbidden. They can cause asthma. Participant 1 : They also forbade to eat ladies' finger during pregnancy, it may make the baby's throat fatty. (**FGD, community women, Taragonj**)*

Some elders felt that if pregnant women ate too much, their babies would grow more, and it would lead to a difficult delivery or even a caesarean section. Therefore, the advice given to women in their last trimester was to eat smaller quantities of food. A woman who experienced a preterm birth and her child did not survive complained,

> *Yes. There is some neighbor who will tell you, "Don't eat too much or your baby will be bring out by slitting your belly (C-section). My mother-in-law also said that my baby died because I ate excessively. I ignore these remarks. (**IDI, woman with a recent PTB whose child did not survive, Gangachara**)*

Beliefs around food were primarily linked to "taboo foods" that cannot be eaten during pregnancy or after delivery. Women were compelled to conform to the expected tradition if they were in families where the beliefs were strongly upheld. Sometimes these beliefs were wrongly used to "blame" women if something went wrong with the pregnancy or baby.

Ethiopia

Eating patterns during pregnancy (frequency, quality, quantity)

Eating patterns varied among the study participants from the three sites in the Amhara region. We tried to understand how women's diets changed during pregnancy, how they managed their food intake across trimesters, and how the annual food scarcity season affected them. While reading this section, we also have to remember that Ethiopian women have an excessive workload throughout pregnancy, and the options for them to prioritize their own nutritional needs are severely limited.

Eating less during pregnancy and no food diversity

The first eating pattern identified in the qualitative data is the most common. Women, their spouses, and family members all stated that women eat less during pregnancy compared to when they are not pregnant. This eating pattern varied over the nine month period, but the overall perception that women tend to eat less during pregnancy persisted in the data.

A woman from West Belesa, North Gondar, who delivered a PTB baby that did not survive shared her experience. She said she tried to follow the doctor's dietary recommendations for one week. However, she was unable to follow the diet after a week due to poverty and gender norms of unequal household food distribution that made her eat last and least. She talked about the time last year when there was food scarcity.

> *Yes, during the summertime [rainy season], there was shortage of food. The man [her husband] is ill-tempered. I prepare the available food for him and the leftover I give to the children.*

> *Whenever there is shortage, we reduce the amount at each meal. (**IDI, woman with a recent PTB whose child did not survive, North Gondar**)*

This woman suffered from malaria during the pregnancy and at the same time faced food shortage and became underweight. She concluded, "*Lifting heavy load beyond my capacity, lack of food leads to lack of milk to be suckled while the child is inside. When there is "Mitat" [exposure to the hot sun], it also leads to preterm birth."*

One of the reasons that pregnant women did not get the nutrition they need is due to the lack of teff in the region. The injera that is available in North Gondar is made of sorghum, and it is not as nutritious as teff. A husband described the limitations of access to nutritious food for women in the area. He said,

> *They (the women) eat what is available in the household such as cooked bean, and injera with shirowot. We don't grow teff here. Injera made from barley and wheat is our stable food. Most people eat Injera made from sorghum. So pregnant women have severe malnutrition. (**FGD, community men, North Gondar**)*

Another factor that compounded the dietary intake of pregnant women was the lack of food diversity. Pregnant women eat the same food three times a day, and often they repeat it day after day. They said they have no option. A religious leader described the situation, saying that pregnant women eat less than usual.

> *Because they are not interested…the food they eat at home is always the same; they have decreased appetite for that….But when it is different, for example, they ask food from their neighbors and eat that… (**KII, religious leader, South Gondar**)*

These pregnant women are also mothers, and when it comes to the food scarcity period, they sacrifice their own food for their family members. A TBA from North Gondar indicated that the pregnant woman was not prioritized over other family members when food fell short (See Chapter 6).

> *However, when enough food may not be prepared in the house, a pregnant woman will not take precedence in taking food before other household members have eaten. Even though she is pregnant she refuses to eat before other household members have eaten. (**KII, traditional birth attendant, North Gondar**)*

Eating 3-4 times a day during pregnancy with reduced eating during food scarcity season

The second eating pattern identified is when women ate 3-4 times a day through their pregnancy with potential shortages if their pregnancy runs through the food scarcity season. A woman who had a normal birth said she ate three times a day during her pregnancy. She ate potatoes, cotyledons, lentils (if available) and eggs (IDI, woman with a recent full-term birth, North Gondar).

However, if the pregnancy occurred during the food scarcity months, then the pregnant women received no special concessions. In fact, the husbands were very strong in their viewpoints. Men in an FGD in South Gondar said:

> *Is there a time when there is not enough food in households in your community? Voices: Yes, there is….during wintertime.*
> *Facilitator: What happens then? What is done to pregnant mothers at that time?*
> *Voice: They cope like the others (their family members). (**FGD, community men, South Gondar**)*

While some men were supportive of their pregnant wives (See Chapters 6 and 7), other men "normalized" pregnant women's plight and did not see a role for themselves to improve their pregnant wives' nutritional intake.

Eating well with moderate food diversity

Data also indicated that several women were able to eat well during pregnancy and were also able to avail of a varied diet. These women ate 3-4 times a day and were also able to snack a few times according to their needs. These women had a more stable economic situation and were therefore able to access more nutritional resources. Below, a woman who had a full-term birth described her nutritional intake. She said,

> *At the time we got married, our house was not much…We did not have a child at that time….we both are educated….we have mule, using that we started to engage in trading… he goes there and buys crops; I sell the crops here in retail……In this way, we get around 200, 300 birr weekly……We also give mule transport service by payment….We have never slept without eating in any day….And at present, we have a shared farm, we have cattle, we are profitable No, there is no shortage of food. (**IDI, woman with a recent full-term birth, South Gondar**)*

A traditional birth attendant outlined what a pregnant woman should eat during her three meals.

> *If in the morning she took injera with shiro wot [made up of finely ground beans], during lunch time she will have injera with "Kik wot" [made up of coarsely ground beans], at dinner time if there is potato, it will replace the "wot" or it may be substituted with cabbage. Pregnant women in this area commonly consume cabbage, habesha's cabbage, lettuce and salads.* (***KII, traditional birth attendant, North Gondar***)

The three eating patterns indicate that there is scope to improve the nutritional intake within each eating pattern. Specifically, unequal food distribution puts the pregnant woman at risk and often pregnant women are not prioritized over the nutritional needs of other family members. Nutrition has been recognized by community leaders and influential leaders as an important area for the prevention of PTB.

Mali

Eating patterns during pregnancy (frequency, quality, quantity)

Eating thrice times a day with minimal food diversity

Apart from reasons related to general financial or food insecurity that limited food accessibility, participants did not discuss specific restrictions on when or how many times a pregnant woman can or should eat: if she was hungry and there was food available, nothing stopped her from eating at any moment. Pregnant women ate alongside their family without change from pre-pregnancy.

> *At our home here, unless you're not hungry, there's no such thing as a specific time, you eat when you're hungry. Saying there are times when you have to eat, or you don't have to eat, that doesn't exist here.* (**FGD, community men, Koutiala**)

Generally, neither extended family members or partners of a woman who had a PTB, nor women who experienced PTB themselves discussed limitations to food access or nutrition that differed from women who experienced full term births. There were several examples of adolescents, women and men describing how some women choose to eat less during their pregnancy (without always specifying PTB or full term), including this partner of a woman who experienced PTB:

> *Interviewer: Did your wife eat more when she got pregnant?*
> *Participant: She ate less.*
> *Interviewer: Did she eat less?*
> *Participant: Yes.*
> *Interviewer: Why did she eat less?*
> *Participant: It could be due to her body. Because if you're not healthy, it's hard for you to eat well. (**IDI, partner of a woman with a recent PTB, Sikasso**)*

In other instances, adolescents, women and men otherwise described how women choose to eat less because some of the available foods upset their stomachs during pregnancy. For example, in most communities, a doughy, thickened porridge-like food called "*tô*" was widely available and eaten, sometimes for all three meals. It was stated that the only exception to what a woman ate depended on whether her tastes changed during pregnancy or if something specific made her feel nauseous that did not before her pregnancy. In the example below, a woman described how *tô* made her nauseous. She then reduced the number of times she ate throughout the day during her pregnancy, and the other foods available to her lacked in vitamins:

> *Interviewer: In the first six months of your pregnancy, how many times did you eat?*
> *Participant: I ate twice because I didn't like the taste of Tô.*
> *Interviewer: Why didn't you feel like Tô?*
> *Participant: I didn't feel like eating Tô because it made me nauseous.*
> *Interviewer: What did you eat during your two times of eating?*

> *Participant: I ate porridge and Tô if I cooked. I had coffee and bread during the night. (**IDI, woman with a recent PTB whose child survived, Kadiolo**)*

Her alternatives in this example were to eat coffee and bread, as well as a liquid porridge. In these cases, women may choose to eat less and get by with fewer nutrients offered in any alternative foods available. In this case, the PTB survived despite reduced food intake. Other participants in an FGD with women said that quantities of food should be decreased during pregnancy because eating too much could cause stomach aches or make breathing more difficult.

Nearly universally, with minor variation, participants across Mali reported eating a liquid porridge (bouilli) for breakfast, and rice or "Tô" for lunch and dinner. The sauces made for *Tô*- and rice-based dishes included several vegetables, and thus opportunities for more vitamin diversity. Other common supplemental foods included: eggs, beans, bread, occasional meat[bb] or fish, and bananas or mangoes. Many participants noted the lack of nutrients and diversity in their diets and an association to maternal and newborn health, yet also signaled their resignation that these are the only foods available and affordable in their locations.

A woman with a preterm birth described an atypical situation where she actively sought foods rich in vitamins, such as liver. At the same time she recognizes that her ability to eat nutritious foods depends on the availability of money:

> *I could look for liver or leaf sauce as they say it's rich in vitamins, I would eat that. Often if I found liver I would eat it. Everything depends on money. Otherwise, I would eat that with bread and sometimes eggs. (**IDI, woman with a recent full-term birth, Kadiolo**)*

A woman who had a PTB that did not survive said there was never a day during her pregnancy that she did not eat. Generally, all participants reported that breakfast, lunch, and dinner were standard times to eat and that the food eaten did not change whether a woman was pregnant or not. Social norms did not emerge in this context, but rather a common barrier to nutrition was lack of resources.

> *They said that when a woman is pregnant, she must eat fruit and meat and that what a pregnant woman eats should be different from what other women eat, but here in our home pregnant women eat the same thing as other women even if we only eat once a day. You spend the day like this and the night like other women. (**FGD, community women, Koutiala**)*

Another woman with a full term birth described a different situation where she ate more than three times a day:

[bb] While no one mentioned eating rat as part of their normal diet, many participants mentioned avoiding rat meat during pregnancy. Whether this specific recommendation suggests the consumption of rat meat is common such that participants often mentioned its avoidance, or whether the dislike for rats is strong enough that no one ever eats rat is unclear.

> *In the morning I eat breakfast but I don't eat heavy foods like [leftover] rice, for example. My breakfast is always different from other people's because a pregnant woman always likes delicious food. So I eat this in the morning, at noon I eat lunch, at 4 p.m. I eat a delicious dish, then at night again, a delicious dish. Then when I find appetizers also in the night, I prepare and eat them with bread. (**IDI, woman with a recent full-term birth, Kadiolo**)*

No obvious trends emerged from the data that distinguished eating habits between women who experienced full term births from those that experienced PTB, nor PTB that survived or did not survive. Furthermore, pre-pregnancy nutrition did not differ appreciably from nutrition habits during pregnancy.

Food beliefs

We explored beliefs related to diet and taboos around food in the Sikasso region study sites. While nearly all participants stated that there were no restrictions to when women could eat, and no restrictions to eating the staple meals, some participants expressed specific beliefs about what pregnant women could and should not eat.

Many adolescents and community women stated that pregnant women should not eat reheated food leftover from dinner for breakfast, because it could cause a difficult delivery.

> *Participant: There are some people who say that if she eats Tô (reheated Tô) that it makes her uncomfortable.*
> *Interviewer: Apart from Tô, what other food is there?*
> *Participant: Dishes that have already spent a night out.*
> *Interviewer: Why is it said not to eat these foods?*
> *Participant: They are too heavy.*
> *Interviewer: So, it's too heavy for you?*
> *Participant: So that you are comfortable on the day of delivery.*
> *Interviewer: So, it stays like that until the delivery?*
> *Participant: Aaaah; there are many pregnant women who don't like to eat Tô (reheated). (**FGD, community women, Kadiolo**)*

Other women discussed how eating at night can make women physically uncomfortable, and so to decrease the quantity of food eaten at night.

Other beliefs, while not commonly reported, suggested the persistence of local beliefs restricting what women were able to eat during pregnancy.

- Several groups mentioned not excessively eating mangoes, with one explanation being that too many mangoes during pregnancy can increase the respiration rate of the baby.
- Female participants in another FGD said that eating the head of any animal would cause respiratory illness in the baby.
- One adolescent girl stated that drinking cold water could make the baby gain weight.
- Men in an FGD said that eating bread or salad while pregnant caused the baby to gain weight.

Synthesis of findings across study settings

Across Bangladesh, Ethiopia, and Mali, distinct eating patterns emerged. In Bangladesh, pregnant women ate twice a day or less; three times a day with minimal food diversity, or perhaps four times a day with adequate quantities. In Ethiopia, pregnant women ate less during pregnancy with limited food diversity; ate 3-4 times a day during pregnancy with potential reductions during periods of food scarcity; or ate well with moderate food diversity. In Mali, pregnant women's food consumption was limited by availability of food. A variety of beliefs shared by participants suggested restrictions on what women were able to eat during pregnancy. Findings suggested that, in Bangladesh and Ethiopia in particular, unequal food distribution put pregnant woman at risk when nutritional needs of other family members were prioritized over pregnant women's.

In light of the eating patterns, and the powerful role of gender inequitable norms in women's daily lives during pregnancy, it is essential to recognize the important barriers that exist to adequate maternal nutrition:

1. Lack of mobility is a barrier for pregnant women. They are insulated from access to nutritional resources, including counseling by health workers.
2. Pregnant women are blamed for breaking mobility restrictions in the event that something goes wrong with the pregnancy.
3. Women's decision-making is compromised and even when it is there, the husbands go out and buy food commodities and grains.
4. Food insecurity, food scarcity seasons and poor financial condition are all barriers to basic nutrition for pregnant women.

As a result, facilitators can include:

1. Fieldworkers. Fieldworkers can counsel pregnant women on diet, food diversity, and food quantity. They can provide tailored nutrition counseling to food insecure households.
2. Engaging men through education about the nutritional needs of their pregnant wives/partners, the importance of equitable food distribution in the household, promoting women's autonomy for decision making around using household resources and freedom of mobility can be facilitators for improved nutritional outcomes for pregnant women and adolescent girls.
3. Husbands are usually the ones who buy groceries and supplies for the kitchen. They can be facilitators if they are knowledgeable about nutritious foods.
4. Promoting women's autonomy for decision making around using household resources and freedom of mobility can be facilitators for improved nutritional outcomes for pregnant women.

Food availability was a significant issue for participants across all three study sites. In Bangladesh, lack of financial resources restricted availability of food for the most economically

vulnerable. In Ethiopia and Mali, lack of available food – particularly during certain seasons as in Ethiopia – led to restrictions on the type and quantity of food available.

Conclusion and recommendations for practice

This chapter outlined the emergent eating patterns of pregnant women described by participants in interviews and FGDs. Intersections of maternal nutrition with cross-cutting issues such as poverty, gender norms, men's engagement, and food insecurity were evident.

Recommendations for practice include:

1. Address, in SBC messages designed for both women and men, the gendered nature of food distribution in households, particularly during periods of food insecurity.
2. Integrate a social determinants of health approach to any SBC strategy to address issues in food availability, which emerged across all three study sites.
3. In the context where food diversity and food availability are limited, use human-centered design approaches to identify opportunities to integrate additional food groups into pregnant women's diets.
4. Further interrogate restrictions on what women eat and do not eat during pregnancy to ensure that nutrition-related messages are contextually specific.

Chapter Twelve: Family planning

Use of contraceptive methods enables women and adolescent girls to space their pregnancies, reducing the risk of PTB as well as maternal morbidity and mortality.[77–79] Use of contraceptive methods also enables women and adolescent girls to make their own choices about whether and when to have children.

Across all three countries, participants identified barriers to using contraceptive methods at multiple levels of the socio-ecological model:

1. Community and societal (including discriminatory gender norms)
2. Health system
3. Couple or household
4. Individual (including method-specific issues)

In this chapter, we explore the multilevel barriers that participants highlighted to using contraceptive methods within each country. Then, we compare findings across countries.

Bangladesh

Community and societal level (including discriminatory gender norms)

Participants described multiple gender norms that served as barriers to contraceptive use.

Contraceptive use before marriage. For unmarried adolescent girls, a major barrier to using contraceptive methods was that they were not married. According to adolescent girls, it was not considered acceptable for unmarried girls to use contraceptive methods before marriage. Using a contraceptive method suggested that one was sexually active before marriage, which was not socially accepted. Adolescents' parents played an important role in reinforcing this discriminatory gender norm.

Contraceptive use before the first child. While family planning was commonly accepted and approved as birth spacing across participants, contraceptive use before the first child was not common. Timing of contraceptive use was influenced by family, community, and societal pressure to have a child, which served as a barrier to women or couples adopting a method. Older community members or family elders were thought to reinforce these ideas. Women, both adolescent girls and adult women, described how comments would be made about their ability to conceive by community members if they did not have a child early in their marriages, illustrating the effect of such discriminatory gender norms on women's lives. One woman from Taragonj using a contraceptive method with no children said that she had talked with her neighbors about contraception. Then she said, "*They forbid us from using this. They say we should have a baby. They vilify me. Why don't we have a baby yet? People make remarks*" (IDI, woman with no children and using a contraceptive method, Taragonj).

Religious objections to contraceptive use. Multiple types of participants – including unmarried adolescent girls, community women, female leaders, and women with a recent full-term birth or currently using a contraceptive method – described contraceptive use as a sin. In the following quotation, one woman using a contraceptive method from Mithapukur described community beliefs around contraceptive use.

> *…after marriage if Allah gives [you a child], you have to take [it]. But someone is taking pills, and someone is using other methods. These are sins…because what Allah wants to give [you], you don't want. If I don't use this method, there would have been a baby a long time ago. It would have been two or three if not one. (**IDI, woman with no children and using a contraceptive method, Mithapukur**)*

Son preference. While described by a minority of participants, one community leader from Taragonj described the desire to have a son leading couples not to use a contraceptive method. He said:

> *…Suppose they have one, two, or three girls. They try again for a baby expecting a boy. This time also they had a girl and it continues so. One of my maternal uncles had eight girls expecting a baby boy. He is in Dhaka right now. All the girls completed their Masters (MS). The girls are lucky, they have been married in educated families. He [the Uncle] can spent his eight months easily at his girls' home. But unfortunately, he doesn't have a boy, all are girls. Now his efforts are off totally. I told him if all of them were boys, then the whole house may have populated, even he could not provide space for all. Now all the girls are gone to others home, the whole home is empty. Isn't it? (**KII, community leader, man, Taragonj**)*

Son preference is a powerful example of how discriminatory gender norms can influence fertility preferences and associated reproductive practices among women and couples in Bangladesh,

Health system factors

While less commonly highlighted than the social norms described above, health system-related factors were considered an important barrier to contraceptive access. These factors included cost of services and availability of health workers.

Cost of services. While not commonly cited by participants, one community leader highlighted access to contraceptive methods being restricted for couples that lacked access to sufficient resources. He highlighted, for example, that couples had to pay for certain methods, which put an economic burden on the family.

> *To buy the birth control [methods] requires money. They consider it an economic burden. Money is needed to buy pills. That is why they did not but it. That is it. (**KII, community leader, man, Taragonj**)*

Availability of health workers. One community leader in Gangachara described how health workers were not always available to provide services. Specific methods were not always

available either, which he considered a barrier to adopting a contraceptive method. He said, *"Sometimes, the contraceptives are not available; the health-workers may come to visit late" (KII, community leader, man, Gangachara).*

Couple or household factors

Family opposition to contraceptive use was highlighted by multiple women in Bangladesh. Mothers-in-law were frequently mentioned as not approving of contraceptive use.

> *Interviewer: Suppose that, don't you think ever that you should have let her know about the pills you are taking? When will you let her know?*
> *Participant: I think I will never let her know…She will get angry…*
> *Interviewer: Do you think your husband can manage her then?*
> *Participant: Definitely, She will be ok if he can make her understand. (**IDI, woman with no children currently using a contraceptive method, Taragonj**)*

In addition, other family members – including women's spouses and other male family members – were also identified as not approving of either 1) family planning use in general or 2) specific methods. Multiple women highlighted how their husbands did not approve of more long-term or permanent methods. As one woman said, *"My husband said you don't need any pill or other things, you just take the injection…They [my family] said that if anyone died after taking the operation no one would take the dead body" (IDI, woman with a recent PTB whose child survived, Taragonj).*

Individual factors

Individual-level factors included both individual knowledge and method-related issues.

Lack of knowledge was considered, specifically by adolescent girls, a reason why some individuals do not use contraceptive methods. One unmarried adolescent girl in an FGD said, *"Many couples don't know about [contraceptive] methods."* However, she then followed that statement with *"But now these families engage in family planning,"* suggesting that knowledge of methods had increased in recent years (*FGD, unmarried adolescent girls, Gangachara*). A similar point was echoed by an unmarried adolescent girl in an FGD in Taragonj, who said, "they may don't know [much] about it like this [method] will be good or that" (*FGD, unmarried adolescent girls, Taragonj*).

Method-related issues or concerns. Method-related issues included concerns about or experiences of side effects. Concerns about infertility and the health effects of methods were shared by adolescent girls as well as women who were using a contraceptive method. Side effects discussed included not only headaches, but also discomfort with specific methods (e.g. long-acting methods or condoms) and larger concerns about infertility after using a contraceptive method. Concerns about infertility were often linked with social normative expectations of childbirth, as described above. Fear of infertility often led women to wait to use a method until after they had given birth.

> *Nobody can blame one another [for using contraception] because everybody is conscious and uses it. And the traditional people also find out problems that they say if you [use a contraceptive] pill, such kind of problem may affect you, it may get hard to become pregnant, etc. But the new generation doesn't listen to this. (**IDI, married adolescent girl, Mithapukur**)*

In contrast, partners of women with a recent PTB described forgetting or not knowing how to use a contraceptive method, which in their perspective led to their wives becoming pregnant. As one man said, "*My wife was taking pills. Maybe she forgot to take the pills on some days, so she got pregnant*" (*IDI, partner of a woman with a recent PTB, Gangachara*).

Ethiopia

Community and societal level (including discriminatory gender norms)

Emergent community or societal factors that participants described as barriers to contraceptive use are described below.

Religious objections to contraceptive use. Several participants, including adolescents, men, women, and a health worker, described having children as God's will. As a result, using contraceptive methods was a sin. In the following quotation, men from an FGD in South Gondar discuss such religious considerations. Their discussion illustrates the intersection of community beliefs or concerns about side effects with larger religious attitudes towards contraceptive methods.

> *Facilitator: What barriers are there for a husband and wife in getting family planning methods?*
> *Participant #1: For example, there are some [who say] they are committing a sin if they use it. [Others show their agreement]. Wives of priests don't want to use [contraceptive methods]. They say it is a sin.*
> *Participant #2: Some, for example, use it for some time and then get pregnant by chance. When they give birth, something happens to the child. After that time, they promise to God they will not use it again and beg Him to give them a child… the child might be dead. After that they vow, they will never use; they plead to Him just to give them a child. Then He will give them [a child].*
> *Participant #1: There is also another thing. The reason they give birth frequently is, there is this method called Depo…Those who use this frequently give birth to twins mostly. They attribute this incident to Depo.*
> *Participant #3: They say "God is angry with us"…and discontinue the injection intending to get a child. When they give birth, like he said, they get twins. Then, they say, "Who am I to get a child when I want, and to stop when I don't want"…. (**FGD, community men, South Gondar**)*

Community expectations to have children. As in Bangladesh, gender normative expectations of women to have children meant that there was strong social pressure on women if they did not have children. Community members would talk about them and their ability to have children if they did not give birth. One man explained how, although couples faced no problems using modern contraceptive methods, people gossiped if women did not get pregnant.

> *People gossip. They speculate the reasons why the woman doesn't produce children. Some of the people believe that the couples are using contraceptive methods. These days couples face no problem in using modern contraceptive methods (**IDI, partner of a woman with a recent PTB, North Gondar**)*

Adolescent girls also described social and family pressure to have children. These examples illustrate the concrete effects of such discriminatory gender norms on women's lives and reproductive practices.

Contraceptive use before marriage. As in Bangladesh, women and adolescent girls described how use of contraceptive methods before marriage was not widely accepted. Parents played an important role in reinforcing this expectation, which served to restrict adolescents', particularly adolescent girls', access to contraceptive methods. In the following excerpt from an IDI with an unmarried adolescent girl in West Gojjam, she explains this perception. She said,

> *Interviewer: What else could be reasons for not using contraceptives while they want to? Participant: I don't know. Maybe fear? There could be people who want to use contraceptives but fail to use because they are afraid to go to the health center. Some women who are not married yet but are engaged in premarital sex can be afraid of going to the health center because they worry someone may see them…They worry about what will happen if their parents hear that they are using [a method]. They don't use contraceptives, they have sex, and will become pregnant and end up having the child. A girl who got pregnant out of wedlock will not get the usual love and support of her parents and family, she will be socially rejected, neglected and humiliated. People who know her will not have good attitude towards her, the parents would say she shouldn't have done such a thing, instead she should get educated and support them. (**IDI, unmarried adolescent girl, West Gojjam**)*

Health system factors

Health system factors were commonly mentioned in interviews and FGDs in Ethiopia. These factors, highlighted by women, adolescent girls, and health workers alike, included lack of availability of specific methods at the health extension level and lack of availability of health extension workers.

> *It [contraceptive methods] is available here in our health post. Unfortunately, the Health Extension Workers were not there at that time. The health post was closed. They are not present regularly. It is closed most of the time. Recently, the health extension worker has asked me whether I'm using a contraceptive method. I've informed her that I couldn't get her and let her know that I went to the health center to get the contraceptive. (**IDI, woman with no children and using a contraceptive method, North Gondar)***

Women's desired methods were not always available, and the method mix was limited at the local level. If not distantly located, health posts were not always open. Health extension workers were not always available to perform the necessary services for certain methods (See similar barriers in Chapter 9 on ANC).

Couple or household factors

Both women and men emphasized how contraceptive use could lead to conflict in the household. As a result, several participants described how people in their community did not use a specific method to avoid such conflict. Women also mentioned spousal opposition as a significant barrier to using family planning. An example of such conflict was described by a health worker in South Gondar, who said,

> *What happened at that time was: she came here…I ask her what she wants…her husband immediately arrived…he threatened her… told us that he didn't want her to use family planning ….I asked her why he is doing that, why did not they discussed and agree before she came here… She told me that he wants her to get pregnant, but she doesn't want to, because she is still young… She has not given birth previously… Then her husband turned his attention to us… Seeing that, we told her to go now and come back anytime without him knowing about it or after discussing and convincing him. (**KII, midwife, South Gondar**)*

Individual factors

Individual factors identified by participants included method-related concerns, as well as women's busy schedules.

Method-related concerns: Concerns about side effects, including headaches, discomfort, or infertility, were commonly cited by adolescent girls, both married and unmarried, as well as women interviewed and participating in FGDs. These concerns about side effects intersected, particularly for adult women, with a lack of available contraceptive choices. As one participant in an FGD in North Gondar described:

> *I use the three-month injectable. There is a great problem… It creates a strong headache. It also makes me nervous... The three year method is very difficult. They even refuse to take it out of your body before three years when you want to. Hence we have no choice and we continue to use the three-month method. The three-month injectable is very difficult especially if you have excess workload. It also affects our arm. Generally it is not comfortable. It also changes our behavior. It makes us furious. Now our husbands become accustomed to it and they don't reply us when we become very angry without genuine reason. We regret what we do after some time. It is also difficult for women who work near fire and around hot areas (**FGD, community women, North Gondar**)*

Some men described worries about the effects of using contraception on future pregnancies as demonstrated in the quotation above (see *Religious objections to contraceptive use* section above).

Women's busy schedules: Women in FGDs described the challenge of scheduling or keeping appointments at health posts to get contraceptive methods due to their workloads. One married adolescent girl said, *"[I am dissatisfied because] when I want a contraceptive the health post may be closed. For example, the appointment may be on a Saturday or Sunday, and I can't get a contraceptive method on these days" (IDI, married adolescent girl, North Gondar)*. A

community woman hypothesized that a woman could miss the date of her injection because she was busy. She said:

> *Maybe if they were busy in different kinds of chores and the specific date for the injection passed, or some social problem like the death of family or friends if they are in such kind of problem they could easily forget the date of injection" (**FGD, community women, West Gojjam)***

Mali

Community and societal level (including discriminatory gender norms)

There was widespread disapproval of unmarried adolescent girls using contraceptive methods, which meant that not being married served as a barrier to adolescents, particularly adolescent girls, using contraceptive methods. Parents reinforced this discriminatory gender norm by not approving of contraceptive methods as well as failing to provide sufficient advice to their daughters. One FGD with community women in Koutiala emphasized this in the excerpt below.

> *Participant #1: What prevents them from using contraceptive methods until they become pregnant is that mothers do not give them advice. Because if they don't get advice to guide them, they don't know the difference between good and bad.*
> *Participant #2: As soon as the girl tells you that she has started menstruating, you must give her advice and tell her that if she is not careful, she will get an unwanted pregnancy. (**FGD, community women, Koutiala**)*

Health system factors

While less frequently mentioned than other barriers, the lack of availability of health workers to provide women's desired method was described by one woman who had recently experienced a PTB. She explained how she had decided to use a contraceptive method since she had a PTB, but there was no available health worker to insert it. "*I went the other day to insert ''Alumètini'' [implant] but I was told that the person who does it is not there, otherwise I have never used a contraceptive method*" (IDI, woman with a recent PTB whose child survived, Koutiala).

Men and women both mentioned cost, or the lack of money, as a significant barrier. As a woman in an FGD in Koutiala said, *"Even if you want to use a contraceptive method discreetly, if you don't have money, you won't be able to do it*" (FGD, community women, Koutiala).

Couple and household factors

The most common barrier described by women in Mali was spousal opposition to family planning or lack of understanding between husbands and wives regarding contraceptive methods. For some, lack of spousal approval meant that a woman should not use a contraceptive method. For others, concerns about quarrels with one's husband meant that women would not use a method. Finally, multiple examples of discreet or clandestine use of contraceptive methods were shared. In the face of a spouse's opposition, some women explained how they would or could use contraceptive methods privately. The following

comments from women in an FGD in Koutiala illustrate different perspectives related to such clandestine use.

> *Participant #1: if the husband doesn't agree, but if you want, you can do it without him knowing about it…*
> *Participant #2: Like she said, if you hide going to get a family planning method for yourself and your husband is always waiting for you [to return], he'll say that you went to plan and that will bring quarrels between you…*
> *Participant #3: If the husband doesn't allow you to do it you can't do it. (**FGD, community women, Koutiala**)*

Adolescent girls also highlighted parental opposition as a major barrier to using contraceptive methods.

Individual factors

Method-related concerns were commonly mentioned by participants in Mali. Side effects, including the potential for contraceptive methods to influence the health of future pregnancies or lead to infertility, were described by adolescent girls, women, and men. In the two quotations below, men participating in FGDs described in detail some of the beliefs and myths related to side effects of contraceptive methods that prevented women from using them.

> *Participant #1: Illnesses have several sources for some people. Often the use of family planning can cause a problem during pregnancy because each person has her own specificities.*
> *Participant #2: Are you finished? I think that family planning, there are people who say if a woman has gone a long time without having a child, when she uses a family planning method after that she will get pregnant. The gestation period becomes fast. There are also people who say if you use l'allumette [implant], if you lose it in your skin you won't give birth anymore, that it's no longer possible to get it out of your body. There are many who put this in your head. Even a woman who is at the center right now says that she used this method and l'allumette [implant] disappeared into her blood. That's the misunderstanding. When she came to the health center, they took it out, after that the woman had a child. People don't understand otherwise it doesn't have any negative effects. Saying that there are serious side effects after using this method is bad information only... (**FGD, community men, Kadiolo**)*

While less commonly described, lack of perceived need was also raised as an important reason why one woman did not use a contraceptive method. She said that since her birth spacing was not short, she did not need to use a method. She said, "*My pregnancies are not very close… Yes, [that is why I don't use them]*" (*IDI, woman with a recent full-term birth, Sikasso*).

Similarities and differences across the three settings

Contraceptive use to delay the first pregnancy was not a common practice in the three countries, with social normative expectations of women to give birth leading them to wait to use a contraceptive method to space their births. In fact, it was not possible for the Mali team to identify married women without children who were using a contraceptive method. In addition, contraceptive methods before marriage was not a common practice, with parents playing a fundamental role in reinforcing such discriminatory gender norms. Individual concerns, particularly those related to side effects and concerns about future infertility as a consequence of using contraceptives, were raised across all three countries.

While some factors were similar across the three countries, others varied. In Bangladesh and Ethiopia, for example, religious objections to contraceptive use were described more commonly than in Mali. Contraceptive use was understood by some as a sin for going against God's will. While health system issues were mentioned in all three countries, participants in Ethiopia described these barriers more often than those in Bangladesh or Mali. Spousal opposition remained a significant issue restricting women's access to contraceptive methods in Mali, while it was less commonly described in Bangladesh and Ethiopia.

Conclusion and recommendations for practice

This chapter explored community members' perceptions of factors that prevent individuals and couples from using family planning methods. An exploration of participants' comments illustrated that barriers existed at multiple levels: not only at the individual level, but within couples, the health system, and the larger social and community context. While factors differed across settings, these findings illustrate the prominent role of side effects, spousal power dynamics reflecting inequity in the household and gender discrimination, health system barriers, and contraceptive practices rooted in discriminatory gender norms about who (i.e. based on marital status) is allowed to use contraception and when (i.e. after the first birth).

Recommendations for practice include:

1. Promote equitable couple communication and women-led decision making for family planning in all major SBCC products designed to increase demand for family planning.
2. Provide support to women who are using contraceptives secretly. Use provider behavior change approaches to train health center staff to maintain confidentiality, address provider biases, and ensure women's safety and protection from violence. Couple these approaches with a gender transformative approach to engage men in reflective dialogue on the importance of family planning for their spouses and children.
3. In addition to robust formative research, conduct routine monitoring (e.g. through the development and implementation of a rumor tracker) to track community perspectives related to family planning in real time to inform local messages related to side effects and long-term consequences of contraceptive methods.
4. Utilize community champions in conjunction with entertainment education approaches to model couples using contraceptive methods to delay the first birth.

5. Take a multi-level approach to any SBC strategy to increase contraceptive use by addressing the individual, household, health system, and discriminatory gender norms that serve as barriers to contraceptive use. Use social normative approaches by emphasizing the role of the “cluster” or “neighborhood” in adopting behaviors and leading to a collective good. Such a multi-level approach demands a gender transformative approach that engages women and girls, men and boys, and key influencers in discussions about the unequal impact of gender norms on women and men and their reproductive practices.

Chapter Thirteen: Discussion

This qualitative study has explored the local and contextual factors associated with LINC factors and risk for PTB in three diverse settings: Rangpur, Bangladesh; Amhara, Ethiopia; and Sikasso, Mali. This BOT qualitative study is among the first mixed methods research on community and household factors linked to PTB. These factors include discriminatory gender norms and gendered power dynamics, household environment, economic vulnerability, couple communication, and access to health services. The study has yielded important broad-based findings as well as context-specific results that can guide the design of effective PTB prevention programs.

In this final chapter, we synthesize findings to provide a roadmap for the priorities that require extra focus if PTB is to be prevented in all three country settings. First, we focus on the new learnings from the study in the context of explanatory models of PTB, specific contextual factors that have emerged within each country setting, and emergent priorities among LINC factors. Then, we provide recommendations for future programs and research. The findings provide us not only with a clear understanding of the cross-cutting issues that demand attention, but also with granular details on how contextual factors – gendered household power dynamics and discriminatory gender norms, economic vulnerability and food insecurity, among others – are manifested and experienced differently in each country.

Explanatory models of PTB

Explanatory models identified a number of factors related to PTB in Bangladesh, Ethiopia, and Mali.

- In Bangladesh, a local belief system exists that emphasizes the role of ghosts and spirits who may enter a pregnant woman's body and cause a PTB. In Bangladesh, this belief system added a double layer of discrimination to women with a recent PTB. This belief system was commonly found in older persons residing in rural areas.
- In Ethiopia, a widespread belief system outlines direct and indirect linkages of excessive workload with PTB. Too much exposure to the sun results in a condition called "Mitat," which then leads to a PTB. This belief system allows for an opportunity to reduce women's workload during pregnancy. The multiple terms used to describe PTB vary in their severity and level of insinuating slurs.
- In Mali, the causes of PTB as perceived by study participants are deeply rooted in women's wombs – "*tozo gnimi*" as well as other illnesses or beliefs that then link with other supernatural explanations or descriptions of PTB.

Knowing the local causes and terminology linked to PTB can facilitate better communication and more robust SBC programming with communities around PTB.

Pressing priorities

A broad synthesis of findings from this qualitative study across three countries is presented in this section. The focus of this qualitative study was to identify factors, from the perspectives of community members themselves, at the household and community levels that can prevent and mitigate the risk of PTB. In Figure 6, we illustrate – drawing on the findings presented in this report – the ways in which women's experiences and health outcomes in Bangladesh, Ethiopia, and Mali lie at the intersection of multiple spheres of influence.

Figure 6 depicts two circles, the outer one representing the macro environment and the inner circle represents a more micro-level household environment. The macro environment includes broader discriminatory gender norms and access to and utilization of health care services. These cross-cutting factors are the bedrock upon which the prevention efforts for PTB should be anchored.

The next level is the more micro-level household environment, where excessive workload, restricted couple communication, inequitable decision-making and violence occurs. Within the household we find the pregnant woman who has to navigate the above obstacles before she can manage to take care of herself and her unborn child. Findings from this qualitative study indicate that these four household factors require simultaneous attention if pregnant women and adolescent girls are to be valued in their own households, communities, and societies. If we can manage these two parallel processes, one at the macro level and another at the household level, there is a real chance that we will be able to influence the LINC factors that are directly contributing to PTBs. These LINC risk factors – lifestyle, infections, nutrition, and contraception-related factors – are each influenced by discriminatory gender norms and practices and affected by existing structural factors that influence access to, and utilization of, healthcare services. To reduce the risk of PTB and improve infant mortality over time, our study has identified priority factors that need to be addressed by policy makers, governments, and health systems (Figure 6).

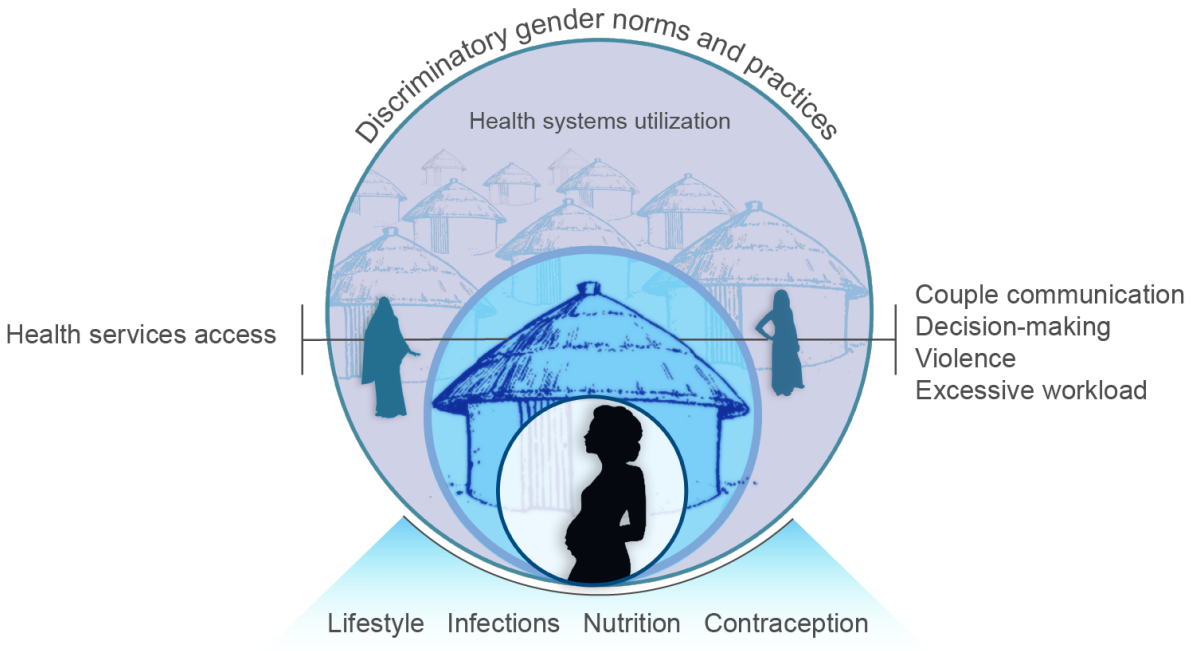


Figure 6. The role of gender, health, and household factors in the prevention of PTB

Discriminatory gender norms and practices and their manifestations at the household level

This qualitative study illustrates that gender inequality is manifested in multiple, complex ways in each country. Evident across countries were the microprocesses (processes that take place within the household environment e.g. couple communication, decision making, violence, excessive workload, mobility restrictions, or "taking permission") through which discriminatory gender norms are manifested in women's daily lives and, ultimately, their health outcomes over time. Household dynamics were gendered and hierarchical, suggesting the intrinsic link between discriminatory gender norms and how families and household function and interact. Restrictions on mobility, couple communication, or decision-making; excessive workload; CEFM; or even blaming of pregnant women for preterm births – either in explanatory models of PTB (Chapter 5) or in FGDs with men blaming pregnant women who refuse to take their medications for PTB– are all examples of the ways in which gender inequality emerged in unique ways throughout this study. Evidence from this qualitative study suggested that the presence of support, tension, or violence within the household, particularly during pregnancy, played an important role in whether women reduced their workload, sought antenatal care, or experienced a PTB during pregnancy. Future quantitative research should build on these findings to examine the nature of these associations across study settings.

Together, this qualitative study has identified which aspects of discriminatory gender norms should be the focus of gender transformative or gender synchronized interventions (i.e. those that work intentionally with both women and girls, men and boys)[80] in each country context. Discriminatory gender norms are manifested as behaviors that reinforce gender-related discrimination. Programs need to prioritize those context-specific gender norms that require more immediate change. Working intensely with both women and girls, men and boys should be an essential component of PTB prevention programs. By intensely, we mean that the program needs to engage with men routinely and more frequently. Programs should have a systematic male engagement strategy that addresses discriminatory gender norms and their intersections with factors related to PTB. Addressing gender inequalities in household support, workload support, mobility, access to health services, decision-making, couple communication, control over money, among other issues will need to be handled individually in each country. Valuing women's work in the household, respecting their voice and their decisions will result in improving household environments to produce better health outcomes.

The intersection of gender inequality and economic vulnerability

Evident across countries was the continued intersections of economic vulnerability and discriminatory gender norms in pregnant women's daily lives. Poverty and gender cut across emergent themes, reinforcing one another in a seeming feedback loop. Men controlled money, and therefore controlled women's healthcare, but neither men nor women had sufficient access to resources, leading to women failing to access healthcare services. Financial strain led to tension in the household, motivated child marriage, influenced access to adequate nutrition, and drove workload as women have no choice but to continue doing hard labor during their pregnancy. Each of these factors was cited as playing fundamental roles in risks of PTB across settings. Efforts to encourage more equitable access to services, including employment, land ownership, and/or universal healthcare, at the policy level are urgently needed to address the social determinants of PTB and the compounding effect of economic vulnerability on PTB in Bangladesh, Ethiopia, and Mali.

A pressing priority: Excessive workload

Women in Bangladesh, Ethiopia, and Mali cited workload as a major stressor, particularly during pregnancy (See Chapters 4, 5, and 6), related to PTB. What made excessive workload during pregnancy a conundrum was that study participants – adolescents, women, men, community members, religious leaders, healthcare workers, mothers-in-law, husbands, or women with recent birth experiences – all recognized excessive workload as a main contributing factor to PTB. As participants were recruited from settings where the BOT project was being implemented, it is possible that such recognition of workload as a cause of PTB was the product of BOT activities in those settings. Women reported receiving counseling from health center staff and fieldworkers about not carrying anything heavy, not lifting anything heavy on their backs, and reducing workload. However, even if women in our PTB sample said that excessive workload was risky, they often had no choice but to continue with their household work because their husbands did not take on this work and/or the women had no support from other family members for these tasks. A comparative analysis between PTB and

full-term deliveries in Ethiopia, for example, clearly showed a trend between the amount of work done by PTB mothers compared with full-term mothers.

Excessive workload is fundamentally linked with, and the product of, discriminatory gender norms and gendered household power dynamics. Gender role boundaries that define certain tasks, such as cooking, caregiving, or even brewing *areke* or *tella* (in the case of Ethiopia), as "women's work" limit the availability of help within the household. A reduction in the work burden of women during pregnancy, as well as when women are not pregnant, is necessary. If women are going to be able to heed the advice of health workers and reduce their workload, especially in the final trimester, and have healthy babies, interventions that focus on the individual, couple, household, community, health system, and policy-related issues that prevent women from being able to reduce their workload during pregnancy are critical. Efforts to lessen the burden of work on pregnant women should be implemented as soon as women find out that they are pregnant in order to more fully mitigate the risks of PTB and other pregnancy complications. A gender transformative approach should also be used to challenge and transform gender norms and attitudes about what is "women's work" more broadly, not only during pregnancy, so that men also take on more of their fair share of household chores and childcare. Community-based approaches that frame the health of pregnant women as a collective responsibility could help ensure that all pregnant women have safe and manageable workloads. To be successful, interventions are required that address the discriminatory gender norms that govern the behaviors and life chances of adolescent girls and boys, women and men. While this study is on prevention of PTB and therefore is focused on pregnancy, all the above recommendations of men's participation in household work apply to daily life too.

Health services access and utilization

Across settings, this qualitative study showed that women with a recent PTB experienced a high level of maternal morbidity during pregnancy. These morbidities include malaria, reproductive tract infections, fever, headaches, backaches, anemia, and preeclampsia, among others. The specific illnesses experienced by women during pregnancy varied by context. Women's healthcare seeking during pregnancy is a priority. However, multi-level barriers continue to exist. Women's workloads, which continued during pregnancy, led to delays or prevented women from seeking ANC. Household poverty, concepts of shame or embarrassment, and delayed disclosure of pregnancy were common across countries. These factors emerge as a result of existing discriminatory gender norms, economic vulnerability, or other factors in greater depth in Chapter 9 – and have concrete impacts on women's access to health services.

Recommendations

We divide the recommendations into 3 sections: 1) overall recommendations for prevention of PTB, 2) recommendations related to specific LINC factors, and 3) recommendations for future research.

Overall recommendations for prevention of PTB

1. The strategic approach to prevention of PTB should focus on cross-cutting issues reflected in Figure 6: discriminatory gender norms and practices; their manifestations at the household level (e.g. couple communication, decision making, violence, and excessive workload); and health services access (also influenced by discriminatory gender norms).
2. Programs should have a systematic male engagement strategy that addresses discriminatory gender norms and their intersections with factors related to PTB.
3. Interventions to reduce pregnant women's workload need to plan for greater program density (more contacts/exposure per family or community/per year).[cc]
4. A community engagement approach is required to reduce women's excessive workload. For example, women with PTBs report being told by health staff and health workers to reduce their workload, but they were unable to act on it due to a lack of household support. Community engagement will work to foster and encourage new norms where it is acceptable for a man to do household chores.
5. The study discusses households where anger, stress, tension, and strictness predominated. A strategic approach to improve pregnant women's household environments, which may have the potential to reduce maternal stress, should promote kindness, empathy, and compassion at the household level. This could take place through training community champions, in films on violence or marital discord, in provider behavior change activities with facility-based staff, with individual couples, etc. Future programs should explore the effects of such intervention components on LINC factors as well as risk of PTB.

Specific recommendations related to explanatory models

Explanatory models can used in each country for the prevention of PTB.

1. In Bangladesh, the focus could be "compassion" towards the pregnant woman, which could be part of a larger gender transformative approach to address existing mobility restrictions.
2. In Ethiopia, the condition "Mitat" could be leveraged to prevent pregnant women from doing arduous work in the sun during pregnancy.
3. In Mali, "tozo gnimi" could be used to motivate families to help pregnant women in their household work.

[cc] An intervention to make men comfortable with household work will require intense work with women, men, mothers-in-law, and other key influencers. It will have to be under the umbrella of "improving household environment." It will also have to begin with small steps. One potential approach could be to begin such activities with younger couples.

Specific recommendations related to LINC factors

Lifestyle factors

1. Explanatory models will be a good way to reach out to communities about workload and its relationship to PTB. In Ethiopia, for example, the condition "*Mitat*" can be leveraged to reduce work on the farm for pregnant women.
2. Examples across the three countries throughout this report highlight the ways in which discriminatory gender norms affected women's mobility (thereby restricting their access to health services), and household environments (thereby restricting their voices, roles in decision-making, and exposing them to violence). A gender transformative approach that uses the examples highlighted in this report as a basis for discussions at the community level to address women's voice, mobility, decision-making, sexuality, and access to health services (among other factors) is essential.[dd]
3. Promote early registration of pregnancy (< 12 weeks) to get women early into the cycle of ANC care.
4. Men's engagement will require their active participation and adoption of a compassionate and equitable approach to interacting with women and adolescent girls. SBC programs should integrate a systematic approach to men's engagement in household work, care-seeking, as well as childcare.
5. Child marriage prevention should be prioritized in all three countries. Gender transformative interventions can create safe spaces for individuals and communities to deliberate and challenge existing gender norms, redefine notions of masculinity and femininity, and promote the value of the girl child. In Bangladesh and Ethiopia where the relationship between child marriage and education was complicated, it is critically important to create alternative roles for girls that go beyond being a wife, mother, or studying in school. Interventions for adolescents with an economic empowerment component could help families realize that delaying child marriage is a better investment in both the girl's and family's future. At the same time, SBC programs working with adolescent girls should acknowledge the important role of key influencers, such as parents, elders, or peers, in reinforcing locally established expectations and restrictions that aim to control girls' sexuality. Gender transformative approaches are needed to create safe spaces for parents and children to engage in critical and reflective discussions. Future efforts should also consider leveraging the storytelling power of entertainment-education, an approach that offers the opportunity to role model equitable gender norms, positive attitudes and behaviors towards child marriage prevention, and address the interconnections between child marriage and other forms of violence as well as other health issues such as preterm birth. Finally, data from all three countries included positive examples of individuals and groups who have delayed

[dd] A gender transformative approach that CCP recently used in Ethiopia and that shifted gender norms included the following: 1) Gender training at all levels of the organization, government departments and district level officials; 2) Gender programming such that gender was at the center of most health messaging; 3) highlighting respect for women in radio dramas, health bazaars, road shows; 4) hiring a gender specialist to be an integral part of the SBCC program team; and 5) focusing entertainment education materials to model decision making that was not male dominated.

marriages. A positive deviant approach would showcase these change agents and amplify their actions for others to follow.

Infections

1. Maternal morbidity was unacceptably high in all three countries. Access to health care is a right for all women, and women should not be limited due to mobility restrictions. Programs must address how to be sensitive to or work to transform existing discriminatory gender norms that limit women's and girls' mobility so that women can access health care services. Engaging community leaders, including religious leaders, to relax mobility restrictions – during illness and pregnancy, but also more generally – as change leaders could be an effective approach.
2. Women described symptoms of RTI and UTI infections during pregnancy. ANC visits should include screening and provision of treatment for women for either RTI/UTI or STI symptoms. Particular attention to symptoms of RTI and UTI infections in Bangladesh is necessary as such symptoms were commonly described by women as well as reported by their partners.
3. Other morbidities mentioned by women include fever, preeclampsia, accidental falls, backaches, anemia, and malaria. Prompt treatment seeking is required for these and all health issues mentioned in Chapter 10. As a result, SBC approaches that address the "Three Delays"[81–83] – delays in deciding to seek care, arriving at the health facility, and receiving care once women arrive will be essential – for example, as well as structural inequalities and socioeconomic inequality that prevent certain women from accessing health services – are needed.

Nutrition

1. Maternal nutrition needs to improve in quality across all three countries. This can be done by promoting food diversity using locally available foods in each country context.
2. Rather than promoting six food groups in rural areas, nutrition promotion programs should explore local food models. Nutritious food should be promoted using constructs and terms that are familiar to local, rural communities.
3. Food insecurity is a real issue for pregnant women, especially during the local food scarcity seasons. Pregnant women were not always prioritized in food insecure situations. Pregnant women need to be brought under the ambit of food security programs.
4. Discriminatory gender norms related to nutrition were exacerbated by food insecurity and led women in all three study settings to give men more food and themselves less. Nutrition programming should take a gender transformative approach in these settings to address existing discriminatory gender norms, even if less common, that prioritize men's consumption of food over women.

Contraception

1. Context-specific barriers were identified for each country, suggesting that unique approaches are needed in each context. Access to contraception for young couples is essential, but must be sensitive to discriminatory gender norms emphasizing the

importance of giving birth and not using contraceptive methods until after marriage. To address this complex context, continued work to address individual attitudes related to contraceptive use before marriage or before the first child – not only with young women and their partners, but also with key influences – could be complemented by community dialogues as well as engagement of champions at the local level to model behaviors and foster a more supportive environment for young couples.
2. Couple communication on contraception should be promoted at the time of marriage. It is beginning to happen in Ethiopia with a few women reporting to have started the use of contraceptives the day after their marriage. Spousal opposition was the most common barrier to contraceptive use in Mali; efforts to foster open communication and shared decision-making about contraceptive use could address this barrier.
3. Counseling services should be provided at health centers for couples to start using contraceptives following pregnancy, particularly for women with PTB.

Other contextual factors

1. Economic vulnerability, a key social determinant of health, plays an important role in numerous adverse health outcomes.[84] Bringing the most marginalized households into the ambit of health and other government services is essential to preventing PTB.
2. When food scarcity seasons are known to occur, government programs must be planned to support pregnant women and provide them and their families with nutritional support.

Recommendations for research

1. This study has resulted in a body of knowledge exploring local and community perceptions related to PTB as well as the multi-level factors – from the individual to the household, community, and health system – that have the potential to influence women's pregnancy outcomes and health over time of how to support the prevention of PTB through the lens of social, gender, and household factors. More mixed methods studies can lead to the identification of contextual factors (e.g. *areke* brewing and *tella* consumption as risk factors for PTB in Amhara, Ethiopia) that are specific and crucial to a given region. Quantitative studies that build on the relationships suggested by this qualitative study will enable further understanding of the associations between the household and community-level factors that influence LINC factors as well as PTB.
2. Research on prevention of PTB should utilize more rigorous, mixed methods study designs so that intervention impact can be measured.

Limitations

It is essential to consider the methodological limitations of this qualitative study. Evidence gathered from interviews and FGDs in this qualitative study was not intended to be generalizable, but rather reflective of the lived experiences of women, men, and adolescents in the selected study sites in Bangladesh, Ethiopia, and Mali. Across each chapter, we summarized findings, identified emergent themes, and drew comparisons across settings to suggest salient themes that can then be explored in more depth through more generalizable research

methods. A comprehensive comparative analytical method was used to compare and contrast responses across participant types to improve the confirmability and transferability of findings.

This study was also limited by the ability to confirm PTB cases in contexts where local health facility data are incomplete, unavailable, or not reliable. As a result, definitions of PTB relied primarily on participants' self-report of PTB. While a screening tool was used to assess PTB, which included questions on 1) whether the child was born early, 2) at what month the child was born, and 3) the baby's size at birth, such reliance on self-report increased the potential for misclassification bias during sampling. It is possible that low birth weight or small for gestational age babies were misclassified as PTB during recruitment. As a result, there is the potential that women with a recent PTB recruited for IDIs as well as spouses/partners and extended family members of women with a recent PTB were misclassified. However, self-report remains an essential way through which researchers are able to gather information about a mother's recent pregnancy, particularly in settings where reliable facility data are unavailable, inaccurate, unreliable, or otherwise of poor quality.

Finally, this multi-country research study explores participants' experiences of LINC factors and their influence on PTB. Given the multiple risk factors associated with PTB, and the multiple populations of interest, it is possible that a single round of IDIs and FGDs with participants failed to gather a complete understanding of the multiple LINC factors outlined in the conceptual framework for this study. Subsequent research studies, including Part B of this multi-country research study or other follow-up studies, are necessary to unpack many of the themes identified here. However, this research study marks a first step in filling an essential gap in the literature by extending existing research on risk factors for PTB in Bangladesh, Ethiopia, and Mali.

Conclusion

This qualitative study mapped the pathways to PTB in three countries. Prioritization of interventions that intentionally address discriminatory gender norms and gendered household power dynamics, along with programming around excessive workload and healthcare seeking, may lead to a large-scale impact on reducing maternal infections, improving nutrition, increasing use of contraceptive methods, improving gender equality, as well as reducing PTB.

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