Social determinants of mental health of pregnant women in Nepal: a sequential exploratory mixed methods research study

by

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Your beliefs become your thoughts,

Your thoughts become your words,

Your words become your actions,

Your actions become your habits,

Your habits become your values,

Your values become your destiny.

- MK GANDHI

Abstract

Women during pregnancy are at risk of developing poor mental health, and it is one of the major concerns in low- and middle-income countries, including Nepal. This PhD study employed a sequential exploratory mixed methods approach to understand social determinants of the mental health of pregnant women by exploring their lived experiences within the socioeconomic and cultural context of Nepal, availability and accessibility of health services and social support, and how these aspects impact their mental health. Data collection included in-depth interviews with eight key informants and twenty pregnant women, followed by a survey with one hundred and twenty-eight pregnant women. The study used purposive sampling to recruit pregnant women through a district hospital in an Eastern region of Nepal, and key informants were recruited based on their experiences. Thematic analysis was used for qualitative data, and descriptive and inferential statistics were applied to analyse quantitative data. The theoretical underpinnings of the study were based on ecological theory and intersectionality.

Qualitative findings highlighted the importance of social support for pregnant women's mental health and reported a lack of structured social support during pregnancy, and this was prominent for those women from poorer socioeconomic backgrounds. Participants also raised concerns about the availability and accessibility of maternal health services that did not meet their mental health needs, mainly due to limited care provision, overcrowded hospitals, and shortages of skilled health professionals. The lived experiences of Nepalese pregnant women highlighted how they saw themselves within the sociocultural and economic context of Nepal and its impact on their mental health. In particular, the analysis highlighted how sociocultural factors intersect with individual and economic circumstances to present compounded risks of poor mental health for many pregnant women. The quantitative findings suggested that there was an association between poor mental health and experience of unsuccessful pregnancy, receiving social support other than husband during pregnancy, and early age of pregnancy. The study findings suggested that a better and more in-depth understanding of various social determinants of mental health are important prerequisites in meeting the mental health needs of women during pregnancy and to design appropriately tailored maternal health services.

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Acknowledgements

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Glossary of Terms

Antenatal stage	The period from the formation of an embryo, through the development of a foetus, to birth
Anxiety	Experience of excess worries, concerns, and fears about something
Antenatal care	The care women get from health professionals during their pregnancy
Distress	Emotional, social, spiritual, or physical pain or suffering that may cause a person to feel sad.
Depression	The clinically diagnosed mental illness or disorder
Eclampsia	Eclampsia is the onset of seizures or coma with signs or symptoms of preeclampsia. However, eclampsia can happen without any previously observed signs or symptoms of preeclampsia.
Gestational age	It is measured in weeks to estimate the length of time that a foetus grows inside the mother's uterus.
Low birth weight	The weight of the baby is less than 2,500 grams (2.5 kg) at birth.
Perinatal stage	The period when women become pregnant and up to a year after giving birth.
Preeclampsia	Pre-eclampsia is a condition that affects some pregnant women, usually during the second half of pregnancy (from 20 weeks) or soon after their baby is delivered. That includes symptoms of high blood pressure (hypertension) and protein in urine and puts women at risk of eclampsia.
Premature delivery	Birth of the baby before 37 weeks.
Postnatal stage	The first six weeks after childbirth
Postpartum period	It begins when a pregnant woman gives birth to the newborn and lasts within a few weeks, which may vary between 6-8 weeks or more in a few cases. It is also a period when the physiologic changes related to pregnancy return to the nonpregnant state.

Abbreviations

ANC	Antenatal Care
COPD	Chronic Obstructive Pulmonary Disease
DFID	Department for International Development
FCHVs	Female Community Health Volunteers
GNMHP	Government of Nepal Ministry of Health and Population
GNMLESS	Government of Nepal Ministry of Labour, Employment and Social Security
HICs	High-income Countries
LMICs	Low- and middle-income countries
MDGs	Millennium Development Goals
MGMH	Movement for Global Mental Health
MoH	Ministry of Health
MoHP	Ministry of Health and Population
NCDs	Non-communicable diseases
NICU	Neonatal intensive care unit
NSO	National Statistics Office
PAHO	Pan American Health Organisation
SBA	Skilled Birth Attendant
SDGs	Sustainable Development Goals
SDIP	Safe Delivery Incentive Programme
UHC	Universal Health Coverage
UK	United Kingdom
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organisation

The Organisation of the Thesis

This PhD thesis is organised into seven chapters.

Chapter One: Introduction and Background

In this chapter, I introduce my study, provide the rationale for the study, and share my personal motivation that has supported me to conceptualise and conduct this PhD research. In addition, I present the conceptual understanding of mental health and social determinants of mental health for the purpose of this study. I also provide the background on the geopolitical and socioeconomic context of Nepal that sets the study to understand pregnant women's position in Nepalese society. I end the chapter with the aims and objectives of the study, which have guided this research and will shape the discussions in the following chapters of this PhD thesis.

Chapter Two: Literature Review and Theoretical Understanding

I present a review of the existing literature in this chapter, which broadens the understanding of the mental health of pregnant women in Nepal. I also discuss the ecological theory and intersectionality that has helped me to analyse and present the research findings in the wider research context. At the end of this chapter, I present research questions explored through this PhD research.

Chapter Three: Methodology and Methods

In this chapter, I examine the research paradigm relevant to this research and present the rationale for using mixed methods in this research, followed by the details of the data collection site. Thereafter, I describe the qualitative and quantitative data collection strategies, including the development of the survey questionnaire and the details of the use of virtual data collection during the fieldwork. Next, I explain how the qualitative and quantitative data have been integrated at several levels and the data transcription and translation process. The data analysis process and techniques that were used in synthesising qualitative and quantitative data are discussed next, followed by the use of reflexivity, where I explain my positionality from insider and outsider perspectives. I end the chapter by

explaining how I ensured ethical principles were considered throughout this research study and how the qualitative and quantitative data are presented in the research findings chapters.

Chapter Four: Findings from qualitative data

In this chapter, I present findings from in-depth interviews with eight key informants and twenty pregnant women aged 18 and over living in the local region accessing healthcare services at the Ilam District Hospital in Nepal. The Key informant interviews were conducted in the preparatory phase of the study, which informed the in-depth interviews with pregnant women that aimed to understanding and exploring the experiences of pregnant women's daily life and its influence on their mental health. The thematic analysis of the qualitative data is conducted using a thematic network tool to come up with three global themes to present all the findings from the in-depth interviews. The three themes are: i) Poor mental health experiences due to inadequate social support; ii) Mental distress due to poor availability and accessibility of maternal health services; and iii) Impact of socioeconomic and cultural context on pregnant women's mental health.

Chapter Five: Findings of the survey

I present the findings from the quantitative survey conducted among 128 pregnant women in Nepal. The findings from the survey are presented in this chapter in three sections. The first section covers the demographic information of the participants. The second section presents maternal health information, and the third section analyses the mental wellbeing of pregnant women that indicates the risk of symptoms of depression or poor mental health. The third section also observes and presents the association of depressive symptoms with women's demographic characteristics and maternal health information.

Chapter Six: Discussions

In this chapter, I use Bronfenbrenner's ecological theory and intersectionality to integrate and discuss the findings from the qualitative interviews and quantitative survey and to explain the understanding of social determinants of mental health and its impact on the lived experiences of pregnant women when accessing available health and social care support and services in the sociocultural context of Nepal. This chapter starts with a discussion of the perceptions of

the different levels of support experienced by pregnant women in Nepal, which is aligned with the different systems of the ecological theory that intersect to affect their mental health. Thereafter, I attempt to explain the impact of various factors within the micro-, meso-, exo-, and macro-systems of ecological theory and their interactions that influence the availability and accessibility of maternal health services affecting the mental health experiences of pregnant women in Nepal. In the third section, I discuss the impact of socioeconomic and cultural norms on the lived experience of pregnant women, which is mostly aligned with the macrosystem of the ecological theory. I end this chapter by I present my methodological reflections and innovation in terms of data collection during the COVID-19 pandemic and highlight the limitations of this research.

Chapter Seven: Conclusion and Recommendation

In this concluding chapter, I summarise the key findings from my research alongside providing methodological reflections, recommendations from this study and my achievements during the PhD study. The first section concludes the major findings of this research by conceptualising the mental health of Nepalese pregnant women within the multiple layers of ecological theory and highlights the importance of intersectional relationships of various factors within these multiple layers that could act together to further marginalise the pregnant women putting them at the risk of poor mental health. In the second section of this conclusion chapter, I present recommendations from this research that are driven by the findings and discussions of this thesis. The thesis ends with my achievements from this PhD journey that have kept me motivated to continue with my academic career.

Chapter One: Introduction and Background of Study

1.1 Introduction

Mental health is one of the significant public health issues worldwide, and it is considered an essential aspect of reproductive health (World Health Organisation (WHO), 2009). Reproductive health includes pregnant women's experiences towards changes in their physical and mental health during pregnancy and after childbirth. The antenatal period is a transition stage for women into motherhood when negative emotions and social changes experienced by the women can have an adverse impact on the health and well-being of the new mother and newborn babies (HM Government, 2021). According to Politowski (2015), the period from conception to two years of age timeframe is a critical stage when positive support received by mothers has a positive impact on newborn babies and provides the best possible start to their lives. Several research studies have supported the argument that poor mental health during the antenatal stage may cause preeclampsia in pregnancy, eclampsia in the post-natal stage, postnatal depression, decreased emotional involvement towards the child, parenting stress, premature delivery, and low birth weight of the baby (Marcus *et al*., 2003; Leigh and Milgrom, 2008; Figueiredo and Costa, 2009). The issues of mental health during the antenatal period have raised global concerns across developed and developing countries (Ali *et al*., 2012; Figueiredo and Costa, 2009; Lovisi *et al*., 2005). Some studies conducted in South Asia, especially in Pakistan and India, found that social environment and social relations, such as experience and exposure to any form of violence, conflict situations in the family and communities, natural disasters, low social support, pregnancy-related concerns, and poverty are major determinants of poor mental health for women during pregnancy and in the first year of the delivery (Patel, Rodrigues and DeSouza, 2002; Kazi *et al*., 2006; Sharma and Pathak, 2015). Within the wider South Asian context, these findings may suggest similar hidden concerns regarding the mental health of pregnant women in Nepal. However, it is important not to generalise these findings within the context of Nepalese pregnant women, as South Asian populations are heterogeneous, and many aspects of socioeconomic and cultural contexts in Nepal are very different from its neighbouring countries, India and Pakistan. These findings provide a strong base and create clear arguments to understand more about the determinants of mental health of pregnant women within the

Nepalese context so that the needs of these women are addressed considering the local context in which they live, become pregnant and give birth to a baby. Therefore, this study aims to understand the lived experiences of pregnant women that can determine their mental health in the context of their experience of social support, accessing available health and social care support and services, and living within the socioeconomic and cultural environment of Nepal.

1.2 Personal motivation

As a Nepalese woman who has given birth on two occasions, this research is very close to me and personal, based on my experiences as a pregnant woman and a mother, as well as my professional background as a medical doctor having experience working in obstetrics and gynaecology department of hospitals in Nepal. My professional work as a doctor has played a significant role in motivating me to conduct this research. During my hospital work, I saw many pregnant women in distressful situations. Initially, I could not understand why they were distressed, especially during their pregnancy, which is expected to be the most joyful stage of life for women. After working for some time in the department, I observed that pregnant women were stressed or unhappy during pregnancy for several reasons. Many were concerned about their health and wellbeing, support and quality of health care they received in the Government hospital. Some were worried about the lack of support from their husbands and family members, while others were distressed because of financial constraints. As a medical doctor, I understood that mental health during pregnancy matters, not only for pregnant women and new mothers but also for their unborn children and after the child is born. It raised several questions for me, and I kept thinking about what the purpose of antenatal visits was; was it just for blood pressure check-ups, height and weight measurement of pregnant women, and monitoring of foetal development and growth, or was it also to look after pregnant women's mental health and wellbeing. I kept asking myself, what do we understand about the problems these pregnant women are facing or what support these pregnant women need to look after their physical and mental wellbeing.

After some time, I had to leave the hospital work because of my personal circumstances, to move to the UK. However, I kept reflecting on my experiences, and those questions about

pregnant women's mental health remained with me. In the UK, I decided to pursue my master's degree in public health, where I was able to conduct primary research exploring the mental health and wellbeing of the Nepalese older population in the UK as part of my master's dissertation. The extensive reading on mental health and wellbeing for my MSc research project, alongside my previous experience of working with pregnant women, reignited my interest to explore and understand more about various factors and circumstances that affect the mental health and wellbeing of pregnant women. This motivated me to start working on my PhD research proposal, and this was also the time when I became pregnant. As a Nepalese pregnant woman in the UK, where we have one of the best maternity services in the world, it reminded me of those women whom I had seen in the hospitals in Nepal. I understand it would not be fair to compare the structured and resource-rich maternal health services of high-income countries such as the UK to the resource-constrained maternal health services of one of the world's poorest countries, such as Nepal. However, I felt physical and physiological changes of women during pregnancy in all parts of the world are similar, and if we know the context and circumstances of the pregnant women in which they live, become pregnant and are likely to give birth, there is a potential to improve the overall experiences of pregnant women by providing better support with the use of available resources. I felt it was important for clinical medicine and public health to work together, which becomes more important in the context of low- and middle-income countries (LMICs) such as Nepal. If clinical doctors, whose priority is primarily to deal with clinical outcomes, have public health knowledge in terms of their understanding of social determinants of health that could affect pregnant women, it would be an advantage to the health system, especially in the LMICs with limited workforce and resources available in health and social care settings. After the birth of my first child, I continued developing my research proposal, reflecting on my experience of pregnancy in the UK and what could be done to improve the mental health of pregnant women in Nepal. Thereby, in my PhD study, I use exploratory mixed methods to collect rich data from pregnant women and key informants to explore and understand the social determinants of the mental health of pregnant women in Nepal.

1.3 Rationale of the study

"No health without mental health" has been widely promoted, especially in the developed nations of the world, which is endorsed by many powerful and privileged organisations such as the World Health Organisation (WHO), the UK Royal College of Psychiatrists, the European Union (EU) Council of Ministers, the World Federation of Mental Health, and the Pan American Health Organisation (PAHO) (Prince *et al*., 2007). The notion of ''No health without mental health'' highlights the relationship between mental health and the overall well-being of the people. Within the literature, it is evident that people with poor mental health or mental illness are more likely to suffer from physical illness and vice versa, and they are also more likely to need healthcare services (Happell, Davies and Scott, 2012; Hendrie *et al*., 2013; Scott and Happell, 2011). That means the mental health burden cannot be underestimated when considering the overall health and well-being of any population group, suggesting the importance of integrated health and social care services that prioritise and support both physical and mental health services equally. Despite this, many argue that mental health is significantly underestimated in LMICs because of inadequate knowledge and appreciation of the relationship between poor mental health and other physical health conditions, lack of research evidence, workforce gap, and financial reasons (Bruckner *et al*., 2011; Kopinak, 2015; Prince *et al*., 2007). The prevalence and social distribution of mental health problems are well documented in high-income countries (HICs) compared to LMICs (WHO, 2014). However, there is ongoing debate and concerns regarding the application of research evidence from developed and high-income settings into the context of poor and developing countries, as the evidence may not reflect the population and their needs to address mental health issues due to a lack of local knowledge about the sociocultural context of LMICs (Campbell and Burgess, 2012; Clark, 2014; Summerfield, 2012). Additionally, lack of appropriate practice and policy to promote mental health services, lack of resources, and cultural norms are also acting as barriers to promoting mental health services in LMICs (Becker and Kleinman, 2013; Das and Rao, 2012; Herrman and Swartz, 2007). In recent times, there has been growing recognition of mental health issues in LMICs, but a significant gap still exists in mental health research knowledge to prevent the problem and act on strategies, policies, and programmes related to mental health (WHO, 2014).

In 2007, the series from the Lancet Journal on Global Mental Health 2007 highlighted that mental health disorders remain largely hidden, especially in LMICs, many of which have no resources to tackle mental health concerns (Horton, 2007). The series also summarised a call for action to scale up the coverage of services for mental disorders in all countries, particularly in LMICs (Chisholm, *et al*., 2007). In 2008, the Movement for Global Mental Health (MGMH) was launched with a coalition of individuals and institutions with expertise in the field with a clear aim to close the treatment gap for people living with mental disorders globally, based on two fundamental principles: One was to generate evidence of effective treatments, and the other was focussed on the human rights of people with mental disorders (Patel *et al*., 2011; Minas, Wright and Kakuma, 2014). Although this widely appreciated movement for global mental health contributed significantly to creating awareness and improvement on mental health globally, it was not an adequate solution to tackle poor mental health, as it has not prioritised social determinants of mental health in its agenda, despite the evidence that addressing social determinants of mental health is a crucial step to promoting mental health globally (Compton and Shim, 2015; WHO, 2012). Particularly in LMICs such as Nepal, to close the treatment gaps for people living with poor mental health and protect their human rights, we need to clearly understand the social determinants of mental health of all ages and population groups, including pregnant women. Fisher *et al*. (2012) highlights the fact that lack of research and evidence about mental health in LMICs limits the effectiveness of policy, which is true in a country like Nepal. In Nepal, we have limited research on mental health, and even in that number, the majority of mental health studies are focused on the impact of political conflicts, such as Bhutanese refugees and the impact of Maoist insurgency, which is not a prominent issue at the current time (Tol, *et al*., 2010). There are limited or no studies that have prioritised looking into wider social factors that affect the mental health of the population, particularly pregnant women, and this concern has also been raised by maternal health research experts (van Teijlingen *et al.*, 2015).

Women during pregnancy are at risk of developing poor mental health, such as anxiety and depression (Biaggi, *et al*., 2016). Research suggests poor mental health during pregnancy is a significant concern in LMICs and can lead to poor mental health in the postnatal period, which may impact the relationship between the mother and infant (Leigh and Milgrom, 2008;

Figueiredo and Costa, 2009; Gausia, *et al*., 2009; Supraja *et al*., 2016). Consequently, there can be a negative impact on a child's cognitive, emotional, and behavioural development (Parsons *et al*., 2012; Satyanarayana, Lukose and Srinivasan, 2011). Although evidence demonstrates the need for mental health care during pregnancy is crucial, maternal mental health is noticeably neglected in LMICs (Honikman, *et al*., 2012). Globally, reducing maternal mortality and promoting mental health have emerged as important health priorities and are included as key targets within the United Nations (UN) Sustainable Development Goals (SDGs), adopted at the UN General Assembly in 2015 (UN, 2015). Goal 3 of the SDGs focuses on ensuring healthy lives and promoting well-being for all at all ages, including the key target 3.1 '*By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births*', and target 3.4 states, '*By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being*'. These targets ensure the achievement of physical, mental, and social well-being for all at all ages, in line with the WHO definition of health.

Over the years, Nepal has made improvements towards various health issues, such as maternal mortality ratio, infant and child mortality rate, polio eradication, and other infectious diseases; however, mental health issues have remained neglected compared to other health priorities (Rai, 2018). According to the National Planning Commission and Ministry of Health (1995), the first National Mental Health Policy (1996) in Nepal was adopted in 1995, which paid more attention to the clinical aspects of mental health and gave limited consideration towards mental well-being. Even after almost three decades, this remains the sole mental health policy in Nepal. Mental Health Atlas 2011 country profile has strongly criticised that mental health is not specifically mentioned in Nepal's general health policy, nor does a mental health plan exist in Nepal (WHO, 2020). Another report by WHO (2013) highlighted a lack of mental health policy and legislative frameworks in Nepal, and there is a need to strengthen skills and support systems for developing and implementing community mental health services in Nepal. For the first time, Nepal has recognised mental health as an essential healthcare priority in the National Health Sector Programme (NHSP-II), alongside other non-communicable diseases (NCDs) such as cardiovascular diseases, cancer, diabetes, chronic obstructive, pulmonary diseases (HEART, 2013; GNMH, 2017). Despite the current

initiatives, mental health issues in Nepal remain a much-neglected area of health in terms of availability of mental health services and support, even when mental health issues are increasing in the country (GNMHP, 2015; Luitel *et al*., 2015; van Teijlingen *et al*., 2015).

Nepal has seen a significant decrease in the maternal mortality ratio since the declaration of the UN's Millennium Development Goals (MDGs) in 2000, where skilled birth attendants and the Safe Motherhood Programme have played a significant role (Hussein *et al*., 2011). However, mental health concerns among pregnant women in Nepal remain a major problem and one of the least explored health issues in Nepal (Van Teijlingen *et al*., 2015), which is also the case in many other LMICs (Dibaba, Fantahun, and Hindin, 2013). Few research studies are focused on postnatal depression and postnatal health care (Dørheim Ho-Yen *et al*., 2007; Paudel *et al*., 2013) and antenatal services (Acharya and Cleland, 2000) in Nepal, but hardly any research directly focuses on antenatal mental health that explores social and healthcare support and wider social circumstances of women during their pregnancy. Evidence suggests that integrating and providing mental health care for pregnant women and new mothers is essential to improve indicators of the SDGs programme that targets maternal and child health status (Rahman *et al*., 2013). The SDGs also aim to reduce inequality in healthcare access and understanding pregnant women's social determinants of mental health, such as ethnicity, socioeconomic status, education background, geographic location, employment status, and other factors are essential, as these factors vary in each community and are responsible for creating disparities in mental health experiences and accessibility of healthcare services (Shim *et al*., 2014).

Ethnic conflicts in Nepal during the first and second decades of this century have further exacerbated mental health issues, particularly among pregnant women (Miklian, 2008; Murthy and Lakshminarayana, 2006). A prospective cohort study conducted in Nepal has found an increase in mental health problems during the period of political conflict, which also highlighted the fact that socio-economic factors should be considered to address mental health issues of the population (Kohrt, *et al*., 2012). Another previous study looked at the understanding of antepartum depressive symptoms and its risk factors among pregnant women rather than looking at the wider determinants such as support for pregnant women,

socioeconomic and cultural influence during pregnancy, and healthcare services access by pregnant women (Joshi, Shrestha, and Shrestha, 2019). Moreover, according to the Nepal Demographic and Health Survey 2022, geographical variations play a significant role in the availability and accessibility to health services for women and children due to the distance and limited availability of transport to reach the nearest health facility, which contributes towards inequalities in health and health services access (Ministry of Health and Population (MoHP) [Nepal], New ERA, and ICF, 2023). In addition, during the COVID-19 pandemic, women experienced poor mental health and increased mental vulnerability due to the changing circumstances of COVID-19 (Thapa *et al*.,2020; Seedat and Rondon, 2021). The issue was more evident among pregnant women in Nepal due to the fear of coronavirus, and institutional childbirth was reduced by more than half during the lockdown (KC, *et al*., 2020; Shrestha, *et al*, 2020). According to the survey evidence presented by the Women's Rehabilitation Centre (WOREC, 2020), a non-governmental organisation in Nepal, the COVID-19 pandemic has further exacerbated mental health problems among women, particularly pregnant women. However, there is limited or no research focusing on determinants of the mental health of pregnant women, including external factors or ecological variations in accessing mental and other health services in Nepal (Maleku and Pillai, 2016). In the current socio-political situation of Nepal, exploring various determinants of the mental health of pregnant women will support understanding how and on which scale the disparity in accessing health services exists, what social support is available and how socioeconomic and cultural norms influence mental health. It is essential to provide appropriate mental health services and support to the pregnant women of Nepal. In this context, this PhD study fills the research gap and aims to provide evidence to understand wider determinants of the mental health of pregnant women by looking into the lived experiences of pregnant women from diverse health and social needs within the socioeconomic and cultural context of Nepal.

1.4 Conceptualising mental health in this research

The World Health Organization (WHO, 1946, p.1) defines health as "*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*". This definition presents a holistic view of health in which health is a positive concept and gives space to argue that health and illness present different meanings and understanding to

individuals and should be understood as such. World Health Organisation (WHO, 2014, p.12) defines mental health as

"*a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community*".

Despite the clear definition of mental health by WHO, there are still challenges in understanding and differentiating mental health from mental illness. Mental health and mental illness may present different contexts, understandings, and meanings to individuals, and they should be understood as such. The emerging evidence suggests that mental health and mental illness may not exist on one continuum. According to Keyes (2005; 2014), the dual continua model of mental health and mental illness states that the absence of mental illness does not mean the presence of good mental health, and the presence of mental illness does not mean the absence of some level of good mental health. For example, many people find a stressful relationship, job, or social situation without any diagnosable mental illness. The person might be considered as having poor mental health, but they are not mentally ill. In contrast, people with Alzheimer's disease are diagnosed as mentally ill, but they may be happy with the situation and enjoy life with satisfaction to a certain extent. In this situation, the person may present some level of good mental health but with a mental illness. Although this thesis focuses on and aligns with the broader understanding of mental health and well-being that is explored through qualitative interviews, the quantitative survey questionnaires included the findings from the qualitative studies as well as utilised the Edinburgh Postnatal Depression Scale (EPDS), which provides insight about pregnant women experiencing depression alongside the poor mental health experience during pregnancy. The use of EPDS for the survey was the best fit for this research alongside mental health questionnaire based on the qualitative interviews, as postnatal depression is one of the common condition many women may experience during and after pregnancy and previous study using EPDS tool have suggested associations between various risk factors and antenatal depressive symptoms which has the potential to affect the overall mental health and wellbeing of pregnant women (Joshi, Shrestha and Shrestha (2019).

The WHO definition of health and mental health includes wellbeing as a concept of positive health rather than illness, where the wellbeing of individuals is for effective functioning and the ability of individuals to cope with the normal stress of life. Therefore, I use 'mental health' and 'mental wellbeing' as synonyms or interchangeably in this research, which is in line with what other experts have recognised (FPH, 2016; White, 2010). I argue that mental health in this research presents a positive concept that does not mean any mental illnesses or diagnosed diseases and can be synonymously used as mental well-being. This definition of mental health also includes the concept of agency of individuals *"……realizes his or her own potential, can cope with the normal stresses of life, can work ….."* (WHO, 2014, p.12), which is hugely dependent on the social determinants (available and accessible resources and the environment in which women are born, live and work). In this context, this study explores the concept of Nepalese women's *agency* (Kabeer, 1999) and the role of social determinants (see section 1.5) that can act as resources to determine the mental health of pregnant women. Therefore, this thesis focuses on the well-being and social aspects of the mental health of pregnant women in Nepal to understand the potential risk factors within this group that could put them at risk of developing poor mental health conditions and experiences.

1.5 Understanding social determinants of mental health

The World Health Organization (WHO, 2023) defines social determinants of health as the conditions in which people are born, grow, live, work and age, and summarises that they are framed by an unequal distribution of resources, money, and power. This definition enables us to understand different aspects of social determinants of health and their impact throughout the life-course, suggesting actions needed to improve health in each stage of life, from the prenatal stage to the older age. The general concept of social determinants of health is reflected in the understanding of the social determinants of mental health (WHO, 2012; WHO, 2014). Therefore, one can argue that there is a lack of significant differences between the social determinants of health and the social determinants of mental health. However, I argue that the term 'determinants of mental health' should be recognised and used when looking into the wider determinants of mental health.

Social determinants of mental health deserve particular emphasis for several reasons. First, the consequences of poor mental health significantly impact individuals and society, for example, poor mental health can cause disability and physical illnesses and can have a negative impact on individuals, families and societies, which could overburden healthcare access (Druss and Walker, 2011). Second, mental illnesses are highly preventable by improving social determinants (Compton and Shim, 2015). Although some mental illnesses, such as schizophrenia and bipolar disorder, are found to be linked to hereditary, the onset and course of illness can be influenced hugely by social determinants (Compton and Shim, 2015). These mental illnesses are difficult to cure fully, but addressing the social determinants that involve attention to the socioeconomic circumstances of mentally ill people can help to provide healthy and meaningful lives and improve their mental health (WHO, 2014). Therefore, social determinants of health in the context of mental health, which is 'the social determinants of mental health' deserve special attention. Most importantly, the social determinants of mental health, such as social exclusion, discrimination, poor education, poverty and unemployment, income inequality, insecurity and neighbourhood deprivation, poor access to healthy food, inadequate housing, and availability of health services can put individuals and populations at risk of poor mental health (CSDH, 2008; WHO, 2014). These determinants are mostly responsible for creating mental health inequities, which are unfair and avoidable differences in mental health status but are experienced within and between countries (Shim, *et al*., 2014). Therefore, I argue necessary attention to the concept of 'social determinant of mental health', especially in the current situation where the number of individuals with poor mental health is increasing worldwide (Vos, *et al*., 2016). These contexts of the social determinants of mental health also put the shared responsibility to the health system and other affiliated organisations as well as politics, policies, governance, and lawmakers to consider the mental health impact on the population from their actions. That is because many of these determinants can be considered in their health policy interventions that can effectively prevent mental illness and promote good mental health conditions (Compton and Shim, 2015). The discussion at this stage concludes the relationship between the social determinants of mental health and mental illness cannot be ignored because improving the social determinants of mental health improves the mental health of the individuals and the population groups and also expects to prevent mental illness. Hence, the

social determinants of mental health demand special attention when addressing mental health issues.

1.6 Geopolitical and socioeconomic context of Nepal

Nepal is a landlocked country in South Asia with a total area of 147,181 square kilometres, making it the 94th largest nation in the world. The country shares its borders with China on the North and India on the South, East, and West. Nepal is divided into three geographical regions: Mountain (Himal), Hills (Pahad), and Plains (Terai). According to the latest census 2021, the population of Nepal is around 29 million, accounting for about 51% of women and 49% of men (NSO, 2021). According to the United Nations Development Programme (UNDP, 2022) data, Nepal ranks 143rd in the world regarding the human development index (HDI), with an average life expectancy at birth of around 68.5 years. Nepal is a secular country by law, but many follow the Hindu religion, people here are from diverse cultures, ethnicities, traditions, and languages, and most people live in an extended family structure (traditional family model) (NSO, 2021).

As in other South Asian countries (Chauhan, 2021), women in Nepal also hold the unequal distribution of caring responsibilities, which is linked to discriminatory social institutions and stereotypes on gender roles, such as looking after the family, cooking, and working on their farmland, raising cattle, etc. When we examine the daily life of women, understanding agency and structure play a key role in revealing their life's realities. Feminist scholar Naila Kabeer (Kabeer, 1999) defines women's empowerment as a process that aims to ensure that women have autonomy over their lives and choices, mediated by access to resources and the possibility of choice. According to her, the agency is presented as a dynamic process, often in flux, and only possible in the presence of resources at individual and wider societal levels. Human (skills, self-efficacy, education), Social (supportive peer-or familial networks), and Economic (material assets such as income) resources are critical but can often only be acted upon in enabling and supportive environments. For example, research suggests that sociocultural norms play a major barrier despite having education and skills that can lead to employment for women in a developing country like India (Jayachandran, 2021), which is one of the closest neighbouring countries of Nepal that shares social, cultural, economic, political

and geographical proximities (Paudel, Devkota, and Bhandari, 2018). That reflects an intersection between the types of agency women use and the limited possibilities of choice available to them because of the sociocultural norms of the communities where women engage. This undermines their rights, limits their opportunities, capabilities, and choices, and obstructs their empowerment. These norms are significant barriers to improving the mental health and well-being of women in this sociocultural environment, and health service providers should take action to address these barriers not only in the policies but also in practice.

The government of Nepal is active in following and integrating international agendas and agreements to promote policies about gender equality and empowerment, but implementation has been received poorly. For example, the women in development approach were introduced internationally in the 1980s to encourage women's participation in the development process, and the approach was integrated into the five-year plan (1981-1985) of the Government of Nepal at that time as discussed by Tuladhar, *et al*. (2013). Since then, the Government of Nepal has taken several other steps towards improving gender equality and empowerment, as a result, women's positions in politics have increased significantly (Tuladhar, *et al*., 2013). However, despite the improvements, a significant amount of work still needs to be done to empower women in Nepal, like in other south Asian countries (Niaz and Hassan, 2006). In Nepal, gender discrimination against women and girls is visible in all sectors, such as political power and position, property and wealth rights before and after marriage, and educational attainment and job opportunities. For example, women are less likely to have secondary and higher education compared to men in Nepalese society (Ministry of Health [Nepal], New ERA, and ICF, 2017).

According to the 2021 census (NSO, 2021), the male literacy rate is 83.6% compared to the female literacy rate of 69.4%. But the question is – 'does this data reflect the accurate literacy rate of the women population? In the last decade, there has been an ongoing campaign to promote girls' education in Nepal (UNESCO, 2023). Since the census data on literacy rate includes girls aged five years and above, the literacy rate among pregnant adult women (e.g., 18 years or over) in Nepal is likely to be much lower. That could lead to a disproportionately

high disparity in access to mental health services, as prior research suggests that people with low education levels are less likely to seek mental health services (Lund *et al*., 2010; Steele 2007). In addition, there are ongoing discussions and developments supporting changes in laws about equal property rights for women (Floyd and Sakellariou, 2017). Only around 23.8 per cent of households in the last census statistics in Nepal reported female ownership of fixed assets such as land or house (NSO, 2021). According to the Human Development Report 2021/22 (UNDP, 2022), Nepal sits in the 113th position in the world for the gender inequality index, even though the labour force participation for women is 83% compared to around 86% males. Despite the massive contribution to agriculture and the economy from women, their position in society is much lower than men's. This evidence suggests that gender disparity has been overlooked and underdeveloped in the theory and practice of the Government of Nepal.

In the last two decades, Nepal has gone through several socio-political changes, civil unrest and natural disasters, leading to concerns about the well-being of its population. For example, Maoist insurgency, royal massacre and the abolition of the royal monarchy, the struggle to write and implement the constitution, civil unrest and protest by the public against the constitution, and an unofficial blockade from India have hugely impacted the financial situation of the country (Hachhethu, 2008; Upreti, Shivakoti and Bharati, 2018). Unstable political situations and poverty have led many young people to migrate for overseas employment. In return, a large amount of remittances flows into Nepal, about 32% of the GDP in 2015/16, and about 50% of Nepalese families rely on financial help from relatives working abroad (ILO, 2017). That raises concerns about the economic independence of the country and the labour market, which can negatively impact the health and wellbeing of its population. Evidence suggest Nepalese migrant working abroad are experiencing poor health due to limited health service accessibility (Adhikary, *et al*., 2020), however, there is a lack of research that explores the impact of male migration on their left-behind pregnant wife in Nepal. The massive earthquake in Nepal in 2015 affected more than 8 million lives and caused about $7 billion in losses to Nepalese economy (World Vision, 2016). Evidence suggests that the earthquake may have contributed to high levels of stress and trauma among Nepalese population, resulting in a rise in mental health problems (Sherchan *et al*., 2018), and this is

more evident among pregnant women in Nepal (Khatri, *et al*., 2018). In addition, flooding issues are the country's ongoing environmental disasters (Sharma, *et al*., 2019). The ongoing political crisis and natural disasters may have further exacerbated public mental health, which is still to be explored. Recent research conducted during the Covid pandemic in Nepal also found that families from lower socioeconomic and disadvantaged backgrounds experienced increased food insecurity, and as a result, there is an increasing number of mental health issues and gender violence, especially among the poor and vulnerable families within the community (Singh *et al*., 2021a). Evidence from previous research from both high-income countries (Maynard *et al*., 2018) and low-income countries (Jones, 2017) suggests a clear association between poverty/ food insecurity and poor mental health. However, the impacts of these socioeconomic circumstances have rarely been studied directly in the context of pregnant women in Nepal, which flags the knowledge gap, and this research study attempts to fill the gap.

1.7 Aims and Objectives

This study aimed to understand social determinants of mental health by exploring the lived experiences of pregnant women and their views on accessing available health services and social support influencing their mental health in the socioeconomic and cultural context of Nepal.

The objectives of the study were:

1. To explore the perceptions of the support experienced by pregnant women in Nepal affecting their mental health
2. To understand the availability and accessibility of maternal health services in Nepal and impact on the mental health experiences of pregnant women
3. To explore the lived experiences of pregnant women in the socioeconomic and cultural context of Nepal and impact on their mental health

1.8 Conclusion

In this chapter, I introduced my study and shared my personal motivation that has supported me to conceptualise and conduct this research study. Then, I explored the rationale of this study with some key initiatives that have promoted mental health globally and highlighted the importance of understanding the mental health and wellbeing of pregnant women in Nepal. Thereafter, the chapter discussed the concept of mental health in line with the WHO definition and presented the understanding of mental health as a positive concept for the purpose of this study, rather than mental illness and can be used synonymously with mental wellbeing. The understanding of social determinants of mental health has highlighted the importance of this concept and justification for why we should use the term 'social determinants of mental health' rather than 'social determinants of health'. Evidence from the discussion to this stage shows that women are highly marginalised in Nepalese community in terms of socioeconomic position of women, decision-making, and freedom of choice due to sociocultural norms. It is also recognised that the poor mental health of pregnant women may negatively impact the health and wellbeing of the new mother and their newborn baby. Therefore, this PhD study explores these issues and aims to provide evidence to promote and protect the good mental health of pregnant women. At the end of the chapter, I present the aims and objectives of this study, which has guided this research and will shape the discussions in the following chapters of this PhD thesis.

Chapter Two: Literature Review and Theoretical Underpinnings

This chapter focuses on a review of the existing literature to broaden the understanding of the mental health issues amongst pregnant women in Nepal and of theoretical approaches that informed the study rationale and questions. Thereby, this chapter includes two sections: the first section presents the review of the existing literature under three broad topics relating to the aims and objectives of this PhD study. The second section offers discussions about the rationale around the use of theoretical approaches, which includes ecological theory and intersectionality, for the purpose of this research. At the end of this chapter, I present the research questions to be addressed in this thesis.

2.1 Literature Review

Maternal mental health is a growing concern in Nepal, but research priority for maternal mental health issues remains low (Van Teijlingen *et al*., 2015). There is a dearth of research exploring determinants of mental health in Nepal, particularly among pregnant women, and therefore, understanding the wider sociocultural context contributing to pregnant women's mental health in Nepal remains challenging. Research evidence from high-income countries, which is comparatively better researched, may have limited relevance to this research since the socioeconomic, cultural, and religious context and availability or accessibility of health service facilities to provide support during pregnancy are very different. Although the literature from high-income countries may provide a broader understanding of maternal mental health, the literature review for this research has mainly focused on relevant literature from low- and- middle-income countries (LMICs) since socioeconomic circumstances, financial constraints, women's positionality in society, health and social care provision, and support system during pregnancy have similar wider contexts, if not the same. In this context, I chose to conduct a narrative literature review (Jesson, Matheson and Lacey, 2011; Hart, 2018), as my main aim was to get a broader understanding about various determinants of mental health of pregnant women and how these factors such as social support, health services accessibility and availability, and socioeconomic and cultural context can influence

the mental health and wellbeing of pregnant women in Nepal. Sukhera (2022) explains that narrative reviews are flexible, practical, and ideally provide a readable, relevant synthesis of a diverse literature for topics that require a meaningful synthesis of research evidence that may be complex or broad, and that require detailed description and interpretation. Narrative reviews incorporate broad range of knowledge sources for undertaking multi-level interpretation and critique using creativity and judgment contributing towards deepening understanding around the topic area that is being reviewed (Greenhalgh, Thorne and Malterud, 2018). In order to maximise the reach of the literature on the topic, healthcare-related databases such as PubMed, Medline, Google Scholar, PsycINFO, Science Direct, and British Nursing Index were searched. The keywords used in the literature search included mental health, maternal health, antenatal services, pregnancy, social support, social determinant, social status, socioeconomic and pregnant women. Synonyms of these words such as wellbeing or happiness, maternal health or fertile women or pregnancy were also used to ensure a broad range of literature and knowledge is captured within this review. When combining these keywords to search literature, appropriate use of OR and AND were used. A skimming and scanning strategy were used before reading full articles, and only those articles deemed relevant to the aims and objectives of this research were extracted for full text. The narrative literature review included peer-reviewed articles as well as grey literature (reports, conference papers, doctoral theses/dissertations) published in the English language. For non-academic grey literature, hand-searching of references was conducted to increase the comprehensiveness of the narrative review. I also searched the websites of national and international organisations and contacted some key experts with expertise in maternal and child health, mental health, and sexual and reproductive health research in Nepal for additional published research evidence. All relevant literature, regardless of publication date, was included in this review. The findings from the narrative review are presented in three broad subsections: importance of social support to enhance mental health during pregnancy; availability and accessibility of antenatal care to promote mental health and wellbeing; and risks associated to poor mental health in the country's wider socioeconomic and cultural contexts.

2.1.1 Importance of social support to enhance mental health during pregnancy

According to Cohen (2004, p. 676), ‘‘*Social support refers to a social network's provision of psychological and material resources intended to benefit an individual's ability to cope with stress*’’. The definition emphasises the importance of benefits for an individual receiving social support that helps them to cope with stress. Similarly, according to Norwood (Norwood 1990 cited in Norwood 1996, p. 144), "*Social support is who and what is perceived as helpful in any way under specific circumstances*". Norwood (1996) explains that the "who" in its definition is its structural dimension or the providers of supportive actions, and ‘‘what’’ is a functional dimension that refers to the activities provided by a structural dimension in social support. For example, intimate social support providers, such as husband/partner, is a form of structure that is fixed, and provides support that can have a substantial impact on health. The functional dimension of support provided by husband/partners could be in the form of material aid or physical assistance, which is seen as tangible support. The functional support could also be in the form of close interaction to provide comfort, guidance to cope with the circumstances, effective guidance to overcome difficult circumstances, or offering social participation and opportunity to enhance a sense of belonging and confidence, which would be seen as intangible support. Therefore, in general, the functional dimension of social support is recognised as tangible and intangible forms of assistance, which is not fixed, as the perceptions of social support that is helpful for those receiving these functional dimensions of support may change over time (Norwood, 1996). Despite receiving support from husband/partner at the structural level, women may not feel fully supported and satisfied if the support they received were inadequate, and therefore they are in need of other forms of structural support to promote their mental health and wellbeing during pregnancy. In this research, I explore pregnant women's perceptions of different forms of support they receive during pregnancy, including level of support and satisfaction, to promote their health.

Social support is a multi-dimensional concept often referred to as the process in which social relationships, integration, and networks act to promote the health and wellbeing of people, and a large body of research from both developed and developing countries supports the notion that low levels of social support increase the risk of poor mental health during pregnancy (Bedaso, *et al*., 2021; Dibaba, Fantahun and Hindin, 2013; Turner and Brown, 2010; Webster, *et al*., 2000). However, it has been argued that the level of support available

or perceived varies across different population groups depending on social or cultural status, gender, marital status, economic status, and other factors (Turner and Brown, 2010). Hence, it is not possible to generalise the social support needed, perceived, or available to one group of the population as the same for other groups in society, especially pregnant women who may need different social support than the general population. On the other side, social support received depends on the social bonds and supportive interaction between support receivers and support providers, while social structures equally matter and may play a significant role in determining available and perceived support (Hammer, Makiesky-Barrow and Gutwirth, 1978; Turner and Brown, 2010).

Research conducted by Thapa *et al*. (2021) found that Nepalese pregnant women are at risk of poor mental health if they receive inadequate social support during their pregnancy. A cross-sectional study conducted in Nigeria found that most women expect support from their husbands during their pregnancy, and emotional support that includes assurance that pregnancy and delivery will be trouble-free is the most desired support by the women (Morhason-Bello, *et al*., 2008). Evidence also suggests that a high level of care by a partner positively impacts the correlation with mother-foetal attachment, and a high level of control negatively correlates with mother-foetal attachment (Condon and Corkindale, 1997). Within the literature, social support is found to be an important factor in reducing the risk of stress during pregnancy, especially the support received by the husbands (Brown, 1986). The other study aiming to identify the source of support found that spouses, relatives, and friends were important sources of support, and the types of support received were mainly categorised into four types: emotional; instrumental; information; and appraisal supports (Jirojwong, *et al*., 1999). Cohen (2004) discusses that social support can be in the form of emotional, informational or instrumental, whereas Hetherington and colleagues (2018) highlight that the most needed support during the maternity period is emotional and informational. Social support in any form is seen as beneficial to promoting the mental health and wellbeing of women; however, it is also evident that its impact on mental health varies depending on the sociocultural and economic status of the women (Kawachi and Berkman, 2001). Generally, women with a lower socioeconomic position face more challenges, such as social pressure and maintaining social expectations from social connections that put them at risk of poor

mental health (Kawachi and Berkman, 2001; Ertel, Glymour and Berkman, 2009). Therefore, before promoting social support interventions in society, risk should be analysed, and women should be protected from the risk of poor mental health through interventions that aim to promote social support for pregnant women.

Pregnancy is the stage when pregnant women experience changes in their physical and emotional states due to hormonal changes in their bodies, and some changes may put women in a vulnerable state and at risk of poor mental health (Davis, 1996; Ertmann, *et al*., 2019). Alongside physical and emotional changes, some women may experience their changing roles and responsibilities towards society and family, as well as financial burdens associated with pregnancy (Furstenberg, 2010; Spiteri and Xuereb, 2012; Tulman, *et al*., 1990). During the transition to parenthood, generally, the couple receives a primary source of support from close family members, such as parents and in-laws (Bost *et al*., 2002), which is in line with the findings of research conducted in Nepal (Sapkota, *et al*., 2014). Evidence also states that the lack of social support and the low-quality relationship between key family members, such as husband and mother in –law, is strongly associated with poor mental health during pregnancy (Biaggi, *et al*., 2016; Senturk, *et al*., 2011). Perceived social support is well recognised to cope with adverse and stressful situations (Norwood,1996; Thoits, 1986), and social support plays an important role in promoting women's mental health, but there is very limited research about the wider social support for Nepalese women during their pregnancy.

Research conducted among Turkish pregnant women found that pregnant women with depressive symptoms are less likely to receive emotional support from their husbands and mothers-in-law (Senturk *et al*., 2017). A previous work by the same authors also found similar evidence that depression among pregnant women and lower emotional support from the husband have a stronger association in traditional families than in nuclear families (Senturk, *et al*., 2011). This research also suggests that pregnant women in nuclear families are more likely to be supported by their husbands and maintain good mental health than in traditional family structures. That means, in traditional family structure, women are in need of a significant amount of support because of their vulnerability are less supported. If this is the case, then much more remains to be explored in Nepal as the majority of families in Nepal

live in the traditional structures of the family (NSO, 2021). However, the degree of support required depends on the pregnant woman's circumstances, and some pregnant women may need an increased amount of support from their partner, family member, and service providers, while others may not feel the same about support in the same situation (Turner and Brown, 2010). Therefore, it seems complicated to define the actual level of support pregnant women need, as it may vary from person to person, and the concept of perceived social support (Norwood, 1996) is hard to measure. Some women may feel the perceived amount of support is inadequate due to their socioeconomic circumstances, while others may feel satisfied with the little support they receive. Over the decades, much research has argued that increased social support is directly associated with the increased attendance of antenatal clinics by pregnant women, especially women from low socioeconomic backgrounds (Higgins, *et al*., 1994; Lia-Hoagberg, *et al*., 1990). By contrast, a study in Thailand among pregnant women also found that social support is not associated with increasing antenatal care attendance or health service-seeking behaviour (Jirojwong, *et al*., 1999). However, all these studies agreed social support received during pregnancy improved women's mental health. Within the available literature, there is a knowledge gap about the specific source of social support and the kind of social support that is most needed for pregnant women. We cannot generalise the research findings from one country to another, as sociocultural and economic factors may influence the expectation and perception of the social support required and needed for women during pregnancy, however it indicates that both structural and functional dimensions of support need to be explored further within the Nepalese context to understand its influence in promoting mental health of pregnant women.

In Nepal, there is a dearth of research that explores the availability and perceived support for pregnant women beyond the family and husband. In developed countries, there is some organised community effort to provide structural support for women to promote health and wellbeing during their pregnancy, for example, Birth and Beyond Community Support in the UK (NCT, 2023). This programme aims to support new mums in the local community who often experience challenges and social exclusion and need support. Other programmes such as Mothers for Mothers (Mothers for Mothers, 2023), Young Mums Together, Mums and Babies in Mind and other programmes in the UK (Mental Health Foundation, 2023), and Single

Mom Programs in Canada (Moms Canada, 2023) have been effective in supporting pregnant women. There is limited evidence of such successful programmes in the resource poor LMICs such as Nepal. One good example of social support in a developing country is women's groups in Africa (Lewycka *et al*., 2013). Women's groups and volunteer peer councillors in the community have successfully improved maternal and child health outcomes in poor regions of Africa (Lewycka *et al*., 2013). In South Asian countries, very few women group-based programmes exist that aim to empower women, are well recognised and have positively influenced the health of the mother and their children (Kumar *et al*., 2018; Prost *et al*., 2013).

In Nepal, Health Mother Groups (HMGs) have been active since 2010, intending to improve and address poor maternal and child health outcomes, led by Female Community Health Volunteers (FCHVs) (Acharya *et al*., 2022). This community programme brings women of reproductive age together and aims to share health-related information and promote women's empowerment through a community approach. The previous research conducted by Manandhar *et al*. (2022) to identify barriers within the programme found gender inequality in society, limited time after household work to join the group, lack of family support, and lack of interest in FCHVs are the major challenges. There are many NGOs/INGOs in Nepal, but hardly any organisations actively support pregnant women in managing day-to-day struggles. Some of the organisations popular and active in Nepal are Saathi (*https://saathi.org.np/*), Koshis (*https://www.koshishnepal.org/*) and Women's Rehabilitation Centre (*https://www.worecnepal.org/*). Most of these organisations provide support through community engagement and tends to address the wider issues on gender inequalities, gender-based violence, addressing social barriers and empowerment for women, mental health awareness programmes, fighting for economic, social and cultural rights and other relevant programmes relating to women justice and rights. However, women's perceived support by these organisations remains unexplored. Although these organisations through their programme are not directly supporting pregnant women with their day-to-day struggle, these programmes empower women to seek support during their pregnancy. This shows the need of a structured approach for NGO/INGOs working in collaboration with the community and clear partnerships with local hospitals, which is not always evident and transparent. These partnerships supporting pregnant women have the potential to promote mental health

and wellbeing of women during pregnancy. The literature discussed above shows that social support is vital to promoting the mental health and wellbeing of pregnant women. Still, there is a lack of evidence about the structural and functional dimensions of the support available for pregnant women in Nepal. Through the narrative of women's experience of perceived support, this PhD research will identify and explore the much needed and available support for pregnant women at different structural levels, including family, relatives, community, and NGO/INGOs support.

2.1.2 Availability and accessibility of antenatal care to promote mental health and wellbeing

According to the Constitution of Nepal 2072 (CoN, 2015), health is a fundamental right, and every citizen of Nepal has the right to basic health services free of cost when they need it. However, in most developing countries such as Nepal, the availability and accessibility of health care services are determined by two key aspects: supply and demand (O'Donnell, 2007). The supply and demand of health care services are interrelated, and their utilisation by the general population could be constrained by various issues such as the costs of care, quality of care, adequate care in terms of effectiveness, availability of care locally, knowledge and education, culture, preference for the care, and others. Hence, promoting health services utilisation needs to address these problems associated with both the demand and supply sides of health services (James *et al.*, 2006). For example, if the service's quality is poor, it is not surprising to see that the demand for the service is decreased.

Most women are likely to experience pregnancy related stress and are very likely to contact health professionals and seek support (Kingston, *et al*., 2015). Therefore, it is well argued that antenatal care (ANC) is an opportunity for health professionals where adequate support to pregnant women may help to promote their mental health (Kingston, *et al*., 2015). This is possible when women have a positive experience of antenatal care. The World Health Organisation has produced recommendations on antenatal care for a positive experience during ANC and childbirth that can create the foundations for healthy and positive motherhood (WHO, 2016). That supports the discussion of the concept of mental health discussed in the first chapter, as a positive pregnancy experience includes maintaining

physical and sociocultural normality and achieving a positive motherhood experience that counts as promoting and maintaining maternal self-esteem, competence and autonomy during the pregnancy and after birth (WHO, 2016). In developing countries such as Nepal, antenatal care is focused predominantly on physical and environmental factors known to influence the physical health of the mother and unborn baby or foetal development, and there is limited or no place for mental health care for pregnant women during pregnancy (Dadi *et al*., 2020). At the same time, developed countries like the UK have recognised the mental health of pregnant women, which is visible in the policy and practice (NICE, 2023). Nepal, as in other resource-poor countries, is still experiencing a major challenge to increase the number of antenatal health check-ups as recommended by the World Health Organisation (WHO, 2016). According to the WHO recommendations (WHO, 2016), antenatal care is expected to include clinical health cheek-up visits, which are designed to not only focus on or limit the prevention of death and morbidity of the mother and baby but also to promote the health and well-being of the mother, foetus, and family, prioritising person-centred health and well-being. It also aims to cover early and continuing risk assessment, take health promotion initiatives through maternal health education and information, medical and psychosocial interventions, and follow-up according to individual needs to improve pregnant women's mental well-being. However, there are several challenges to meeting all these expectations, particularly in developing countries, due to limited knowledge and skilled workforce and lack of priority (Filippi *et al*., 2006). Despite that, promoting antenatal care uptake among pregnant women is important and should be prioritised. If appropriate antenatal care services are provided in line with the recommendation of WHO (WHO, 2016), women's mental health will likely be protected or promoted through antenatal care services.

Inequality in the uptake of antenatal health care remains a challenge worldwide as poor people are even less likely to access health care than people from higher socioeconomic backgrounds, and in LMICs, the inequality is significantly wider (Peters *et al*., 2008). Many women in developing countries do not have access to antenatal health care services from which they can benefit greatly (Filippi *et al*., 2006). For example, the rural rich and the urban poor may represent similar levels of maternity service uptake (Houweling, *et al*., 2007), suggesting there are massive poor–rich inequalities in maternity care in developing countries.

The reasons seem mostly due to the lack of availability, accessibility, and affordability of maternal health care services and the nature of the services (Houweling, *et al*., 2007). In addition to that, sometimes cultural and superstitious beliefs about pregnancy and late disclosure of pregnancy may act as a barrier to accessing adequate and timely antenatal services (Stokes, *et al*., 2008; Matsuoka, *et al*., 2010).

A large-scale qualitative study conducted in Cambodia presented several key findings on barriers to accessing maternal health services (Matsuoka, *et al*., 2010). One of the research findings from that research suggests the reason could be misinformation about the cost, health professional behaviours, and benefits available in maternity services, which might be the case in several South Asian countries. For example, the impolite behaviour of health professionals may discourage these women from attending government hospital services, while sometimes mothers' decision to seek antenatal care, skilled birth attendance, lack of knowledge to identify labour onset, and the rate of progress by pregnant women may limit the time to reach the maternal health service provider (Edmonds, Paul and Sibley, 2012). Similar evidence was found in recent research in Nepal, which suggested limited knowledge and education was one of the major barriers to healthcare engagement and access, followed by culture, gender roles, and quality and cost of services (Budhathoki, *et al*., 2017). The previous research found that families had to make financial saving arrangements before accessing the maternity hospital, such as husbands borrowing from friends or family or having to work extra time or taking the additional job to maintain the cost of health services in Nepal (Simkhada *et al*., 2014). Another research found that health service-seeking behaviours during pregnancy are hugely influenced by the mother-in-law's decision in Nepal (Simkhada, Porter and Van Teijlingen, 2011). This evidence supports the argument that people from poor backgrounds face several challenges and receive fewer health services than people from a higher socioeconomic background in developing countries, which creates health inequalities among the population, and it is a matter of social justice (Gwatkin *et al.*, 2007; Marmot *et al.*, 2020).

Given the well-recognised benefits of antenatal care uptake for mothers and babies, Nepal seems ambitious to promote antenatal care uptake. It has developed, adopted and

implemented several health strategies over the decade. Some recent health sector strategies of Nepal and WHO, for example, Nepal–WHO Country Cooperation Strategy 2018–2022 (WHO, 2018) and Nepal Health Sector Strategy 2015-2020 (GNMHP, 2015), alongside the contribution and achievement towards Sustainable Development Goals (SDGs) are in progress to achieve the universal health care for all. The National Health Policy of Nepal (GNMHP, 2014) states access to equitable and quality basic healthcare services free of cost and is a basic human right of all citizens. Later, that policy was supported by the Nepal Health Sector Strategy 2015-20 (GNMHP, 2015), which is focused on achieving universal health coverage (UHC), including equitable access, quality health services, health systems reform, a multisectoral approach, and emphasises community-based Primary Health Care for achieving UHC. Still, health care is not universal, and access to quality services at an affordable cost remains a challenge for most Nepalese women to seek antenatal care (Greenfield, *et al*., 2022). Nepal Health Sector Strategy 2015-2020 states that the major barriers to accessing healthcare services are financial constraints, socio-cultural aspects, geographical location of patients, institutional support, and availability of the services near them (GNMHP, 2015). The stigma attached to mental health issues is a major barrier to the treatment and support of mental health patients, including pregnant women and all sex and age groups in Nepal (devkota, *et al*., 2021). The Nepal Health Sector Strategy 2015-2020 mentions that women are still not able to decide on their health, especially related to sexual and reproductive health, which needs to be further explored, and this research will explore this issue to some extent in the context of pregnant women. The discussion and evidence so far suggest that there are several obstacles for women which discourage them from seeking the health services they need during their pregnancy. These can include literacy level, income, stigma and societal norms, and these women's geographical location (Deo *et al*., 2015).

Women from low socioeconomic backgrounds are six times more likely to give birth without skilled health professionals assistance compared to women from high socioeconomic backgrounds (Målqvist, *et al*., 2017). To address this gap in service access, Nepal has promoted a few effective health incentive programmes in the last couple of decades. First, in 2005, the Maternity Incentive Scheme (MIS) was launched with the support of major funding from DFID, which was further revised as the Safe Delivery Incentive Programme (SDIP) in 2006

to reduce transport costs associated with accessing care at childbirth centres (Upreti *et al.*, 2013). This SDIP later evolved into the "Aama Surakshya Programme" in 2009. Aama means "Mother''. This programme, known as the 'Aama Surakshya Programme' or 'Safe Motherhood Programme', has three goals (Subedi *et al*., 2014). The first goal is to provide free institutional delivery care to all Nepalese women; the second goal is to provide a safe delivery incentive in which women receive a certain amount after attending a health institution, a skilled birth centre to give birth; and the third goal is an incentive to women who complete four antenatal care visits. Under this programme, a certain amount of money is provided to women as an incentive, which varies depending on geological location, considering the travel cost and health institutions, and health workers also receive a certain amount that encourages them to provide quality care to pregnant women at home or institutions (NHSSP-III, 2020; Subedi *et al*., 2014). This programme supports the Sustainable Development Goal targets to achieve the Universal Health Coverage (UHC) in the country. Despite this initiative, many pregnant women are still not taking part in this programme, or they are unaware of the services and financial benefits they can receive through this programme, as noted in a report published by the Ministry of Health and Population of Nepal in 2013 (Upreti *et al.*, 2013), and recently by the Nepal Health Sector Support Programme III (NHSSP-III, 2020). These reports found that despite some success of this 'Aama' programme, many women are still paying fees for delivery services and not receiving any financial incentive after attending four ANC and institutional delivery, which can act as a barrier to improving maternal health and wellbeing in Nepal (Upreti *et al.*, 2013).

Another research assessing knowledge about the financial benefits of attending four antenatal clinic (ANC) visits and institutional delivery found women have limited awareness about the financial benefit of four ANC visits, while the safe delivery incentive programme achieved a huge success (Subedi *et al*., 2014). A research paper focusing on the impact of this programme in the last 10 years found there is a limited impact of this programme on women from poorer backgrounds and least accessible areas (Ensor, Bhatt, and Tiwari, 2017). This clearly indicates that a large proportion of the women who could greatly benefit from the programme are not engaged in the programme and the Universal Health Coverage (UHC). The national demographic and health survey in 2016 (Ministry of Health [Nepal], New ERA, and

ICF, 2017) has reported the maternal mortality ratio is 239 deaths per 100,000 live births, and only 57% of deliveries are at health institutions and 69% of pregnant women complete four or more ANC visits. This evidence suggests there is still more to do to achieve equitable maternity health services for all women in the country and achieve the sustainable development goal set by the World Health Organisation despite the fact that Nepal is the country to celebrate huge success in maternal health services in comparison with other South Asian countries. Since the 'Aama' programme has been seen as unsuccessful in achieving the target, especially disadvantaged women and women from hard-to-reach areas, the government of Nepal has doubled the incentive amount for travel expenses given to the women if they come for institutional delivery. For example, the women who live in the mountain region receive Rs. 3000 (roughly £18), the hill region Rs. 2000 (roughly £9) and Tarai/Plain region 1000 (roughly £4.5) (GNMHP Family Welfare Division, 2021). In addition to this incentive, women receive a certain amount for each recommended health check-up at the health facility, but that varies according to the geographical areas in Nepal (GNMHP Family Welfare Division, 2021). This PhD research explores the women's experience of receiving support from the 'Aama Programme' in Nepal.

From the political landscape of the country, after decades of political uncertainty, Nepal has recently gone through a political transition period, from a unitary state to a federalised state, called a province, with new roles and responsibilities of health service provisions for federal governments (Thapa, *et al*., 2019). That means how Nepal delivers health services has changed, bringing challenges and opportunities for present and future healthcare. There are currently several uncertainties about how the health system will work in each province, given the conditions such as lack of adequate healthcare workers and economic constraints. In addition, the country's rapid civilisation and globalisation process are leading the country in terms of epidemiological alteration, lifestyle behaviours, adverse climate conditions, and changes in the social environment (McMichael, 2013; Thapa, *et al*, 2019). So far, Nepal seems to be struggling to update the accountably and information about the health system and the government's regulation and enforcement of public health laws. To prioritise public health, each province should adopt a collaborative approach to fill the human resource gap, tackle the inequalities, and improve the accessibility of standard health care, especially for those

who are living in isolated and remote areas and who are at the absolute and immediate need of health care services (Målqvist, *et al*., 2017). Another author researched the challenges and opportunities of public health research in Nepal but, most importantly, argued that there is a crucial need for public health research in the country (Shrestha, 2014). Therefore, the findings from this PhD will help health policymakers and service providers to make informed, evidence-based decisions to address the health needs of the population, especially at this time when the health system is going through a massive structural change.

In terms of skilled health professions to support pregnant women, Nepal has recently started midwives in the health care system who meet global standards of maternal care, but the country has existing community health workers (CHWs) who are also known as female community health volunteers (FCHVs). Several research studies have recognised the worldwide increasing role and popularity of community health workers (CHWs) in healthcare provision (Lewin *et al*., 2010; Van Ginneken, Lewin, and Berridge, 2010). According to the United States Agency for International Development (USAID, 2023), Nepal has one of the world's most successful community health volunteer programmes. By contrast, a literature review by Redick and colleagues (2014) about CHWs suggests a lack of adequate skills among CHWs in developing countries, including Nepal. The National Female Community Health Volunteers (FCHVs) program was introduced in 1988 by the Ministry of Health and Population in Nepal. FCHVs have played a significant role in increasing the number of skilled birth attendance in Nepal, and their contribution towards Millennium Development Goals 4 and 5 to reduce child mortality and improve maternal health is recognised by the Government of Nepal and in several research studies (Khatri, Mishra, and Khanal, 2017). However, despite the significant contribution of FCHVs in Nepal, there is a huge variation in their regional role. For example, Panday, *et al*. (2017) state FCHVs in the hill regions reported activities such as assisting with childbirth, distributing medicines, administering pregnancy tests, and educating mothers by providing pregnancy-related information. By contrast, such activities were not reported in the Terai/Plains region in the same report. Panday *et al*. (2017) also identified the lack of monetary incentives and education and training for FCHVs in both hill and plain regions. In general, the lack of updated training and skills among FCHVs has been noted in many research (Horton, Silwal and Simkhada, 2020; Panday *et al*., 2017). The evidence

discussed so far summarises that there is still skills gap and more skilled health professionals are needed in the country to promote wellbeing of pregnant women and meet the quality of antenatal care uptake recommended by WHO (WHO, 2016).

Although there is not enough information about the current health facilities structure and management at the national or province level, published literature related to maternal health services in Nepal has guided me to summarise, make arguments and discuss antenatal health check-up services at the different levels of health facilities in Nepal (Baral, 2014; Banstola, *et al*., 2020; Bentley, 1995; Gurung and Tuladhar, 2013; Rai, *et al*., 2001). For ANC visits in the country's rural areas, the first point of contact is the health post, which is the most basic health facility available in each ward of the municipality. Health posts provide basic services such as measuring height, weight, blood pressure and baby growth in pregnancy, but these health facilities do not have laboratory test services and have limited medicine such as iron and folic acid available for pregnant women (Luitel, *et al*., 2015). The health posts also provide Outreach Clinic services for hard-to-reach populations residing in almost inaccessible geographical locations and having limited transport options (Gurung and Tuladhar, 2013). Some health posts also offer laboratory tests and Rural Ultrasound Programme to pregnant women if the municipalities fund these facilities. For this programme, the significant challenges are resources and the availability of a trained workforce in the health post, as the central government does not fund these services (Jha, 2013). Therefore, there is a significant disparity in service availability across the country, indicating some women may be fortunate to receive these services if the municipality prioritises their health as an immediate priority or the health post receives additional funding from INGO. Some health posts also offer birthing centres, but these facilities lack highly skilled health professionals. In the birthing centres of health posts, women can be assisted for normal delivery and cannot be provided caesarean section or services to manage complications during the delivery, such as PPH. These cases are referred to primary health centres (Jha, 2013), which can provide basic emergency obstetrical and neonatal care. In these health facilities, a doctor and SBA-trained nurse are present and able to manage some complicated cases such as PPH. Regarding ANC visits, pregnant women are offered antenatal check-ups, laboratory tests and ultrasound services by a trained doctor or a nurse. These health facilities are also recognised as the

primary level of health facilities. If this health facility cannot manage some complicated cases, then the women can be referred to district hospitals, where secondary-level health facilities are available.

District hospitals are recognised as secondary-level health facilities (Banstola, *et al*., 2020; MoHP [Nepal], New ERA and ICF, 2022). Ilam District Hospital, where the data was collected for this research, provides comprehensive emergency obstetrical and neonatal care. In this facility, specialised doctors are generally expected to provide care for maternal health. This health facility also provides caesarean section, blood transfusion, laboratory and ultrasound facilities like in other district hospitals (Banstola, *et al*., 2020). These district hospitals refer complicated cases to tertiary-level hospitals that cannot be managed in the health facilities. In this health facility, women expect to receive services from a specialised team of health professionals and the services are expected to be equipped to manage the most complicated cases. However, the latest Nepal Health Facility Survey 2021 Final Report (MoHP [Nepal], New ERA and ICF, 2022) raises several questions about the availability and accessibility of health services in Nepal. For example, according to that survey, only one-quarter of health facilities in Nepal offer laboratory testing capacities such as haemoglobin, urine protein, or urine glucose testing. If we aim to adopt and implement WHO recommendations on antenatal care for a positive pregnancy experience (WHO, 2016), then Nepal has much to do regarding good quality health service availability for pregnant women.

2.1.3 Risks associated to poor mental health in the country's wider socioeconomic and cultural context

It is well recognised that discriminatory socioeconomic and cultural practice determine the poor mental health of women and presents mental health inequalities in our society (WHO, 2012; 2014). There are socially constructed roles for women which restrict them while the same society promotes more freedom for men, supporting patriarchal norms and creating inequalities in several aspects of life, including poor health and wellbeing for women (Everitt-Penhale and Ratele 2015; Seedat and Rondon, 2021). In South Asian countries, including Nepal, where deeply rooted patriarchal practice and caste and hierarchical social systems are evident in policies and service provisions, inadequately address the needs of women to

promote their wellbeing, resulting in the widening of the gender gap in mental health (Ajala, 2017; Jayachandran, 2015; Pariyar and Lovett, 2016). Generally, it is evident that the gender gap favours males in all areas of our society, such as education, health, wealth, and autonomy. These socioeconomic and cultural factors are widely recognised as a determinant of poor mental health (WHO, 2001), and is considered as major reasons for gender-based mental health inequality among women in South Asia (Niaz and Hassan, 2006). Gender inequality in mental health refers to the unequal treatment of men and women in a society that puts women in a lower position in society in terms of decision-making power, resource allocation, entitlement to equal rights and freedom, and the way society and organisations have been structured and functioning can benefit men compared to women (Jayachandran, 2015; Yu, 2018). Decision-making and freedom of choice in women's lives in Nepal are very often controlled by the husband/male or elderly members of the family (Ministry of Health [Nepal], New ERA, and ICF, 2017), which is in line with other South Asian patriarchal societies (Jayachandran, 2015). A report from the Ministry of Health Nepal (Ministry of Health [Nepal], New ERA, and ICF, 2017) states that the child mortality rate decreased when women participated in the decision-making towards their maternal care in Nepal. Still, women's freedom in the decision-making process is highly restricted in the sociocultural context of the country. Research focussing on antenatal service uptake in Nepal states that the husband and mother-in-law are the key persons to lead the decision-making about the service uptake, and pregnant women have limited or no say in the decision-making during their pregnancy (Bhusal *et al*., 2011; Simkhada, Porter and van Teijlingen, 2011).

Given the fact that gender inequality is one of the major causes of poor health and wellbeing of women in society, the fifth Sustainable Development Goals (SDGs) aim to achieve gender equality around the world. It is unfortunate to see the gender gap is huge between the rich and LMICs, according to the UNDP Human Development Report (2022). Although men earn more in almost all societies, a gender discrimination is noted as a serious issue in LMICs (Ajala, 2017; Jayachandran, 2015). Even in developed countries, women participation in the labour market and earning is not equal to that of men, despite the attitude towards women in the labour market and society being more progressive (Jayachandran, 2015). There are several sociocultural factors that directly impact women's lives, but they do not have control over

these factors. The literature acknowledges the consequences of structural disadvantage mediated through discriminatory laws against women, policies that disadvantage women, and institutional culture that prioritises men, putting women at risk of poor health and wellbeing and treating women as second-class citizens in many of the LMICs such as Nepal (Heise *et al*., 2019). Nepal is a predominantly patriarchal society like other countries in South Asia and South-East Asia, where the general perception towards women is *'girls are born to be fed throughout their lives, and boys are born to earn and support the whole family*' (Niaz and Hassan, 2006, p.118). Having a male child to extend the family line is an essential and admired social concept in many south Asian countries, including Nepal (Gao, Chan, and Mao, 2009; Mahato *et al*., 2018).

Nepal is characterised by a strong son preference country (Chalise *et al*., 2022; Rai, *et al*., 2014). The desire of having a son is deeply rooted in cultural norms in Nepal including in other Asian countries such as Bangladesh, India, and Pakistan (Channon, 2015). One of the reasons given is that the son in the family is important for religious rituals and functions to take forward the tradition and culture of the family (Nanda, *et al*., 2012). The research further states that from a socioeconomic perspective, the son is seen as a breadwinner for the family, carries the family line and looks after the old parents, while daughters leave their parents' house after getting married to create a new family with their husband (Nanda *et al*., 2012). The preference for a son in Nepalese society is such that couples who deliver a baby boy feel their family is complete and take longer to plan for another baby, whereas if a baby girl is born, they start planning for another pregnancy as early as possible (Brunson, 2010; Nanda *et al*. 2012; Rai *et al*., 2014). The societal expectations to give birth of a baby boy is a cultural norm, and this possibly put an extra pressure on women to conceive another child as early as possible. Research in India shows appalling evidence of gender discrimination where baby girls are breastfed for shorter periods than baby boys (Fledderjohann *et al*., 2014). That also indicates that women are seen differently in the patriarchal Nepalese society, with limited or no power and lower status even before they are born and their lifetime in most cases, which restricts women's freedom of choice, independence, and agency that influences their mental health (WHO, 2001; Yu, 2018). Chalise and colleagues (2022) looked at the mental health impact of son preference practice on pregnant women in Nepal found that pregnant women

were at risk of poor mental health due to the imposed expectation of a son during their pregnancy. A cross-sectional study conducted in mainland China found the desire for a son in the family, especially from in-laws, put pregnant women in a stressful situation; as a result, postnatal depression is seen among women (Gao, Chan, and Mao, 2009). In Nepal, as in other patriarchal societies, women are pressured to give birth to a baby boy, and there is still a stigma around giving birth to a baby girl, which can lead to mental health problems among women. Pregnant women often feel anxious and stressed about meeting the expectations of giving birth to a baby boy for the family, and if they fail to do so, they get the blame for giving birth to a baby girl (Chalise *et al*, 2022; Mahato *et al*., 2018).

Gender-based violence due to gender inequality is one of the major causes of poor mental health that women are experiencing throughout the world, particularly in developing countries such as Nepal. There is limited understanding of the context of violence within marriage and pregnancy, specifically in South Asia, including Nepal (Regmi *et al*., 2017). Intimate partner violence is a common form of violence experienced by women during their pregnancy, including physical violence, sexual violence, harassment, and psychological assault by an intimate partner (Dicola and Spaar, 2016; Regmi, *et al*., 2017). According to the survey report in Nepal, 26% of married women have experienced spousal physical, sexual, or emotional violence (Ministry of Health [Nepal], New ERA, and ICF, 2017). The survey report also found that common types of spousal violence is physical violence followed by emotional and sexual violence. Although Nepal has had the domestic violence act since 2009, evidence suggests around two-thirds of Nepalese women who have experienced violence have not sought help or justice to stop the violence they have experienced (Government of Nepal Law Commission, 2009). This evidence raises several concerns about women's agencies and empowerment. For example, are Nepalese women aware of their rights and the law that can protect them from future violence? Are these women able to seek help within the law? Do they recognise the consequences of such violence on them and their family?

Since the average age of women at their first marriage is around 18 years compared to 22 years for men in Nepal (MoH [Nepal], New ERA, and ICF, 2017), marriage at a young age without an adequate literacy level may be a reason for women experiencing sexual violence

(WHO, 2009). Previous research found that gender discriminatory norms in the cultural context, the financial dependence of women to men and the family income, alcohol consumption of husbands, limited or no knowledge about sexual rights, social stigma speaking against husband, and lack of supportive familial and social environment including within the policy are responsible factors for putting women at major risk of sexual violence within the married life in Nepal (Puri, Shah, and Tamang, 2010). That research also found that generally, men perception is forcing sex on their wives as part of their entitlements since they are the breadwinner of the family. It seems sexual violence within marriage is a complex issue to understand and its impact on women's mental health should be explored further. There is enough evidence to support the argument that pregnant women experience violence in the sociocultural context of Nepal (Gurung and Acharya, 2016; Rishal *et al*., 2018) and South Asia (Nepal *et al*., 2022) and conclude emotional or psychological violence was more prevalent. A study conducted in India found that physical violence during pregnancy has a significantly adverse impact on birth outcomes such as miscarriage, abortion, and stillbirth (Krishnamoorthy and Ganesh, 2022). However, the study could not explore the mental health impact of violence on women and children. Although there is limited research to reveal the impact of sexual violence on the mental health of pregnant women in Nepal (Chalise *et al*., 2022), there is enough evidence to argue violence has a negative impact on the mental health of women in general (Oram, Khalifeh and Howard, 2017).

Research in the global context and LMICs have enough evidence to justify that women who experience violence may experience poor mental health. For example, a systematic review found the prevalence and association of intimate partner violence (IPV) and mental disorders among pregnant and postpartum women in LMICs (Halim *et al*., 2018). Moreover, a prospective cohort study conducted in Brazil also found the experience of violence during pregnancy has a significant association with postnatal depression among women (Ludermir *et al*., 2010). Within the literature, there is sufficient evidence that IPV is a risk of unplanned or unintended pregnancy among south Asian women. An analysis using Demographic and Health Survey data from India, Bangladesh, and Nepal found an association between IPV and unintended pregnancy among young south Asian women (Anand, Unisa and Singh, 2017). Another study, which used the Nepal Demographic and Health Survey data 2016, also found

a strong association between sexual violence within a marital relationship and unintended pregnancy among young women in Nepal (Acharya, Paudel and Silwal, 2019). Another study concluded that lower socioeconomic circumstances, especially a lower level of education, are common among women with unplanned pregnancies in Nepal (Bastola *et al*., 2015). So far, the evidence suggests that pregnant women are more likely to experience IPV in Nepal because of the sociocultural circumstances. These could be some of the reasons why women may experience poor mental health during pregnancy, as noted in previous research in Nepal (Chalise *et al*., 2022).

The review of the existing literature showed that sociocultural and economic circumstances play an important role in contributing towards the mental health and wellbeing of pregnant women. Existing research evidence suggests that Nepalese societies have a cultural norm favouring males, and the social concept is that women are lower in status and power, which restricts women's freedom of choice, independence, and agency, affecting their mental health and wellbeing, and more so when they are pregnant.

2.2 Theoretical Approaches

The theoretical underpinnings of this research provide the foundation of knowledge used to explore and answer the research questions throughout this research, determine the research design and frame the inquiry for data analysis and interpretation that offer a clear explanation of what has been found in this research. The importance of theoretical perspective in public health has been well discussed by Potvin and colleagues (2005). They concluded that public health knowledge should be placed within a theoretical perspective that enables us to understand the health and wellbeing of the population in the contemporary world. As such, I explored both the medical model and social model of health (Barry and Yuill, 2021; Robinson, 2021). Following the wider reading of the literature and findings from the narrative review, I felt it was not always about women's mental illness during pregnancy that affected their overall mental health and wellbeing, but it was the context in which the women were living, their socioeconomic circumstances and other factors that were affecting their mental wellbeing (Tew, 2005). Therefore, for the purpose of this research, social model of health suited the best, which explored social circumstances and cultural norms, alongside the

availability and accessibility of health care services, social support, policies, and practices that have the potential to shape the experiences of pregnant women towards their mental health, rather than looking at the mental illness that is covered within the medical model of health. While examining social model of health, I considered using feminist theory (Alpert, 1973) since the research is focussed on the experiences and belief of women during their pregnancy. However, within the patriarchal society of Nepal, the experiences of women are generally shaped by the sociocultural and traditional norms. Moreover, there are multiple level of structural factors that intersects with each other to marginalise women further and has the potential to affect the mental health and wellbeing of pregnant women, which is often overlooked by the feminist theory (Annandale and Clark, 1996). In the light of these considerations, Ecological Theory (Bronfenbrenner, 1977) was best suited to understand and explore the multilevel factors affecting women's experiences during pregnancy and Intersectionality Theory (Crenshaw, 1989) supported to examine the intersections of different factors to explore and understand the issue of mental health among pregnant women in more depth.

2.2.1 An ecological approach to public mental health

The seminal work of ecological understanding of human development by Urie Bronfenbrenner stands to be the most influential theoretical perspective in many of the recent health research. The ecological theory has evolved significantly since it was developed in the late 1970s. A well-written work by Rosa and Tudge (2013) critically categorises the evolution of ecological theory into three different phases: Phase one (1973-1979) associated with an understanding of an ecological approach to human development. During this phase, Bronfenbrenner (1977) named his emerging theory an ''ecological model of human development'' where ecology is an environment, and individuals develop and survive within that environment. Bronfenbrenner described that the ecology was composed of four levels and explained the importance of human development within an interrelated ecological level, which could be seen as a nested enclosed circles system. That means a person sits at the centre of the circles, and all the levels represent the situation/context of individuals. In this research study, the pregnant woman sits at the centre of ecological theory, and I attempt to see how each ecological level influences the mental health of pregnant women. The first circle

in the theory represents the microsystem, which is the closest layer of the environment where individuals have immediate contact with the surroundings. For example, it presents the connection between pregnant women and family and neighbourhoods. The second layer is the mesosystem, which connects the microsystem to an outer environment, such as the connection between the women's family and organisations such as health services. The third layer is the exo-system, which explains the link between individuals and a range of social settings or systems. In the context of this study, pregnant women may not have an active role in the political, government, and religious systems. Still, these settings impact women's lives, either positively or negatively. The fourth layer, which is considered the outermost layer, is the macrosystem that refers to the culture within the socioeconomic context of the society, political system and social policies, religious practice and culture. Here, the culture includes values, ideologies, and laws of the society, which may vary in each society or country where they live. For example, if it is the belief of the culture that women should be solely responsible for taking care of themselves during pregnancy and raising their children, then that culture is less likely to provide the required support to the women. In terms of the elements of the layers, they may have different impacts and bring changes over time in the role and activity of the person, which is also known as a shift from one ecological context to another that every person undergoes throughout life (Bronfenbrenner, 1977). For example, the impacts of each layer can be different for a daughter, and these may change when the daughter becomes a wife, a pregnant woman and a daughter-in-law. This version of Bronfenbrenner's theory allows this research to analyse the mutual interaction between pregnant women and the environmental context, which is the intention of this research. This concept is also in line with the understanding of health inequalities, the life-course approach, and the understanding of social determinants of mental health.

In the evolution process of the ecological theory, phase two (1980- the mid-1990s) added biology and chronosystem into the ecology (Rosa and Tudge, 2013). At this stage, Bronfenbrenner put more emphasis on the close and reciprocal interaction of an individual with the immediate environment. This is also referred to as the 'proximal process', and this process is termed a chronosystem (Paquette and Ryan, 2001). In this phase, Bronfenbrenner's work also discusses how gender difference is derived from the different meanings, and the

task involves males and females rather than biological differences. This concept is described in the person-process-context model of human development by Bronfenbrenner (1979; 1986). The ecological perspective of interrelations between contexts and individuals has been described and emphasised as the interactive process and reciprocal relations between them and their environment between different levels of the context in which individuals reside. It includes the transitions and shifts of individuals' lifespans according to the dimension of time, which is partly the same understanding as discussed above in Phase 1. Still, the term chronosystem is used in the second phase. That means the microsystem, mesosystem, exosystem, and macrosystem can change over the period, or these are modifiable structural elements. As this PhD research is focused on pregnant women and is not looking at how the individual is changing or how the individual and social circumstances are changing over time, the understanding of the second phase does not fit to the context of this research.

The evolution of the ecological theory in Phase three (mid-1990s-2006) is focused on the Process-Person-Context-Time (PPCT) model (Rosa and Tudge, 2013). This later version of Bronfenbrenner's theory emphasises more on the proximal process and the immediate environment. Also, in this model, policy implications are more focused on individuals without considering social and organisational context, and that makes me feel that the PPCT model is more appropriate for public health promotion intervention focused on individuals' behaviours and beliefs or research in psychology, which values more individualised perspectives. Probably, PPCT is the best outcome of ecology for Bronfenbrenner (Harney, 2007). I agree that individual factors also matter in mental health, but this PhD research looks beyond the individual factors and focuses on social determinants of mental health, and therefore, this latest version of the ecological theory does not fit the context of this research.

Thereby, I conclude that phase 1 (1973-1979) of the ecological theory, which looks at an understanding of an ecological approach to human development with a significant focus on social factors and explores different level influences that affect the mental health of pregnant women is the best fit for this research study. The first phase of ecological theory, where ecology is an environment and individuals develop and survive within that environment, focuses more attention on the context rather than personal characteristics, which can be

assumed as a limitation of this theory. However, the mental health of pregnant women, especially in the patriarchal society of Nepal, is mainly dependent on the context in which the pregnant women are born, live and access maternal health services, which are considered social determinants of mental health. Hence, the ecological perspective in this research is helpful in showing interrelationships between various factors identified and explored within the multilayer of ecology. These factors, although not equally important, should not be prioritised above another, which could be a shortfall within the ecological theory. Therefore, the use of intersectionality becomes important to minimise this risk and discuss the intersection of those factors, which could be aggregated further to marginalise the pregnant women towards their mental health experience.

2.2.2 Intersectionality: a theoretical perspective on women's health issues

Crenshaw (1989) coined the term intersectionality and presented the concept, which has contributed significantly to the research of different disciplines relating to women. Her exceptional thought about how being a female from a Black and Minority Ethnic (BME) background put her in a disadvantageous position compared to other white or women from elite backgrounds drew huge attention mostly from feminist and anti-racist theorists to evaluate the inclusiveness of women with multiple identities in our society. She concluded the arguments by presenting an intersectionality point of view that enables us to see the lived experiences of women of multiple social identities determined by race, gender, class, and sexuality. She critiques the feminist theory for not including race issues and argues that the feminist theory subordinates black women in society, which has raised concerns among academics when using feminist theory. In her further work (Crenshaw, 1991), she has demonstrated how women from disadvantaged backgrounds are situated in economic, social, and political worlds and how these circumstances put them at risk of further marginalisation in society. According to Crenshaw (1991, p. 1299),

> '*Through an awareness of intersectionality, we can better acknowledge and ground the differences among us and negotiate how these differences will find expression……*'

Intersectionality has been defined by many authors of different disciplines. According to Hankivsky and Christoffersen (2008, p. 275),

'Intersectionality is a theory of knowledge that strives to elucidate and interpret multiple and intersecting systems of oppression and privilege'.

Over the decades, intersectionality has been seen as a productive concept developed in several disciplines, such as sociology, anthropology, ethnic studies, and history. In addition, the initial concept of intersectionality extended to other domains of research, such as studying population health and health inequalities experienced by women, where the range of socio-demographic factors determines health inequalities. Very often, social inequalities, health policies and practices create an environment where some are at risk of poor health, and others are protected from the same environment. Several authors have highlighted the implications and benefits of using intersectionality in public health research (Bowleg, 2012; Hankivsky and Christoffersen, 2008). Bowleg (2012, p.1267) explains,

'Intersectionality is a theoretical framework that posits that multiple social categories (e.g., race, ethnicity, gender, sexual orientation, socioeconomic status) intersect at the micro-level of individual experience to reflect multiple interlocking systems of privilege and oppression at the macro, social-structural level (e.g., racism, sexism, hetero-sexism). Public health's commitment to social justice makes it a natural fit with intersectionality's focus on multiple historically oppressed populations.'

Intersectionality considers how multiple social identities at the personal level intersect with multiple social structure levels. Here, intersectionality is the notion that social categories are interdependent, multiple, and simultaneously constitutive. Intersectionality does not prioritise one category over others, instead, it recognises the importance of social identities that determine their health (Hankivsky and Christoffersen, 2008). Relating this concept to the current public health agendas, such as health inequalities, the concept fits well to explain and explore health inequalities, which is one of the key interests of this research study. Intersectionality in this research allows me to explore health inequalities experienced by some pregnant women because of their socioeconomic circumstances, whereas others enjoy the privilege in the same society. Over the last decade, the Marmot Review (Marmot et al., 2020) has demonstrated how health follows a social gradient, where people with higher socioeconomic status have better health outcomes and directly relates to the concept of

intersectionality. He concluded reducing health inequalities is a matter of fairness and social justice, at the same time, action to reduce health inequalities requires actions on all the social determinants of health. To understand health inequalities, it is important to understand how these social determinants act on individuals, which can be seen through an intersectionality perspective, as discussed by Hankivsky and Christoffersen (2008). In this research, the concept offers a theoretical perspective by devising a path to rethink our understanding of the determinants of mental health. It also concerns a natural interest and engagement to explore how multiple social identities intersect to identify health disparities in our society. Ultimately, the concept of intersectionality enables this research to see mental health policy and service provision available to pregnant women at the local and national levels and see if there are any existing disparities. On the other hand, intersectionality theory is to generate knowledge rather than to provide solutions, which could act as the limitation of this theory. The use of ecological theory together with intersectionality is likely to compensate these shortcomings in both the theories. The concept of intersectionality and ecological theory play a crucial role in this research, particularly in exploring an understanding of how some pregnant women are marginalised in our society and understanding the appropriate level of intensity that should be given to marginalised pregnant women when providing appropriate support they need. The words 'minority' and 'marginalised' can have multiple definition. This research uses these words for those pregnant women who are oppressed in society due to several circumstances, such as socioeconomic status.

I argue the use of intersectionality in this research is to talk about the process of marginalisation of some pregnant women based on their socioeconomic characteristics. I also understand the relation of this intersectionality concept with the ecological theory in the sense that intersectionality promotes an understanding of human beings that is shaped by the interaction of different individual social identities (e.g., gender, social class, age, migration, income, religion, language, geographical location), which are well discussed as individual factors in Bronfenbrenner's Ecological Theory. These characteristics discussed in both ecological theory and intersectionality may put some pregnant women in a privileged position or force them to live in oppression. This theoretical understanding enables this research to explore pregnant women's mental health and well-being in Nepal. There is

sufficient evidence of the suitability of intersectionality in qualitative research, however, there is an emerging scope of use of intersectionality in quantitative research as well (Bauer, *et al*., 2021; Bowleg, and Bauer, 2016). Therefore, I also argue for the use of intersectionality in mixed-method research. This research is the first of its kind in the subject area of research conducted in Nepal using this theoretical understanding.

2.3 Research Questions

This research study aimed to understand the social determinants of mental health of pregnant women in Nepal by exploring the lived experiences of women's daily life that could impact on their mental health and explored their views on accessing available health and social care support and services that promoted their mental health in the socioeconomic and cultural context of Nepal, a country with deeply rooted patriarchal norms. The research questions for this research have been developed based on my understanding and interest and then revised several times after completing the review of the literature for the purpose of this PhD research study. The study's research questions are as follows:

1. How do lived experiences of perceived support of pregnant women in Nepal affect their mental health?
2. How do the availability and accessibility of maternal health services in Nepal impact on mental health of pregnant women?
3. How do lived experiences of socioeconomic and cultural factors affect the mental health of pregnant women in Nepal?

2.4 Conclusion

The evidence and discussion from the literature review and theoretical understanding at this stage show that women are highly marginalised in Nepalese community regarding decision-making and freedom of choice due to sociocultural norms. This indicates that the research about the impact of gender discrimination, decision-making, and socioeconomic position of women on their mental health is crucial, especially among pregnant women in Nepal, a country which has deeply rooted patriarchal norms and caste and hierarchical social systems.

Because of this, some women enjoy a privileged position in several social aspects of their lives while others are suppressed and marginalised. In this research, the ecological and intersectional theory allows us to see women from different aspects of social realities in their day-to-day lives. For example, women from marginalised groups living in poverty and remote areas may be more suppressed in our society than women from marginalised groups who are financially well off but live in remote areas of Nepal. This means women's lived realities intersect with each other and may present compounded risks that can be different than women having only one characteristic that puts them at risk of marginalisation. Both the ecological theory and intersectionality allow this research to see women with different characteristics in different contexts and environments, possibly putting them in a disadvantaged position in society.

Chapter Three: Methodology

This chapter explains the methodological approach I have taken to conduct my study to understand social determinants of mental health by exploring the lived experiences of pregnant and their access to health and social care support services that can determine and promote their mental health in the sociocultural context of Nepal. At the start of the chapter, I examine the research paradigm relevant to this research and present the rationale for using mixed methods, followed by the details of the data collection site. Thereafter, I describe the qualitative and quantitative data collection strategies, including the development of a survey questionnaire and the use of virtual data collection approach during fieldwork. Next, I explain how the qualitative and quantitative data have been integrated at several levels, including data transcription and translation processes. Data analysis techniques used in synthesising qualitative and quantitative data are also discussed, as well as the use of reflexivity, where I explain my positionality from insider and outsider perspectives. At the end of the chapter, I explain in detail how I ensured the ethical principles were considered throughout this research study and how the qualitative and quantitative data are presented in the research findings chapters.

3.1 Research paradigm

The research paradigm states ''*a set of beliefs, values, and assumptions that a community of researchers have in common regarding the nature and conduct of research*'' (Johnson and Onwuegbuzie, 2004, p. 42). However, the paradigm differs in the reality of knowledge (ontology), what counts as knowledge (epistemology), and how we gain this knowledge (methodology). Based on the research questions, this study aims to understand the experiences of pregnant women that determine their mental health. At the same time, the research also aims to explore and identify variables of social determinants of mental health and explain the interrelationships between those variables or social determinants of mental health. Therefore, this research touches upon both constructivism and post-positivism views/paradigms (O'Cathain, Murphy and Nicholl, 2007). Constructivism is typically associated with qualitative approaches to present subjective understanding or meaning of context from participants' perspectives. In contrast, post-positivism is often associated with

quantitative methods where researchers claim knowledge through cause-and-effect thinking, narrowing and focusing on selected variables to interrelate and measure those variables (Creswell and Plano Clark, 2017). They argue that both constructivism and post-positivism paradigms can be presented pragmatism, which is most suited to mixed methods research.

For the last few decades, it is well known that the concept of paradigm has been highly debated for mixed methods among researchers and philosophers. Some argue quantitative and qualitative methods cannot be combined because they represent different paradigms (Sale, Lohfeld, and Brazil, 2002). There is still an ongoing debate about which paradigm a mixed-method study presents. That is one of the most debated areas in mixed-method research for some researchers who are highly engaged in qualitative versus quantitative paradigms (Johnson and Onwuegbuzie, 2004). Despite these debates and arguments, pragmatism seems very commonly used by several researchers and philosophers (Johnson and Onwuegbuzie, 2004). The general rationale given for using both qualitative and quantitative research methods in a single study is that research questions should be given primary importance when designing any research study (Creswell and Plano Clark, 2017). They justify the ontology of pragmatism by using both singular (post-positivism) and multiple realities (constructivism) in a single study. From an epistemological point of view, they argue pragmatism provides more practicality in data collection methods, focusing on what works to address the research questions and allows for a mix of qualitative and quantitative data (Creswell and Plano Clark, 2017). In the simplest sense, pragmatism is a practical approach to solving research questions, allowing the researcher to take the flexibility to design the research study based on the research questions, purposes, and available resources. Therefore, the pragmatism paradigm has a strong philosophical argument supporting this research study. From a methodological stance, pragmatism relies on both inductive and deductive approaches. According to Wheeldon (2010), mixing inductive and deductive approaches is suggested as an abductive approach, which addresses the weaknesses of both qualitative and quantitative research. In this research, the abductive approach allows me to use arguments of qualitative evidence from the qualitative interviews to develop the survey questionnaires, which is the quantitative component of this research study. Therefore, the

best option suited for this PhD research study was the exploratory sequential mixed-methods study design as discussed by Creswell (2013).

3.2 Exploratory sequential mixed methods research

This research study uses a mixed-method approach, which addresses the research limitations of both qualitative and quantitative research and brings strength to the research findings of this study through exploratory sequential design (Creswell, 2013). Most importantly, the mixed methods approach is widely accepted as an extension of research strategy rather than replacing quantitative and qualitative approaches, and the strength of this design has been acknowledged in a wide variety of disciplines (Creswell, 2013; Wasti, *et al*., 2022). According to Tashakkori and Creswell (2007), if the research idea is new to the target population with a potential to improve health services and policies, which is relevant to the context of this PhD study, then a mixed-method approach is seen as the most appropriate choice, as it provides further analysis of research findings. This research design addresses the concerns of multiple stakeholders and reaches a wider audience, such as policymakers, health practitioners, and academics, who may need multiple forms of evidence to address the issues. Therefore, the primary purpose of using mixed methods in this research is to provide a better, clear, and in-depth understanding of research questions, which can be noted as a strength of this design. However, the challenges of using the mixed-method study design could be the time and resources required for collecting data for both the qualitative and quantitative phase of the study. This was further complicated in the context of this study as most part of the data collection was completed virtually during the COVID-19. Integrating two different data set could present challenge if the data presents contradicting findings, as discussed by Creswell (2013). As I have taken the sequential exploratory approach, the risk of contradictory data is not expected because the survey is informed by the qualitative interviews for the purpose of further exploration and clarification rather than comparing two sets of data. This approach also limits the explanation of findings of both sets of data as it would be possible within the explanatory sequential design where quantitative data is collected and analysed first, then qualitative data is collected and analysed based on the quantitative results (Creswell, 2013). However, for the purpose of this research it was important explore the understanding of

social determinants of mental health and then seek possible associations and therefore sequential exploratory mixed method approach was more suited.

In the context of mental health, where we have very limited information about pregnant women in Nepal, my approach was to interview key informants in the preparation stage of my study. Knowledge gained by in-depth interviews with key informants broadened my understanding of mental health issues faced by pregnant women in Nepal. That helped me to conduct in-depth interviews with pregnant women in the first phase of the data collection. Knowledge gained during interviews with key informants and pregnant women has helped me to prepare the survey questionnaires for the second phase of data collection. Figure 1 explains these different phases of the research design used within my PhD research study.

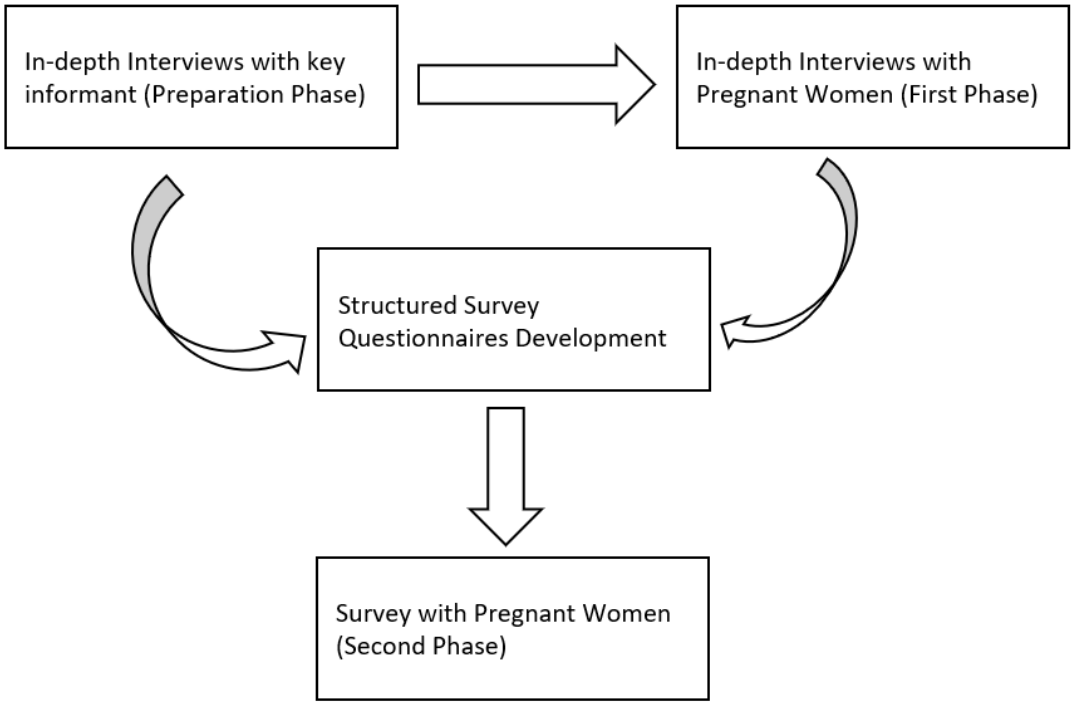


Figure 3.1: Different phases of the research design

In technical terms, this study followed an exploratory sequential design, beginning with a preliminary qualitative component that contributed to generating or developing the content for questionnaires to be used in the quantitative survey. As discussed in the literature review chapter, there is limited available research evidence that directly addresses the wider social

determinants of the mental health of pregnant women in Nepal. Therefore, it was seen as the best option to explore qualitative information in the first phase of the data collection, which led to the generation of questionnaires and variables for quantitative study in this research. Most importantly, despite the growing concerns about the mental health of pregnant women, there are no instruments that directly address the social determinants of the mental health of pregnant women in Nepal. Therefore, preparing survey questionnaires based on the available evidence from other developed countries may not be appropriate for pregnant women of Nepal, where women live in a very different socioeconomic and cultural context compared to the developed countries, and this may not have provided clear and complete answers to the research questions from this study. Hence, the exploratory sequential mixed method study design was selected in this research, allowing the adoption of information from the interviews into the survey preparation.

3.3 Data collection site

All the pregnant women, primary participants in this research, were recruited from Ilam District hospital, an Eastern region of the Koshi Province in Nepal. According to the recent census, the district has a total population of 279,534, around 70% population are aged 15-64 years, with over 83% of literacy rate (NSO, 2021). Due to limited-service availability in the neighbouring district hospitals of the province, the Ilam District Hospital also received patients from neighbouring areas. The key informants for this study were recruited from the wider region as the purpose of the key informant interviews was to gain a general understanding of the social determinants of the mental health of pregnant women in Nepal.

Figure 3.2: Study site in Nepal

3.4 Qualitative data collection and sample size

In this research, the data collection for qualitative research was conducted from pregnant women and key informants using qualitative interviews. The use of qualitative research to explore and gather participants' perceptions, opinions, and stories helped to shed light on the mental health issues of pregnant women in Nepal (Savin-Baden and Major, 2013). Furthermore, the qualitative approach provides flexibility to explore the human world and allows researcher to understand the complexity and differences in human behaviours and their experience of day-to-day life within their world in the context of pregnant women (Higgs and Cherry, 2009). That means, in this research, a qualitative approach enabled an in-depth analysis of complex behavioural and cultural experiences of pregnant women in such a manner that possibly could not be fully understood with measurement scales and multivariate models of quantitative data analysis (Plano Clark *et al*., 2008; Weber *et al*., 2019). In addition, this method allowed this research to understand the day-to-day life experience of mental health issues among pregnant women and explore their knowledge and

perceptions of influencing factors that may put them at risk of poor mental health (Savin-Baden and Major, 2013).

This research used an open-ended, in-depth interview informed by a narrative approach to collect qualitative data. The key features of this type of interview permit the interviewer to include the interview schedule (Appendix H) while maintaining the flexibility to explore the research questions fully until the reasons, feelings, opinions, and beliefs are fully understood (Holloway and Galvin, 2017; Legard, Keegan and Ward, 2003). The women were encouraged to discuss their typical daily routine in the form of a story that included what they did and how they felt since they wake up in the morning and until they got to bed. The probes during the interviews were used only when required, such as 'Would you give me an example?', 'Can you please elaborate on that?', 'Would you explain that further?', 'Would you like to add anything else?', and others. These probes played a significant role in ensuring the continuation of the conversation. As discussed in the concept of mental health (See section 1.4), it is important to recognise mental health from individuals' perceptions and experiences and understand it through their lived experiences. Therefore, a narrative approach, which is about revealing the information in the form of a life story, is suited best in this research as an approach to the interviews with pregnant women and key informants. The understanding of the narrative approach is focused with people organising their major events or life experiences in the form of stories, and telling stories is the most basic way that allows the participants to make meaning of those events/episodes (Flick, 2018). In the episodic narrative approach, as Mueller (2019) discussed, the method offers an innovative way of collecting highly focused phenomenon-driven stories while simultaneously offering research participants the opportunity to choose the context and content and enable them to provide detail of their narratives, which makes the interviews interactive and environment comfortable for research participants. Therefore, this approach allowed me to collect in-depth and rich data from the participants. One question to start the conversation was enough to sustain the conversations while using this approach. For example, asking about feelings or personal experiences during their pregnancy was focused on the pregnancy episode rather than what happened before and after. Depending on the responses, I was able to use probes to ask questions freely in any order or sequence of the interview schedule (Holloway and

Galvin, 2017). That means the research questions of this research were covered in a flexible manner, although the questions were probed and explored responsively and spontaneously by the researcher (me) in these in-depth interviews. Hence, a narrative approach within the interviews allowed this research to claim that this research presents in-depth data collection that covers the aim of this research.

All the essential written documents, such as the consent form, participant information sheets, and survey questionnaires, were prepared in both English and Nepali languages. As a bilingual, I was able to prepare these documents in English and then translate it into Nepali language. Nepali is my first language, and my second language is English. My skills in both languages helped me to translate these documents. To ensure the accuracy and quality of these consent form, participant information sheets, survey questionnaires and other relevant documents, these documents were 'back translated' into the Nepali language by another bilingual colleague who were competent in both English and Nepali languages.

An average qualitative interview lasted for about 30-45 minutes, and these interviews were audio recorded. As the data collection for this phase of the study was conducted during September – November 2020, which was at the peak of the COVID-19 pandemic, all the qualitative interviews were conducted virtually, which is explained in detail in the next section of this chapter (See section 3.7). It is important to highlight that I spent a good amount of time before and after the interviews to ensure that there was adequate rapport building before the conversations and that the research participants were fully supported with their queries after the interviews (Powell, Fisher and Wright, 2005). I spent the first ten minutes building rapport with participants before starting the formal interviews that were recorded. Once the interviews were complete and the recording stopped, I spent another ten minutes to ensure any of their queries or concerns were fully answered, and they had opportunities to ask any informal questions before the conversations were stopped. Therefore, the total length of the interviews was generally an average of one hour.

In the **preparation phase** of this research, I conducted eight interviews with the key informants (See Appendix J, Table 2), which included the husband of a pregnant woman, two

nurses who were working in the maternity department, one doctor who specialised in gynaecology and obstetrics, a Female Community Health Volunteer (FCHV), a nursing lecturer/an academic, a woman who was previously pregnant but not currently pregnant, and a female activist working for the rights and wellbeing of women in Nepal. The key informants were a diverse group of people from different backgrounds and work experiences, which was necessary to provide a wide range of views since they would have had different perspectives about the factors affecting pregnant women's mental health during pregnancy. Their experiences and opinions helped me as a researcher to facilitate in-depth interviews with pregnant women and prepare survey questionnaires for this research, which is in line with the discussion by Kaplowitz and Hoehn (2001). In addition, including key informants in this research allowed this research to see if there were any gaps and misunderstandings in the knowledge and understanding of mental health issues between pregnant women and other key stakeholders.

In the **first phase** of the data collection, 20 in-depth interviews with pregnant women with diverse sociodemographic characteristics were conducted (See Appendix J, Table 1). Pregnant women in some societies might be considered vulnerable from socioeconomic and cultural perspectives. However, many argue that pregnant women are considered vulnerable in research when there are justifiable concerns about their capacity to understand the information presented to them and make an informed decision (Schwenzer, 2008). Generally, they are in a protected group in clinical research because of the possibility of harm to unborn babies, but this research is not clinical research. This interdisciplinary research is focused on the social aspects of the mental health of pregnant women, and therefore, pregnant women were not considered a vulnerable group. However, this research excluded vulnerable pregnant women who could not consent due to known mental illness or any other concerns. This research strictly followed the inclusion and exclusion criteria of pregnant women participating in the interviews.

Inclusion criteria:

- Pregnant women at any stage of their pregnancy (regardless of the history of the number of birth and pregnancy)
- Aged 18 years and over

- Living in the region and accessing maternal healthcare services at the Ilam District Hospital
- Have the ability to give consent to participate in the study

Exclusion criteria:

- Participants who are not pregnant
- Pregnant women aged under 18 years
- Pregnant women who are not living in the local region and not accessing the maternal healthcare services at the Ilam District Hospital
- Pregnant women who are diagnosed with a mental illness or have limited ability to give consent to participate in the study

Before the data collection with the pregnant women in the first phase of this study, I completed two pilot interviews with pregnant women but did not include them in the main participant numbers for data analysis. My aim for the pilot interview, which lasted for about 30 minutes, was to receive participant feedback and comments about the interview guide and my interview techniques and use them to understand the interview procedure and improve my interview skills, such as asking ice breaker questions, using specific wording, and building rapport with participants. Following the pilot study, the participant advised me to use ice breaker questions to build rapport with research participants, such as how are you celebrating this festival? instead of directly imposing any questions related to research. Similarly, they advised me on using specific or general wording rather than technical terms for example, use months instead of trimester and so on. This understanding of the pilot study is in line with the authors such as Bryman (2016), and van Teijlingen and Hundley (2005). After conducting pilot interviews, I revised the interview schedule and added some probes. For example, What was the hardest thing to do in your day to day life? Is this your first pregnancy? Do you often meet other pregnant women? How do you feel about your day in the hospital? and others. Through the pilot interviews, it also became evident that it was not always practical to discuss or follow all the points mentioned in the interview schedule, some participants focused on what they wanted to discuss. Therefore, I adopted the inductive approach for conversational style of interviewing in the way participants felt more comfortable in sharing their experiences rather than dragging their attention repeatedly to the questions in my interview guide. Although I did not include the findings from these interviews within the main research findings, the findings from this pilot interviews were very helpful in modifying the interview

guide, polishing my interview skills and techniques and made me a confident researcher and interviewer improving the quality of subsequent interviews conducted as part of this study.

The **sample size** in qualitative research is a highly debated topic. Many argue that the size of sample should not be considered, but rich data that answers the research questions should be at the centre of focus (Holloway and Galvin, 2017). Bryman (2016) argues if data saturation is the criterion for sample size, then mentioning the minimum or maximum number for sample size is unnecessary. In this research, the sample of primary participants (pregnant women) is relatively homogenous, which indicates the possibility that the number of participants needed for an interview might be less. However, the research is broader in scope, as it explores social determinants of mental health among pregnant women at any stage of pregnancy. It also includes women from rural and urban areas, which could potentially demand a diverse and a greater number of participants to achieve data saturation. Therefore, in this research, I continued conducting interviews with pregnant women until themes started repeating from the interview transcripts as an indication that data saturation was achieved (Bryman, 2016). The last three interviews did not add any new themes or ideas, which clearly indicated the data saturation and therefore, no further interviews with pregnant women were required after the twentieth interview. Therefore, the total number of interviews with pregnant women conducted in this research was twenty.

This study uses purposive sampling to recruit pregnant women for qualitative interviews in this study. Purposive sampling focuses on recruiting participants that suit providing information for the purpose of the study (Bryman, 2016). Responding to the request from researchers to participate in the study also depends on participants' availability, willingness to participate, and time constraints in the hospital where these pregnant women come for a health check-up, which is in line with the understanding of convenience sampling (Etikan, Musa, and Alkassim, 2016). The purposive convenience sampling strategy is commonly used in qualitative research to identify and select information-rich participants, which means participants with knowledge and experience who can contribute to addressing the research questions became part of the research (Etikan, Musa, and Alkassim, 2016; Teddlie, and Yu, 2007). The overview of the literature from chapter two of this thesis suggests that pregnant

women with diverse backgrounds, such as age, the geographical location where participants live (urban or rural), and other socioeconomic characteristics, such as education and employment, should be considered in this research. Therefore, I consider the inclusive participation of the women while recruiting participants to represent the voice of a wide range of pregnant women, which helped to clarify the issues they are facing. This inclusiveness of a wide range of participants brings broader applicability regarding support and service provision for all pregnant women according to their needs (Saxena *et al*., 2007). For example, people in rural areas are least likely to access supportive health and welfare services, and poverty is common among them. That means the purposive sampling strategy allowed me to select pregnant women from a wider background that suits the purpose of this research.

3.5 Survey questionnaire development

As part of the exploratory sequential design of this study, the findings from the interviews conducted during the preparation phase with the key informants and at the first phase of the study with the pregnant women contributed to the development of the survey questionnaire to further explore and identify the determinants of mental health of pregnant women in Nepal. This survey also allowed me to analyse factors/determinants that can influence mental health, which would possibly be in line with the factors recognised in the qualitative interviews. As Creswell and Clark (2017) discussed, developing a survey based on the findings from the same population group is more relevant and suits the purpose of this research, which is to be one of the potential products of this research outcome. However, many researchers argue that the survey should be conducted using validated questionnaires, but this is not always possible since validation of the questionnaire requires significant resources in terms of time, finances, and skills. As this is a PhD study, I was constrained by time and other resources, and therefore, I have included the existing validated questionnaires together with the new questionnaires developed from my research findings from the qualitative interviews at the preparation phase and first phase of the study. That was important because I had to consider how to best produce the survey within the constraint of my PhD study's limited time and resources, as well as develop a survey that maintained the socioeconomic and cultural context of pregnant women in Nepal and, therefore, suited to the purpose of this

research. Thereby, the survey questionnaire was divided into three parts, where Part A covered the demographic information, Part B covered the maternal health information, and Part C covered the mental wellbeing information.

The demographic information in part A of the developed questionnaire was similar to the information collected during qualitative interviews as part of the demographic information of the pregnant women who were interviewed in the first phase of this study. This included demographic information of the participants, such as age of the participants, education status, marital status, geographical location of participants' residence, living arrangement (extended or nuclear family), employment status of participants and their husbands, the distance of the nearest health services from their residence, and means of transport to reach the nearest health facility. Maternal health information in part B of the survey were derived from the research findings from the qualitative interviews at the preparation phase and first phase of the study. That included maternal health-related information such as number of pregnancies, age of the first pregnancy, number of live children, experience of unsuccessful pregnancy, planned or unplanned pregnancy, stage of pregnancy (trimester), expectation of giving birth to a baby boy, number of ANC visits, awareness of Safe Motherhood Programme/maternal incentive programme (locally known as Aama Surakshya Karyakram), satisfaction with health services and health care professionals, and the experience of support during the pregnancy. Although the qualitative interviews also reflected discussions around mental health of pregnant women, the qualitative data was not used to develop questionnaire around mental wellbeing, since a validated survey questionnaire is already available to capture this information and are widely used within the Nepalese context. However, for the maternal health related information, there are no validated questionnaire available to capture the information within the Nepalese context.

For mental wellbeing information in the part C of the survey, I looked at the various existing validated surveys such as the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) in the UK, Edinburgh postnatal depression scale (EPDS), Canadian Community Health Survey (CCHS) – Mental Health, Antenatal Psychosocial Health Assessment (ALPHA) (Carroll *et al*., 2005), Kessler Psychological Distress Scale – 10 items (K10). However, these questionnaires do not

directly address and explore social determinants of the mental health of pregnant women. Some questions in the Canadian mental health and wellbeing survey are not relevant to the context of social determinants of a mental health survey of pregnant women in Nepal. For example, asking questions about height and weight is possibly not relevant to the survey I intend to develop since the survey's primary purpose is to investigate social determinants of mental health among pregnant women in Nepal and see how these determinants can influence their mental health. In this context, the EPDS survey was best suited for this research, as this survey has already been validated in the Nepalese context (Bhusal, *et al*., 2016) and has been used by several researchers in mental health research (Bhusal and Bhandari, 2018; Singh *et al*, 2021b). Despite the wide use of EPDS survey in health research in Nepal, the research conducted by Joshi, Shrestha and Shrestha (2019), Chalise *et al.* (2022), and Chaudhary *et al.* (2023) are the only studies that have used EPDS among pregnant women in Nepal. Their study was conducted in Kathmandu, Lalitpur and Dharan, the country's major cities, which have well-resourced hospitals compared to the study site of this research. My PhD study is the second study, after Chaudhary *et al.* (2023), that uses EPDS among antenatal women residing outside the capital city of Nepal and one of the first among women residing in the rural hilly part of Nepal.

The EPDS survey consists of 10 short statements, which indicate if women were at risk of poor mental health or symptoms of depression experienced within the last 7 days (Cox, Holdenand and Sagovsky, 1987). Each statement is self-reported and rated on a scale from 0 to 3, and the overall score of the 10 items in the EPDS survey can range from 0 to 30. As instructed by Cox, Holden, and Sagovsky (1987), during the analysis of the EPDS, responses were scored as 0, 1, 2, and 3 for each option within each statement. Statements 3, and 5 to 10 were coded as reverse scores (i.e., 3, 2, 1, and 0). The total score was calculated by adding together the scores for each of the 10 statements. The total possible score after addition ranged from 0 to 30. A higher score indicates a higher level of depressive symptoms. A previous study conducted among pregnant women in Nepal suggested that cut-off levels of EPDS score ≥10 can reduce errors in assessing depressive symptoms (Joshi, Shrestha and Shrestha, 2019). A cut of EPDS score ≥10 to assess the risk of depressive symptoms has used a sensitivity of 91% and specificity of 84% in a previous study in Nepal (Singh *et al*., 2021b). Therefore, the cut

point of EPDS score ≥ 10 was used to identify women at risk of depressive symptoms among the pregnant women in this research. Likewise, a systematic review has also concluded that EPDS can be a preference for screening antenatal depression in low-resource settings because of the reported level of accuracy, sensitivity, and specificity (Chorwe-Sungani and Chipps, 2017) of the EPDS. Therefore, in low-resource settings like hospitals in Nepal, using the EPDS survey among antenatal women seems more appropriate.

The process of developing the full survey questionnaires, which included Part A, B & C, also included consultation with five key stakeholders. The stakeholders included two health professionals, two pregnant women and a woman who had experienced being pregnant in the past. The suggestions and feedback from them were focused on how to ask survey questions in terms of the use of understandable language by pregnant women and ensuring the reflection of cultural competency within the survey. In the feedback, it was noted that the understanding of the stage of pregnancy was different for pregnant women and health professionals. For example, health professionals calculate weeks of gestation, which women were unfamiliar with. Most women also did not understand the trimester system commonly used in clinical discussions. In search of common words that could be easily understandable and are in line with the trimester, women and health professionals suggested using the terms 'less than 3 months' for the first trimester, 'less than 6 months' for the second trimester, and 'less than 9 months' as the third trimester, and 'more than 9 months' for post-dated (women who passed the due date). Using the word post-dated pregnancy could have been confusing to the women or has the potential to cause distress among pregnant women. Therefore, the consultation process was helpful in addressing the issues around such sensitivities and the use of terminologies in the development of the survey questionnaire for the purpose of this research.

3.6 Quantitative data collection and sample size

Quantitative data were collected in the second phase of data collection using a survey questionnaire among 128 pregnant women. The survey provided factual data that complemented qualitative data findings and played an important role in providing clarity and further explanation of the qualitative data collected in the first phase of the study (Creswell,

2013). The survey allowed for obtaining information about the depth and distribution of health issues and quantified description that suggests a precise measurement of potential risk factors for the mental health of pregnant women (Bryman, 2016; Sapsford, 1999). As surveys took a shorter time than qualitative interviews, it provided an opportunity for many participants who could not give a longer time for in-depth interviews but were willing to participate in this research. Hence, including both qualitative and quantitative data collection approaches in this research has addressed a wide range of participants, which could support the generalisability to some extent, especially within the nearby regions of the study site.

The inclusion and exclusion criteria for the survey participant was the same as for the participant in the interviews. The participants in the survey included pregnant women aged 18 years and over at any stage of their pregnancy living in the Eastern region of the Koshi Province in Nepal and accessing maternal healthcare services at the Ilam District Hospital. Any participants who were not able to give consent to participate in the study, who were not pregnant at the time of the data collection, who were pregnant women under the age of 18 years, and who were living outside the region were excluded from the study. The survey also excluded participants who participated in the qualitative interviews in the first phase of the study since the purpose of this quantitative survey was to expand the knowledge and provide further evidence (Creswell, 2013). This fitted well with the exploratory sequential mixed methods study design (See 3.2) of this research.

For sample size calculation, the power calculation was not needed in this research because this is not clinical research, and the purpose of this study is not to test any statistical hypothesis (Jones, Carley and Harrison, 2003). The sample size for this study was calculated using the single population proportion formula $N = Z^2pq/d2$, considering a 95% confidence interval (CI), 18 % proportion (p) of antepartum depressive symptoms as noted in the previous research (Joshi, Shrestha, and Shrestha, 2019), with 7% absolute precision (d), and 10% non-response rate, then the estimated sample size was 128. The rationale for using a 7% margin of error in this study is: first, it is not clinical research, and EPDS gives only prevalence on the symptom of depression, not a diagnosis. Second, this research is limited to primarily descriptive analysis and is in line with previous studies among Nepal's antenatal and post-

natal women, which used 7% absolute precision for calculating sample size (Joshi, Shrestha and Shrestha, 2019).

As this survey was conducted in one of the maternity units of a hospital, it was unlikely to estimate the daily patient flow for a month, which means the sampling frame was unknown in this case. Therefore, the required sample size was drawn based on the enumerative sampling method (i.e. participants meeting the study criteria and visiting the clinic within the allocated data collection period), and all the participants willing to participate were included in the study until the required sample size was fulfilled. Consecutive sampling, which is also known as total or complete enumerative sampling (Arnab, 2017), is used for selecting participants in a quantitative study, especially where random sampling is not possible due to various reasons. Therefore, the consecutive sampling was an appropriate fit for selecting participants for this study. This sampling technique allowed me to collect data one after the other until I reached the final sample size required for the study. A pre-requisite to conducting this research was the number of sample requirements, which was 128, and then selecting the sample based on convenience. Once the participants met the inclusion criteria, they were included as a sample to carry out the research. Using a complete enumeration method means I was observing a unit of the population and making any inferences based on the observed data, and in this context, we expect the correct value of the parameter that suggests there is no nonresponse rate. i.e., a response from each participant was obtained, and there was no error in measuring y-values (Arnab, 2017). However, in practice, I acknowledge that a nonresponse rate is unavoidable as participants in this survey may have reported untrue confidential characteristics such as age, income, geographical location, etc. Therefore, this survey may not be able to present an accurate measurement of y-values. However, as the sample size is small, I argue this survey's non-sampling error is very limited.

The survey data collection was conducted virtually between 15th February 2022 and 29th March 2022. I spent a total of about 30 minutes on average to complete each survey. The first 10 minutes with participants was used to develop rapport before starting the formal survey, 15 minutes to complete the survey, and the last 5 minutes saying thank you and addressing any questions or queries of the participants. The survey was piloted among 10%, 13

participants as the standard pilot survey number, of the total calculated number of the survey participants (128). That survey from the pilot study was not included in the final survey data. The pilot study followed the same procedure as the main survey which took about 30 minutes to complete. The pilot survey enabled me to identify the language appropriateness and arrangements of the contents in the questionnaire, such as clarity in wording, order and ways of presenting the questionnaires, and the expected time that an individual may take to complete the survey. Some changes adopted in the survey based on the pilot studies are order of the questions, such as age of marriage then age of first pregnancy. It was also suggested by the surveyed participants in the pilot survey to use both English and Nepali words in the survey, where appropriate, as many educated women who live in the town may be confused with the typical Nepali language/wording. Also, some English words, such as check-up and hospital, are more commonly used than typical Nepalese words in practice. I integrated these suggestions in the finalising process of the survey development. The process of piloting the survey also helped me to enhance the validity and reliability of the survey.

3.7 Fieldwork: virtual data collection

At the start of my PhD study, I had planned to conduct data collection by visiting the study site in Nepal and interviewing the research participants in person. However, I had to adjust the data collection plan due to the COVID-19 pandemic, as lockdown and travel restrictions were enforced, and there was great uncertainty about when and how the overall situation will normalise. The restrictions were becoming tougher with no signs of normalisation and complying with Covid-19 rules in the UK as well as in Nepal was very complex and challenging. Hence, I had to make a significant change in the data collection process to move forward with my PhD study, considering advice from my research supervisors and the Graduate School at Canterbury Christ Church University, Nepal Health Research Council, and the gatekeepers at the Ilam Hospital, the study site for this research. Given the health and safety concerns of the research participants and the researcher, we reached a consensus to collect the data virtually to ensure the health and safety of all involved in this research remain secured.

While reflecting on the challenges with data collection using virtual media platforms, I will highlight some of the issues in this paragraph. At the beginning of the pandemic, I was worried

that I would not be able to travel for data collection and my PhD progress would be affected because of the COVID-19 pandemic. Also, I had never discussed the option of virtual interviewing as a possibility for data collection with the gatekeepers and hospital. However, after the pandemic, I had no choice but to apply a revision application to the ethics committee to seek approval for virtual data collection. The wider literature also supported the use of virtual data collection, especially given the situations we were in with the COVID-19 pandemic and argued that there was no significant difference in virtual and in-person data collection (Marques *et al*., 2021; Rupert *et al*., 2017). As I had previous experience conducting qualitative interviews as part of my master's dissertation, I understood and had the practical experience of using reflexivity while conducting interviews which made me feel confident that these virtual interviews gathered no less information compared to when conducted in-person interviews (Campbell *et al.*, 2001). It took a few months to receive confirmation from the ethics committees, but finally, I got approval from both the university and NHRC to collect data virtually for the purpose of this research. Initially, it was hard to convince the hospital management and the gatekeepers about the virtual data collection process, as it was new to them. However, considering the health and safety priority for pregnant women, who were more vulnerable to Covid-19 infection, it was agreed, and the hospital management gave a go-ahead with the virtual data collection plan. After having open conversations with the gatekeepers, they agreed to distribute introductory letters and participant information sheets to the pregnant women who came to the Maternity Unit for antenatal check-ups in the Ilam hospital. The participant recruitment process for both the interviews and the survey was the same. All the interviews were conducted by the researcher (myself). For the survey, participants were offered an option of self-completion or help to complete the survey. For those who asked for help, I supported them to complete the survey using a virtual media platform.

All the Interviews and the survey with pregnant women were conducted virtually while participants were at Ilam Hospital for their health check-ups, and therefore, participants were not exposed to any extra risks. I started conducting qualitative interviews on 25/09/2020 and ended on 13/11/2020. Similarly, the survey began on 15/02/2022 and was completed on 29/03/2022. Once the participant agreed to participate, we discussed and came to a

consensus for a time and private/safe location within the hospital premises for conducting the qualitative interviews and the survey. The hospital management has allocated a private room for interviewing and survey of pregnant women for the purpose of this research. The private and confidential room provided for the interview had a chair and a table, and the door was lockable if the participant wanted to do so. Many participants who took part in this research were pregnant women who were waiting for their blood test results. I noticed they felt happy talking to me as it was better to speak to someone rather than waiting in the sitting area, which, most of the times, was overcrowded.

In developing countries, we cannot expect the cost of the internet to be paid by participants. Knowing the fact that internet access and phone bills could be expensive for research participants, I arranged to contact all the interviewees when they were on the hospital premises, where Wi-Fi was free. Moreover, I arranged a smartphone with mobile data for internet access, as Wi-Fi in Nepal could be less reliable comparatively. This was kept safely in the hospital and was used for video calling and interviewing the participants. Despite this arrangement, poor connectivity remained a concern, which meant some disruptions during interviews. This issue was experienced during some interviews, but this was managed, and no interviews were stopped in the middle. I was informed by the hospital management that many participants will lack the skills to use the technology for video conferencing or virtual interviewing. This is where, again, the gatekeeper played an important role in not only bringing the participants to the quiet space or a private room in the hospital allocated for interviewing or survey but also setting up the video call with me. The gatekeeper also supported fixing the initial technological glitches, such as any issue with the mobile phone or connectivity and ensured that the video conferencing connection was established before the gatekeeper left the room. The gatekeeper remained outside the interview room and within reach until the interview was completed. I ensured that the research participants remained alone in the room during the interviews and/or while completing the survey questionnaire. Confidentiality was maintained throughout the process, and gatekeepers were not part of the interview or present during the interviews.

Mental health is a sensitive topic to discuss, and it was possible that participants may feel upset recalling their stories and experiences. To address this concern, I approached a health professional from a nursing background to support the participants if help was needed. This nurse worked in the hospital and was available to support participants emotionally and signpost for additional support and services if the participants needed them. However, I never needed this additional support as none of the participants raised any concerns during the interviews or looked for any extra emotional support after the interviews. Although I conducted video interviews, only the audio voice was recorded to ensure any important information was not missed while preparing the transcription of the interviews. The use of video during interviews was important as it helped us in rapport building, ensuring there was enough space and indication to make participants comfortable, as well as observing participants' body language and identifying any physical or mental discomfort due to the sensitivity of the research topic. The video conferencing also made me feel that my experience as a researcher was similar to the one if I had conducted these interviews in person. The facilitation of the interviews by setting the context, having informal discussions for rapport building at the start of the interviews, and engaging with participants in an interactive conversation while covering all the research questions ensured that the interest of both the research participants and the researcher were maintained, though it was a virtual interview.

The experience of virtual data collection during the initial months of the COVID-19 pandemic was a great achievement for me, as not many researchers have fully understood or utilised it for the full project. Therefore, it was important for me to share my experience with other researchers in similar situations who could benefit from this method of data collection. I collaborated with colleagues who were conducting COVID-19 research in Nepal at the same time frame and used virtual communication tools for data collection. I led the conceptualisation of a research paper and created the first draft of the paper, where colleagues added their experience to the paper to finalise the manuscript. The need for and importance of scientific knowledge in the areas of virtual data collection was such that the paper was published on 31st December 2020, soon after the submission, in one of the reputed peer-reviewed journals of Nepal. This research paper (Sah, Singh and Sah, 2020) is currently

among one of the most cited COVID-19 papers of Nepal with over 90 citations (Google Scholar, as October 2023).

3.8 Integrating qualitative and quantitative methods

There are several stages where both qualitative and quantitative approaches can be integrated depending on the research design and purpose of the research. In this study, the levels of integration of the qualitative and quantitative approach are divided into three stages: integration at the study design level, integration at the methods level, and integration at the interpretation and reporting level (Creswell and Plano Clark, 2017; Fetters, Curry and Creswell, 2013). In the first integration stage, the integration principles at the study design level allowed me to collect and analyse the qualitative data. Then, the findings informed subsequent survey design. In the second phase, integration was at the methods level. There are several ways of integration in methods such as building and merging (Creswell and Plano Clark, 2017). In this research, integration through building took place when results from qualitative data informed the data collection approach of the survey. The survey questionnaire utilised the previously collected qualitative data that provided ideas and information. It also helped the survey to use the language used by research participants in the qualitative data collection process. In the third stage, integration at the interpretation and reporting level through narrative occurred in the general discussions of this research. As stated above, the intention of collecting two sets of data was to expand knowledge, and the expansion of knowledge took place when the findings from the two data sources were used to expand insights into the women's experience by addressing different aspects of a single phenomenon. For example, qualitative data explore the nature of information/context in this research, while quantitative data suggests the strength of associations of these contexts. It provided more clarity, detailed and in-depth understanding, examined different aspects of the overall research questions and provided more confidence to readers of the study (O'Cathain, Murphy and Nicholl, 2010).

3.9 Data transcription and translation

All the qualitative interviews were audio recorded, and the language used in the interviews was Nepali. Therefore, all the interviews were required to be transcribed and translated into English. Being bilingual in Nepali and English, I transcribed all the interviews in the Nepali language and then translated them into English to produce transcripts of the interviews. During the transcription and translation process, I anonymised the data to maintain the anonymity and confidentiality of the participants. For quality purposes and to ensure the accuracy of the translation, three translated interviews were 'back translated' into the Nepali language by a colleague who was bilingual and knew both English and Nepali languages, in line with the discussion within the literature (Younan *et al*., 2019). This colleague was familiar with the terminology used in this research and understood the Nepalese cultural context for maternal health care. Any unclear or ambiguous issues identified during this process were discussed and resolved, which was reflected while translating the remaining interviews.

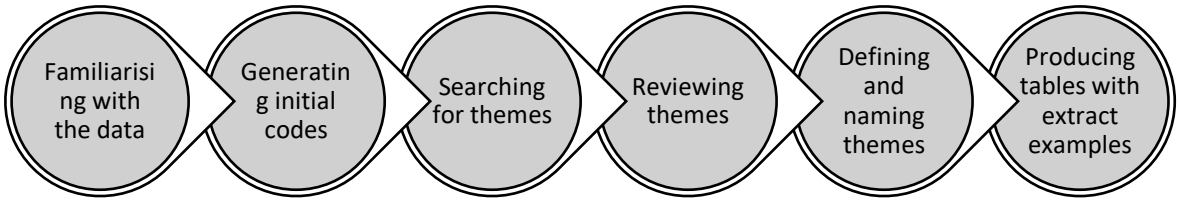
3.10 Data Analysis

In this section, I present the process of data analysis and visualisation of data to discover valuable insight that answers the research questions for this study. This section is divided into two sub-sections; the first sub-section discusses thematic analysis used to analyse qualitative data, and the second sub-section explains the use of SPSS for quantitative data analysis.

3.10.1 Thematic analysis

The qualitative data analysis within this research was conducted using thematic analysis (Braun and Clarke, 2006). I followed the six-step process of the thematic analysis (Braun and Clarke, 2006) (See Figure 3.3.), starting by familiarising myself with the data. I undertook all the transcription and translation of the in-depth interviews, and in this process, I was listening to the interviews, reading the transcripts again and again, and noting down some initial ideas, which helped me to familiarise myself with all my data. In the second step of the process, I started the initial coding of the dataset using NVivo software. NVivo 12 software helped me to organise the interview data and assist in data analysis more systematically and rigorously. In the third step of the analysis, I started searching for and identifying the potential themes,

which I then reviewed in the fourth step of the analysis process. Finally, I started naming the themes and defining them. Once I was clear with the themes, I prepared tables with key themes with the extract examples. A sample of one of these themes is presented in Appendix L.



- (Braun and Clarke, 2006)

Figure 3.3: Thematic analysis process

Attride-Stirling (2001) describes the use of the thematic network tool that assists in structuring and depicting themes from textual data. This tool organises themes from the qualitative data at three levels and illustrates the relationships between these different levels rather than prioritising one theme over the other. These three levels of themes are basic themes, organising themes, and global themes. A thematic network develops starting from the basic themes that include the lowest-order themes derived from the textual data, and a group of basic themes forms an organising theme that summarises the principal assumptions of a group of basic themes. After that, a group of organising themes forms a global theme that encapsulates the principal metaphors. This process demonstrates that thematic network tools support the inductive approach to the data analysis as basic themes were data-driven from the narrative of women's experience, and there was no pre-existing coding frame (Jebb, Parrigon and Woo, 2017). Most importantly, I also acknowledge that a thematic network tool is a convenient tool or technique to facilitate textual data in the most organised format, and it is not the analysis itself.

3.10.2 Descriptive and chi-square tests for quantitative data

The collected survey data was downloaded from the Google Form in an Excel document and transferred into the SPSS Version 27.0 for statistical analysis. Descriptive and chi-square tests were applied in this research. I also considered applying other statistical tests, such as ANOVA, regression statistical test and the t-test (Bruce, Pope and Stanistreet, 2018). ANOVA would not be appropriate and was not the best as this research did not look for differences between multiple groups over time. The regression statistical test could be a potential test to apply as the research aim, which was not to predict any future models to identify the risk of depression. I also looked at the potential application of the t-test but excluded it as this research aimed to explore social determinants rather than comparing groups of women's experiences. The chi-square test was used to see whether two variables might relate. I have applied the chi-square test to various variables to see their relations, and only a few showed significant relationships. I acknowledge that the sample size was small in this research. That means the relationships may appear significant because of the small sample size. One of the limitations noted in this analysis is that the chi-square test does not give much information about the strength of the relationship between variables.

The initial descriptive outcomes are presented in the form of mean, standard deviation, frequency, and percentage in the survey findings chapter (See Chapter Five). In addition, analytical information from Crosstabulation and Chi-squared are presented, where relevant, in the findings of the survey chapter. The statistical significance was considered at p-value <0.05 and 95% confidence intervals (Cis) in the Chi-squared test. Fisher's Exact Test was applied where the insufficient number was identified in each cell.

Descriptive statistics is commonly used to describe the basic features of the variables in the data (Fisher and Marshall, 2009). In this research, using descriptive statistics provided simple summaries of the sample and the measures, for example, the frequency of distribution of each variable. Therefore, descriptive analysis was used at the beginning of the quantitative data analysis of this research. This technique was used to construct tables, which segregated data and presented groups and subgroups with quantifiable data that showed noticeable differences across subgroups. This means the survey, which included a relatively large number

of participants compared to qualitative interviews, is summarised in a readable and meaningful way. Most importantly, this analysis presented the neutrality of the researchers and the facts without any influence of the researcher. Furthermore, this analysis provided the broader picture from the survey about the women's demographic, maternal and mental health. Also, it helped me to identify variables and develop new ideas that were further analysed using qualitative data. Finally, this process allowed me to understand and present the findings with great confidence. Therefore, it should appeal to a wide range of readers and those involved in qualitative versus quantitative debates.

3.11 Reflexivity: insider and outsider perspectives

Reflexivity is an integral and integrated part of the research process while collecting data, writing up and disseminating the research findings. Reflexivity on insider and outsider perspectives is key in this research as I share some similarities and differences with the participants of this research. This also becomes important since, as a researcher, my positionality will have an impact on how I construct the meanings of the lived experiences of the research participants (Savin-Baden and Major, 2013). Generally, researchers consider taking a stance as both outsider and insider and hold either or both positionalities during the research study process (Ryan, 2015). Holloway and Galvin (2017, p. 8) state, ''*the insider perspective is one when the researcher is part of the specific subculture that he or she is studying*''. In this sense, I, as a researcher, present an insider perspective to some extent as I belong to the Nepalese community and share similar cultural values and perspectives. Reflexivity, in this context, was important, as I was able to delve into the details to gain in-depth information while remaining culturally sensitive to many of the pregnancy-related discussions or information in the sociocultural context of Nepal. In addition, my experience as a woman who had experienced pregnancy twice and one just a year before the data collection started has helped me to explore greater insights from the experience of pregnant women in this research. However, I acknowledge that I might have preconceptions about some aspects of my own experience that could have affected the meaning of others in this research, which may prevent the generation of new knowledge in the field. To mitigate this, I used reflexivity to understand and respond to what they were saying within the context they were in. Therefore, generating conversations but distancing myself from the participants'

perspectives was important for this research, at the same time, putting my effort into presenting participants' voices and their meaning from their perspectives regardless of my perception of the mental health of pregnant women was the priority.

Even as an insider, I take my stance as an outsider to some extent. Because I believe I differ from participants of this research in many aspects, such as age, ethnicity, education, empowerment, and health service access. For example, most pregnant women in Nepal are in their twenties, while my first pregnancy was in my thirties. I have lived in the UK for more than 10 years, and health and social care services are unanimously different compared to those available in Nepal. I belong to a minority ethnic group in Nepal, but my socioeconomic background and education could be comparatively higher than most participants in this research. Hence, I consider myself from both sides, an insider and an outsider in this research. Furthermore, it is also important to note that most of the women expressed their concerns regarding social support, health services, and lived experiences within the sociocultural context of Nepal. This is possible because they see this research has the potential to address their concerns and the opportunity to raise their voice, which can reach a wider audience, including service providers and the Government of Nepal. In addition to that, it is well understood that pregnancy is a sensitive phase of women's lives, and any small adverse experience can be perceived as a big issue for them. As a researcher, my role is to present their voice as they are experiencing during their pregnancy, which may not be the same experience after pregnancy. I reflect on my own experience of pregnancy when I had several complaints about the service I was receiving from the NHS Trust in the UK. However, now I can see several positive aspects of the NHS and praise these services for working hard in the difficult time of COVID-19 despite funding constraints and staff shortages. In the same way, although the experience of pregnant women in this research may be challenging during pregnancy, I believe it may change after pregnancy and the experience of these services while accessing health services outside pregnancy may be different.

3.12 Ethical Considerations

This PhD research study received ethical approval from the Faculty of Medicine, Health and Social Care (previously, Faculty of Health and Wellbeing) at the Canterbury Christ Church

University (Appendix E) and Nepal Health Research Council (Appendix F). The study also received permission from Ilam District Hospital (Appendix G), the study site, for field access to recruit participants for interviews and the survey. Ethical consideration has been one of the most important parts of this research, and it provided guidelines to abide by the ethical principles to conduct this research study ethically. As a researcher, it was my responsibility to ensure that the ethical principles are followed through every step of this research process. This research adhered to four basic principles of ethics throughout the research. These are respecting autonomy, beneficence, non-maleficence, and justice (Jahn, 2011). This research focuses on social aspects of mental health, which limits the likelihood of disclosure of severe mental health risks or illnesses of participants during data collection. However, all the participants were given contact details of health services and health professionals, and they were advised to use the services if they felt the need after the interview or anytime in the future. The topic of vulnerable participants is highly debated among researchers and academics (Hurst, 2008; Racine and Bracken-Roche, 2019). This PhD study is not clinical research. Therefore, pregnant women were not seen as a vulnerable group. This research excluded vulnerable pregnant women with limited ability to give consent, such as women with mental health illnesses. All participants were treated equally in this research regardless of their socioeconomic, cultural, and professional backgrounds. I respected the participants' decisions without controlling or influencing them to participate in this research. I provided the detailed information verbally and a copy of an introductory letter (Appendix A), a participant information sheet for pregnant women (Appendix B) and key informants (Appendix C), and a consent form (Appendix D). The confidentiality and anonymity of participants were maintained throughout this research. Pseudonyms in terms of participant numbers were used throughout this research. It followed a general rule that individual participants should be able to recognise themselves, but a reader should not be able to recognise participants, for example, using numbers I,2,3 in an ordinal manner instead of names. During data transcription and translation, all the data were anonymised in order to maintain their anonymity and confidentiality.

An audio recorder was used in all the interviews in agreement with the participants. The audio recording was transferred to a securely password-protected laptop as soon as possible and

soon after the completion of the interview. Electronic data was backed up regularly, and duplicate copies were kept in a secure password-protected USB. The data folder on the laptop and USB was also password protected, which gave double password protection to the data as part of the risk management practice. Completed digital consent forms will be kept as long as the research data are retained. The data will be retained in accordance with the data retention policy of the Canterbury Christ Church University.

3.13 Data presentation

The following two chapters of this thesis present the findings from the qualitative data (Chapter 4) and the quantitative data (Chapter 5). Only the relevant tables are presented in these chapters, and all the other tables are presented as appendices. In chapter four, the opinions and experiences collected from the pregnant women (primary participants) and the understanding of key informants (secondary participants) are integrated to present their quotes under the relevant themes. Following each quote, a quote identifier is presented in the brackets, which shows the participant number instead of the real name, such as P1 for Participant 1. The theme identifier in brackets also includes whether the participants were residing in rural or urban areas, as it was noted during the interviews and data analysis that the geographical location plays an important role in providing the context of what they were saying. For example, if Participant 1 is from a rural area, after her quote, I have used P1, Rural. The pauses and irrelevant context are removed from the presented quotes to focus on the themes. These removed parts of the quotes are replaced with brackets and dots that look like [……]. The purpose of doing this is to provide coherence and clarity for the readers.

Following the sequential exploratory mixed methods approach, the qualitative data was collected and analysed in the first phase, and more weight is given to the qualitative part of this research from the methodological point of view. The presentation of this research findings is in the same sequence, while quantitative data (collected in the second phase) is supported by qualitative findings (collected in the first phase). Therefore, the findings of the quantitative data chapter (Chapter Five) are seen as integrated with the findings of the qualitative data. The discussions in chapter six include the knowledge driven from both the

qualitative and quantitative data and argue the importance and application of intersectionality in the context of ecological theory.

3.14 Conclusion

This chapter discussed the significance of sequential exploratory mixed methods in this PhD research. I argued the rationale of doing interviews with key informants and pregnant women and then collecting the survey sequentially as it is exploratory research based on the research questions. I also argued that this is the appropriate method as we have limited research about the topic in the context of pregnant women in Nepal. I provided clarity in the participant's recruitment process, highlighting inclusion and exclusion criteria and sampling strategy. I provided evidence of ethical approval in this research and presented the strategy to address the ethical challenges of conducting this research. Then, I discussed data analysis techniques in detail with their importance in this research, which is a thematic analysis and descriptive statistics. I presented the ethical aspects of this research and justified that this research followed the ethics in all stages of this research. I reflected on the data collection process and its strengths and weaknesses. At the end of this chapter, I also indicated how the findings will be presented in the following chapters. The next chapter presents findings from interviews.

Chapter Four: Findings from qualitative data

In this chapter, I present findings from in-depth interviews with key informants and pregnant women aged 18 and over living in the local region accessing healthcare services at the Ilam District Hospital in Nepal. Key informant interviews were conducted in the preparatory phase of the study to understand the general context and generate initial information about the maternal mental health situation among pregnant women in Nepal. The eight key informants included the husband of a pregnant woman, two nurses who were working in the maternity department, one doctor who specialised in gynaecology and obstetrics, a Female Community Health Volunteer (FCHV), a nursing lecturer/academic, a woman who was previously pregnant but not currently pregnant, and a female activist working for the rights and wellbeing of women in Nepal. Key informants' findings supported in preparation for in-depth interviews with pregnant women, which aimed at understanding and exploring the experiences of pregnant women's daily life that could determine their mental health and support and their decision-making towards accessing available health and social care support and services. The demographic characteristics of the pregnant women interviewed for the purpose of this study are presented in Table 4.1. The detailed demographic characteristics of all participants (8 key informants and 20 pregnant women) interviewed for qualitative data collection are presented in Appendix J.

The thematic analysis of the qualitative data was conducted using a thematic network tool (Attride-Stirling, 2001; Braun and Clarke, 2006). An inductive approach to thematic analysis was used to come up with basic, organised and global themes (an example is presented in Appendix L). Despite using an inductive approach, the global themes corresponded with the three main research questions posed in this thesis, which is backed by multiple sub-themes. From the qualitative data, I have identified three global themes: i) P*oor mental health experiences due to inadequate social support*; ii) *Mental distress due to poor availability and accessibility of maternal health services*; and iii) *Impact of socioeconomic and cultural context on pregnant women's mental health*. These global themes and organising themes are presented in figure 4.1.

Table 4.1: Demographic Characteristics of Pregnant Women (In-depth Interviews)

Participants	Age at the time of interviewing	Age at marriage	First pregnancy Yes/no	Age of first pregnancy	Number of pregnancies	Stage of current pregnancy/ Trimester	Planned pregnancy Yes/no	Education *	Employment	Husband Employment	Living arrangement (extended/ nuclear family)**	Place of residence	Distance to the district-level heath facility
P1	24	21	Yes	24	1	2nd	No	Undergraduate	No	Business but currently impacted by covid-19	Extended	Rural	More than 1 hour
P2	18	14	No	14	2	3rd	Yes	Literate	No	Labour job daily basis	Extended	Rural	Less than 30 minutes
P3	21	19	Yes	21	1	Post-dated	Yes	Intermediate	No	Bus driver	Extended	Rural	More than 1 hour
P4	20	18	Yes	20	1	3rd	Yes	Primary	No	Self-employed – contract job	Extended	Rural	More than 1 hour
P5	30	17	No	18	2	3rd	Yes	Lower Secondary	No	Farmer	Extended	Rural	More than 1 hour
P6	30	25	Yes	30	1	3rd	Yes	Graduate	No/Past teacher	office worker	Extended	Urban	Less than 30 minutes
P7	24	16	No	17	2	3rd	No	Lower Secondary	No	Work in labour market abroad	Nuclear	Rural	More than 1 hour
P8	20	19	Yes	20	1	3rd	No	Intermediate	No	Works in bank	Extended	Urban	Less than 30 minutes
P9	45	21	No	27	6	3rd	No	Literate	No	Works abroad in the labour market	Nuclear	Rural	More than 1 hour
P10	33	32	Yes	33	1	3rd	Yes	Upper Secondary	No	Farmer	Extended	Rural	More than 1 hour
P11	40	21	No	23	3	3rd	No	Literate	No	Farmer, live stocks	Nuclear	Rural	More than 1 hour

P12	28	22	No	23	2	3rd	No	Graduate	No	Farmer, live stocks	Extended	Rural	More than 1 hour
P13	28	21	No	24	2	3rd	Yes	Graduate	Self-employed - small grocery shop	Vehicle business	Nuclear	Urban	Less than 30 minutes
P14	28	27	Yes	28	1	3rd	Yes	Postgraduate	office worker	Office worker	Nuclear	Urban	Less than 30 minutes
P15	38	37	Yes	38	1	3rd	Yes	Literate	No	Carpenter	Extended	Rural	30 minutes to 1 hr
P16	24	16	Yes	24	1	3rd	Yes	SLC	No	Tea farmer	Nuclear	Rural	More than 1 hour
P17	27	20	No	20	2	1st	No	Upper Secondary	Self-employed	Farmer	Nuclear	Rural	30 minutes to 1 hr
P18	25	18	No	19	2	2nd	Yes	Literate	No	Bus driver	Extended	Urban	Less than 30 minutes
P19	42	27	No	28	4	2nd	No	Intermediate	No	Farmer	Nuclear	Rural	More than 1 hour
P20	31	13	No	16	4	2nd	No	Literate	No	Carpenter	Nuclear	Urban	Less than 30 minutes

* Educational Terminology used in the table above is in line with the Census 2021 Nepal
https://censusnepal.cbs.gov.np/results/files/result-folder/National%20Report_English.pdf
For example, Literate: can read and write but never been to school; Primary: 1-5 years in school; Lower secondary: 6-8 years in school; Upper secondary: 9-10 years in school; SLC: completing 10 years in school, Intermediate and equivalent (2-3 years in study after SLC), Graduate, postgraduate and others.
**Nuclear family: Couple living with children under the same roof; Extended family: Couple living with children and grandparents under the same roof.

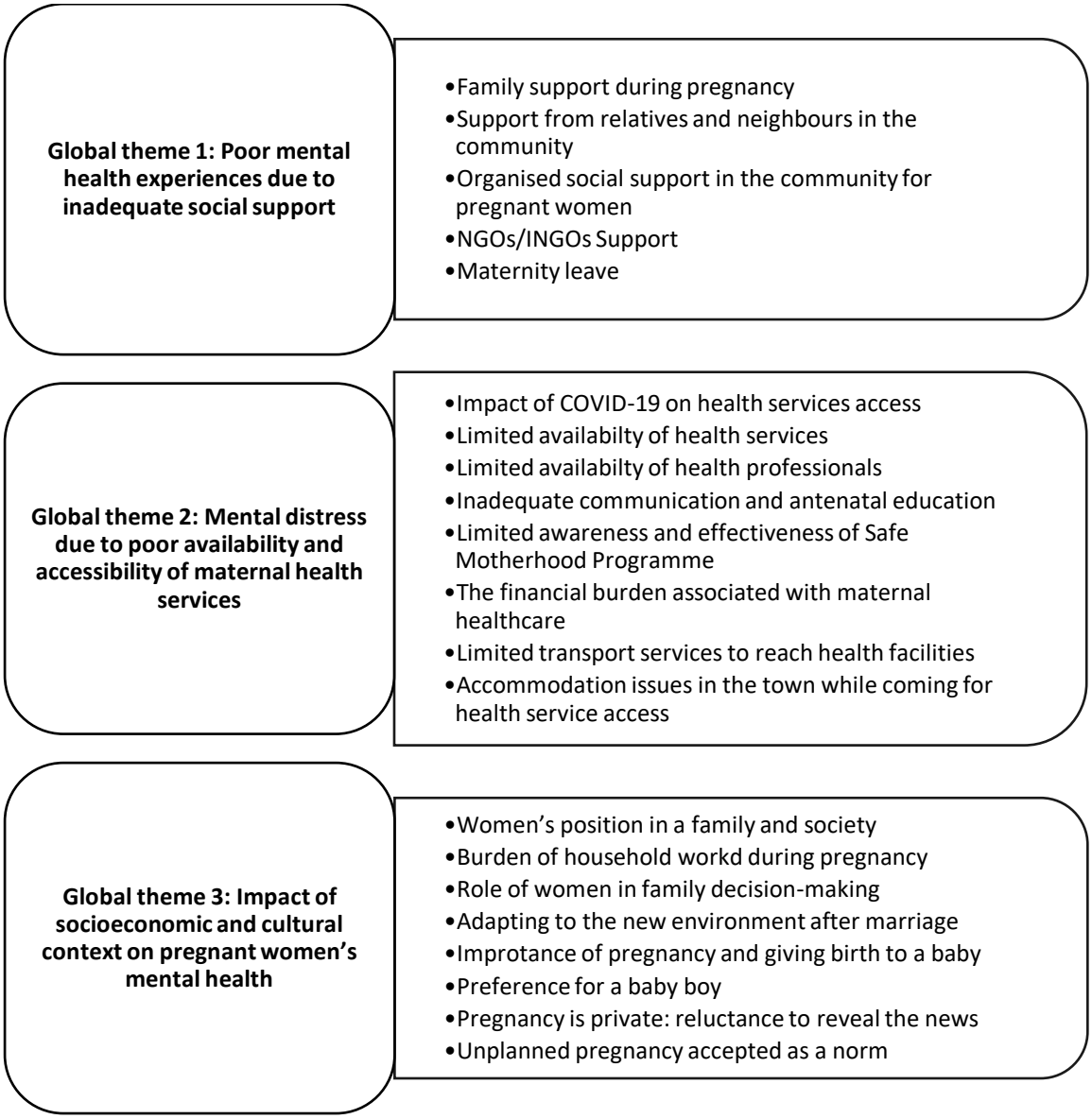


Figure 4.1: Global themes and organising themes

This chapter is structured to provide detailed findings from the interviews within the three global themes, which also addresses the three research questions of this study: i) *How do lived experiences of perceived support of pregnant women in Nepal affect their mental health?*; ii) *How do the availability and accessibility of maternal health services in Nepal impact on mental health of pregnant women?*; and iii) *How do lived experiences of socioeconomic and cultural factors affect the mental health of pregnant women in Nepal?*

4.1 Global theme One: Poor mental health experiences due to inadequate social support

The first global theme in this section addresses the first research question: *How do lived experiences of perceived support of pregnant women in Nepal affect their mental health?* Understanding social support remains subjective and dependent on the experience of an individual. However, in general agreement, social support is any form of social interaction that supports the wellbeing of the recipient of support (Hupcey, 1998; Finfgeld-Connett, 2005). Social support can be received from different sources such as husband/partner, family/relatives, neighbours, and community, as well as from the welfare system of the nation (Cohen, 2004). From the ecological theory perspective, family, husband, and relatives are some of the key elements of the microsystem. Similarly, neighbourhood, organised support, NGO/INGO support and welfare services such as maternity leave allowance are the aspects of the exosystem and macrosystem of ecological theory. Previous research has shown that positive social support can improve wellbeing of the recipient (Leon-Gonzalez, *et al*., 2021).

From the analysis, using the thematic network tool, this section presents various forms of support within five sub-sections that are the organising themes (See Figure 4.2). Following the principles of ecological theory, this section presents the findings that explore the different levels of support utilised by pregnant women and the challenges faced by them. This starts by looking into immediate family support and then support from relatives, neighbours and organised support within the community, alongside the maternity leave policy in Nepal that determines the extent to which the support system is available for pregnant women in Nepal. The findings also show the intersection of family and social circumstances, where some women feel further disadvantaged in accessing the support available to them, affecting their mental health and wellbeing.

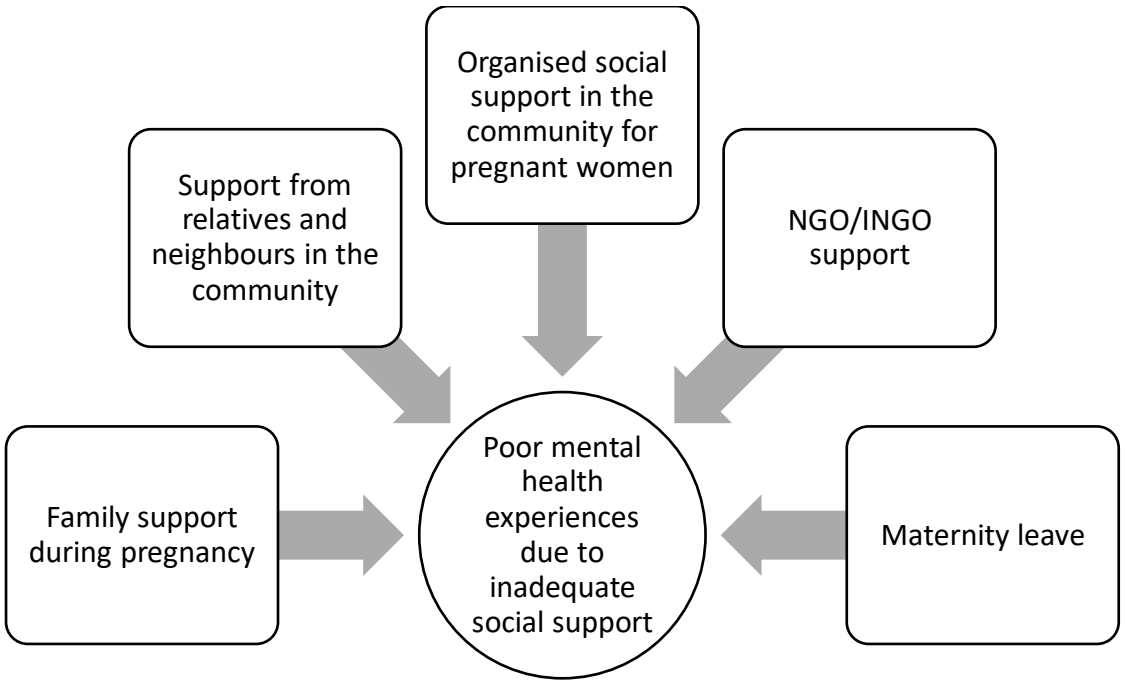


Figure 4.2: Five organising themes within the global theme one

4.1.1 Family support during pregnancy

Family support in this research refers to the support received from the husband/partner and immediate relatives of the pregnant woman, which is in line with the structural dimension of support and forms the key elements of the microsystem of the ecological theory. All research participants (pregnant women and key informants) interviewed in this research highlighted the importance of receiving support from their husbands. When pregnant women were asked about their perception of the support received from their husbands, they said it was okay, but most women were not willing to elaborate on this to explain it in further detail during the qualitative interviews, despite using various prompts. For example, pregnant women were mostly confused and took a long time to remember any recent examples of the support they received from their husbands or family members. Their responses were mostly protective towards their families and would say, 'I think men do not know what to do and how……'. However, they openly discussed the social and cultural norms of the society in which they lived. It was also noted that women did not want to reference themselves when talking about negative statements or experiences, instead, they preferred to present it as someone else experience from the community. On most occasions during the interviews, I clarified that I had asked about their experiences and not the experience of other women. However, making

reference to other persons during the interviews did not change. This indicates that women may be hesitant to express negative experiences about their families and therefore use the reference of other people, which is in line with the understanding and role of women in the family in the South Asian context (D'Lima, Solotaroff and Pande, 2020). In a patriarchal society, the position and roles of women to honour family reputation are deeply rooted in the sociocultural context of families in South Asia. On the contrary, they were happy to share their positive experiences directly with reference to themselves. During the interviews, it was also noted that the perceived support level of the pregnant women was also dependent on their socio-economic situation. For example, Participants 6 and 18, who lived in town and were from higher socioeconomic backgrounds, shared their positive experiences of being supported both physically and psychologically by their husbands and family members which aligns with the functional dimension of the support. The pregnant women highlighted,

> *My husband works in the office, I stay home, and my in-laws are old, so they stay at home. They tell me not to do any heavy work. They do help me as much as they can. Today I am here for health check-ups accompanied by my mother-in-law. (P6, Urban)*

> *I do feel having my husband with me is better. I share my concerns and happiness, emotions, and wishes with him. Women who do not have husbands with them must be experiencing distressful times. Women cannot share all their emotions with other people or with in-laws. (P18, Urban)*

The quotes above were from women who lived in urban areas and thought they were well supported by their families during the pregnancy. However, they did not provide any examples of the situations in which and how they were supported. On the contrary, women who lived in rural areas had very different views. For example, Participant 15, who lived in an extended family, said

> *My husband goes out of the house for daily work. I feel and wish my family could support, care and love me more. My in-laws are okay. They are old people, they think differently. We live in a village, they have lived their whole life in this village. They do not know how things are these days. For example, health check-ups and taking rest during pregnancy. [……..]. I feel my husband's love and care for me is okay, not too much, nor neglected. I wish I could get more support and care from my husband. I think men do not know what to do and how to look after pregnant women. Men are also busy at work, so they cannot care enough or give enough time to their pregnant wives. My husband never comes to this hospital. He says you go.*

Maybe he is not interested in coming to the hospital during the pregnancy health check-ups. This is a women's thing for him. (P15, Rural)

The participant above reflects the deeply rooted patriarchal norms where pregnancy and maternity care are seen as 'women's thing', and the husband has no role in contributing towards the care of pregnant women. This may put many women at risk of physical and psychological vulnerability, especially towards women's need for emotional support during pregnancy and in accessing maternal health services in the country's rural areas. In one of the key informant interviews, a pregnant woman's husband, who had his own business and was working as a professional, expressed

My mummy supports her (his wife) in the family, but the difference is in understanding and the generation gap. My mother says, in her time, the practice during pregnancy was like this and that, which does not fit now. (KII 7, Husband of a currently pregnant woman)

The role of elder women in the family in supporting pregnant women was a general consensus that was agreed by all involved in the care of pregnant women, including the pregnant women. However, most of the participants and key informants highlighted the challenges with a generation gap between the pregnant women and the senior members of the family, as well as the changing practices in the current times towards providing maternal health care to pregnant women. In some cases, maternal health care from the senior members of the family was a default position because of the absence of the husband, who would have gone to earn for a livelihood for the family. Participant 7 stated her husband had to go abroad for work, and he returned only after a few years when he got time off from his work.

He (husband) went to Qatar for labour work after marriage. He went to work for the first time during my first pregnancy. I was 4 months pregnant at that time. He came back after 3.5 years. Then he stayed at home for about 1 year. Then again, he went to Qatar for 2 years. […….]. This time he came for a holiday for 2 months, and he was scheduled to go back. But due to the coronavirus, the lockdown started. I wish my husband is staying at home with me, but he does not have any work here (locally). What to do? We do not have any income sources. Otherwise, he would not go away for work during my pregnancy (P7, Rural)

Every woman wishes their husband to be with them during pregnancy, even if that means only physical presence, but that is not always possible. Migration is seen as a global phenomenon, and a significant number of Nepalese men travel abroad for employment.

Researchers argue negative mental health impact among the migrant population due to multifactor issues experienced by the migrant community, but it hardly recognises the negative mental health impact on their left behind family members in their home country (Hatzidimitriadou, 2021; Paudyal *et al*., 2020). According to the Nepal Labour Migration Report 2020 (GNMLESS, 2020), many men have migrated to Gulf countries for work, in order to support the livelihood of their family members in Nepal. Previous research in Nepal has found that female spouses of migrant workers have experienced poor mental health due to spousal separation, which presents a risk of lack of companionship as well as increased household responsibilities for the women left behind (Aryal *et al*., 2020). An experienced nurse, who was one of the key informants in the study, also supported the experience of pregnant women and explained that pregnant women feel unfortunate as they are not only sad because their husbands are not physically present but also do not have opportunities to receive emotional support from their husbands during the pregnancy.

> *I notice pregnant women are happier if their husbands are with them. Pregnant women feel sad and say their husbands went abroad for work. A very limited people express their happiness to support those women. Many people/family/relatives are supporting these pregnant women for courtesy. Relatives think they just have to support the pregnant women, as a courtesy, and they do so just for a shake-off, such as bringing the pregnant woman for health check-ups. (KII2, Nurse 2)*

In another key informant interview with an Obstetrics and Gynaecology doctor, the doctor also highlighted that women during pregnancy were more vulnerable and in stressful situations without their husbands. According to the doctor

> *Most people, especially lower and lower-middle-class men, after marriage, the man goes back to these foreign countries for work. Men return home after 2-3 years of marriage, just for 2-3 months as a holiday. Their wives have a big pressure that they must conceive a baby by that time. Then their husband returns to work in those countries. Here, women are looked after by the husband's family, especially in-laws. I think that is why women do not have the opportunity to share their excitement of being pregnant with their husbands and do not seem happy. These women think being pregnant is a job they should do. It looks like women are the machine to give birth to a baby. These women must have stressed that their husband is not with them, but they think it is normal as they see many women who do not have their husband with them during their pregnancy. (KII3, an Obs/Gynae Doctor)*

Female vulnerability due to the absence of the husband, in some cases, resulted in women being raped by another villager. Participant 9, whose husband is working abroad, shared her experiences as a rape victim who has now become pregnant.

> *I do not have anyone who can help me in this difficult time. I hope these nurses and this hospital will help me. I do not have any support in the society as well. I am worried. Because I do not know where to go, what to eat, how to survive, and how to raise this baby once born. My health is not good. My husband says the man who did the rape is responsible for my future. He (husband) says he is not responsible for looking after me and neither allows me to stay home. I have an illness as well. I don't know what to do. I am worried so much. I don't know where to go, and my family/relatives do not want to see me. I have nowhere to go. Family/relatives and society do not believe that this is a rape case. They think I am lying. They all think I am a bad woman. They think I am characterless. They talk about doing physical violence to me in the village. I do not have anyone who supports me. (P9, Rural)*

In the absence of the husband, women are often at risk of being isolated within the family and from society. In case of incidence like rape, social attitudes towards such women are also against them. Participant 9, although she is a victim of rape, she is seen as a woman at fault. As a result, she is being disowned by her own husband and disregarded by her family members. Moreover, the patriarchal society in which she lives is posing a threat to her presence or existence within the community, and she is at risk of experiencing physical violence, although she is going through pregnancy. Her circumstances explain the intersection of the absence of family support, financial circumstances and limited women empowerment, the negative attitude of the society towards women, and the lack of the social security system in the country that has put her in a further vulnerable position and at risk of poor mental health and wellbeing.

The position and experience of women in the absence of husbands expressed above are also supported by the women activist, another key informant in this research. She shared her understanding of women's position within Nepalese society as

> *Women are very emotional during pregnancy, and it is hard for them if their husbands are not with them. They may not be looked after well by their in-laws if the women do not have a good relationship with them. In society, these women, if they walk outside or even see or talk to other men, then society blames the women*

for being characterless. That is a way of marginalising them (women). (KII 6, Women Activist)

From the experience of women in this research, pregnant women are further marginalised in society despite their husbands staying away to earn money to provide livelihood for their extended family members. None of the women supported that pregnant women have any better experience due to the money earned by their husbands. The absence of a husband so that they could provide a better livelihood for families do not always bring positive experience for women, but it can exacerbate vulnerability and risks contributing towards women's mental health, and more so for pregnant women, because of the patriarchal society in which they live where women are dependent on men for all aspects of their life. Participant 13 lives with her husband and feels more confident in receiving physical and psychological support when required compared to other women whose husbands are working abroad. She echoed other women's positions in this research and asserted that women are more vulnerable if their husbands are working abroad. She states

Many women, my neighbours and relatives, do not have their husbands at home. Their husbands are working abroad or out of the village […….]. Many families neglect women because they are daughters-in-law. In our society, the daughter-in-law's position is the lowest while experiencing power within the family. Many women cannot even ask for help when they have leg swelling during pregnancy. They are hesitant to ask for help or to go for a health check-up. Women whose husbands are not with them are experiencing more problems. For example, if my husband is busy with his work, I still feel confident that if something goes wrong, my husband is with me and can come to me anytime I need. I feel so confident. I feel sad for those women who are alone without their husbands with them. (P13, Urban)

The majority of pregnant women in this research highlighted the importance of the physical presence of their husbands, as it provided psychological support and confidence for the pregnant women when they go through mental distress during pregnancy. The presence of the husband also meant that the immediate family members are likely to be more supportive during pregnancy compared to when the husband is working abroad.

4.1.2 Support from relatives and neighbours in the community

Besides the husband and immediate family members, pregnant women discussed the role of relatives and neighbours in providing support to them during their pregnancy. Pregnant

women often seek help from relatives when they are travelling or staying in the town for a health check-up and if their husbands or family members cannot be there with them. For example, Participant 12 lives in a rural area, and she has to travel to the nearby town for maternal health check-ups, where she stays at her relatives' home. She is not accompanied by her family members, except a 5-year-old son. She said

> *I am staying at my relative's place in this town. I came here 3 days ago and still waiting for my delivery. I don't know how long I have to wait for delivery.[…….]. As my relatives are here in this town, it is easier for me to come here for better health services rather than going anywhere else where I do not know anybody. (P12, Rural)*

Women who live in rural areas are likely to take help from relatives when they need to commute to travel to health centres or bigger hospitals in the town, where they are often required to stay if they cannot return home on the same day. In addition, pregnant women often ask help from their relatives to take them to their local health providers rather than going alone or if no immediate family members are available. Participant 5 discusses the support she receives from her in-laws.

> *Regarding relatives' help, if my family can't come with me for health check-ups at the health post in my village, then we have relatives who help me. My sister-in-law takes me to the health post in the village. Other than that, I have not received any help from anybody. (P5, Rural)*

In the absence of family and relatives, pregnant women often turn to neighbours for support during pregnancy. As there is limited or no organisational support available for pregnant women, in many cases, this could also be in the form of direct or indirect financial support. The narrative of Participant 7, who lives in a rural area and her husband works abroad in the labour market, reflects how she perceives and expects support from her neighbours and relatives' support.

> *I do not know any organisation that can help me or my village community organisation that can help me in need. I feel neighbours can help me, especially my relatives who will help me. In case of an emergency and we have to go to another hospital from this hospital, then we might need financial help from relatives and neighbours. I am managing myself so far. I wish people would show interest and advise me on how to do better during my pregnancy. I also wish for help to look after my baby and me after delivery in the community. At that time, I will be physically inactive for a few days. Relatives and family members from my parental*

side will come and stay with me for a few days and help me to go through the first few days after delivery. (P7, Rural)

On the contrary, pregnant women in urban areas who were in better socioeconomic situations compared to women in rural areas were more likely to get social support during the pregnancy as it did not include financial expectations. For example, Participant 6 lives in an urban area. She worked as a teacher in the past, and her husband is an office worker. She expressed her positive experience in the community as:

In the community, people ask me when my due date is. They advise me on what to do and what to expect. They ask me how everything is going. Our neighbours are good. They ask me often about how I am feeling. They advise me to eat healthy food, take rest, etc. Socially, I feel good. So far, I have not taken any help from people in the community. I am managing well. (P6, Urban)

Similarly, Participant 13, who lives in the town and runs a grocery shop as a business, is more socially connected and seems to enjoy her social life. Similar to the previous participant, she expressed her positive experiences from the community as:

In society, I have good relationships. Older women or previous pregnant women say good things to me. They say to eat healthily, take a rest, and go for a health check-up. I feel supported by them. I meet with other pregnant women too. We have relatives and neighbours who are pregnant. We ask each other how everything is. In the society, I also notice independent women are more supported in the family and society. I think the reason is women can explain and convince families what they wish to do. (P13, Urban)

A key informant who worked as a lecturer in nursing explained the situation as the differences in social support received by pregnant women are dependent on their socioeconomic status in the community. The quote below from an Academic reflects the realities of women's position in society and the support they receive.

In terms of support for pregnant women in society, it depends on women's status. If they are less privileged in terms of their employability, education, and other opportunities, then they are less supported in the family and society. Women who are in a better position get more help from everywhere. (KII 4, A Nursing Lecturer)

There are different views on the experiences of women who are from lower socioeconomic backgrounds and those who live in rural areas. Participant 15 shares her lack of experience of getting any support from the local community but expects it would be beneficial to get social

support when required during her pregnancy. When I asked her about her social life, she started answering with her day-to-day problems and repeated it many times during the interview, which was a clear distinction from the experiences of pregnant women with better socioeconomic conditions in urban areas.

> *Physically it is difficult to be pregnant. I feel weak. Financially we are a poor family. It is also a problem. In terms of support from others, I do not see any support from anybody. I do not talk about my pregnancy with anybody. In the community, people are busy working for their chores. I feel uncomfortable talking to them about my pregnancy. Society is ok for me. I do not feel anything special. In terms of support, I do not have any experience. I have not experienced any emotional or physical support from the people in the community. People say take rest, how is it possible to take rest without working, who will do all the household work and look after cattle? I do not feel or expect any support in the village, but I wish people will help me if I need anything. (P15, Rural)*

Another woman in the interview feels socially isolated because people in the community think she is pregnant at an older age to give birth to a baby boy, as she had only female children before this pregnancy. She expressed her experiences as:

> *In the village area, people are talking behind my back. They think I am pregnant because I want to give birth to a baby boy. That is not true. I wish to have a girl again. Villagers say I am pregnant at this old age because I want a baby boy. People laugh at me. I do not feel very much welcome environment in the community and by my neighbours. But few women have supported me. It hurts me when people say I am pregnant at this old age just to give birth to a baby boy because I do not have any boys. (P19, Rural)*

Support from relatives and neighbours was seen as an important form of support during pregnancy. However, the extent to which this support was received by pregnant women was dependent on various other factors, such as whether they were living in rural or urban areas, the expectations they had, their socioeconomic status, and the age of the pregnant women. Beyond the help from family, relatives, and neighbours, I also explored if women have experience of any organised social support through social activities and interaction with others in the community during their pregnancy, which is presented in the next section.

4.1.3 Organised social support in the community for pregnant women

Besides the support from husbands, families, relatives and neighbours, I was keen to explore if there were any organised social support or activities available for pregnant women within

the community since not every pregnant woman had a positive experience with the informal support they received, as discussed in the previous sections. Notably, none of the pregnant women from urban or rural areas were aware of any organised activities for pregnant women where they could meet and share their experiences during pregnancy. Participant 18, who lived in an extended family, stated

> *I have not met any other pregnant women in the community. We do not have any groups or organisations that gather pregnant women and provide information. There are other pregnant women in the area, but we are not very much connected to each other and do not have the environment to share experiences of our pregnancy. (P18, Urban)*

I also asked all the key informants if there were any organised activities or programmes to facilitate interactions among pregnant women to promote pregnancy health education and the mental well-being of pregnant women in the communities. The majority of the key informants responded by saying*, 'No there is nothing like that'*. One key informant, who is a nursing lecturer, expressed her observations and understanding as

> *We do recognise social issues can create huge mental distress among women, but what to do? How can we help them?. We do not have a support system where nurses can refer them for further support. We recognise the problem and say, "oh poor woman" nothing more than that. We can be good listeners, that's all. In terms of social support in the community, neighbours and community members can interfere and support if there are gender violence cases or any other visible issues. If the problem is severe, health professionals say go to the police and complain about it. In some cases, pregnant women, who do not have a family to support, are brought to the hospital by community members. […..]. As human beings, sometimes nurses collect some money and decent clothes for them and manage to refer them to a higher centre. But that is from an individual level, not from the institution level. […….]. We do not have any organisational /institutional system to support them, nor any charities working for them. (KII 4, A Nursing Lecturer)*

The interviews with pregnant women and key informants clearly showed that there was no organised support system in the community for women who needed support during their pregnancy. Therefore, women cannot rely on the help they can get in the community, as individual-level help is a goodwill gesture that can be selective and possibly discriminatory and can be stopped anytime. Although from the discussions, it looked like pregnant women from the rural areas were more in need of support than those in the urban areas, pregnant women in both the rural and urban areas asserted the need for more organised social support

during their pregnancy. Although none of the pregnant women mentioned a formal social group, a Female Community Health Volunteer (FCHV), one of the key informants in this study, highlighted that there were mother's groups in the community to share information and engage in interactive discussions about maternal and child health, but it remained sporadic and was hard to sustain. According to the FCHV

> *We have AAMA SAMUHA GROUP (Health Mother's Group). We collect NRs 20 every month and put them in a fixed place so that when the women in the group need money, they can borrow without paying interest and fees, but they have to return the money within 2 months. We did bean farming from the group. Now we have more than 2 lakhs in the group. We women support each other, but the government has not supported us in any way. If the government or local authority would support us through the group, then we would feel encouraged. Now AAMA SAMUHA group is active in many villages. Many groups disappear after some time, but we continue working to support each other. From the group, pregnant women get little financial support. We also have an emergency fund if women are in crisis. They can borrow some amount. We ask the young generation, daughters-in-law, to join this group, but they don't seem interested or understand the value of this group. (KII 8, A Female Community Health Volunteer)*

Health Mothers' Groups (HMG) are monthly community meetings led by FCHVs which aim to bring women of reproductive age into a group and share information to promote safe motherhood and increase awareness about maternal and child health, family planning services and other community-based health promotion and service delivery targeted for women during pregnancy and after childbirth (Manandhar, *et al*., 2022).The study by Manandhar and collegues showed 90% of FCHVs facilitated the HMG meetings, but only 64% of mothers were aware of this group, and from them, only 1 in 4 mothers were actively engaged in the HMG meetings. This may be the reason why none of the pregnant women in this research reported to have received any form of social support. Also, according to the Ministry of Health and Population (Upreti *et al.*, 2013) survey report, although the focus of these meetings was to discuss information about maternal and child health and services for safe motherhood, they often ended up discussing financial needs, support for credit and saving activities. The report also suggested tea/snacks and active leadership of FCHV increased the attendance and interest to join the HMG, but the discussions remained around financial concerns. Interviews with pregnant women from rural areas revealed that financial concerns were one of the biggest challenges, and they were expecting financial support from the community rather than physical, psychological or any other form of support. Participant

17, who lived in a nuclear family and Participant 4, who lived in an extended family, both expressed their concerns about finances and were expecting financial support from the local community.

> *The community can help other pregnant women and me financially in case families of pregnant women are in a difficult position. They can lend some money. That is all the community can do for me. There is no guarantee who can support me in that time of need. We all women experience financial stress during pregnancy. We never know how much expenses can be during labour and delivery. It is very uncertain, and no one can be assured, and this uncertainty of support and expenses is a worry for me. (P17, Rural)*

> *The village committee (municipality) said they will support me with some expenses later, once the baby is born, that is to support delivery-related expenses. (P4, Rural)*

Although some local municipalities within the new Federal Structure have promoted maternal health that supports the safe motherhood agenda of WHO, the financial incentives or support at the local level remains sporadic, and most women do not recognise the rural municipality's support for them. Financial needs were a real concern for many of the pregnant women in this research, and they were willing to explore all available options for this support, which meant the information or support regarding the health and wellbeing of these pregnant mothers were a secondary priority. Beyond organised activity and support in the community, I also asked the participants if there was any support from NGOs/INGOs for pregnant women, which is presented in the following section.

4.1.4 NGOs/INGOs support

Non-governmental organisations (NGOs) and International non-governmental organisations (INGOs) support for poor people in developing countries make a significant difference towards improving the health and wellbeing of the local population, including maternal health of pregnant women during pregnancy and after childbirth. For example, an organisation called Women's Rehabilitation Centre (WOREC) supports women who are experiencing violence in Nepal (WOREC, 2020). In this research, when pregnant women were asked if they had received any NGOs or INGOs support during their pregnancy, not a single woman had received any support from NGOs/INGOs, and neither of any key informants provided any related information. Participants were expecting answers from me, as they wanted to know more about any available support from the NGOs/INGOs. Participant 7, who lived in a rural

area as a left-behind woman, as her husband was working abroad as a labour worker in one of the Middle East countries, stated

> *I have not experienced any support from the society or NGOs/INGOs. I have not taken any help from family relatives as well. I am managing myself so far. I wish people are showing interest and advising me on how to do better during my pregnancy. I wish there is any other support other than health services, but I do not know how and who could provide that support. Do you know any organisations? (P7, Rural)*

Another participant who has studied to a graduate level and was living in an urban area highlighted the roles any NGO/INGO could play in the local community. She describes the situation as

> *Many families do not have cash in their pockets. It is hard for those women to receive maternal health services. I feel if NGOs/INGOs could support needy women, then many lives would be saved. Even free ambulance service could be lifesaving. Many poor families cannot call for ambulance services for pregnant women, and these pregnant women suffer at home. (P6, Urban)*

All the key informants in this research echoed the voice of pregnant women, and unanimously agreed that there were no NGOs/INGOs in the local community working to improve the health outcomes or services for pregnant women.

> *Unfortunately, I have not seen any NGOs or INGOs working to provide support to pregnant women and new mothers in this community. No organisation or group looks after or supports pregnant women in the community. I think the government should initiate such an organisation designed to support pregnant women and new mothers. (KII 4, A Nursing Lecturer)*

From the interviews with pregnant women and the key informants, it is noted that there is no visible organisational and structured support available for pregnant women in the community. This research presented the voice of participants of this study, however, future research consulting NGO/INGO and local people would provide better clarity in role of these organisation in supporting health and wellbeing of local population. Looking beyond the community level support, women highlighted concerns of maternity leave and job insecurity, which relates to the national policy in relation to maternity pay and leave, which is presented in the next section.

4.1.5 Maternity leave

Among 20 pregnant women interviewed, only one woman was working in an office setting, in a private bank, at the time of the interview. During the whole interview, she kept talking about her distress associated with maternity leave and work life. Despite many attempts to ask other questions, she responded by relating most of her answers to the context of her job insecurity and social injustice that she feels in society because of her being a pregnant woman. She expressed her concerns as

> *I am still waiting to apply for my maternity leave. We can take it before or after the delivery. We get only 90 days of paid maternity leave but that is not enough for us. This is the same amount of leave as for the government sector. I think a minimum of 6 months of maternity leave would be more practical. In a private company, women need to leave the job if they want more or longer leave for maternity reasons. We do not have any law that protects the job for women after maternity leave. For example, if I take a longer leave, then it is not guaranteed the company will allow me to return to my existing job. It is a huge job insecurity. For a mother, for a baby, and for a nuclear family, we must have a longer and reasonable maternity leave. At least breastfeeding is the most important right of my baby. My baby will not have exclusive breastfeeding if I return to work, which is my major concern now. I have a master's in finance, and I am a working woman, but my future is very uncertain because I am not sure if I can return to work after the birth of the baby. The company policy does not guarantee return to work after 3 months of maternity leave. […….]. The company will recruit someone else. I am on probation period because the company does not want to employ permanent staff because of COVID-19 uncertainty. It is already an insecure job. So, job insecurity is very high among working mothers, in my experience. I have other friends who were pregnant before and they share the same experience. They could not spend enough time with their baby. We have to choose between the work or family life, which should not be the case. (P14, Urban)*

Job insecurity among working pregnant women is a major concern in wider society, especially in urban areas. Participant 14 further highlighted the difficulties in planning a future and her experiences of mental distress due to job insecurity and the absence of a support system in the work environment is devastating for all working mothers and pregnant women. The job security and work environment could be seen as functional dimensions of support which does not seem to have positive impact on women's experience. She further expanded the conversation about her feelings of insecurity as

> *I have a feeling I am going to be a mother, and I have a responsibility toward my family and the baby. For me, the biggest problem is how I am going to manage my*

baby during this short time of maternity leave. Who will look after my baby once I am back to work? How can I trust someone who can look after my baby very well? I cannot leave my working life too. My work is important to me, for my dignity, for my family, and for my baby too. At the same time, being a mother, I have to manage my family and prioritise my new-born baby. I do not see any support from the company I work for. It is just 3 months of paid leave. I have constantly thought about this dilemma since I came to know I am pregnant. I am very excited and looking forward to seeing my new-born baby, but I am equally worried about upcoming uncertainty. Now I have to choose either a baby or a job. I feel I am going to choose my baby at this time. Mentally I am stressed about how to manage my work life and family with a new baby. (P14, Urban)

The situation of job insecurity was beyond the formal sector, where there was no provision for any leave or pay. Participant 18 had to leave her job in the factory because of the sickness during her pregnancy. Despite working in the factory for three years, she was not supported to take sick leave or time off and neither she got any paid or unpaid maternity leave. She describes the situation as

I used to work in a tea factory in this district. I worked for 3 years for that factory. Now I have left the job because I am pregnant. I was on a temporary contract. Temporary contact is like a labour job. If I go to work, I get money. If I don't go to the job, I do not get any money. There is no support for pregnant women. I started feeling sick after being pregnant. I used to vomit at that time. It was difficult for me to work. So I left that job. It has a financial impact on my family, but I have no choice and no support from the workplace. (P18, Urban)

Unskilled workers in Nepal are often get contract as temporary workers on a daily wage, which is detrimental for women and more so if they become pregnant, as such job ends without any support or benefit for a woman during her pregnancy. One of the key informants, who was a lecturer in nursing, supported and echoed the opinion of the challenges faced by pregnant women about maternity leave.

In terms of working mothers, let's imagine, I am working in the private sector, and if I am pregnant, then I need to leave my job to spend some time with my baby and breastfeed him/her. Job insecurity is a problem for working mothers. We have a provision of paid leave for a few months, which is not sufficient, and return back to work is not guaranteed by the private sector. (KII 4, A Nursing Lecturer)

Limited or lack of support at the local and national levels in policy and practice was evident from the interviews with pregnant women and key informants in this research. Beyond that, women are experiencing a significant amount of health concerns. At the same time, most

pregnant women do not see adequate maternal health services for them. The next section will focus on the findings about pregnant women's experience of accessible maternal health services in the community.

4.2 Global Theme Two: Mental distress due to poor availability and accessibility of maternal health services

The second global theme in this section addresses the second research question of this doctoral research project: *How do the availability and accessibility of maternal health services in Nepal impact on mental health of pregnant women?* Healthcare availability and accessibility to improve maternal health is a global health agenda and important to achieve maternal health targets within the Sustainable Development Goals (SDGs). The findings in this section present the experiences and voices of pregnant women towards the availability and accessibility of maternal health care, which could be categorised as structural dimensions of support, in resource-constrained countries like Nepal. From the ecological theory perspective, the availability and accessibility of healthcare facilities belong to the exosystem, but it poses direct and indirect links with the macro and microsystem of the ecological framework. For example, pregnant women's socioeconomic circumstances, geographical location, gender, income, family structure, social norms and local or national policies can have a huge impact on the health service utilisation by pregnant women.

In this section, I present the key findings from the in-depth interviews with pregnant women and key informants in organising themes (Figure 4.3) about their experiences of health services in Nepal, which are embedded and influenced by multilayer ecological factors such as economic, political, policies, health service provision and practice.

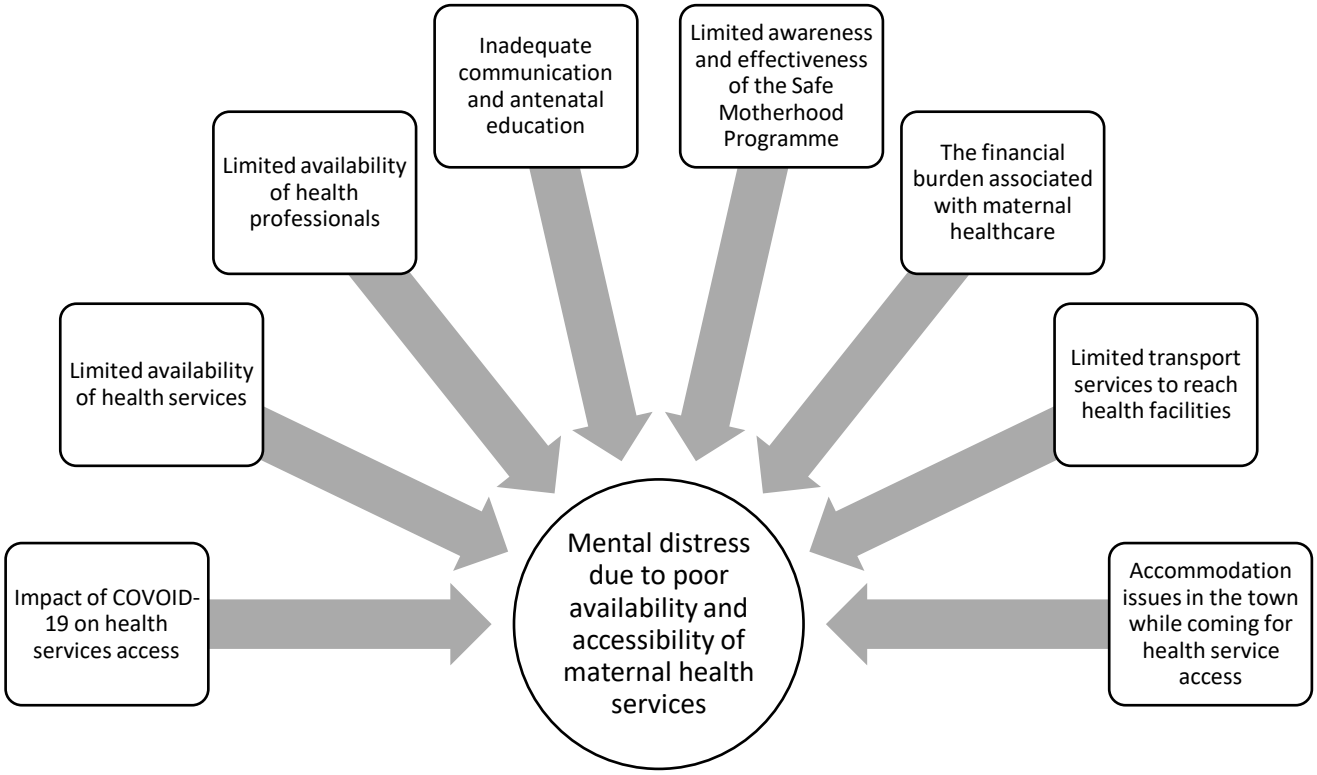


Figure 4.3: Eight organising themes within the global theme two

4.2.1 Impact of COVID-19 on health services access

COVID-19 pandemic affected all aspects of our lives, and at-risk population groups such as pregnant women were more vulnerable during these times. Research by Thapa and colleagues (2020) exploring maternal mental health in Nepal at the time of the Covid-19 pandemic highlighted pregnant women were aware of the risk of Covid-19 and were very concerned about their health and wellbeing, thereby presenting a significant risk of poor mental health for women during pregnancy. The interviews with pregnant women were conducted during Covid-19, and all participants expressed their worries about COVID-19 and shared their challenges experienced during these times. Most pregnant women were concerned about the limited services available in the hospital due to the risk of Covid infection. Participant 1 expressed her concerns as:

> *The hospitals are not opening fully and providing all the services. So, there are not many options for seeking health check-ups. I am afraid. I heard COVID will remain for the next 2 years. My delivery will be within 6 months. I don't know if hospitals will remain open at that time or not. I don't know where to go or how to manage during the time of delivery. (P1, Rural)*

The anxiety created by Covid-19 about how they could manage the delivery was visible during all interviews, and more so among those pregnant women living in rural areas. Women living in the rural areas were more affected by the pandemic as they experienced limited availability of health services and no public transport due to the lockdown, which was important to access these limited health services available mostly in the town. Participant 10, who comes from a farmer background and lives in a rural village, needed to commute for 3 hours to reach the hospital to complete all the tests. She reflected on her stressful time as

> *Because of the lockdown due to the coronavirus, I could not come here (the hospital) before. The health post in my village asked me to go for a video X-ray and other tests, but we did not come here because there was no transport facility due to the coronavirus. Recently vehicles are started arriving in the village, so we decided to come here. Now it is a bit late I am 8 months pregnant but what can we do? We live in a village. It is far from here. […….]. Because of the lockdown due to the virus, we had to wait for some time to come to this town from my village. (P10, Rural)*

During COVID-19, the frequency of antenatal health check-ups was relatively diminished among women from poor socioeconomic backgrounds and who lived in the village, and this is in line with the evidence from the latest Nepal Demographic and Health Survey (MoHP [Nepal], New ERA and ICF, 2023). Participant 19, who lived in a rural village, needed a total of 2 hours to visit the hospital (30 minutes to walk from home to get transport and then 1 hour 30 minutes by vehicle to reach the hospital in town) and another couple of hours to return to home, shared her experiences as

> *Before this coronavirus, not all pregnant women were receiving basic health check-ups. Now, this coronavirus is an excuse for those women who are not coming for health check-ups. At this time, many women will not have regular health check-ups, including me. In the news, I heard that even iron tables are not available in community health centres. Women have to buy from a private pharmacy. I could not come to this hospital before. Now I am in 5th month of pregnancy. This is the first time I came to the health check-up. I was scared of the coronavirus. […….]. I heard on the news that a woman died during pregnancy because of the coronavirus. This fear of the coronavirus has impacted me, and I think many women are reluctant to have health services in the hospital. Another pregnant woman who was supposed*

to come to this hospital for a video X-ray did not come with me. She was so scared to come to the town because of the coronavirus. (P19, Rural)

Participant 19 highlighted the realities of the impact of COVID-19 on pregnant women's psychology, which gave them an excuse to avoid health check-ups during pregnancy. Developing countries, where maternal health services are limited, were more affected due to Covid-19 (Pant, Koirala and Subedi, 2020). This signifies the importance of maternal health awareness and improvement programmes necessary to improve the uptake of antenatal and postnatal health check-ups, which is likely to become more challenging in the post-Covid-19 recovery period. The reality or could be misinformation about the lack of iron tablets that are not freely available from the community health centres, has a significant impact on health of pregnant women in Nepal. A nurse who was the key informant in this study highlighted

We have seen many anaemic pregnant women. Last time we saw haemoglobin 5 in a pregnant woman. She was from a very rural part (KII 2, A Nurse).

The issue of pregnant women being anaemic during pregnancy is a common issue in Nepal (MoHP [Nepal], New ERA and ICF, 2023), and therefore, it is essential that pregnant women have free access to iron tablets during pregnancy, as most women from rural areas with poor socioeconomic conditions are likely to be unable to afford to buy this basic medicine. The impact of COVID-19, resulting in limiting access to a very basic health service at the community level, had a significant impact on pregnant women living in both rural and urban areas of Nepal. KC and colleagues, in their prospective observational study, reported a significant decrease in institutional childbirth, whereas an increase in institutional stillbirth rate and a decrease in quality of care in the hospital settings in Nepal in the early period of the Covid-19 (KC *et al*., 2020). In the key informant interviews, a previously pregnant woman shared her experiences on how pregnant women in the capital city of the country were struggling for adequate health services.

I was worried that because of COVID-19, the hospital may not admit me at the time of delivery. I heard doctors do not like to take the patient from other hospitals or who are not their regular patients. It was a big struggle for a pregnant woman to search for a birthing centre at that time. Women used to go here and there, looking for a place for delivery in hospitals. The first COVID death was a woman in her postnatal stage, just after the delivery of the baby, so it was a big fear of COVID among pregnant women. (KII5, Previous pregnant women)

The struggle to find a place for delivery in hospitals was a real challenge for many pregnant women during the pandemic. The findings from my research study highlight that the impact of COVID-19 on pregnant women could be understood in three different ways. The first is the fear of getting a Covid-19 infection during pregnancy. Secondly, there is limited availability of maternal health services and issues with free medicine. Thirdly, there is limited accessibility of maternal health services due to low availability and lack of adequate transport facilities due to the lockdown and fear of using public transport. Despite these barriers, some women attended antenatal check-ups, and when they were in the hospital, their major disappointment seemed to be the limited availability of health services within the health facilities, affecting the quality of services. The following subsection presents women's experience of limited health services and their impact during pregnancy.

4.2.2 Limited availability of health services

WHO (2016) highlights that limited availability and accessibility of health services is seen as a barrier to promoting the health and wellbeing of the people. In this section, I discuss the findings from women's experience of the limited health services available in the resource-constrained settings of Nepal and their impact during pregnancy. Participant 19 lives in a rural village, and she shares her perspectives on health services as

> *We have a small health post in the village, but it is just a building. We do not have any qualified health professionals in the health post. Even that health post is far for me. It takes 1 hour to reach that health post in my village. We do not have facilities such as blood tests, X-rays, and video X-rays. These services are important for pregnant women like me, so we have to come to this hospital in the town, and it takes about 2 hours for me. [……]. The best place to have all the services for pregnant women is in this hospital but this is very far from us. (P19, Rural)*

The lack of adequate maternal health services in small health posts in rural areas was evident from most of the participants residing in rural areas. A female community health volunteer (FCHV) interviewed as a key informant highlighted similar concerns.

> *Health posts, Gaughar Clinic (Outreach Clinic) and Khop Kendra (vaccine centre) are close to us so that women do not need to commute too far for pregnancy check-ups. However, we do not have enough health professionals in the health post for health check-ups of pregnant women. In our area, we do not have nurses who can facilitate delivery/labour. (KII 8, FCHV)*

In rural village areas, health professionals and other facilities are very limited or not available in most cases, and therefore, pregnant women have no choice but to travel a long distance for regular maternal health check-ups, which is not always possible because of various socioeconomic constraints. The outreach clinic and vaccine centre are the government initiative to reach hard-to-reach populations in rural areas where good transport and other health service facilities are unavailable (MoHP [Nepal], New ERA and ICF, 2023). The issue of limited health services was not restricted to those in rural areas, but pregnant women in urban areas expressed similar concerns. Participant 6, who lives near a hospital in an urban area, said that even the district hospital, considered one of the biggest and well-equipped hospitals in the region, does not have all the essential facilities that pregnant women would expect. She shares her opinion as

> *Health services are not enough in this hospital. Now, we have doctors in this hospital, so hardly any patients need to go out of this district to seek health services. But I am concerned that we do not have a neonatal ICU facility in this hospital. I am more worried about my baby than myself. In case of emergency, my baby cannot get the health services needed at the point of need. […….]. I imagine if something goes unexpected during delivery, then the mother and baby need to be referred to a better centre, which takes about 3 hours by ambulance. During that time mother and baby can be at risk of life. That is what I am concerned about. (P6, Urban)*

For participants, referral meant extra health services needs and travelling further away from their residential location and to bigger hospitals in bigger cities. Most participants were worried about the referral during pregnancy and childbirth due to the financial implications alongside the risk posed for the pregnant women and child during the transfer period, as highlighted by another participant living in an urban area.

> *Sometimes, at the last stage of delivery, for several reasons, women are referred to a bigger hospital. Many women die while on the way to another hospital from this hospital. […….]. If doctors and other services are enough here, then women would not be referred to other places. Women would not die like this unexpectedly. I am scared and thinking about the situation if I am referred to another bigger hospital. What will happen to me on the way? (P18, Urban)*

The insecurity of getting inadequate maternal health services could have a negative impact on the mental health and wellbeing of pregnant women. However, the available maternal health services have very limited capacity to incorporate provisions which could support mental health of women during pregnancy, as the primary focus of the health services

remains on the clinical aspects of pregnancy and delivery. In conversation with a key informant who was working as a nursing lecturer, she expressed as

> *We are still at the basic level of health services. We have preventable maternal mortality issues, and we are focused on them. We are not looking at the social and emotional aspects of health. We focus on survival from ill health. Mental health is taken as an individual problem here (in the community and the hospital). We do not have a system to measure patients' well-being in the hospital, and that is not reflected, recorded and addressed appropriately. (KII 4, A Nursing Lecturer)*

Women in this research have highlighted the availability of services for pregnant women in Nepal is on the continuum, where no or very limited maternal health services are available in rural areas compared to urban areas, and not all urban hospitals have the availability of comprehensive maternal health services. The referral from smaller hospitals to bigger hospitals or smaller centres to bigger centres is part of the service delivery. However, this still does not incorporate adequate maternal health services for pregnant women, as the focus is mainly on the clinical aspects of pregnancy and childbirth, possibly due to limited resources such as limited availability of health professionals.

4.2.3 Limited availability of health professionals

Shortages of health professionals are a global issue, and resource constraints in countries such as Nepal have significant challenges to ensuring adequate staffing levels in its hospitals. This often results in overcrowded hospitals, affecting the experience of pregnant women and the quality of services they receive during their visits to the hospital for health check-ups. Participant 16 clearly stated that the overcrowding is the result of *'patient's numbers are more in this hospital and doctors are less' (P16, Rural).* Moreover, Participant 7 shared her hospital experiences as

> *This is a very crowded hospital, with a long queue to get my turn for a health check-up. It is hard for pregnant women, especially those who need to return to their villages. We do not get vehicles to return home on time. In this hospital, the same doctor works everywhere, ultrasound, delivery, and in the ward. If we had more doctors, I would get my turn quicker than this. Now only one doctor is here. He (the doctor) needs to go for emergency delivery as well. So, we have to wait here longer to see him. Doctors and nurses have to give time to everyone like me. So, I cannot complain anything about them. Today I came straight to the hospital after getting off from the vehicle in the town. First, I had to stand in the queue to buy a ticket,*

> *and then I had to wait in the queue for my video x-ray. Now I am waiting to see the doctor. I would be happy if all the tests are done on time so that I can return home on time. Last time, I had to wait a long time, and it was frustrating for me. (P7, Rural)*

In most cases, when pregnant women travel from rural areas, they expect all services, including various tests, check-ups and doctor consultations, to be completed within hours. However, this is not always possible since the test results and general check-ups may need to be completed before they can see the doctors. As there is no scheduled or organised timetable to see doctors, the availability of doctors is dependent on the other workload, such as emergency delivery or covering other emergency services, because of the shortages of doctors in the hospital. This often means a long waiting time for pregnant women and, in many cases, less time for each patient to cope with the demands of the services. This is the situation not only with the doctors but also with the nurses and other allied health professionals in the hospitals. Participant 8 expresses her concerns about the waiting time and expects priority services, especially for pregnant women like herself who have added challenges if they have to wait longer. She is in the last trimester of her pregnancy and shared her experience as

> *I wish pregnant women are prioritised, and all the check-ups are done as quickly as possible because it is hard for pregnant women to stay a whole day in the hospital. […….]. There is not enough chair to seat, and we have to stand most of the time. (P8, Urban)*

The limited availability of health professionals in Nepal is not only limited to the hospitals but also within the community settings. According to UNICEF (2022) policy brief for Nepal and National Female Community Health Volunteer Program Strategy (GNMHP, 2010), the FCHV are based within the community, and their role includes home visits to provide health education at the monthly Health Mother's Group (HMG) meetings, promote family planning, and meet the women at their home during pregnancy and after, provide essential curative services such as treatment of acute respiratory infection and diarrhoea, and refer them to better health facilities if needed. During the interviews with pregnant women in this research, they were asked about their interactions with FCHVs, however, only a few women recognised the contribution of FCHVs during their pregnancy. For example, Participant 5 and Participant 12, although they lived in rural areas, were familiar with FCHVs, and they shared their experiences as

In my village, FCHV has provided some health-related information. My family and relatives also suggested staying good and eating well. I also knew a few things. So, I am managing it so far. I do eat green vegetables. I also eat fruits. (P5, Rural)

FCHVs are good in the community. They advise us to eat healthy food, take rest, do not do any heavy work. They also advise us to go to health posts for regular health check-ups. I already know about these things as I have experience of previous pregnancy and childbirth. […….]. I also know little about Amma Surakshya Karyakram, a FCHV told me about it. The nurses in the hospital did not tell me anything about it. (P12, Rural)

The information received from FCHVs was not always beneficial for the pregnant women as they did get such information from those with prior experiences of pregnancy, but in some cases, it was beneficial to update or inform them about new or existing maternal health programmes that they could access. During an interview with FCHV, a key informant in this research, I asked about the effectiveness of the role of FCHVs in the community. She shared her side of the story as

It has been more than 15 years since I have been working as a FCHV. We (FCHVs) work voluntarily and we do not get any salary. But we serve the community 24/7. We keep working without the expectation of money. If we are taking part in educational programmes/training, we get expenses. For example, on training day, we get Rs. 400 and Rs. 800 when we distribute vitamin-A in the community. We have to arrange someone for childcare and household support so that we can work in the community and attend training, but we do not have any financial support from the government. I had training about 15 years ago for 18 days at that time. That is outdated knowledge for the current health needs we have in the community. The government provides some basic training from time to time for healthy eating, vaccination, vitamin A, etc. Last time we got training about Pneumonia. That was very helpful. But still, this is not enough to be competent to provide maternal healthcare support in the current health needs of the community. We need a more informative programme so that we have up-to-date knowledge, and then we can share our knowledge with pregnant women in the community. We have a book in which all the required information is written, from pregnancy to the birth of the baby, such as vaccination, healthy eating, health check-ups, and everything. We follow that book and provide information from that book. We need to have new training to support pregnant women effectively. We all attend new trainings available to us because we are interested in gaining new knowledge. I think we should have updated training as things have changed in the last 15 years. We need to have more updated books to update our knowledge that we can share with pregnant women in the community. We feel happy to share our knowledge with pregnant women, and improving our knowledge will benefit pregnant women in the community. (KII 8, FCHV)

The frustration expressed by the FCHV in this research about limited and outdated knowledge not fit for purpose in the current times is in line with the previous research study by Redick and Dini (2014). The limitations of FCHVs are such that most pregnant women living in urban areas did not encounter FCHVs, though they were aware of the role and contribution of the FCHVs in rural areas. Participant 6 and Participant 18 lived in town and stated their opinion as

> *In village areas, FCHVs provide good services, like providing information about pregnancy and health check-ups. But I live in the town. I did not experience anybody coming to see me at my house. I think this service is available in village areas only. FCHVs make reports of pregnant women, how they are taking medicine, and where they are taking vaccinations. FCHVs advise what to do next. But, in the town area, we do not have those services. I think even in the town area, the service should be available. Nobody contacted me, and I did not know where to go at first after knowing that I was pregnant. (P6, Urban)*

> *We live in a town [……..]. Still, I wish FCHVs would visit us and explain healthy eating and other health practices. I have not been contacted by any FCHVs. (P18, Urban)*

It looks like active and available FCHV services are in demand by pregnant women in urban areas. Still, the limited availability of the service is a current challenge that needs to be explored further. It is very likely that the lack of FCHVs in the urban areas may be attributed to the volunteer nature of this work, as it is challenging for urban women to find time for volunteer work because of their priorities and the support available for them when they are not at home for the volunteer work. The lack of health professionals at all levels affects the mental health of pregnant women due to the anxiety that is created because of the limited support they receive from health professionals, mostly knowledge and information about pregnancy.

In addition to the overstretched health facilities, limited availability of health services and shortages of health professionals, lack of adequate antenatal education and limited communication from health professionals, discussed in the next section, are other factors that cause distress among pregnant women.

4.2.4 Inadequate communication and antenatal education

Adequate communication with health professionals and antenatal education is part of the maternal health services. However, pregnant women in this study did not recognise it being part of the health service they received. Participant 1 expressed her experiences as

> *I feel like it would be better if they (health professionals) provided more information and gave me more time, as this is my first pregnancy. I don't have an idea about what to ask, what to do and not to do. So, it becomes harder to get the needed information. Last time when I was in the antenatal clinic, suddenly, I remembered my calcium tablets has finished. I asked the nurse how long I should take the calcium tablets for, the nurse replied loudly ''it's for the whole 9 months and 45 days after the delivery''. It is my first pregnancy, I had no idea about that medicine. How would I know that? If they would have told me earlier, it would have helped me to organise the medicine in advance, rather it looked they were not happy about me asking questions (P1, Rural)*

Participant 1 suggests that adequate early information, appropriate antenatal education, and polite communication with health professionals could help her manage distress during pregnancy. Some participants found unacceptable behaviours from health professionals and limited communication to provide adequate information during pregnancy has the potential to exacerbate poor mental health for pregnant women. Participant 6 and Participant 8, who live in urban areas, shared their experiences as

> *They (health professionals) are supposed to explain nicely and behave well, but I found some health professionals are not good at their work. I felt it is their nature and behaviours. I was afraid to see them again. I felt so bitterness about the services because of the impoliteness of the nurse I met. Their (Nurses) focus was just to measure blood pressure, weight, etc. I could not feel any counselling or have an opportunity to ask any questions to the nurse. The environment was not very comfortable or welcoming. (P6, Urban)*

> *I wanted to ask everything and share my experience, even small things, with health professionals. I do not have that privilege. I wish I had that opportunity as well. For example, today, the video X-ray shows my baby's weight is 2.5kg. I have so many emotions and concerns, and I want to talk about my concerns with someone. But the doctor told me it is not a concern. I wish I could have more information. I wish someone could talk to me about the weight of the baby. I have so much curiosity and worry about it. (P8, Urban)*

Attitudes and behaviour of health professionals, especially not having proper communication to address the concerns of pregnant women, could have a huge impact on the mental health

of the women during pregnancy. The issue of lack of communication was highlighted by most pregnant women in this research and was not only related to those who came to seek health services, but it also acted as a deterrent for many pregnant women who were discouraged from seeking maternal health check-ups because of such behaviours from health professionals. Participant 13 highlighted

> *These behaviours discourage women to come forward for the health check-ups. I know this behaviour from the nurses exists in all the hospitals. (P13, Urban).*

Many participants felt that health professionals were not interested in counselling and, therefore, they were reluctant to spend time communicating with pregnant women. Participant 18 asserted that health professionals were focused only on health issues and expressed *''I think they are concerned with health issues only'' (P18, Urban)*. A very similar experience was expressed by Participant 17, but she also added that there is a lack of support and an environment where she could discuss her concerns about social support, finance and other issues. She felt

> *They (Health professionals) said to eat healthy food. If I ask something, then they answer me. Otherwise, they do not explain everything, for example, what to do in the next health check-up. They do not ask about my circumstances, how my family supports me, or how are my financial circumstances. (P17, Rural)*

An interview with a nurse working at the senior level in a hospital, who was one of the key informants within this study, was aware of the concerns raised by the participants. She tried explaining this as

> *The communication gap is one of the major problems [……..]. Because of the workload in the hospital, sometimes some health professionals can't explain to the women for the next health visits. The main problem, as the women say, ''Nurses did not tell me about this in my last visit''. They say they did not know about it otherwise, they would come for health check-ups from the beginning of their pregnancy. Sometimes they come for the first and second health check-ups, but they do not come for the third and fourth visits. (KII2, Nurse2)*

Based on the experiences shared by pregnant women and key informants, it was clear that there was evidence of misinformation, which may be because of a lack of adequate antenatal education. This was highlighted by another key informant, a nursing lecturer, who asserted

that the 'Safe Motherhood Program' is not enough effective in the absence of adequate antenatal education in Nepal. According to her:

> *There is a lack of adequate antenatal education. Recently, because of the safe motherhood program (Aama Surakshya Karyakram), they are aware of antenatal health check-ups, but that is not enough. For example, they may experience constipation because of the iron tablet, and abdomen bloating because of calcium tablets. To whom they should share this distress? They do not share these things with anybody, not even with health professionals as women take these distressing experiences as norms of their lives. They are not aware of hormonal and emotional changes during their pregnancy. (KII 4, Academic)*

Lack of communication and limited antenatal education put these women at risk of poor mental health, as they are concerned about the next steps in the pregnancy, how it will progress, labour, and birthweight of the baby, which is also noted in other research studies (Alehagen, Wijma and Wijma, 2001; Sharma *et al*., 2015). There is limited or no research to understand if there was any system that recorded women's wellbeing, concerns, and personal issues when they came for antenatal check-ups. Pregnant women in this research highlighted the gaps in these services, and Participant 13 highlighted this as

> *When I came to the hospital, I was not asked to fill out any form that records my concerns or happiness, or my personal or family situations. Sometimes, if nurses are free, they ask a few things, especially during the first check-up. In follow-up check-ups, they ask me what the problem is. [……..]. I think women are not comfortable sharing their concerns or asking for help in the hospital. We think the hospital is just for health issues and we hope to get health services such as health check-ups. (P13, Urban)*

An interview with a key informant in this study, who was a nurse working in the maternity department, echoed the concerns raised by the participants. The nurse shared her working experience as:

> *We do not take any record of their well-being or happiness. We do not have any system to take this information and record this information and reflect it in practice to support pregnant women. (KII 1, Nurse1)*

In this research, the experience of participants and understanding of key informants suggest that there is a lack of adequate communication with health professionals, and the provision of antenatal education is very limited within the maternal health services. Many women were unaware of the changes in their physical and mental health, as adequate information was not

provided to them. However, despite all the issues, the Safe Motherhood Programme is seen as an effective programme to encourage women to come forward for antenatal health check-ups. The women's experience with this programme is presented in the following subsection.

4.2.5 Limited awareness and effectiveness of the Safe Motherhood Programme

The Safe Motherhood Programme, locally known as the *Aama Surakshya Karyakram*, or Aaama Programme, aims to reach every pregnant woman, particularly women from disadvantaged and lower socioeconomic backgrounds. This is a popular Government of Nepal's Maternity Incentive Scheme (MIS) that provides all pregnant women with free delivery care at the point of use; a cash payment to contribute towards the cost of transportation to reach health facilities; and an additional cash payment on completing Four Antenatal Care Visits (See section 2.1.2). The incentive within the programme is a key attraction for pregnant women and is contributing towards the uptake of the programme, as highlighted by a doctor and a nurse working in the local hospital, who were the key informants within this research. They share

> *We have an increasing number of women who have completed 4 antenatal care visits in the last 2 years, and the 'Aama Surakshya Karyakram Programme' is the main contributor to this uptake. In that programme, we provide incentives that include some amount of money and 'Nyano Jhola' (warm bag). The bag includes two sets of clothes for the newborn baby, including mittens, hats, blankets, etc., and a set of clothes for the mother. The overall cost of the bag is about NRS 1,500 (approx. £9-£10). (KII2, Nurse 2)*

> *Aama Surakshya Karyakram is available in Government hospitals. Delivery expenses are free in the government hospitals. Antenatal health check-ups are not completely free, as they have to pay for all the investigations. (KII 3, Doctor)*

The doctor and nurse interviewed in this research clarified that *Aama Surakshya Karyakram* only covers some aspects of the costs related to antenatal check-ups. In most cases, the costs of investigations and buying the majority of medicines are contributed by the pregnant women and their families. In this research, many pregnant women were unaware of this programme and had limited knowledge about where and how to seek additional information related to this programme. The 8 women out of 20 pregnant women said they do not know or have very limited awareness about the program in this research. Despite the popular and attractive incentives within this programme, awareness about the programme remains

limited (Subedi *et al*., 2014). Participant 15, who lived in a rural area, shared her knowledge about this programme as

> *I do not know about Aama Surakshya Karyakram. I do not know all the services in this hospital. This is my second visit to this Hospital. When I came here for the first time […], nobody told me about this program. (P15, Rural)*

The lack of awareness about the programme, especially among pregnant women in rural areas, poses significant challenges in improving the uptake of this programme. Even among pregnant women who knew about the programme, one of the major concerns raised was the timing of the incentive they receive. Participant 5 shared her concerns about the programme as

> *I know about it. I will get some money after giving birth. I am so happy that the government has initiated this programme. Many women will be benefited from this programme. Many women have financial problems in our village. This programme will help us. The incentive given by the government through Aama Surakshya Karyakram is too late. We get that money after giving birth to a baby. But before that, we do not get any help. The Aama Surakshya Karyakaram should give money (incentive) in the middle of the pregnancy. So that many people like us are benefited much from this programme. Like us, we are farmers, we may not have money on hand for these expenses, such as antenatal health check-ups. So, if we get that incentive money in the middle of the pregnancy, many women will come for health check-ups (P5, Rural)*

Pregnant women from rural areas and low socioeconomic conditions often do not have reserve money to pay upfront for the cost of services, and therefore, they are likely to miss antenatal health check-ups because of upfront costs associated with various investigations during pregnancy. The little amount of money they receive after the delivery is too late and too little to cover the expenses associated with antenatal health check-ups. Another problem that may be a barrier to the programme's effectiveness is that some women may not use the incentive as designed. As husbands' control over wealth is a deeply rooted practice in Nepal, women may not be allowed to use this financial incentive for their health and wellbeing and is rather used by their husbands in the way they want. Participant 13 explained this common scenario within the community as

> *Many women do not know about this programme, and many women say what to do with this little money. However, many women are poor, and that money is a lot*

> *for them. Women need to know how to use that money for themselves. Many families do not understand how to use that money. Many husbands buy alcohol with that money instead of using that money for the betterment of women. However, this incentive has encouraged women to come to the hospital and have health check-ups. (P13, Urban)*

Opinion about *Aama Surakshya Karyakram* is divided among pregnant women. Some women do not know about the programme, while some women know about it and appreciate the programme. At the same time, some women have raised concerns about the appropriate effectiveness of the program. From a key informant perspective, in the current socio-cultural context of Nepal, a health awareness programme may not be successful without involving the family members of the pregnant women. All the key informants in this study unanimously agreed that the involvement of family, especially mother-in-law and husband, was important to promote the wellbeing of pregnant women through this programme. A female activist, who was one of the key informants in this study, stated

> *If a woman is pregnant in the family, then the relevant information and awareness should be given to the mother-in-law, husband, and all the members of the family. Sometimes, women cannot facilitate their desired food because of the restrictions imposed to the daughter-in-law in the family. Any awareness program should include not only pregnant women but also their family members. For example, in 'Aama Surakyahya Karyakram', women are entitled to get some incentives after giving birth to their baby, but we cannot guarantee that women can use the money they want. Sometimes, the mother-in-law and the husband have control over the given money. (KII 6, A Female Activist)*

The financial burden associated with antenatal check-ups was one of the major concerns for most women in this research. The *'Aama Surakshya Karyakram'*, which aims to address the financial barriers towards accessing maternal health care services, are expected to be beneficial to pregnant women. However, it was seen as too little and too late, which is not helpful and timely to cope with the financial distress among pregnant women and their family members. Moreover, the effectiveness of the programme was affected by the lack of awareness of the programme among the pregnant women and the capacity building towards how they could make decisions to use this money for their health and wellbeing. Despite some pregnant women benefiting from this programme, the overall financial burden associated with maternal healthcare was one of the key concerns for many pregnant women, and their experiences are presented in the next section.

4.2.6 The financial burden associated with maternal healthcare

Financial concerns were raised by almost all the pregnant women and key informants interviewed in this research. Participant 5, who lived in a rural village with an extended family, explained why she were worried about the finance associated with pregnancy.

> *I have concerns about how we are going to manage enough money we need for better treatment during the delivery. I wish even calcium tablets are given free of cost from the hospital. Video-Xray is a little costly. If it would be free of cost, then it would be a great relief for poor families like us. Last time, I paid about NRs 400 (£2.50 approximately) for video-Xray and blood tests. We are farmers. We need to arrange even that amount of money. Every time I have to spend money for travel and health check-ups such as blood tests and video-Xray in this hospital. It costs about Rs 2-3 thousand (£15-£25) every time I come to this hospital. Sometimes, travel is very expensive if we have to reserve a taxi to come. Many women may not have money for travel and health check-ups. It is difficult for me too. If we are recommended to have these basic health check-ups, we should get them free, especially for poor women during pregnancy. Sometimes, I think about how to manage everything in the future. Sometimes we have to stay in town for 2-3 days to complete all the health check-ups. If I do not have relatives who live in the town, then I will have to stay in a hotel, and that would cost more for food and accommodation, etc. This hospital does not provide accommodation for people like us, who come from far and rural hilly areas. (P5, Rural)*

The experience of the financial burden of pregnancy and delivery among pregnant is significant in this research study. Most of the pregnant women interviewed in this research felt that the support received from the government *Aama Surakshya Karyakram* is tokenistic and does not cover the costs of even basic medicines or investigation costs, and therefore, most of the expenses incurred during the pregnancy and delivery are out of pocket payments from the pregnant women or their family. According to the Nepal Health Facility Survey 2021, only 29% of health facilities had calcium tablets on the day of the survey (MoHP [Nepal], New ERA and ICF, 2022). This evidence supports the participants' statement about the lack of access to calcium tablets at the healthcare facility and the cost of buying calcium tablets with out-of-pocket payments. Although research participants understood they were expected to pay, many pregnant women from low socioeconomic backgrounds expressed their desire as they could have got some extra support with the medicines and investigations costs because managing the money was burdensome and created a stressful situation in the family, especially when the total costs could add up very quickly to an unexpected level. This was in line with another study conducted by Ahmed and colleagues (2010), suggesting that

socioeconomic circumstances, together with education, play a significant role towards empowering pregnant women to access maternal health services. Most participants, regardless of whether they were living in urban or rural areas, expressed similar concerns. For example, Participant 6 said: '*Many poor families cannot afford ambulance service for pregnant women and these pregnant women suffer at home'* (P6, Urban). Participant 11 said: ''*If the government would take care of all pregnancy and childbirth related health service costs wherever we are referred, then we would be more relaxed''*. (P11, Rural). Referral to other hospitals was one of the biggest concerns raised by many pregnant women in this research, as this was associated with higher costs. According to Participant 15

> *In case my caesarean section has any complications, and I am referred to another hospital, it will be very expensive for us. The transport system is not good. In case of emergency, we need to arrange a private vehicle. It is costly, and I have that worry. […….]. We do not know much about any other places. This is a government hospital, so I have the belief that it will not be very costly. But I cannot imagine going to another hospital from here. We are a poor family living in a village. My husband works on daily wages to feed the family. I cannot be prepared in advance for the additional expenses. (P15, Rural)*

Pregnancy has the potential to create a complex emergency situation where a decision needs to be made and, in many cases, could have significant financial implications for pregnant women and their families. The preparedness for such circumstances for people coming from low socioeconomic situations is very challenging as they do not have savings or reserve money that could be used in such situations. This often leads to additional distress among the pregnant women and their family members. During the interview with a previously pregnant woman, who was a key informant in this study, she expressed her experiences as

> *I was worried about the financial impact of delivery. I could not afford a very expensive private hospital. […….]. I looked for space in government hospitals. I could not find any space at that time, so I went to a teaching hospital. That was also so expensive for me. I thought it was a government hospital, but it was not. I could not afford a private hospital because if my baby needed NICU, which was likely, then the overall cost would be around 6 to 7 lakhs, which is too much money. There are government birthing centres, but I could not get any with the facility of the NICU at that time. (KII 5, Previous pregnant women)*

Another key informant, a nurse working in the maternity department, agrees with the financial concerns expressed by pregnant women. She asserted that this could be one of the

reasons why many women from rural village areas and poor socioeconomic backgrounds are not coming for antenatal health check-ups, as the whole process might spiral and put them under financial pressure. According to the Nurse

> *When we ask the women why they are not coming for a regular health check during their pregnancy, some women explain their financial problems. They have to ask for money from their husband and mother-in-law. They say they have no money in hand, or they receive little money from family for health check-ups. (KII 2, Nurse 2)*

Some families have health insurance from the local government hospital to cope with the financial constraints. At the time of the data collection for this study, this insurance scheme was available only in a few district hospitals, and the government's aim is to expand this scheme to all the hospitals in the country. In the interviews, only 4 pregnant women had this health insurance, two women were from rural areas, and the remaining two women were from urban areas. Participant 6, who lived in an urban area and was enrolled on this health insurance, shared her understanding as

> *I have a health insurance from this hospital. The insurance has helped me a lot. The insurance covers the cost of medicines, ultrasound scans, blood tests, and check-ups with doctors and other health professionals, almost everything. The government has initiated this insurance in a few districts of Nepal, and this is one of the districts. We pay Rs. 3500 (around £20 depending on the rate) for the insurance that covers a family of up to 5 members for one year and up to hundred thousand NRS, and we can renew this every year. (P6, Urban)*

Health insurance could be one of the solutions to tackle the burden of healthcare costs during pregnancy and delivery. Participant 6 was aware of the benefits associated with health insurance; however, the majority of pregnant women were unaware of the benefits of the insurance and, therefore, did not have the insurance. For example, Participant 17 lives in a rural area and has health insurance with the hospital, which covers health services within the government hospitals only. But she was not fully aware of the benefits of the insurance scheme as she said*: 'I do not know exactly what the benefit of this health insurance is' (P17, Rural).* Although health insurance has the potential to provide security to pregnant women in terms of the cost of accessing health services at government hospitals, it does not necessarily cover the health care costs if women are referred to private hospitals, as not all private hospitals accept this policy. Moreover, the upfront cost to buy the insurance may be high and unaffordable for many pregnant women from poor socioeconomic backgrounds. As with

many other schemes, there are several challenges and opportunities associated with health insurance (Mishra *et al*., 2015). Alongside the financial burden, pregnant women, mainly from rural areas, experience huge restrictions towards accessing health services due to inadequate and limited transport systems, which are discussed in the next section.

4.2.7 Limited transport services to reach health facilities

About three-fourths (14 out of 20 participants) of the pregnant women interviewed in this research lived in rural areas, and all of them highlighted the issues of limited transportation services affecting their access to adequate maternal health services, for which they had to travel to a nearby town. Participant 3 lived in a rural village and needed to commute about an hour by public van or about 1.5 to 2 hours walking, using shortcuts in the hilly regions to arrive at the district hospital. She was in a post-dated stage of the pregnancy, which means she could have needed emergency maternity services at any time. The health post in her village did not have adequate services for pregnant women, and therefore, her only option was to commute to the district hospital. She was extremely concerned about her situation, and she shared her experience as

> *Yes, we do have a health post near our home in the village. I used to go there for regular check-ups. But we do not have a video X-ray facility in the village. I wish all the services to have near to us. It is a very difficult road to commute to arrive at this hospital. Sometimes we can't arrange vehicles on time. Many women's lives would be saved if we had all the services in our village. We can't come to this hospital immediately when we need health services because it is difficult to commute due to bad roads. If it is a rainy season, then it is more difficult. I wish health services could be available near us. I cannot come whenever I wish to come to this hospital. If it is an emergency, then it is difficult to manage to come to this hospital. I can't come to this hospital when I need immediate health services due to bad roads and limited transport services. (P3, Rural)*

The need for maternal health services close to home in rural areas was one of the key needs highlighted by most pregnant women in this research. The government of Nepal aims to provide basic health services for the general population within a 30-minute commute, which has not been met according to the government report (MoH [Nepal], New ERA, and ICF, 2017). Many participants in this research highlighted that they had to travel more than an hour. For example, Participant 15, who had to travel about an hour to reach the nearby district hospital, said

The problem is not only the far distance, but also the bad road. I am scared of traveling in vehicles as the delivery date nears. It is more troubling, not comfortable at all, and very bumpy. (P15, Rural)

In the late stage of pregnancy, women become more uncomfortable travelling on the gravelled road with lots of bumps and potholes. Women in rural areas expressed multiple levels of barriers towards accessing health care services, starting from the lack of local health services, lack of adequate transportation system to commute to hospitals in nearby towns and then the issue of financial constraints if they come from a low socioeconomic family. This is further complicated by the conditions of the hill roads they use to commute and the situation of the pregnant women in which they must travel. Another participant who has to travel more than an hour asserted

I live far from this town 2 to 2.5 hours by public van/taxi/jeep. The big bus does not go to my village because the road is not in good condition, it is a gravel road. If it is raining too much, we have flooding on the road everywhere. For the last 4-5 days, I have been trying to come to this hospital, but only today I got a vehicle to come for a video X-ray. We managed to come here today and hope to return home by the same vehicle that returns to the village. We need to get in the vehicle by 4 pm to return home. I wish this hospital could send an ambulance immediately when we call them for help. Reaching this hospital when I need the services is very important for me, and that is my main concern. I wish all pregnant women supported in their pregnancy at free of cost. I wish the government could do that, but I do not think the government can provide all the services. (P7, Rural)

The participants in this study understood the restrictions of how far the government could go to provide all the health services in a country like Nepal, but they still expect the government should prioritise accessible maternal health services for all populations, whether they are living in rural or urban areas, otherwise, it creates a huge mental distress for the pregnant women and put both mother and child lives at the risk. The issue was reiterated by the nurse, a key informant in this study.

The geographical feature creates difficulties for them (pregnant women), mainly because the transport system discourages them. A bus comes in the morning from their village, and the same bus returns to the village in the evening. When they come to the hospital, it is already 10-11 am then they have to wait hours for their turn in the queue. Sometimes the doctor is not available, and sometimes, reports do not come in time. They have to wait for reports until 3-4 pm. They have to take the same bus in the afternoon to go back home. This is what the women say about the reason for not coming for regular health check-ups. (KII 2, Nurse 2)

Women in this research showed that there were many barriers that discouraged them from accessing the health care services that they needed during pregnancy. Despite all the barriers, if pregnant women are aware of the services, then they look for solutions so that they can get the care required. This, in many cases, includes having to arrange accommodation at the last minute if they are not able to return home the same day, which can create further mental distress for pregnant women and their families.

4.2.8 Accommodation issues in the town while coming for health service access

Many pregnant women in this research felt they were discouraged from attending antenatal health check-ups if they had to travel to the hospitals in a nearby town, as the women would not have a place to live if they had to stay overnight, or it would create an additional financial burden for the family. Participant 11 lived in a rural village, and it took them 2.5 hours by public transport (van/jeep/taxi) on a gravel road to arrive at the hospital. According to her

> *I want to return home today after today's health check-up. It is not as comfortable to stay elsewhere during pregnancy. I have friends and relatives from my village who live in this town if I have to stay overnight in the town, which I can see the possibility of today. But I want to go back home today after the check-ups as it is not comfortable to live elsewhere as I live in my home. We do not get vehicles on time. We have to wait for the same vehicle that comes to this town in the morning, and only that vehicle returns to my village. Sometimes it can be too late. It can be dark. (P11, Rural)*

Finding appropriate and comfortable accommodation during health check-ups in the town is important for pregnant women from rural areas but not always possible. They often need to rely on the goodwill of friends or relatives who may allow them to stay overnight or more at their places. Although such places could be manageable, but not always comfortable to meet the needs of pregnant women. Participant 3, who lived with her relatives during her visit to the hospital, shared her experiences as

> *I live in a village, but for the last 15 days, I have been living in this town because I am having tummy pain. It takes 1 hour by taxi; walking takes about 1.30 to 2 hours. We live in a hilly area. Currently, I am living with my sister, and she has rented accommodation here in this town. The doctor called me today for a health check-up, so I am here today. We do not have a public bus service to come to this hospital from my home in the village. (P3, Rural)*

Another alternative option for pregnant women is to live in rented accommodation in the town at the time of delivery. However, pregnant women would not feel comfortable living alone in the town, and many families may not have someone who can stay with the pregnant women in the town. Participant 7, who is in the third trimester of the pregnancy, shared her plan and challenges associated with it as

> *I hope at the time of delivery, the road will be better to commute. We also discussed an option to rent a room in this town when my delivery date is due. My due date is during our festive period. I will be alone in the town during that time, so we are also thinking to stay at home and hire a private vehicle to come to his hospital. […….]. If my destiny is to die during labour, then nothing can stop it. I hear many women dying during delivery because they are not able to reach the hospital on time. So, I feel fear. I wish these health services are near to me at a commutable distance. (P7, Rural)*

The uncertainty of how pregnant women could manage adequate health check-ups and delivery due to the lack of a place to live in a town creates additional mental distress for the women. This would range from being stressed to the extreme of thinking about death during labour, which shows the level of vulnerability they go through during the whole process of pregnancy, putting them at higher risks of poor mental health. The nurse working as assistant head of nursing in the hospital, one of the key informants in this study, reiterated the challenges experienced by pregnant women. She emphasised

> *Some women have to travel long to arrive this hospital. They say they do not have a place to stay in the town. That's why they are not coming to the hospital very often. Women are asked to return home as soon as possible by their families. They can't wait longer until evening. They say they can't spend a whole day on this. […..] We are talking about maternity waiting home. If we provide that service, then many women who live in rural areas will be benefited, and their health service accessibility will increase. (KII 2, Nurse 2)*

Although none of the pregnant women were aware of the concept of Maternity Waiting Homes (MWH), they expressed their desire to have a safe place where they could live if they had to stay overnight because of the health check-ups in the hospitals in the town. The nurse highlighted the importance of MWH, which has the potential to increase the uptake of antenatal health check-ups. Evidence suggests that despite the several challenges, implementing MWH in low- and middle-income countries can encourage women to have maternal health service uptake (Penn-Kekana *et al*., 2017). Future research should look at the

opportunities and challenges of implementing MWH in Nepal to address the issue of transportation and accommodation, especially for pregnant women visiting nearby hospitals for maternity health check-ups. This will also support tackling mental distress among pregnant women created by the financial burden, transportation issues and accommodation problems.

4.3 Global Theme Three: Impact of socioeconomic and cultural context on pregnant women's mental health

The third global theme in this section addresses the third research question of this doctoral research project: *How do lived experiences of socioeconomic and cultural factors affect the mental health of pregnant women in Nepal?* Every pregnant woman during an interview was asked to talk about their story of a typical daily life relating to the socioeconomic and cultural context in which they lived. Most pregnant women explained household work as a part of their everyday life, including household chores towards extended family, raising cattle and working in the farmland while maintaining the socio-cultural traditional norms. Another significant discussion was around the importance of procreation and giving birth to a baby boy. From the ecological perspective, the findings from this section highlight the personal and emotional events of pregnant women that are highly influenced by social and cultural expectations that sit within the macrosystem of Bronfenbrenner's ecological theory. Although socioeconomic and cultural factors can be categorised as a structural dimension of support, how women are supported within this context can be seen as a functional dimension of social support. In this section, I present the key findings from the in-depth interviews with pregnant women and key informants in eight sub-sections (Figure 4.4).

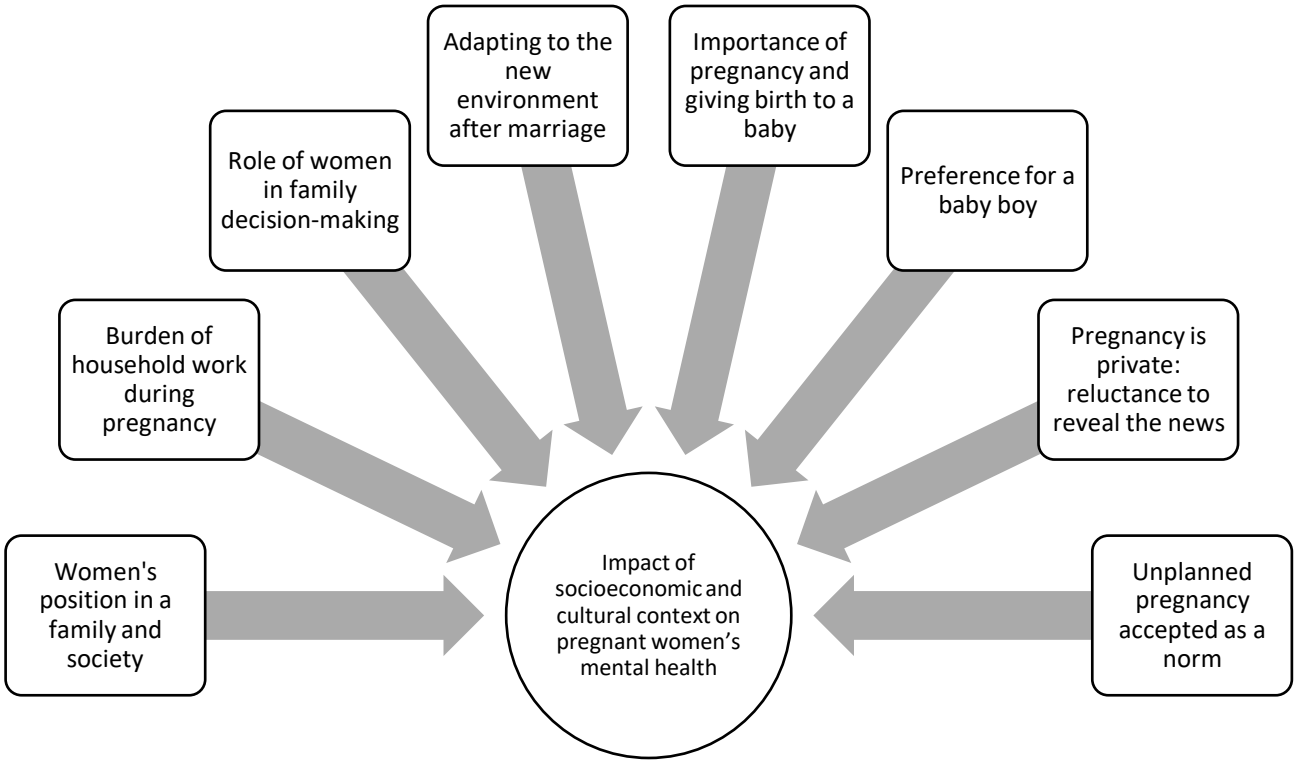


Figure 4.4: Eight organising themes within the global theme three

4.3.1 Women's position in a family and society

Within the South Asian sociocultural and traditional norms, women are often seen within the shadow of men and are treated as second-class members within the family and society. They are often dependent on their husband or a male guardian of the family, which restricts self-expression and choices in life (Jayachandran, 2015; Niaz and Hassan, 2006). Lack of empowerment means South Asian women often live in a restricted space, bound to complete all the household work but are without employment, affecting their self-esteem and compromising their identity and self-image (Niaz and Hassan, 2006). Some research in the past also argues that women's life in Nepal is very much restricted by their husband and mother-in-law, highlighting the power imbalance and hierarchy even amongst women in the family, such as mother-in-law to be higher in hierarchy compared to daughter-in-law (Bhusal *et al*., 2011; Simkhada, Porter and van Teijlingen, 2011). In this research, women highlighted the traditional norms of associating their identity after marriage. Participant 15, who lived in a rural area, said

> *Married and unmarried life is different. [……]. After getting married, I have to follow my husband's wishes and decisions, and I have to listen to his thoughts. I wish all women have an independent life, not only my life. But in our society, it is not easy. We, women, have to be with family and have a husband and kids. (P15, Rural)*

The above participant was clear in distinguishing what she (although presented in the context of all women) wants and what she is expected to follow after the marriage. Participant 13 reasserted this and highlighted that gender differences are rooted in the family and society in which they lived. According to her

> *We say girls and boys are the same, but not in reality. Women do all the household work. It does not matter how well women are educated or where they work. We are grown up with an understanding that a girl is born to be at home and should work all the household. For example, a little girl washes her dishes after eating a meal, but a boy plays football and never does household work. The previous generation and our parents said, 'You are a daughter, and you should learn these household works'. They never said this to boys. That could be the reason women do household work, and it is the norm in our society. (P13, Rural)*

According to Participant 13, girls are reminded about their role in a family from early childhood. The perception of their role within the family becomes traditional and cultural norms as they grow in this society, and they are likely to face barriers and challenges if they intend to go against these norms, regardless of their education and work life. Childhood development is a crucial stage in setting perceptions about gender attitudes and behaviours, and the expectations perceived at this stage can remain life-long (Neetu *et al*., 2017). A female activist, one of the key informants in this research, highlighted a daughter-in-law's position within a family with an example

> *A newly married woman, a daughter-in-law, eats at last when everyone finishes their eating. Our mother and our grandmother follow the same tradition. We, who live in the city, eat together. But still in our old generation, even in our generation, who live in the village areas, daughter-in-law eats at last. Sometimes, food is not left enough for women. This has been our tradition for a long time. (KII 6, A Female Activist)*

Although there is a shift in the new generation of families living in urban areas, women in rural areas still struggle with the traditional norms of a patriarchal society where daughters-in-law are expected to feed the family first and survive on whatever is left, thereby asserting the notion of hierarchy within the familial practices. The situation does not change despite being pregnant, which puts them in a vulnerable position due to poor physical and mental

health. Participant 17, who currently lives in a nuclear family, shares her challenges of being a daughter-in-law:

> *Our women's lives in society are valueless. The whole day we work, we have to look after the family, and in addition, we must give birth to babies. After marriage, I have realised living as a daughter-in-law is so difficult. It is not only me, but all the women in society also have the same experience. Now we are living separately from our in-laws. Now I can do whatever I want. I can come to the town three times a day if I want. No one stops me, and I don't have to ask permission from anybody. My first baby was born at my in-law's home. I cannot remember any supportive events or experiences of that time. I was pregnant at that time and still had to do all the household work. Even after giving birth to the baby, I could not take good rest. The daughter-in-law's position in the family and society is very low. I do not know why, but there is a huge difference in the treatment of boys and girls in the family. Then there is a huge difference in the treatment of the daughter in -law and the daughter in the family. The daughter in -law is at the bottom of the family. While I used to live with my in-laws, they expected me to do all the household. (P17, Rural)*

Gender discrimination and hierarchical positioning of women, especially in an extended family, highlight the conservative sociocultural norms of Nepalese patriarchal society. In an extended family, it is perceived that pregnant women are likely to get additional antenatal and postnatal support. However, this is not always the experience, as highlighted by Participant 17. The circumstances have forced her to opt out of an extended family and live in a nuclear family to experience her basic freedom, such as going out independently without having to seek permission. Marriage in Nepal brings in a new role for women, and as daughters-in-law, they are expected to follow their mothers-in-law to take responsibility for caring for husbands and their families (Simkhada, Porter and van Teijlingen, 2011). Moreover, marriage is seen as an endorsement of procreation. Therefore, the majority of women are pregnant soon after getting married, bringing new challenges to adapting to the new role of daughter-in-law, alongside facing the challenges associated with pregnancy (Bhusal *et al*., 2011;). The challenges in adapting to the new environment for women after marriage pose the risk of violence, which may continue even when they are married for a longer period. Participant 9, who lives on her own as her husband works abroad, has been married for 24 years and is pregnant with her sixth child, shared her experiences as

> *My relatives came at midnight to hurt me. I saved myself somehow. Now it is dangerous for me to return home. In the village, my relatives and villagers are*

planning to abuse me physically. A drunk man, a relative of mine, came to touch me on several occasions. My relatives think I am a characterless woman. If I complain about that man, nobody will believe me. They (relatives) abuse me verbally, using bad words. I am afraid that my relatives may kill me anytime if I stay at my home in the village. I do not have anybody to support me in the village. Relatives are saying if someone supports me in the village, he/she should take responsibility for me and my unborn baby. All the villagers support my relative's view. They do not believe what I am saying. They all (relatives and villagers) talk about doing violence to me all the time. They reject me, do not talk to me, or come to my home in the village. I don't know where to go from here. I cannot go back home to that village. The village does not accept me. I was struggling alone in society. I left my village now. I feel sad. I cannot see my kids. I miss my village and my children. But if I go back to the village, the villagers will neglect me, and they will abuse me. (P9, Rural)

Lack of family support creates circumstances where women become more vulnerable and are at risk of physical and sexual violence. Participant 9 was raped by a villager. Although she is a victim, she is blamed and seen as a characterless woman in the village. She was one of the most vulnerable women in this research, as she is being accused of bringing shame to the family. Therefore, she was neglected and abused by her husband, relatives and villagers. As a result, she is left alone to deal with the pregnancy without any formal or informal support. Many women in Nepal do not share their experiences of violence until it is extreme, as they fear going against the sociocultural norms, and also, this could often exacerbate the violence and put them at additional risk. In this research, only Participant 9 shared her experience of violence, but key informants in this study suggested that there are frequent cases of neglect and abuse during pregnancy that remain hidden. A hospital nurse working in the maternity unit of the hospital, one of the key informants in this study, highlighted the issues of hidden cases of violence with an example

Last time, a husband and wife came for treatment. It looked like the wife was beaten. Her face had scars. But the wife said her face is like this. We can't do anything in this case until she raises her concerns. (KII 1, Nurse1)

Several research in Nepal has reported on the evidence of hidden violence against women and the challenges associated with why women do not come forward to report the abuse. One of the reasons is that abused women are often dependent on their family for financial and social support and do not have a choice to live alone or independently (MoH [Nepal], New ERA, and ICF, 2017; Puri, Shah, and Tamang, 2010). Even though the health system and health professionals can play a significant key role in preventing and responding to intimate

partner violence (IPV) and protecting women from further IPV (WHO, 2013), it seems that their role in Nepalese context is limited, or they do not have appropriate strategies to respond to IPV cases. Evidence from European countries suggests that social support has a significant role in the decision-making to use health care among victims of IPV (Dias, *et al*., 2020a). Looking at the macro-level, as suggested by Dias, *et al*. (2020a) and contextualising IPV, it seems very unlikely that women in Nepal will be coming forward to seek health services due to the limited women empowerment that influences their decision-making capacity and also the limited social support for women as noted in this research findings (See section 4.1).

4.3.2 Burden of household work during pregnancy

The burden of household work for pregnant women was considered one of the important issues that put them at risk of poor mental health during pregnancy (Yee and Schulz, 2000). Globally, the household burden for women during the Covid-19 pandemic increased significantly, which exacerbated poor mental health in their day-to-day lives, and more so for pregnant women. Women in this research expressed that Covid-19 did not make any difference in the amount of household work they had to do, as they were already expected to do all the household chores anyway, but it was seen as more problematic if they had to complete this work during their pregnancy (Seedat and Rondon, 2021; Sjörs, Ljung and Jonsdottir, 2014). Participant 4, who was pregnant for the first time and was in the third trimester of the pregnancy at the time of the interview, shared her experience of struggling to manage daily household work in village areas. According to her

> *I do household work, washing, cleaning, and cooking, and then I go out for grass cutting for cattle. I am having leg pain. Sometimes I can take a rest, and sometimes, I cannot take a rest when I want to. I have to complete all the household work and work on the farmland. Sometimes, I go for grass cutting twice a day and carry that home. Yesterday, I had to cut extra grass to feed cattle because we planned to come to this hospital today. Sometimes, I wish I should not have to do these jobs during my pregnancy. But we have to do that because we need to look after cows and goats and work on farmland to survive. (P4, Rural)*

Lack of proper rest during pregnancy due to household work makes pregnant women feel tired and distressed. However, many women in this research felt they did not have an option to skip the household work. On the contrary, men in the patriarchal society do not see their responsibilities to involve themselves in the house chores (Jamil, Piang, and Mahadir, 2018).

Most women from rural areas in this research shared very similar experiences. For example, Participant 5 said

> *I wake up and drink some water. Then I cook lunch and complete household works such as cooking, cleaning, washing clothes, etc. If I am feeling ok, I go for cutting and collecting grass for cattle. Then I cook dinner for everyone and clean the dishes and the kitchen. Then I sleep. (P5, Rural)*

A nursing lecturer, one of the key informants, asserted the physical burden of household work despite the fact that women were physically vulnerable during their pregnancy.

> *You imagine the life of a typical pregnant woman in Nepal. She works from the morning each day, working on farmland, raising cattle, cook food for the family. [….]. The women experience back pain, leg swelling, and discomfort holding the heavy weight of her baby on her tummy. Despite that, they carry a heavy weight on their back when working on farmland. (KII 4, Academic)*

The daily routine of many of the pregnant women from rural areas in this research included all the household work as well as the responsibility of raising cattle and contributing towards the work on farmland. Despite going through many physical and emotional changes during pregnancy, women had no option to get any additional support as many of these women in rural areas came from a family with lower socioeconomic backgrounds, and daily household work to live was a basic necessity although pregnant women sometimes found these work very challenging, especially in the late stage of pregnancy. On the contrary, the experience of pregnant women living in urban areas was very different as they had comparatively minimal household work, no farming or grass cutting, and often could seek additional support as they came from a better socioeconomic background compared to the rural women. Participant 8, who was also pregnant for the first time and was in the third trimester of the pregnancy at the time of the interview, shared her experience in a very different way compared to Participant 4 and Participant 5, who lived in rural areas. According to Participant 8

> *I wake up in the morning, drink water, and walk around for exercise around my house. After preparing and having my tea and breakfast in the morning, I start cooking lunch. After lunch, I finish cleaning, washing and tidy-up things in the house. Then again, I walk around for fresh air. I watch TV in the afternoon, and then I prepare afternoon snacks. After eating snacks, I cook the evening meal. I do not need to work on farmland, I just do household work inside. (P8, Urban)*

Although pregnant women in urban areas are also expected to complete all the household work, they also have time and opportunities to get exposure to mass media such as television and mobiles compared to women from rural areas (MoH Nepal, New ERA, and ICF, 2017). However, there is a dearth of research suggesting the difference in household chores responsibility for women from a higher socioeconomic background in urban areas compared to women in rural areas with a lower socioeconomic background in Nepal. In addition, there are multiple factors that intersect, which could contribute to the experiences of pregnant women. For example, some participants may not feel the burden of these household chores or other daily chores if supporting factors motivate them, such as they wish to have a child and become a mother. For example, Participant 16, who lived in rural areas, was desperate to be a mother for many years and later became pregnant with the help of medical treatment. She shared

> *I am pregnant after a long time of struggle and desire. I was so desperate to be pregnant. I cannot explain the happiness of my pregnancy. It is an amazing feeling. I do not feel tired. I keep working, and I enjoy that. All the time, I feel that I will be a mother like other women. (P16, Rural)*

The importance of procreation after marriage in Nepal is a key social expectation for all married women. Failure to become pregnant can have negative experiences, as childless women are seen as not having fulfilled their role as a woman, which is in line with the concept of motherhood where women as a mother and caregivers present distinctive roles in society (Neyer and Bernardi, 2011). In such context, the feeling of pregnancy overcomes the challenges and hardship related to the day-to-day household work, and further research is needed to explore how the positive emotion of being a mother can support women's mental health during their pregnancy.

4.3.3 Role of women in family decision-making

The role of women in family decision-making, which includes activities or decisions related to day-to-day life as a pregnant woman or health service access, is highly restricted within the cultural norms of families in Nepal (Bhusal *et al*., 2011; Simkhada, Porter and van Teijlingen, 2011). Many women in this research raised concerns about their restricted decision-making

opportunities for themselves and their families. For example, Participant 8, although an educated woman living in urban areas, shared her understanding as

> *I cannot take big decisions, but I can take small decisions. If the decision is related to finance, then I cannot take that decision. But for small households, I can decide what to do. Even household thing which needs finance, I cannot decide myself. My in-laws and husband make that decision. I do not work and am dependent financially on my husband and in-laws, so I cannot decide for myself. I need to rely on them. I imagine If I was an independent working woman, then I could take decisions myself and I could fulfil the needs of my family too. I come for health check-ups, but I decide that after discussing it with my family, especially my husband. Generally, I say I have been asked for health check-ups on this date, and my husband says ok. They consider my decision too. (P8, Urban)*

Participant 8 got married at the age of 19, and within a year, she was pregnant. Her education (A level equivalent) at the time of the interview was incomplete. She was financially dependent on her husband and in-laws. Financial dependency is one of the key reasons why many women have very limited input in the decision-making within the family. The situation is more challenging for women living in rural areas. Participant 12, who lives in a rural area, explained how she makes decisions in the family and whether there would be any changes if she were an independent working woman. As Nepal is a deeply rooted patriarchal society, many women, particularly in rural parts of the country, think their husbands should be the decision-makers. Participant 12 explains

> *Decision-making is led by my husband. He tells me we should do this and that. If I feel good about that then I say yes. We both discuss but the involvement of my husband is more in decision making. Even if I was the main person to earn money, still I would discuss it with my husband and I would do it according to his agreement. I would not take any decision myself without his consent. I don't think there would be any difference in decision-making in my case although I was independent. My husband asks me if there are options, and we discuss and take our decisions. (P12, Rural)*

Although most pregnant women in this research reported that they do have an input in decision-making, all agreed that the final decision is always taken by husbands. Participant 15, who also lives in the rural area, further explains the grounded realities of Nepalese society, where the majority of women agree that men are the decision-makers and leaders of the family.

> *My husband makes all the decisions. I think it is our culture that women have to listen to their husbands. We have been practising this for a long time, and our older generation did the same. I feel it should be improved. In my case, my husband does not listen to me. Maybe some men listen to their wives. Generally, a man does not listen to his wife in the village area. It is hard to follow and listen to what the husband says. It is hard in many aspects of life. I have to ask him all the time and listen and follow his decisions. (P15, Rural)*

Participant 15 highlights that the role of men as decision-makers of the family is rooted in the sociocultural and traditional norms of patriarchal Nepalese society. The experience of women in this research is reflective of gender expectations, which shows the role of women in decision-making is often limited or none and this is set up for girls from their childhood (Blum, Mmari and Moreau, 2017). Although decision-making in day-to-day life and health check-ups is a significant factor in improving the mental well-being of pregnant women, it is often seen that women's decision-making is influenced by sociocultural and traditional norms. However, such norms can be controlled or mediated if women are educated and independent. For example, Participant 13 lives with her nuclear family in an urban area. She is self-employed, selling seasonal fresh fruits and vegetables grown in her back garden. She is financially independent now. She explains how difficult it was to live in an extended family and how her freedom and decision-making were controlled by family members (husband's family and relatives) within an extended family.

> *In my first pregnancy, I had to take support even to come hospital. I had to bring them (family members) to the hospital so that they could be there for decision-making or buying medicines. I was reluctant to share all my emotions with my family. I had the fear of what they (her family) will think about me. Before, I used to worry a lot. During this pregnancy, I am more confident because I am independent. Before, I used to live with an extended family, and I could not share my problems with my family. I used to hide my problems; I was not sure how to explain things to my family. I could not come for a health check-up myself; someone needed to accompany me to go for a health check-up. Now I do not need to ask permission for my health check-ups. (P13, Rural)*

The reflection of Participant 13 in the above quote demonstrates a clear distinction between a financially dependent pregnant woman and an independent pregnant woman. Financial independence empowers women and brings confidence in decision-making in their day-to-day lives, which is important for the mental wellbeing of pregnant women. A female activist, one of the key informants in this study, highlights

We have a patriarchal society. […….]. Women's decision is controlled by male members and female members of their family in some ways. Even if some women take the decision themselves, there is also patriarchal influence and practice hidden. If a husband earns money and gives that money to his wife, then the wife gets resources, and she is valued in the community. But sometimes, for that money, they experience violence as well. In the family, in-laws try to control the money, and that conflict creates gender violence. If the family is supportive towards the women, then women experience a better life. If not, they are further marginalised because they do not have the reach to the resources. They cannot spend money on what they want. They can't go for health-check-up when they need as their in-laws control them because their husband is not at home. It is hierarchical cultural norms. Recently women's employment has improved a little bit, few women are in employment now, and some of those women are taking some decisions themselves. (KII 6, Women activist)

The female activist highlights the norms of a patriarchal society regardless of who makes the decision, indicating even if females make the decision, there are hidden patriarchal practices in the decision-making process. The interplay between financial dependency and hierarchical powers within the family is always visible in most households in Nepal, and pregnant women often are at the receiving end of this experience. Another key informant, the husband of a current pregnant woman, explains this as

A woman from her childhood starts behaving like a girl in terms of following her parents' guidance, thinking about what society thinks about her, and how she can be a well-behaved girl in the family and society. In that environment, she pushes herself to be a disciplined girl, and she gets limited exposure in society, outside her home, and within her family. This societal norm restricts their experience of being independent despite their education, and the same scenario applies when they are pregnant. Pregnant women are not free from that cultural restriction. (KII 7, Husband of a currently pregnant woman)

The notion of behaving like a girl and following the decisions of husbands is rooted deeply in Nepalese society. Therefore, pregnant women often feel it is a norm that husbands are responsible for family decision-making, as this is what most women see while growing up in Nepalese society. A doctor, one of the key informants in this study, highlighted the need to educate family members about the rights and needs of pregnant women, which could potentially help and support the family members to empower the pregnant women to make their own decisions in relation to their pregnancy and wellbeing.

Patients do not understand anything and say, and please talk to my guardian. Then we need to talk to their guardian. Women do not involve themselves in this process

of decision-making. We need to focus on the family, especially in-laws, to promote the well-being of pregnant women. [……]. We need to create awareness among the family who makes the decision on behalf of these women in the family. The family should encourage to allow women to make decisions. (KII 3, Doctor)

Financial independence and education for both pregnant women and their family members are crucial if we aim to empower pregnant women to make independent decisions related to their health, which will also improve their mental wellbeing.

4.3.4 Adapting to the new environment after marriage

In Nepal, it is a normal cultural practice for women to move and live with their husband's families after marriage. Women, after marriage, are expected to adapt to the new environment by integrating into the new family and creating social bonds with all the new people where, in most cases, they are not known to each other. In addition, it is a societal expectation in Nepal that women become pregnant soon after marriage. In this process, women hardly get time to adapt to the new environment and often fail to explore the support in the community and opportunities to interact with other people in the community. This social norm, which can be placed in the macrosystem in Bronfenbrenner's Ecological theory, significantly impacts women's agency to mobilise the resources in their favour. The circumstances put them in a position where they are unaware of the available support required during pregnancy. For example, Participant 17 states

There is a huge difference between my first pregnancy and my second pregnancy. Before, during my first pregnancy, I was new to this community. I married and came to my husband's family. I was not familiar with this hospital and the place. Now I know this hospital. I know the place and the people. In our tradition, girls marry, become daughters-in-law, and have to move to a new place with their husbands. That is a completely new place. If I was in the same place where I was born and grew up, then I would be more confident. I know people there. I have family and relatives in that place. The societal position of the daughter-in-law is respected only in conversation, not in practice. (P17, Rural)

Participant 17 says she would be more confident in the society where she was born and grew up. But, after marriage, she had to leave her parents and relatives and move to a new place and adopt a new family, her husband's family. Time plays a crucial role in adapting to a new environment where women can integrate with the new family and create social bonding

among family members, relatives and wider society. If women fail to integrate and do not develop social bonding, they are less likely to receive social support (Fisher *et al*., 2012). Previous research has concluded that optimal mental health is found in societies with a strong system of social integration that allows people to be connected to each other (Horwitz, 2010). This is more important if women are pregnant, as access to health care services and additional support during pregnancy determines the positive or negative experience of pregnancy. When pregnant women in this study were asked about other services that could be available in the community, most women shared similar experiences. For example, Participant 8 said

> *I am not aware of any services or support in my area by the government or NGOs/INGOs. I recently moved to this place after getting married. How do I know how this society is or are there any support and services for me? This is a new place for me. My in-laws and husband know the people and this place better than I do. (P8, Urban)*

The challenges in knowing the new place often make these pregnant women further dependent on their husbands or family members. Participant 20 further explained the context of moving to a new place. According to her, a woman's role is to move with her husband, and the husband's role is to work outside and manage finances to feed the family.

> *I do not know many people in my area. I recently moved into this place. In the new place, it is different. We need to make friends here. In my old place, I was knowing everyone. In a new place, making new friends is difficult. I have been living here for the last 3 years. I still do not know many people who are living nearby. As it is our culture, women need to move to a new place to live with their husbands, and husbands do not need to move to a new place after getting married. Men work hard to feed a family. So, women follow them as they do not work outside and earn money. (P20, Urban)*

From the quotes above, it is evident that women have to move to a new place and live with their husbands' families and being dependent on their husbands' earnings makes them vulnerable to resource access, affecting their mental health and wellbeing.

4.3.5 Importance of pregnancy and giving birth to a baby

Becoming pregnant is seen as the next step after marriage for the majority of Nepalese women. The sociocultural norm within Nepalese society creates a situation where family members expect women to become pregnant soon after marriage. Most women are in

constant fear that if they do not conceive sooner, their position in the family and society will be considered negatively, putting them at risk of vulnerability. Participant 11 explains her understanding of why it is important for women to become pregnant.

> *Being pregnant is important after marriage for women. Many women are neglected because they cannot be pregnant. Many men marry other women and leave/abandon their first wives because they cannot have a baby together. We see that in our village. Many families are broken, and women are abandoned because they cannot be pregnant. That is why pregnancy and birth are important in our village area. Not all people understand the reason why women are not pregnant. They just blame women. Therefore, it is necessary to be pregnant and have children after marriage. (P11, Rural)*

Procreation is an important aspect of women's lives in the patriarchal society, and failure to conceive or give birth to a baby poses higher risks for women, in some cases leading to the breakdown of the relationships or not being respected within the family. This makes it more difficult for a woman to adapt to a new environment soon after the marriage as their priority is set on being pregnant and giving birth to a baby. Participant 13 shared her understanding as to why women should be pregnant and give birth to a baby.

> *I think after marriage, a woman should be a mother. [……]. After marriage, women must have at least one child. Then we make a family. I think, after marriage, all women wish to have a child or children. I think marriage is the starting point of a family, and the birth of a baby is the completion of the family for women. Marriage means connecting two families and making a new family, and that is completed with the birth of the baby. We will be old one day. At a young age, we may not think about the need for children. But when we are old, who will look after us? That is why we need a child. Other people, such as neighbours and relatives, can be with us in our good times, but they will not be there during our difficult times. We need our children to be with us in our difficult times. (P13, Rural)*

Pregnant women in this research highlighted that the need for children is important for the completeness of the family as well as associates it with the expectations of care responsibilities in older age. Participant 16, who tried to get pregnant for a long time, reiterated the importance of pregnancy after marriage. In the seventh year of her marriage, she is currently pregnant with the support of treatment called Intrauterine Insemination (IUI). She is in the last trimester of her pregnancy and shares the difficulties and challenges she faced because of the long gap between her marriage and pregnancy. According to her

After marriage, family is not complete until we give birth to a baby. That is the norm in our society. I do not know why women are expected to give birth to a baby after marriage. We always see a family with kids. This is our way of life in society. Women like me also wish to see the baby. It is a very happy feeling to see and give birth to a baby. Another important thing is the baby will be grown up in the future, and he/she will look after us in our old age. Otherwise, who will look after us? Where will we go in our old age when we are physically unable? I was struggling to be pregnant. But I never thought about adopting a baby. I wanted to have the feeling of being pregnant. I wanted to give birth to my baby. I would wait many more years, but I wanted to be pregnant. I wanted to have the experience of happiness of being pregnant. If I would adopt any baby, then I would not have had this experience of having pregnant. (P16, Rural)

Alongside the social norms of completeness of the family with children, many pregnant women also highlighted the importance of experiencing motherhood through conception and childbirth rather than adoption. The opportunity to have an experience of pregnancy among the women interviewed in this research was also important for promoting their mental health and wellbeing. In a key informant interview with the husband of a current pregnant woman, he explained his understanding of the importance of pregnancy for a woman and family as

In our society, the concept of a woman is like this – once a woman gives birth to a baby, she is acknowledged as a perfect woman and capable of making the family happy. To receive support from family, a woman must have a baby. For example, a woman is under so much stress, more than her husband, for not being able to give birth to a baby, even though her husband has a fertility problem. She lives in such an environment that constantly creates mental stress relating to pregnancy and the birth of a baby. As a mother, she gives more importance to having a baby, but a family also needs the baby. A father also needs a baby. I think women experience huge mental stress in family and society if she does not give birth to a baby. That's why a woman gives more importance to giving birth in our society. For example, people say she has been married for so many years and still has not given a baby to her family. People start saying she will not have a baby, so her husband should marry another woman. These are common in Nepalese society. That is why women give so much importance to giving birth to a baby as soon as they get married. (KII 7, Husband of current pregnant women)

Although everyone in a family expects children, the social pressure of being a perfect wife, daughter-in-law, and mother creates an extra stressful situation for women within Nepalese society. According to the Nepal Demographic and Health Survey 2022, 10% of currently married women aged 15–49 want a child soon (within the next two years), and 59.3% of them had a preference for a son in the next birth (MoHP Nepal, New ERA, Nepal and ICF, 2022). This evidence supports the narrative of women's experience of being pregnant and giving

birth, which is culturally rooted in Nepalese society. The social pressure does not stop with pregnancy but further extends when women are expected to give birth to a baby boy, which is presented below in the following sub-section.

4.3.6 Preference for a baby boy

In interviews with pregnant women and key informants, it was unanimously agreed that women, regardless of their socioeconomic status, were under pressure to give birth to a baby boy. For example, participant 1 is an undergraduate student, her husband is a businessman, and they normally live in the capital city of Nepal, though she is currently residing in her ancestral home in rural areas. She is from a comparatively better socioeconomic background than most other participants in this research. She explains how her family members living in a village still expect her to give birth to a baby boy.

> *Family/relatives, everyone expresses like I will have a baby boy, but they say whatever it is, we will be happy. It is an expectation that I will give birth to a baby boy. Everyone wishes that I will give birth to a baby boy. It would be good to have a baby boy for me too. I don't know what the gender of the newborn baby will be. If it is a girl, it is good, treated as "Laxmi" (goddess). If it's a boy, we might not go for another child, and in the village area, a boy is more important as he carries the family line. (P1, Rural)*

Although social expectations on the preference of a baby boy are rooted in the traditional norm in most families within Nepalese society, there is a changing pattern where women/families from better socioeconomic backgrounds living in urban areas are welcoming and receptive to the arrival of a baby girl. However, they still expect to give birth to a baby boy, as this means there is someone in the next generation who can carry a family line, which is very important for the majority of Nepalese family. Many women, especially those living in urban areas, are reluctant to have a second child if the first child is a boy. However, if the first child is a baby girl, then in most cases, they are looking for a second pregnancy expecting to give birth to a baby boy. Participant 18 disclosed her feelings as '*I wish for one boy in my family. I already have a girl'' (P18, Urban).* If women already have a boy as a first child, then they are not much concerned about the gender of the newborn baby in their second pregnancy. Having a baby girl seems to be the second choice for women. Participant 12, who

is pregnant with her second child and has a boy as her first child, is not worried about the gender of the newborn. She explains

> *I already have a baby boy. If I had a girl, then I would wish to have a baby boy this time. In family and society, a baby boy is expected as the first baby' (P12, Rural).*

Participant 15, who lives in a rural village with an extended family, provides another perspective on why mothers or family members prefer to have a baby boy rather than a girl. She describes

> *I wish to have a baby boy. My family also wishes to have a baby boy. It will be good for me if I have a baby boy. Girl life is very difficult. Girls face many more problems than boys. I do not want my baby girl to get hard times in the future. My husband also wants a baby boy. He will be happy if I give birth to a baby boy. If I have a baby boy in this pregnancy, I will not plan another baby. That is why I want a baby boy. If I have a baby girl, I have to plan another baby, which I do not want. (P15, Rural)*

The above participant is pregnant with her first child at the age of 38 years, and her quotes show the urgency of delivering a baby boy to meet familial and social expectations. She asserts that the failure to deliver a baby boy in this instance means she will have to plan another pregnancy, although she does not want to be pregnant again, to meet the expectations of her husband and family. She also indicates, possibly from her life experiences, the realities of girls/women in the Nepalese patriarchal society, which is very challenging, and she does not want her baby girl to go through those difficulties. Women are under so much pressure to give birth to a baby boy to make their family happy. Making family happy and being valued in society could be the reason why women themselves want to have a baby boy. The finding of this research on the gender preference of unborn babies supports the previous study conducted by Mahato *et al.* (2018) in Nepal. Women in this research expressed that their families and society expect them to give birth to a baby boy, but they did not directly discuss if there will be any consequences if they do not have a son. They all said they may plan another baby if they have a girl as their first child. However, a Nurse who was interviewed as a key informant shared the scenario and consequences when pregnant women give birth to a baby girl.

> *Sometimes, a woman complains that her husband married another woman because she could not give birth to a baby boy. We see the 6th, and 7th gravida because they want a baby boy. Once, I have seen 11th gravida. The reason for pregnancy was to*

give birth to a baby boy. If women give birth to a baby girl, then they may not be supported by the family. They say it is the same for me, boy or girl, but they celebrate differently if they have a baby boy. Still, that practice exists in our society. I don't know what else we can do to support them. (KII 1, Nurse 1)

The nurse highlighted the realities of many women who are expected to be pregnant again and again until they give birth to a baby boy. The desire or willingness of the woman, whether to be pregnant or not, is not important in the context of making the family happy and meeting the expectations of society. Another nurse working in the hospital supported pregnant women's experience in this research and indicated that the preference for baby boys is deeply rooted in Nepalese society. She shares this from her experience of working in the hospital.

In one case, the family told her to give birth to a baby boy. It was her first baby. She asked about the gender of the baby once the baby's head came out. We said we should be happy whatever gender is. When we said it was a baby girl, she was so panicking. When we asked her why she was reacting like that then, she said the family will misbehave with her because it's a baby girl. We taught her about breastfeeding. Despite that, she did not breastfeed the baby well. She was very scared because her mother-in-law and husband said to bring a baby boy. Then we called her husband and explained not to discriminate against a baby girl. We kept her in the hospital for two days because she was not responding well to the baby. Later, she started looking after the baby. Some women ask the gender of the baby as soon as they hear the baby cry. (KII 2, Nurse 2)

The nurse highlighted the fear pregnant women experience from the family, which makes pregnant women more vulnerable to postnatal depression since they are under pressure to deliver a baby boy (Gao, Chan, and Mao, 2009). The stressful situation created by the expectations of a baby boy leads to a scenario where the mother is not able to accept the baby girl after the delivery because of the fear of discrimination and violence they might experience when they return to family from the hospital, and therefore they start neglecting the newborn baby girl by not willing to breastfeed or provide the care that is necessary for the newborn. This is in line with research in India (Fledderjohann, *et al*., 2014), where similar sociocultural and patriarchal norms are practised. There is also evidence that baby boys are breastfed for a longer duration than baby girls (Barcellos, Carvalho and Lleras-Muney, 2014). To mitigate the expectations of the family, women often do not like to reveal early that they are pregnant. Otherwise, the family conversation revolves around the expectation of

delivering a baby boy, which can put pregnant women under pressure from the early days of pregnancy, affecting their mental health and wellbeing throughout the pregnancy.

4.3.7 Pregnancy is private: reluctance to reveal the news

Women are expected to celebrate their pregnancy, but within Nepalese society, pregnant women, in most cases, feel awkward or shy to share the news about their pregnancy. Participant 15 explains

> *I do not know why we feel shy talking about pregnancy. I feel I do not know what to say and how to say it. It is a bit awkward to talk about pregnancy with others. This is the norm in our community. Women do not talk about their pregnancies openly. People will say how shameless a woman is this if I talk about my pregnancy to everyone. When it comes to talking about pregnancy, I feel what to talk about. I feel how to ask for any information. It is our cultural norm. In a village, people start talking that I ask this and that about pregnancy. Maybe pregnancy is private, so we do not share it with everyone. (P15, Rural)*

Lack of adequate education about pregnancy, coupled with cultural taboos associated with the discussion of sexual and reproductive health, including pregnancy, is common within Nepalese society. The feeling of shyness and awkwardness when discussing pregnancy and related issues are associated with the wider sociocultural norms of the Nepalese society, in which the majority of women are concerned about what others in the society will think about them rather than what they think or feel. Lack of knowledge and understanding of pregnancy, especially for those who are first-time pregnant, makes it more difficult for them to start the conversation, as revealing news of the pregnancy to others is not the norm in the community. However, lack of conversation about pregnancy can affect the service access for pregnant women. Pregnant 13, who is pregnant for the second time and lives in an urban area, explains

> *In our society, women want to hide their pregnancy. They feel shy about it. I experienced fear and shyness during my first pregnancy. I was reluctant to talk to health professionals during my first pregnancy. I was not willing to reveal to pregnancy to neighbours and relatives. I do not know why pregnancy is associated with shyness. Pregnancy is not wrong, but women are not open to sharing their experiences with others. Instead of celebrating pregnancy, we hide it. Women hesitate to share pregnancy news with family, relatives, and society. I do not know why women cannot talk about their pregnancy. I also hesitated to talk about my pregnancy with family and others. But in the second pregnancy, I am ok. I do not know why we are like that. (P13, Rural)*

Although most women highlighted that they were shy and felt awkward talking about their pregnancy, none of the participants in this research provided clear insights to understand the reason behind this. They mainly refer to it as a cultural norm, especially in their first pregnancy, but as they grow as a woman in society, they feel more comfortable discussing their pregnancy. However, the above participant also highlighted the challenges associated with access to services if they are not open about discussing their pregnancy. Other research has suggested that if pregnancy is concealed and avoided to be revealed on time, then this may result in failure to access healthcare on time (Stokes, *et al*., 2008; Matsuoka, *et al*., 2010), which could lead to catastrophic health outcomes during pregnancy, including maternal and neonatal deaths. Besides health care access, failure to reveal pregnancy can also create a situation where pregnant women fail to receive adequate social support from family, relatives and the society in which they live. Participant 1 is an undergraduate student, pregnant with her first child and is in the second trimester of her pregnancy. She used to live in the capital city of the country but now has come to live with her husband's family (in-laws) in a rural village. She asserts she felt shy to reveal and share her pregnancy news and was reluctant to come to her mother's house initially as she felt uncomfortable sharing the news.

> *I was completely clueless about what to do and what not to do. I felt shy. I have also not shared this news with my friends though some of my friends already have kids. I have not shared it with many people at that time. It is just too awkward in this situation. I don't know why I feel such a way. My husband told me that if I wanted, I could go to my parents' house and stay there. But for me, it was awkward to be with my mother and brothers during pregnancy. At last, I went with my aunt and that's how my mother came to know about my pregnancy and now I am living with her (P1, Rural)*

Women share their pregnancy news with a very limited number of people with whom they feel close and confident. Lack of open conversation about pregnancy may restrict women from getting access to the social and professional support they need during pregnancy, especially in the early phase of pregnancy. Moreover, a lack of conversation about pregnancy can also create stressful situations for pregnant women since they are not aware of the support they could receive during pregnancy, which has the potential to affect their mental health and wellbeing. The shyness in discussing pregnancy may also be related to the unplanned nature of the pregnancy, which is explained in the next section.

4.3.8 Unplanned pregnancy accepted as a norm

Out of 20, 9 participants (45% pregnant women) stated that their current pregnancy was unplanned in qualitative study, which supports the similar finding of the research by Bastola *et al*. (2015). According to the Nepal Demographic Health Survey, only 57% of currently married women are using contraceptives and accessing family planning services (MoHP Nepal, New ERA, Nepal and ICF, 2022). This figure justifies why about half of the pregnancies were unplanned in this research. All pregnant women in this research with unplanned pregnancies have their own story and context to explain. Participant 11 is pregnant with her third child at the age of 40. She expresses that child as 'a gift of God' and, therefore, is happy with her pregnancy, although it is unplanned.

> *I already have the kids I wanted. Now this baby is a gift of God, I did not wish to have this pregnancy, but it came into my life. I feel God decided this pregnancy to happen in my life. My husband says we need to take it as a blessing from God. I also think like that. I was not pregnant for so many years without family planning, and this pregnancy came out as an unexpected incident. So, I am not sad or so happy. We are accepting this pregnancy. (P11, Rural)*

The first and second pregnancy of the above participant was in her 20s. Despite not using family planning methods, she did not become pregnant, but now she is pregnant in her 40s. She associates this with her cultural/religious belief, where anything that happens is the will of God or a blessing from God. Nepalese women's belief about pregnancy and childbirth is deeply rooted in the religious sentiments of the conservative Nepalese society. Moreover, in the patriarchal Nepalese society, the final decision is often taken by the husband. Participant 20, who was married at the age of 13 and had first pregnancy at the age of 16, is pregnant for the fourth time at the age of 31. She is in the second trimester of her current pregnancy and explains why she is keeping this unwanted pregnancy.

> *We did not plan. This is an unwanted pregnancy. When I asked about abortion, I saw his (husband) sad face. So, I also thought about keeping this baby. When I said I will keep this baby, then he was very happy now. (P20, Urban)*

The happiness of the family, especially the husband, is key for many of the women within Nepalese society. Although this is natural in any marriage relationship, as discussed in section 4.3.3, the role of women in family decision-making is very limited. Therefore, it is always an easier option to accept the decision of the husband. Acceptance of the circumstances as a

way of coping strategies could be the way for many of these women, as they do not see a way out of it (Folkman and Lazarus, 1985). Also, in many cases, it does not matter whether the pregnancy is planned or not, many women feel procreation is a natural phenomenon following a loving relationship, and therefore, the majority of husband and wife mutually agree with continuing the pregnancy. Participant 7 shares her experiences as

> *We (she and her husband) were talking about not planning a baby now, but my husband came from abroad and I became pregnant. So, it is ok now. We do not have any problem. My husband works in the labour market in a foreign country, Qatar (a middle east country). He came home for 2 months' holiday. The coronavirus lockdown started just 2 days before he was scheduled to go back. So, he is still at home, and I am pregnant. (P7, Rural)*

The above quote indicates the celebration of their relationship and enjoyment as a result of pregnancy rather than thinking about whether it was planned or unplanned. In some cases, an unplanned pregnancy can result in a situation where women are unaware of their pregnancy until a few months, which may pose a risk to the health and well-being of the pregnant woman and the unborn child. Participant 12 shares her experience as

> *I experienced vomiting and unwillingness to eat food for the first 2 months of pregnancy. I was thinking about why this is happening as I am a healthy person, so I should not have anything like that. I did not realise I was pregnant. I went for a health check-up then the nurses told me I was pregnant. Now it is ok for me. (P12, Rural)*

The majority of the participants in this research agreed that unplanned pregnancy is a result of healthy marriage relationships, which are socially expected and accepted. Therefore, many were not worried about terminating the pregnancy. However, in some cases, this can be a result of sexual violence. The situation for pregnant women in such cases is more complicated. Participant 9 was a victim of sexual assault and is now in her third trimester of pregnancy at the age of 45. She is already the mother of 5 shared her experiences of this unplanned pregnancy as

> *A man who lives in the same village raped me when I was unconscious. I have been taking epilepsy medicine for the last 15 years. My medicine was finished at that time, and I was unconscious because of a seizure. […….]. The man who raped me said that he will bring medicine for me so that I will not be pregnant. He said, 'I should not say anything about this to anybody. He threatened me. […….]. He did*

not give me any medicine to stop this pregnancy, and it was too late to stop this pregnancy. (P9, Rural)

Participant 9 tells her story of how she became a victim of rape. Her husband worked and lived abroad, which is common in Nepal. She used to live with her kids in the village before this incident, but now she has to leave the village, as she is seen as a characterless woman in the society, rather than a rape victim. Her narrative explains the social complexities of women's position and risks associated with gender vulnerabilities within Nepalese society, especially when husbands are not there to protect them. According to the nurse, who was a key informant in this research, there are multiple issues that is associated with unplanned pregnancies. She describes

We have seen many unplanned pregnancies. Some women come to safe abortion services. They say it was unplanned. They did not know that they were pregnant for a few months. [.....]. Sometimes they are not aware of family planning services and end up with pregnancy and abortion. [.....]. Some pregnant women come through police support, usually pregnancy without the consent of women. I feel these women are scared and hopeless. [.....]. They do not feel comfortable sharing the incident. (KII2, Nurse 2)

Lack of awareness about family planning services was one of the major issues, which might be the case in Participants 7, 9 and 11. Sexual assault is another major issue in Nepal, many of which remain unreported. The experience of a nurse in this research clearly indicates many such scenarios that she has encountered in her professional work. The majority of unplanned pregnancies were not of any concern for women in this research, as they were happy to accept the pregnancy. However, a previous study from a developing country found that women who reported unwanted pregnancy were almost twice as likely to experience depressive symptoms compared to the women who stated their pregnancy was wanted/planned (Dibaba, Fantahun and Hindin, 2013).

4.4 Conclusion

This chapter presented the findings from the in-depth interviews with the pregnant women and key informants conducted in the first phase of the data collection. The global themes in this chapter were used a way to answer the research questions of this PhD study. The first global theme focused on the support women received during their pregnancy and how this

contributed towards their poor mental health experiences. From the findings, there was mixed opinion about the support they receive from the family, relatives and within the community, indicating the socioeconomic position of the women determines how and what support they receive during the pregnancy. However, family support, particularly from the husband, was noted to be the most positive and important support women would like to receive during their pregnancy. No support from NGOs or INGOs was received by any of the participants in this research, and limited or no organised support was available in the community. This chapter also presented the context in which women may have positive experiences with a social life and interaction with others that may work as a supportive mechanism during pregnancy. From an ecological perspective, the support from family, relatives, and neighbours, alongside support from NGOs/INGOs and organised and structured support within the community, and the national policy of the country to support working mothers are placed within different layers of the ecological framework, representing both the micro-, exo-, and macro-system.

The second Global theme focused on presenting the findings around the availability and accessibility of healthcare services and how the challenges with access could affect the mental health of pregnant women. Covid-19 had a significant impact on women's mental health, especially for those living in rural areas and from lower socioeconomic backgrounds, as they were not able to access adequate health services due to the lockdown and challenges of managing COVID means, as well as pregnant women were not always prioritised. Lack of adequate communication between health professionals and pregnant women was noted to contribute towards poor healthcare services. Safe Motherhood Programme, which aims to prove maternal health, does not seem to be as effective as it could be. The findings of this chapter link the fact that there were some barriers that discouraged women from accessing health services, such as travel and resource constraints in government hospitals. Additionally, the socioeconomic burden associated with the costs of transportation to access health services, accommodation in town while visiting hospitals and other pregnancy-related costs contributed towards mental distress among pregnant women in this research. The findings highlighted that multiple factors affecting the availability and accessibility of maternal health services aggregated together to impact their overall mental health experiences.

Global theme three presented the findings related to the socioeconomic and cultural context experienced by the women, indicating their positioning in the Nepalese society affecting their mental health and wellbeing. The findings suggested that women's day-to-day life, which is overburdened with excessive household work, leads them to be tired and exhausted and puts them at risk of poor mental health and wellbeing. In addition, the findings highlighted women's challenges with decision-making during pregnancy. The findings also presented the sociocultural norms of the Nepalese patriarchal society, where women were expected to be pregnant soon after marriage and give birth to a baby boy. The cultural norms of being reluctant to reveal pregnancy news may also put them at risk of missing early health check-ups and support-seeking behaviours that could have a significant impact on the health and well-being of many women. The findings also suggested that unplanned pregnancy was acceptable for women and families in most cases. The findings highlighted that the overall mental health experiences of pregnant women in this research are affected or influenced by multiple factors interacting with each other at the same time exacerbating their poor experiences and marginalising them.

Although the findings from the qualitative interviews are presented under the three global themes, the findings also demonstrated that those themes and sub-themes interrelated with each other and intersects at various levels affecting the experiences of pregnant women towards their mental health and wellbeing. For example, if the sociocultural norms would not restrict or discriminate against women in their day-to-day life, then they are more likely to receive support from their husbands and make their own decisions related to their mental health. This could eventually result in better access to health care despite living in a rural area improving overall health experiences of pregnant women, including their mental health. Similarly, poor mental health experiences of women during pregnancy could be exacerbated due to lack of inadequate support and poor accessibility of maternal health services because of the sociocultural and economic constraints. These interrelationships are demonstrated and explained in detail in the discussion chapter with the use of intersectionality to discuss the various factors within the multi-layer of ecological theory.

Chapter Five: Findings of the survey

This chapter presents findings from the quantitative survey conducted among 128 pregnant women. From the methodological sequence, the survey was developed (see section 3.5) and conducted after completing the in-depth interviews. The survey findings provide clarity and further knowledge to support the findings from the qualitative in-depth interviews (see chapter 4) towards answering the research questions of this PhD study (see section 2.3). The findings from the survey are presented in this chapter in three sections. The first section covers the demographic information of the participants. The second section presents maternal health information, and the third section analyses the mental wellbeing of pregnant women, indicating the risk of symptoms of depression or poor mental health. The third section also observes and presents the association of depressive symptoms with women's demographic characteristics and maternal health information.

5.1 Sociodemographic characteristics of the survey participants

The first part of the survey recorded the demographic information of the participants, such as age of the participants, education status, marital status, geographical location of participants' residence, living arrangement (extended or nuclear family), employment status of participants and their husbands, the distance of the nearest health services from their residence, and means of transport to reach the nearest health facility. The demographic characteristics captured in the survey are presented in Table 5.1.

A total of 128 pregnant women completed the survey, and all the participants were married. The majority of participants (64.9%) in the survey were aged 21-29 years, with less than one-fifth (17.2%) were aged between 18 to 20 years, and just above a quarter (26.6%) were aged between 21 to 24 years. In the sociocultural practices of Nepal, childbearing is seen within the marriage relationships, which means the marriages of 17.2% of the women aged 18-20 years in this study who were pregnant at the time of data collection were married before the age of 20, which is against the law in Nepal (The National Civil (Code) Act, 2017). When looking at the ground reality, many women are married under the age of 20 years.

Table 5.1: Demographic characteristics of survey participants

Variables		Frequency	Percentage
Age of participant (years)	18-20	22	17.2
	21-24	34	26.6
	25-29	49	38.3
	30-34	18	14.1
	35-39	5	3.9
Education status of the participants	Primary (1-5 years in school)	7	5.5
	Lower secondary (6-8 years in school)	16	12.5
	Higher secondary (9-10 years in school)	23	18.0
	School Leaving Certificate (SLC, completing 10 years in school)	20	15.6
	Intermediate and equivalent (2-3 years in study after SLC)	48	37.5
	Graduate and equivalent	12	9.4
	Postgraduate and equivalent or above	2	1.6
Marital status of the participants	Married	128	100.0
Participant's place of residence	Rural	91	71.1
	Urban	37	28.9
Living arrangement	Extended family	94	73.4
	Nuclear family	34	26.6
Employment	No	108	84.4
	Yes	20	15.6
Husband's employment	No	56	43.8
	Yes	72	56.3
Distance to reach the nearest health facility	<30min	63	49.2
	30-60min	44	34.4
	>60min	21	16.4
Means of transportation used to reach the health facility	Walking	115	89.8
	Bust/taxi	13	10.2

From the data of this survey, the pregnancy age trend suggests that with the increasing age (30 and over), women are less likely to be pregnant as the data presented just above half a quarter (14.1%) were aged 30 to 34 years, and only very few (3.9%) were aged 35 to 39 years and no participants were aged 40. In terms of education, 5.5% of women had primary education (1-5 years in school), which is the lowest level of education recorded in the survey, and 12.5% of women had lower secondary education (6-8 years in school), 18.0% women had higher secondary education (9-10 years in school), 15.6% of the women completed School Leaving Certificate (SLC, completing ten years in school), the majority of the women, 37.5%

had intermediate and equivalent education (2-3 years after SLC), while the very limited percentage of women had Graduate (9.4%) and Postgraduate (1.6%) or equivalent. This data cannot be compared with national census data or regional data of the census because the census data gives an overall education level of women not specific to pregnant women. For example, according to the Government of Nepal Central Bureau of Statistics (NSO, 2021), around 21% of women had lower secondary education in the Ilam district, which is almost double the figure of data stating the percentage of lower secondary education among pregnant women. The reason could be the recent movement in education, which means more young girls are in education. Lower education and poor mental health seem to be significantly associated, as noted in the Chi-square test, discussed below in the third section (See section 5.3) of this chapter. A study with a similar level of education among women participants in Ghana also found a lower level of education is associated with a greater risk of severe psychological distress among women compared to higher education (Sipsma *et al*., 2013)

With regards to the geographical location of the residence of the participants, more than two-thirds of the women lived in rural areas (71%) compared to urban areas (29%). The reason could be because the data collection was in one of the hilly district hospitals of Nepal, where the majority of women come for health check-ups when the health services are unavailable in their rural village areas. That means an increasing number of women from rural areas are likely to access maternal health services in this hospital, which is reflected in the data. Women were also asked about the time required to commute to the nearest health services as the government of Nepal aims to provide primary health services at the nearest health facility within 30 minutes of their place of residence by walking or using any means of transportation. In the survey, only about half of the women (49.2%) had access to the nearest health facility within 30 minutes, while about one-third had to commute 30 to 60 minutes. 1 in 6 women (16.4%) had to commute even further, more than 60 minutes, to access the nearest health service. A nationwide health survey data collected in 2016 found that 29% of women reached the health facility within 30 minutes and reported that travel time to reach the nearest health facility varies within the country depending on the geographical region such as Plain, Hill, and Mountain (Ministry of Health [Nepal], New ERA, and ICF, 2017). As this research was carried out in a rural hilly area of the country (Map1: presenting study site in Nepal), women who

lived in the town of Ilam district had good access to the hospital, while many women who lived in nearby rural village areas where public transport was not easily accessible found it took longer time to reach the health facility. In this survey, about 90% of women used to walk to reach the nearest health services compared to only around 10% of women who used bus/taxi. This shows the limited availability of much-needed transport services for pregnant women. Geographic accessibility is seen as one of the major barriers to accessing health care in the findings of this research, and other research argues the same (Garchitorena *et al*., 2021).

Financial constraint was raised in several interviews, and therefore, the survey questionnaire included whether the women and their husbands were in employment or not in order to understand the source of income for the family. From women's perspectives in this survey, it was noted that if women and men were working outside the house or on farmland of other people and the work generated income, then the women and men were counted as employed. A large proportion of women were unemployed (84.4%) at the time of data collection. About 56% of the women stated their husbands were in employment, compared to about 44% of the women who stated their husbands were unemployed. The cross-tabulation data analysis (See Table 5.3) presents around half of the women, who were unemployed had no source of income (49.1%, 53 out of 108), which means neither pregnant women nor their husbands were in employment. Although these women's perceptions meant they had no family income, they relied on working on their farmland, growing crops, food and vegetables for survival, and raising cattle, which were used to source income for livelihood. The women's perception and understanding of employment do not align with the recent Nepal Demographic and Health Survey 2022, where 82% of men and 68% of women in rural areas of Nepal are in employment that includes not paid agricultural work (MoH Nepal, New ERA, and ICF, 2022). Most importantly, in the previous research in Nepal, it was noted that if a husband is unemployed, then women are at risk of depression during pregnancy (Chalise, *et al*., 2022), which raises serious concern as the majority of women reported that their husbands were unemployed at the time of data collection. Only a few percentages of women were in employment during the data collection (15.6%), and the data also found that 90% of women who were in employment completed more than 10 years of study in the school (above

SLC). This indicates that if women were more educated, they were likely to generate income for their families. Looking at the living arrangement, just above one-fourth of women (26.6%) were living in a nuclear family structure compared to the majority of the women (73.4%) living in an extended family structure. This study also found an indication that women who live in nuclear family structure are more likely to receive the most support from their husband (see section 5.3).

5.2 Maternal health information

In the second part of the survey, maternal health-related information such as number of pregnancies, age of the first pregnancy, number of live children, experience of unsuccessful pregnancy, planned or unplanned pregnancy, stage of pregnancy (trimester), expectation of giving birth to a baby boy, number of ANC visits, awareness of Safe Motherhood Programme/maternal incentive programme (locally known as Aama Surakshya Karyakram), satisfaction with health services and health care professionals, and the experience of support during the pregnancy were recorded. These findings are presented in Table 5.2

Around 40% of participants reported that they were aged 20 or below when they got pregnant for the first time (See Table 5.2). According to the National Civil (Code) Act, 2017, part 3-family law of Nepal states both males and females must reach the age of 20 years to get married (The National Civil (Code) Act, 2017). The data from this PhD study raises concerns about the implementation of laws within low- and middle-income countries such as Nepal and the impact of early marriage on mental health and well-being, which is discussed in the discussion chapter below. The Demographic and Health Survey 2022 also presented similar results in which 14% of women were pregnant between the ages of 15 and 19 years and used the term 'teenage pregnancy' (MoH Nepal, New ERA, and ICF, 2022). The mean age of first pregnancy among the participants was found to be 21.06 years (SD ± 2.93 years). Looking at the participants who were interviewed in this research, their demographic information (Table 4.1) shows 6 out of 20 (30%) participants had experienced pregnancy at the age of 20 and under, and 9 out of 20 (45%) participants were at aged 20 and under at the age of marriage. This indicates pregnancy at an early age is common, according to the findings of this research. Pregnant women under the age of 18 were excluded from this research for ethical reasons. If

future research includes pregnant women under the age of 18 years, then data on early pregnancy can be much more extensive and detailed.

Table 5.2: Maternal health related information from the survey

Variables		Frequency	Percentage
Age of first pregnancy (years)	Under 18	4	3.1
	18-20	46	35.9
	21-24	43	33.6
	25-29	28	21.9
	30-34	7	5.5
Mean age (years) of first pregnancy (Mean ± SD)	21.06 ± 2.93	-	-
Gravida (number of pregnancies)	Primigravida (1st pregnancy)	63	49.2
	Multigravida	65	50.8
Have at least one child before the current pregnancy	Yes	53	41.4
	No	75	58.6
Experience of unsuccessful pregnancy (miscarriage, IUFD, stillbirth) in past (women with at least one children or no live children)	Yes	27	21.1
	No	101	78.9
Sex of previous last child (n=53)	Male	20	37.7
	Female	33	62.3
Planned pregnancy	Yes	120	93.8
	No	8	6.3
Stage of pregnancy during the interview	First Trimester	13	10.2
	Second Trimester	24	18.8
	Third trimester	59	46.1
	More than nine months or post-dated	32	25
Women expected to give birth to a baby boy	No	106	82.8
	Yes	22	17.2
ANC visit during the current pregnancy	One	10	7.8
	Two times	18	14.1
	Three times	33	25.8
	Four times and more	67	52.4
Aware about Aama Surakshya Karyakram (Safe Motherhood Programme)	Yes	14	10.9
	No	89	69.5
	A little	25	19.5
Health service satisfaction	Yes	114	89.1
	No	14	10.9
Satisfaction with healthcare professionals	Yes	108	84.4
	No	20	15.6
Health concerns during pregnancy	Yes	128	100
Experience of support from family	Yes	128	100
Accessed help from	Husband	128	100
	Parents	128	100
	Health Professionals	128	100
	In-laws	127	99.2
	Relatives	121	94.5
	Neighbours	120	93.8

	Others	1	0.8
Received the most support during pregnancy	Husband	97	75.8
	Mother-in-law	29	22.7
	Sister	1	8
	Sister-in-law	1	8
Depressive symptoms (risk of depression) among participants	No risk of postnatal depression (EPDS score <10)	92	71.9
	Risk of postnatal depression (EPDS score ≥ 10)	36	28.1
EPDS: Edinburgh Postnatal Depression Scale; IUFD: Intrauterine foetal demise; SD: Standard Deviation.			

The survey questionnaires with the narrative responses provided varied insights. When asked about health concerns during pregnancy, all the participants in this research responded 'yes'. Some of the common health concerns shared by them were mode of delivery (caesarean or normal), outcome of pregnancy, complications related to the pregnancy, concerns about newborn care and issues related to referral to other health centres. In another open survey questionnaire, when asked if they were supported by their family members, all the participants in this survey responded 'yes'. The most common support they received were in related to helping with household chores, taking them to hospital for ANC check-ups, providing time to rest, and providing healthy food. In another open question, when asked about what support they needed during the pregnancy, the narrative responses included physical support, emotional support, mental support, financial support, health education regarding pregnancy and counselling. These responses indicated and are in line with the functional dimensions of social support highlighted by Norwood (1996).

Table 5.3: Crosstabulation between demographic characteristics and maternal health information of the participants

Participant employment status	Husband employment status	
	No (n/%)	Yes (n/%)
No	53 (49.1)	55(50.9)
Yes	3(15)	17(85)
Participant employment status	Education level	
	SLC and below (n/%)	Above SLC (n/%)
No	64(59.3)	44(40.7)
Yes	2(10)	18(90)
Participant age at first pregnancy	Education level	
	SLC and below (n/%)	Above SLC (n/%)

20 years and below	31(62)	19(38)
More than 20 years	35(44.9)	43(55.1)
Participant number of pregnancies	Experience of unsuccessful pregnancies	
	Yes (n/%)	NO (n/%)
One	0(0)	63(100)
Two and more	27(41.5)	38(58.5)
Distance to the nearest hospital	Place of residence	
	Rural (n/%)	Urban (n/%)
Less than 3o minutes	47(74.6)	16(25.4)
30 minutes and more	44(67.7)	21(32.3)

Means of transportation used to reach the nearest health facility	Stage of pregnancy			
	First Trimester (n/%)	Second Trimester (n/%)	Third Trimester (n/%)	Post-dated (n/%)
Bus/taxi	1(7.7)	0(0)	8(61.5)	4(30.8)
Walking	12(10.4)	24(20.5)	51(44.3)	28(24.3)

Women prefer to give birth to a baby boy	Gender of the last child	
	Daughter (n/%)	Son (n/%)
No	17(47.2)	19(52.8)
Yes	16(94.1)	1(5.9)

Post-dated pregnancy	Place of residence	
	Rural (n/%)	Urban (n/%)
Normal due date	67(69.8)	29(30.2)
Post-dated pregnancy	24(75)	8(25)

Post-dated pregnancy	Complete 4 ANC visits	
	4ANC completed (n/%)	Less than 4 ANC (n/%)
Normal due date	51(53.1)	45(46.9)
Post-dated pregnancy	16(50.0)	16(50)

Participant living arrangement	The most support received	
	Husband (n/%)	Other than the husband (n/%)
Extended family	67(71.3)	27(28.7)
Nuclear family	30(88.2)	4(11.8)

The most support received from	At risk of depression	
	No risk (n/%)	At risk of EPDS (n/%)

Husband	76 (78.4)	21 (21.6)
Other than husband	16 (51.6)	15 (48.4)

The cross-tabulation data analysis (See Table 5.3) shows that 62% of pregnant at the age of 20 years and below had an education level below SLC level (10^{th} grade and below). By contrast, 55% of women had an education level of more than 10 years in education (above SLC) among those who were pregnant at an age above 20 years. These findings suggest that an increase in the level of education may increase the age of the first pregnancy and vice-versa, which also supports the argument that girls' education is needed to delay the age of pregnancy, especially in the LMICs (Marphatia, *et al*., 2020). According to a recent health survey in Nepal, 14% of women aged 15–19 had experienced pregnancy, and the women with no education are more likely to be pregnant earlier than those with at least some secondary education (MoHP Nepal, New ERA, Nepal and ICF, 2022). This suggests the intersection of education, age of marriage and pregnancy, which is evident from the findings in this PhD research.

1 in 2 participants in the survey reported being first-time pregnant (primigravida), with around 41% reported to be having children before this pregnancy, while 1 in 5 (about 21%) pregnant women had experienced unsuccessful pregnancies in the past, which included miscarriage, abortion, intrauterine foetal death-IUFD, and stillbirth. This figure is not unusual as other studies also found a similar percentage of women experiencing unsuccessful pregnancies in the past. For example, evidence from a retrospective analysis in Israel found 18.5% of the women had one or more miscarriages in their first trimester before they gave their first live birth, and about half of the parous women (43%) reported one or more miscarriages in their first trimester (Cohain, Buxbaum and Mankuta, 2017).

In this survey, more than half (51%) of women commute more than 30 minutes to reach their nearest health facilities for antenatal care visits, and more than two-thirds (71%) of women were residents of rural areas (See Table 5.1). The government of Nepal aimed to provide the nearest health services within the reach of 30 minutes (including walking or use of any mode of transport). The cross-tabulation data analysis (See Table 5.3) of those living in rural or urban areas to the distance of the nearest hospital reported that more than two-thirds (68%) of

participants in the rural region took more than 30 minutes to reach the nearest health facility whereas this percentage was relatively lower (32%) in the urban region. This data provides evidence of inequality in access to health services based on the geographical location of the place of residence. The geographical location of participants' residences and the availability of public transport facilities were significant concerns raised for health services access by pregnant women and key informants in the qualitative findings, and it summarises that these factors may discourage women from seeking health services when needed. In terms of means of transport used by these women, about 91% of pregnant women from rural regions stated that they walk to reach the nearest health facility for more than 30 minutes. In addition, around two-thirds (68.6%) of women who were in their third trimester or post-dated were used to walk to reach the nearest health facilities for ANC visits (see Table 5.3). Again, this situation may discourage women from commuting to access health facilities, especially those who do not have anybody to support them on the journey. The evidence from previous research found that women who live within 30 minutes distance from the ANC are more likely to attend the service than those who live a far distance that takes more than 30 minutes to research by any means of transport (Aryal *et al*., 2019).

The gender preference of unborn babies was one of the major issues discussed in the qualitative findings of this research and other research in the Nepalese and South Asian context in the literature review chapter. In qualitative interviews, only a few women reported that they preferred to have a baby boy, but among the participants in this survey, around 94% of women whose last live child was female stated that they were expected to give birth to a baby boy compared to only around 6% of women whose last live child was a son (see Table 5.3). Key informant interviews in this research support this finding and also highlight the deeply rooted gender issues of unborn babies in society. They reported that demands from husbands, in-laws, and parents were the main reasons for male-child preference. Again, these results support the qualitative findings and indicate that women are more likely to expect to give birth to a baby boy if they already have a female child.

In terms of the stage of the current pregnancy during the data collection period, nearly half (46.1%) of the women were in the third trimester of pregnancy, 25% of women were post-

dated, followed by the second trimester (18.8%) and first trimester (10.2%) (see table 5.2). Post-dated pregnancy was a big concern in qualitative interviews. The survey data suggest the majority of post-dated women (75%) used to live in rural areas (see table 5.3). Post-dated pregnancy was a big concern raised in the qualitative interviews and highlighted those pregnant women, especially in the rural region, do not visit the health facility for their regular ANC check-ups as per the government protocol. They usually come into the hospital when the woman passes the due date or the delivery is not progressing well at home. These quantitative findings support the narrative of the qualitative study.

According to the latest ANC model recommended by the World Health Organization (WHO, 2018), a minimum of eight ANC visits is recommended in order to enhance a positive pregnancy experience for pregnant women, which includes one ANC visit in the first trimester, two ANC visits in the second trimester and five visits in the third trimester (WHO, 2018). However, health service practice is still following the previous guidelines recommended for pregnant women, including at least four ANC visits in developing countries and struggling to get success even in the four ANC visit targets (Aryal *et al*., 2019). In Nepal, the practice of ANC visits recommends the first ANC visit is to be before 16 weeks of pregnancy, the second visit to be between 24 and 28 weeks of pregnancy, the third visit to be between 30- and 32 weeks of pregnancy, and the fourth visit to be between 36 and 38 weeks of pregnancy (Aryal *et al*., 2019). Looking at the data of this survey, the questions were not in line with the weeks recommended by WHO, as it would be confusing for participants to ask about the weeks of their pregnancy, but they were asked which months of pregnancy they were at the time of data collection. Therefore, if not accurate, the data can give an overview of the number of ANC visits. Participants were asked about the number of antenatal clinic visits in the current pregnancy, 52.4% of women stated that they had completed 4 ANC and more visits, which are recommended by the government of Nepal, followed by the completion of three ANC visits (26%), and two ANC visits (14%) (see Table 5.2). Also, about 7.8% of women were found to have just one ANC visit during the period of pregnancy. Women are expected to complete at least four ANC visits at 38 weeks of gestational age, as recommended by the government of Nepal. However, in the survey, 25% of women were more than nine months into pregnancy (39 weeks and more, including post-dated). Generally, we expect post-dated women to have

completed their four ANC visits, as recommended and provided guidelines of the government policy and WHO. In contrast, this survey found only 50% of women who were in post-dated pregnancy completed four ANC visits (see Table 5.3).

In the survey, only 6.3% of women reported that their pregnancy was unplanned. By contrast, in the qualitative interviews, 9 out of 20 women (45%) said their pregnancy was unplanned, which is in line with the global data presented by UNFPA (2022). UNFPA (2022, p.6) states, '*unwanted pregnancy should not be used a synonym for unintended pregnancy'*. Therefore, it should be understood and clearly differentiated. A recent report by UNFPA (2022) stated nearly half of all pregnancies worldwide are unintended, which presents a global health crisis, and it is evident that women's ability to choose whether they want to be pregnant or not or when they want to be pregnant and with whom they want to pregnant are heavily compromised. In narrative conversation, women felt comfortable revealing the reality of how they became pregnant and whether they desired to be pregnant. In the qualitative interviews, women who had unplanned pregnancies revealed the context of why they were accepting and carrying on with the pregnancy, but they were reluctant to state that they did not want the pregnancy. However, there are several supporting evidence that argue unwanted or unplanned pregnancy may bring stigma and shame to women in society, and women may not want to reveal this (Anyanwu, Ter Goon, and Tugli, 2013; Levandowski, *et al*., 2012). If this is the case, then many women might not reveal that their pregnancy is unplanned or unwanted in the survey as the survey asked straight questions to the participants without listening to their narrative about the pregnancy. As there is an explicit difference in the percentage of unplanned pregnancies between the survey results and the qualitative findings, future research should look into it and explore if there are any barriers to revealing unplanned pregnancies in the Nepalese context.

The survey results showed that all the participants received some form of support from the family, with 3 in 4 (75%) participants receiving the most support from their husbands (see table 5.2). Moreover, about 88% of women received the most support from husbands in the nuclear family compared to other family members, which was just around 11%. However, the majority of women in the survey lived with their extended family (73.4%) (See Table 5.2), and

among them, the support received by their husbands decreased slightly to 71% from 88% in the nuclear family (See Table 5.3). This was in line with the qualitative findings where husbands' support was recognized as an important aspect of the support received during pregnancy. The majority of women reported that physical support, emotional support, financial support, and health education were key supports that they expected to receive during their pregnancy. These aspects of support are well discussed in qualitative findings where participants expressed the need for similar kinds of support during pregnancy.

The survey reported that overall health service satisfaction in the hospital where the data was collected was 89.1%, and 84.4% reported that they were satisfied with healthcare professionals working in the hospital (See Table 5.2). One of the major concerns for health service dissatisfaction in the hospital was overcrowding, which meant long-standing waiting times to complete health check-ups. Similarly, participants in the survey reported that the main reasons for not being satisfied with health professionals were impolite behaviours of health professionals, not providing proper information about their health and the available services, delays in receiving healthcare services, and health professionals talking too fast during check-ups. These concerns were similar to what participants had raised during the interviewing of the qualitative study of this research.

Safe Motherhood Programme, which is also known as *Aama Surakshya Karyakram* locally, is one of the key health promotion strategies of the Government of Nepal, in which pregnant women receive monetary incentives for attending four recommended ANC visits and delivering the baby at the health facility (Subedi, *et al*., 2014). In the survey of this research, the majority of women, around 70%, stated that they were not aware of this Safe Motherhood Programme. Only about 11% were confident that they knew about the programme, and about 20% of the pregnant women stated they knew a little about the programme. (See Table 5.2). This supports the qualitative findings of this research when I, as a researcher for the purpose of clarifying the question, had to explain what the maternal incentive programme was about, and despite that, many women did not recognise the programme or had never heard of it. The qualitative interviews also revealed similar findings where 8 out of 20 pregnant women mentioned that they did not know or had very limited

awareness about the program. These findings also support the previous research by Subedi *et al*. (2014), which found the majority of women in their study were unaware of the benefits of the Safe Motherhood Programme.

When they were asked if they had any concerns during pregnancy, all the women in the survey responded that they were worried about the delivery process, mode of delivery (whether it would be vaginal or caesarean section), the outcome of pregnancy, newborn care, complications during pregnancy, newborn baby, and fear of referral. These were the similar concerns raised by participants in the qualitative interviews, where most concerns were related to the health and wellbeing of pregnant women and the newborn, and fear of referral was associated with the additional financial burden on the family.

5.3 Mental wellbeing of the pregnant women

In the third section of the survey, the Edinburg Postnatal Depression Scale (EPDS) was used to identify the women with symptoms of depression or poor mental health. Using a cut-off score point ≥ 10, the majority of pregnant women (71.9%) showed no risk of postnatal depression, however, 28.1 % of women were identified with symptoms which showed they were at risk of depression symptom (see Table 5.2). The prevalence of risk of depressive symptoms among pregnant women in this study was slightly higher compared to a previous study in Nepal, where it was 18%, that used a similar tool to identify depressive symptoms (Joshi, Shrestha, and Shrestha, 2019). The differences in the risk of prevalence of depressive symptoms among pregnant women are likely and can be justified by looking at the population demographics. For example, the previous study was conducted in the capital city of Nepal, where more job opportunities, better education, and health services are available. In contrast, the research participants in this PhD study were from a relatively disadvantaged location, where health service availability and accessibility are challenging. Furthermore, this research study also observed the association of depressive symptoms with women's demographic variables (See Table 5.4) and maternal health variables (See Table 5.5). Cronbach's alpha for the Nepalese version of EPDS in the previous study was 0.76. However, in this study, Cronbach's alpha of EPDS was 0.67, which is slightly lower than the previous study but reasonably acceptable, according to Taber (2018).

Table 5.4: Chi-square test (χ2) of association between risks of depression and participants demographic variables

Variables	No risk of depression (n=92, 71.9%)	Risk of depression (n=36, 28.1%)	X^2 value	p-value
Age of participant				
20 years and below	14(63.6)	8(36.4)	0.89	0.24
More than 20 years	78(73.6)	28(26.4)		
Education status				
SLC and Below	47 (71.2)	19 (28.8)	0.030	0.863
Above SLC	45 (72.6)	17 (27.4)		
Age at first pregnancy				
20 years and below	31(62.0)	19(38.0)	3.95	0.04*
More than 20 years	61(78.2)	17(21.8)		
Gravida				
Primi	45(71.4)	18(28.6)	0.012	0.912
Multi	47(72.3)	18(27.7)		
Participant employment				
Yes	15(75.0)	5(25.0)	0.11	0.48
No	77(71.3)	31(28.7)		
Husband employment				
Yes	50(69.4)	22(30.6)	0.48	0.55
No	42(75.0)	14(25.0)		
Place of residence				
Rural	65(71.4)	26(28.6)	0.31	0.86
Urban	27(73.0)	10(27.0)		
Distance to reach the health facility				
Less than 30 minutes	47(74.6)	16(25.4)	0.45	0.49
30 minutes and more	45(69.2)	20(30.8)		
Living arrangement				
Nuclear	26(70.3)	11(29.7)	0.06	0.83
Extended	66(72.5)	25(27.5)		

p-value from x^2 test, [a]P-value from Fisher Exact Test, *p-value <0.05 significant at 95% CI.

From the Table 5.4, the age of first pregnancy (p-value=0.04) found to be significantly associated (p-value <0.05, 95% Confidence level) with the risk of depressive symptoms among the survey participants. A similar study in Nepal by Joshi and colleagues (2019) also found women who had the experience of being pregnant at an early age (21.3 ± 3.6 years) showed

a significant association with the risk of depression. Research in other countries also supports this finding and suggests early pregnancy may cause poor mental health (Tang *et al*., 2019). The chi-square test was also applied to see the association between risks of depression and maternal health information obtained in the survey of this study, which is presented in Table 5.5. From Table 5.5, the women having a history of unsuccessful pregnancy (p-value=0.001), and women who receive the most support other than their husband (p-value=0.004) were found to be significantly associated (p-value <0.05, 95% Confidence level) with risk of depressive symptoms among the participants. The findings from this study support the previous research finding that used EPDS among pregnant women in Nepal (Joshi, Shrestha, and Shrestha, 2019) and Iran (Haghparast, Faramarzi, and Hassanzadeh, 2016.). Similarly, a large-scale quantitative study in the UK found the negative impact of miscarriage and other unsuccessful pregnancies on emotions and anxiety in a subsequent pregnancy (Statham and Green, 1994). In the same way, the results showed women who were supported by other than their husbands (48.4% of depressive symptoms), which is more than double compared to the women who were supported by their husbands (21.6%). Overall data summarise the support by the husband to their wife during the pregnancy may act to protect women from being at risk of poor mental health, and women receive the most support from husbands in the nuclear family compared to extended family.

Table 5.5: Chi-square test (χ2) of association between risks of depression and maternal related factors

Variables	**No risk of depression (n=92, 71.9%)**	**Risk of depression (n=36, 28.1%)**	**X^2 value**	**p-value**
Unsuccessful pregnancies in past				
Yes	14(51.9)	13(48.1)	6.787	0.009*
No	78(77.2)	23(22.8)		
Aware of Aaama Surakshya Karyakram				
No	62 (69.7)	27 (30.3)	0.70	0.40
Yes	30 (76.9)	9 (23.1)		
Health services satisfaction				
No	9(64.3)	5(35.7)	0.44	0.35
Yes	83(72.8)	31(27.2)		
Women expected to give birth to a baby boy				
Yes	13 (59.1)	9 (40.9)	2.14	0.11

No	79 (74.5)	27 (25.5)		
Satisfaction from health professional behaviour				
No	14(70.0)	6(30.0)	0.41	0.51
Yes	78(72.2)	30(27.8)		
Received the most support during pregnancy				
Husband	76(78.4)	21(21.6)		
Other than husband	16(51.6)	15(48.4)	8.30	0.004*

P-value from x^2 test, *p-value <0.05 significant at 95% CI.

The findings of previous research revealed that depression among pregnant women and lower emotional support from the husband has a stronger association in traditional family structure than in nuclear family structure (Senturk, *et al*., 2011), suggesting husband support during pregnancy is a protective factor of mental health. The Chi-square test looking at the association between the risk of poor mental health or symptoms of depression and support received by other than the husband (p- value= 0.004) is significant. It supports the previous research conducted among postnatal women in Nepal (Singh *et al*., 2021b) and Bangladesh (Nasreen, *et al*., 2011). This shows the likely association with depression risk among those Nepalese women whose husbands have migrated abroad for the labour market or practising deeply rooted patriarchal norms to maintain the sociocultural norms.

5.4 Conclusion

This chapter provided the findings from the quantitative survey conducted among 128 pregnant women. The analysis of the quantitative survey was also supported by qualitative findings from the previous chapter and allowed me to see the differences and similarities in relation to previous research and literature. The significant finding was an association of the risk of depression symptoms with experience of unsuccessful pregnancy, early age of first pregnancy and the most support received by other than the husband. Alongside these findings, this survey identifies the relationship between early pregnancy and education, education and employment, rural geographical area of residence and antenatal health check-ups. In the next chapter, all the significant findings from qualitative and quantitative data are discussed in an attempt to expand knowledge to support the findings of the research questions mentioned in Chapter Two.

Chapter Six: Discussion

This PhD research is one of the few studies that uses sequential exploratory mixed methods research, a relatively distinct approach to examine social determinants of the mental health of pregnant women in Nepal. In the first phase of the study, I used open-ended, in-depth interviews, informed by a narrative approach, to explore pregnant women's lived experiences that determine their mental health and explore their views on accessing available health and social care support and services that promote their mental health within the socioeconomic and cultural context of Nepal, a country with deeply rooted patriarchal norms. These voices from the pregnant women were examined further using a quantitative survey in the second phase of the study. This was also an opportunity to include many participants who could not give a longer time for in-depth interviews, compared to a shorter duration for the survey, but were willing to participate in this research. The use of exploratory sequential mixed-methods research meant that I was able to prepare and adopt information from the interviews into the survey questionnaires rather than conduct a survey based on the available evidence from developed countries, which may not be appropriate for pregnant women of Nepal, where women live in a very different socioeconomic and cultural context compared to the developed countries. However, where it was appropriate, I was also able to use validated questionnaires. For example, in one of the sections of my survey questionnaire, I used the EPDS survey, which has already been validated in the Nepalese context. The balanced approach to protecting and raising the voice of Nepalese pregnant women consistently and throughout this research is one of the key features of this PhD study.

In this discussion chapter, I start by presenting some of the new and important contributions of this research in the wider context of maternal health in Nepal. Following this, I discuss the key findings from my research by applying Bronfenbrenner's ecological theory and intersectionality theory to integrate the findings from the qualitative interviews and quantitative survey to explain the understanding of social determinants of mental health and its impact on the lived experiences of pregnant women when accessing available health and social care support and services in the sociocultural context of Nepal. In this research study, the pregnant woman sits at the centre of ecological theory surrounded by micro-, meso-, exo- and macro- system, which explains the link between individuals and a range of socioeconomic

and cultural factors at different levels that influence the mental health of pregnant women. Bronfenbrenner's ecological theory allows this research to analyse and present the mutual interaction between pregnant women and the environmental context, and in doing so, this chapter attempts to answer and further analyse the three research questions (See section 2.3) of this PhD study. In this context, I provide the discussion around the perceptions of the different levels of support experienced by pregnant women in Nepal, which is aligned with the different systems of the ecological theory that intersect to affect their mental health. Thereafter, I attempt to explain the impact of various factors within the micro-, meso-, exo-, and macro-systems of ecological theory and their interactions that influence the availability and accessibility of maternal health services affecting the mental health experiences of pregnant women in Nepal. In addition, I discuss the impact of socioeconomic and cultural norms on the lived experience of pregnant women, which is mostly aligned with the macrosystem of the ecological theory. Lastly, I present my methodological reflections and innovation in terms of data collection during the COVID-19 pandemic and highlight the limitations of this research.

6.1 Contributions to Knowledge

This research highlighted the importance of social support for pregnant women to promote positive mental health and wellbeing. Social support for pregnant women can come in different forms, but this research highlighted the importance of the husband, who was perceived as the most desired person for pregnant women to receive support from during their pregnancy. Although the support received by other than husbands was acknowledged by pregnant women in this research, it showed those women were at increased risk of poor mental health during their pregnancy. Although there are many NGOs/INGOs working to support and promote maternal and child health in Nepal, the participants in this research reported that there were no NGOs/INGOs that were actively working to support pregnant women in the study region. Participants in this study also did not experience any structured support in the form of community events or organised activities that could be helpful for pregnant women. Women who received any support from their neighbours and community were completely based on their individual reach, relationships, and social network, which varied based on their socioeconomic status, where women from higher socioeconomic

backgrounds were likely to receive more social support compared to women from disadvantaged backgrounds. In the cultural context of marriage, women have to leave their parent's home and the established network of support to stay with their husband and their families after the marriage, which could potentially put them in a disadvantaged position in accessing support from the social network when they are pregnant, which also risks them to experience loneliness if they do not get adequate support from their husband.

Pregnant women in this research also expressed concerns about health service constraints in terms of accessibility and availability of maternal health services in region. Inadequate and overcrowded health services, insufficient number of health professionals and their attitudes towards pregnant women were some of the factors that discouraged pregnant women from seeking health services, which exacerbated their mental distress. The geographical location where pregnant women reside with limited or no options for the accessible and easy transport system and the issue of accommodation in the town if they had to stay overnight while seeking health services were some of the key concerns raised by the participants in this research, which made pregnant women feel mentally insecure about the opportunity to seek health services, when in need. The insecurity was further exacerbated when they understood the financial burden on the family with costs related to regular health check-ups, investigations, referral to other hospitals, and delivery. Although there has been research on maternal health services accessibility and availability, this research is one of the first studies to understand the impact of limited availability and accessibility of health services on mental distress and insecurity experienced by pregnant women.

Another key contribution to the knowledge from this research was in the context of how Nepalese pregnant women see themselves and interact within the socio-cultural and economic context of Nepal. One of the distinct contributions of this research is shyness in revealing pregnancy as a cultural norm. Shyness in announcing their pregnancy to their family and community was noted as a cultural norm, but this also meant that it restricted women's celebration of pregnancy and motherhood, which should be a proud moment for many women. This also demonstrated women's positionality in the family and society, where they were often burdened with the excessive workload of household chores and were also

expected to support the family with outside work in farming, which, for many, was the major source of family income. The expectations from women in terms of their commitment to the family and society often meant pregnant women had to compromise and limit or have no voice of their own, even when they had to make decisions about their own pregnancy and health. The discriminatory approach towards women in the Nepalese patriarchal society was evident for a girl even before they were born, and it continues with fewer opportunities towards education and employment, thereby limiting women's empowerment and increasing gender inequalities in a society where women are already marginalised in their own family and the wider society. This also results in women experiencing violence from partners and others in many cases, which puts pregnant women at an additional risk to mental health.

From the data analysis of the quantitative survey, three key distinct findings were identified related to the demographic information of the pregnant women, maternal health information and mental wellbeing information. The demographic characteristics such as the age of first pregnancy (20 years and below) were found to be significantly associated with the risk of depressive symptoms (p-value <0.05, 95% Confidence level) among the surveyed participants. Within the maternal health context, women having a history of unsuccessful pregnancy and women who receive the most support other than their husbands were found to be significantly associated with the risk of depressive symptoms (p-value <0.05, 95% Confidence level).

From a theoretical perspective, this PhD research is the first of its kind to use ecological and intersectionality theory from a public health perspective to look at the social determinants of the mental health of pregnant women in Nepal. The limited evidence regarding the mental health status of pregnant women in Nepal indicates the necessity of generating evidence to convince service providers, policymakers and local authorities about the importance of pregnant women's mental health. Moreover, in this research, multifaced factors that intersect to influence the mental health of pregnant women are explored and analysed with special attention from theoretical grounds. The ecological theory is used to see multi-layered factors where women may not actively influence these factors but still experience a significant impact on their mental health and wellbeing. In addition, intersectionality brings the focus of

multiple factors that can come together to affect pregnant women's mental health and therefore, the focus of the policymakers and service providers should take multifaceted approach to improve the services and provide adequate support to promote positive mental health among pregnant women in Nepal. Data collection using virtual media is also a unique contribution of this research. From a methodological perspective, the innovation in data collection methods during the Covid-19, whereby I used virtual communication tools to conduct the interviews and surveys. The success of this innovation has been in the form of a peer-reviewed publication (Sah, Singh, and Sah, 2020), which has gathered close to a hundred citations.

6.2 How do lived experiences of perceived support of pregnant women in Nepal affect their mental health?

Social support for pregnant women could come in different forms, and it plays an important role in contributing towards the mental health and well-being of the mother and the newborn baby. However, as seen in this research, not all pregnant women experience the same level of support in the community, which means the mental health experiences of these pregnant women are likely to vary. Looking at Bronfenbrenner's ecological theory, a pregnant woman with their specific needs during her pregnancy in the context of this research sits at the centre of the circle, and their husband, immediate family members, relatives and neighbours are seen as the prime source of support that can be placed in the microsystem of the ecological theory. In this research, the most important support mentioned by pregnant women was from the husband, but other family members were also acknowledged for providing support during pregnancy, such as support received from mothers-in-law. One of the significant findings from the Chi-square test in this research showed that women were at risk of depressive symptoms if they were not primarily supported by their husbands. This finding suggested that support from other family members was valued, but the husband's support during pregnancy had the potential to improve pregnant women's mental health, which is in line with the evidence from previous research conducted in Nepal that suggested if women were supported by their husbands, then the mental well-being of women could be improved (Joshi, Shrestha and Shrestha, 2019; Singh *et al*., 2021b). The qualitative findings of this

research highlighted that pregnant women feel comfortable and confident sharing their concerns with their husbands, and it also provided greater reassurance to the pregnant women promoting their mental health, which is also in line with the findings from previous research that was conducted in low- middle-income country (Morhason-Bello *et al*., 2008). Another previous study also found that maternal mental health and infant health are associated with improved support and involvement from the baby's father, while lack of support may cause adverse emotional and behavioural health outcomes for the mother and baby (Stapleton, *et al*., 2012). All this evidence suggests that the involvement of a male partner or husband can play a significant role in positively influencing the mental health of pregnant women, new mothers and the newborn child. Although participants in this research unanimously agreed on the importance of husbands' support, the findings also noted that males were likely to migrate to other countries for employment opportunities, and therefore, pregnant women were often left behind at home with other family members relying on getting support from in-laws and family members other than the husband.

From the understanding of ecological theory, family support received by pregnant women, alongside family circumstances and income, could also be considered as part of the microsystem. The intersection of the absence of a husband to support pregnant women during pregnancy and their socioeconomic circumstances put them at an increased risk of poor mental health. For example, women are at risk of poor mental health if they experience poverty and have an absent husband during their pregnancy compared to those women whose husbands are with them at the time of pregnancy despite the economic hardships. This means some women experience multiple factors coming together that put them at risk of poor mental health compared to others. In addition, the survey findings of this research revealed that women with a nuclear family structure are more likely to receive the most support from their husbands. Here, the intersection of the nuclear family and the husband's support can be observed as a positive factor that promotes the mental health of pregnant women, as evident in this research. However, within the sociocultural practices of Nepal, pregnant women living in an extended family structure are more common, and this is reflected among participants in this research and the last census of Nepal (NSO, 2021). This means only a smaller number of women live in a nuclear family structure, and therefore, only

a smaller number of women are likely to receive the most desirable source of support, that is, from their husbands.

As stated by research participants in the interviews, a woman's relationship with family, neighbours, relatives, and the community also determines the support they receive during pregnancy, which is within the understanding of the mesosystem of the ecological theory. The qualitative interviews in this study demonstrated a clear indication of the intersection of social status and social support received by pregnant women. For example, the women's relationship within the family and neighbourhood is influenced by their socioeconomic status, which means women from lower socioeconomic backgrounds may not receive the same level of support compared to women from higher socioeconomic backgrounds, demonstrating the intersection of social status and social support. A similar argument was noted in the previous research in which women from higher socioeconomic backgrounds received better social support from the family during their maternity period (Barona-Vilar, Escribá-Agüirand and Ferrero-Gandía, 2009). Beyond family, very few women noted the experience of informal social support in their neighbourhood. Generally, the support from neighbours is asking for the mother and baby's health and suggesting to take rest, which can be categorised as a form of emotional and informational social support provided by neighbours (Cohen, 2004). However, women asserted that this form of support was not very effective as they needed tangible forms of support during the pregnancy, such as financial support or help with household chores. The findings from this research also suggest the intersection of social support and socioeconomic status. For example, the social support networks may be stronger for women from higher socioeconomic backgrounds. At the same time, desired social support may not be adequately available for women from low-income families because of the different expectations in the form of support.

From the understanding of Bronfenbrenner’s ecological theory, the sociocultural perspective of gender roles sits within the macrosystem. The findings from this study suggest that, in some cases, even if the husband is at home, sociocultural norms give more power to the in-laws in the family to decide on behalf of the pregnant woman. Also, in some cases, men may think pregnancy and childbirth are women’s problems and women in the family, such as the

mother-in-law, should get involved in the decision-making and support the pregnant woman. This patriarchal sociocultural practice, as discussed by Itulua-Abumere (2013), also discourages men from supporting their wives in regular household chores, accompanying wives for health check-ups and during labour and the birth of the baby in the hospital. In addition, as noted in qualitative interviews, some women may not be comfortable sharing their concerns with their mother-in-law, or there can be a lack of knowledge about the updated practice among mothers-in-law, and sometimes mothers-in-law may provide inadequate support to their daughter-in-law if there are some disagreement or conflict between them. This means pregnant women who do not have their husband's support and rely mostly on support from in-laws may experience low social support during pregnancy, and that puts them at increased risk of poor mental health.

In Nepalese society, traditional cultural norms mean a woman moves to her husband's house after marriage and lives with her husband and his family, which could be seen within the macrosystem of the ecological theory. Within this context, it is also possible that women may find it challenging or struggle to develop and strengthen a new social relationship within their husband's families and society. As noted within the literature, a lack of social bonds and social integration may put women at risk of receiving inadequate social support (Fisher *et al*., 2012). On the contrary, optimal mental health is expected to be experienced when pregnant women have strong social connections and integration (Bedaso, *et al*., 2021). As observed in the women's narratives in this research, it was expected within the Nepalese society that women become pregnant soon after marriage while living in their husbands' houses with their husband's families. In addition, women's role, in the majority of cases, is limited to household work and caring responsibility of the family member in the husband's house, while men were the breadwinners, likely to go out and work to earn money and hold the decision-making power for the family. While women remain housebound, they are constrained to develop new social connections or relationships and may not explore the support available in the community or have opportunities to interact within the neighbourhood that could support promoting their mental health during the pregnancy. These sociocultural norms put pregnant women in a disadvantaged position to access social support during pregnancy, and they are likely to experience poor mental health.

In this research, organisational social support means an organised or structured support system that exists within the community to promote the health and wellbeing of the people living in that community, which fits well in the exosystem of the ecological theory. Health service constraints among low-resource countries such as Nepal are evident, but understanding the local population's needs, cultural norms, and socioeconomic circumstances may help to improve the effective utilisation of the limited services. For example, working with people at the grassroots level to promote maternal health has been effective in India (Saha, Annear and Pathak, 2013). Around the world, many community-level programmes seem to promote maternal mental health effectively. For example, Mothers for Mothers (Mothers for Mothers, 2023), Young Mums Together, Mums and Babies in Mind and other programmes in the UK (Mental Health Foundation, 2023), and Single Mom Programs in Canada (Moms Canada, 2023) have been effective in supporting pregnant women, and positively impacting the mental health of new mothers and pregnant women. Even in developing countries or low-resourced countries, such community programmes have been successful. For example, there is a success story of women's groups at community-level programmes. Women's groups and volunteer peer councillors in the community have successfully improved maternal and child health outcomes in poor regions of Africa (Lewycka *et al.*, 2013).

Another community approach, such as self-help, has been successful in the United Kingdom (Hatzidimitriadou, 2002). The idea of self-help group creation is to promote personal empowerment and share information about mental health within the group, and it has been more effective for those with lower social support. Such initiatives have the potential to benefit pregnant women in Nepal by providing social support and creating a channel for sharing maternal health-related information. As stated by an FCHV during the interview, AAMA SAMUHA, internationally known as Health Mother's Group (HMG), already exists in Nepal (Acharya *et al*., 2022), which has a similar principle to that of the concept of self-help group (Hatzidimitriadou, 2002). In Nepal, the health mother's group (HMG) was implemented in 2010 to improve maternal and child health outcomes (Acharya, *et al*., 2022; Manandhar, *et al*., 2022). On paper, this is a great source of organised social support that many women,

particularly disadvantaged women, could benefit from to improve their health and wellbeing. However, research looking into the success of HMG has found that very limited women were active users of the programme, and this was reflected in this research as none of the pregnant women in their interviews referred to associating themselves with this community-organised activities.

Previous research noted that pregnant women were mostly unaware of this programme or were faced with many barriers that discouraged women from participating in this programme actively (Manandhar, *et al*., 2022). Some of the barriers noted by Manandhar and colleagues (2022) are lack of community awareness regarding HMG meetings and benefits, lack of motivation of FCHVs, inaccessible transport to reach the group to participate, including time and cost, and heavy burden of the household commitments of the participant. On the other hand, the facilitating factors for the women participating in the programme were family support, HMG's savings component, and active FCHVs. Another research also found that women from lower caste and poor backgrounds were unlikely to join the group because of the lack of awareness and time constraints, as these women were mostly involved in agricultural work to survive (Acharya, *et al*., 2022). Here, the intersection of socioeconomic status and opportunity to access social support networks suggests that women from lower socioeconomic backgrounds have limited opportunities to be part of social support networks in Nepal. None of the pregnant women from urban and rural areas acknowledge any organised community activities that provide a platform for pregnant women to socialise and interact with each other. If it existed, it could also be a channel to promote health education during pregnancy that could promote mental health among pregnant women and new mothers.

Financial support was one of the key forms of support many women highlighted during the interviews. As noted in some women's narratives, there was an acknowledgement of some assurance in providing financial support for pregnant women, but only by some selective rural municipalities on an irregular basis, and there was no compulsory provision for all regions of the country. The municipality decided on the support based on the family's socioeconomic situation of the pregnant women, and this support may not be available for women with

unsuccessful deliveries, which means the support is not available for every pregnant woman. The provision was dependent on rural municipalities (local government), whether they recognised maternal health as a key part of their agenda to support health and wellbeing or not and how they wanted to spend their budget, but there were no obligations or formal policies for municipalities to support pregnant women financially. Looking at the exosystem of the ecological theory, the welfare system through NGOs/INGOs, organised and structured forms of support for pregnant women can be influential towards promoting women's mental health (Gallie and Paugam, 2000; Melchiorre, *et al*., 2023). In this research, pregnant women during interviews did not mention or refer to any support received from the NGOs or INGOs. It is well-recognised that the support from INGOs/NGOs significantly impacts the health and wellbeing of the global population (Cooper, 2018). There is an extensive list of NGOs/INGOs working in Nepal (GNMHP Department of Health Service, 2023); however, it was somewhat surprising to see none of the participants in this research recognised any support they had received from any of the listed NGOs/INGOs working in Nepal. No previous study or publication has mentioned any organised or charity support for pregnant women in Nepal beyond the Health Mother's Group, which the FCHVs and the women in the community lead.

Maternity leave is one of the national policies of Nepal, which sits within the macrosystem of the ecological theory. However, working women in this research expressed serious concerns about the impact of the national maternity leave policy on their mental health and wellbeing. Women expressed their insecurity and financial concerns associated with the shorter duration of maternity leave, which can significantly impact breastfeeding women and child development. According to the Government of Nepal Law Commission (2017), women get maternity leave for only fourteen weeks before or after the delivery and get full remuneration for only sixty days, which seems to be insufficient support for women to help them during their pregnancy and after the birth of the child. Moreover, the pregnant women in this research asserted that there was no job security or guarantee after the maternity leave, which exacerbates their mental wellbeing, as they are not sure if they will be in employment or not following the pregnancy. Increasing girls' education and empowerment in the last few years has meant more women have entered the job market, which is likely to increase in the future. However, the current policy in Nepal does not seem to be effective in promoting women's

employment opportunities considering the constraints within the maternity allowance and protecting maternity rights as in many developed nations like the UK (https://www.gov.uk/working-when-pregnant-your-rights), who have comparatively supported and promoted working mothers in a better way.

6.3 How do the availability and accessibility of maternal health services in Nepal impact on mental health of pregnant women?

The availability and accessibility of health services significantly impact the health and well-being of pregnant women, including mental health, while these women have limited or no influence in the health policy or control over these health services. The pregnant woman in this research highlighted that one of the major concerns is the availability and accessibility of adequate health services that could support them during pregnancy and childbirth. From the understanding of the ecological theory, health service facilities sit within the exosystem. However, the immediate environment within the microsystem, such as family structure, income, education, geographical location and many other circumstances directly or indirectly influence the health service accessibility for pregnant women, although existing health service facilities sit in the exosystem of the ecology. Similarly, national policies and practices, such as the Safe Motherhood Programme, sit within the macrosystem and can influence the health service availability and accessibility for pregnant women. Moreover, the interactions of all these factors within the micro and meso-systems will have an impact on the exosystem i.e. towards the availability and accessibility of adequate health services, for pregnant women.

Most women in this research raised concerns about the availability and accessibility of health services when they needed them the most. Some key issues the pregnant women interviewed in this research raised were income, geographical location where women reside, education and awareness about health service needs. From the understanding of intersectionality, these issues may interact with each other and may present a compounded risk to some women that may restrict them from accessing the much-needed available health services. For example, infrequent public transport services and bad road conditions in the geographical location were the main issues for the pregnant women who reside in the rural areas, and they were

automatically disadvantaged in accessing adequate services compared to those pregnant women residing in the urban areas. From the analysis of the survey data from this research, those women who were from rural areas were more likely to commute more than 30 minutes to reach basic health facilities, as well as, they were more likely to present post-dated pregnancies and less likely to complete all the recommended health checks, which supports the understanding of intersection of these factors, which is in line with the previous literature (Aryal *et al*., 2019; MoH [Nepal], New ERA, and ICF, 2017).

Findings from this research suggest that personal circumstances of women, for example, income to afford health services, education and awareness about health service availability, overburdened household work among pregnant women, limited time to take rest during pregnancy, and limited decision-making ability of the women, were associated with poor health and wellbeing and put women at risk of limited health service access which is also supported by the previous literature (Budhathoki, *et al*., 2017; Edmonds, Paul and Sibley, 2012; Simkhada *et al*., 2014). These circumstances can intersect and present compounded risks of vulnerability to some women and, therefore, could be at increased risk of experiencing poor mental health. For example, as noted in the findings of this research, personal circumstances such as limited education and living in rural areas may limit health service access, while despite limited education, those living in urban areas had better access to health services. These issues, such as limited local transport systems, were the biggest barrier to accessing health services for women from rural areas, which is not the case for women in urban areas. The findings show that if women were aware of the importance of health check-ups and could afford the health service, they were more likely to commute a longer distance to seek adequate health services. On the other hand, if women were aware of the importance of health check-ups but could not afford the cost of transport to visit health facilities, they were less likely to attend antenatal check-ups and access other health services that were needed for them and may experience uncertainty and insecurity in accessing health services.

Evidence suggests that a maternity waiting home in a hospital in Eastern Nepal, surrounded by a rural and hard-to-reach community, has proved to be effective (Lori, et al., 2013). This service has significantly contributed to the scale-up of skilled birth attendants (SBAs) in rural

areas. However, maternity waiting homes are not available in all the rural parts of the country, including the Ilam district hospital, where the data was collected for this research. Although maternity waiting homes have proved to be a significant step toward improving maternal health in Nepal and other developing countries (Kurji, et al., 2019; Gaym, Pearson, and Soe, 2012), Nepal has not been successful in implementing maternity waiting homes in all the hospitals in Nepal. The funding constraint in low-resource countries can be one of the biggest challenges to the sustainability of maternity waiting homes which should be further explore.

From a health service perspective, it is evident that health professionals providing appropriate counselling significantly improve the wellbeing and experience of the service users (MacInnes, MacDonald and Morrissey, 2001). However, this and other research in Nepal found a lack of adequate communication and limited antenatal education provided to pregnant women by health professionals (Singh *et al*., 2021b). This research also found that the Covid-19 pandemic had a negative impact on pregnant women's health service access and created a fearful and insecure environment for them. Pregnant women in this research shared that during the time of lockdown due to Covid-19, women could not get public transport, and the available health services were very limited. Pregnant women were in fear, and there was limited or no support and assurance for them from the health service provider, nor did any other organisations provide guidance or support. This was the situation experienced by Nepalese pregnant women, despite the fact they were more at risk of poor health and wellbeing in the absence of support, which is also evident in other studies in Nepal (Singh *et al*., 2021c) and elsewhere (Clifton, *et al*., 2022). As noted in the findings from this research, limited health service accessibility and uncertainty caused distress among pregnant women, leaving them with a feeling of insecurity about health service access. Women's vulnerability is exacerbated further because of the intersection of fear of COVID-19 infection and limited availability and accessibility of health services. Pregnant women in this research also expressed dissatisfaction with the service providers and health professionals, particularly because of inadequate time given by the health professionals to assess and provide support addressing their health issues. Similarly, another challenge noted in the findings was in relation to the lack of equipment in the hospitals, which meant most services were unavailable and created an insecure environment for women as they could not see the

availability of the services if they needed them in an emergency. Many women were worried about the challenges they would face if they were referred to another health service centre due to the lack of equipment and unavailability of services in their desired health facility.

The lack of resources means limited health services options due to equipment and also in terms of the limited number of health professionals to provide necessary and adequate health services, which resulted in overcrowding in the hospital to access health services, which was another major concern in the resource-poor health setting of Nepal. This situation was very likely to discourage many women from seeking the health services they needed during their pregnancy. These factors from the service providers' side may exacerbate and increase the concerns among pregnant women as they did not see health service providers were able to meet their health needs. The latest Nepal Health Facility Survey 2021 Final Report (MoHP [Nepal], New ERA and ICF, 2022) also raised serious concerns about inadequate health services within the health facilities in Nepal, indicating the risk of poor maternal health. This survey report also discussed the role and responsibility of Female Community Health volunteers (FCHVs), mostly to provide health education about the availability and accessibility of health services for women and children during pregnancy and childbirth. However, in this PhD research, only a few women acknowledged the awareness and contact with FCHVs but did not experience any effective or adequate support from the FCHVs, which aligns with other research findings (Redick and Dini, 2014). Limited resources, such as funding for FCHVs to improve knowledge and skills, are noted in this research alongside the need and review of updated training for FCHVs, which is also acknowledged by UNICEF (2022). Effective use of this workforce could significantly improve maternal mental health.

Although most healthcare services in the government hospitals of Nepal are free, there are some costs associated with paying for blood tests, video X-rays, and the costs of medicine that need to be out of the pocket of the patients or their families. To provide equitable health services to all and achieve universal health coverage, the government of Nepal has initiated several initiatives in the last few decades (Pokharel and Silwal, 2018), which could be placed in the macrosystem of the ecological theory. Some of these programmes were highlighted by the participants in this research, such as the Safe Motherhood Programme, also known as the

Aama Surakshya Karyakram or the Maternity Incentive Scheme programme, which was implemented in Nepal in 2007, and is a highly prioritised policy by the government of Nepal and international organisations. Looking at the Safe Motherhood Programme, women raised concerns about the amount they received, as it was insufficient to cover the costs during pregnancy and childbirth. Most importantly, these funds were too little and too late to use during pregnancy, as they received the amount after childbirth at the health facilities. Many women expressed concerns about transport and the cost of commuting to a health facility to give birth. As per the Safe Motherhood Programme policy, transportation-related costs to reach the health facility should have been covered by this programme (Upreti *et al.*, 2013), but this was not the case highlighted by the pregnant women in this research. Despite the government's effort to promote the Safe Motherhood Programme, about 70% of participants in the survey and many women in the in-depth interviews in this research stated they were unaware of this programme. It was noted that many women were not fully aware of the programme's benefits, which aligns with the findings of the other research (Subedi *et al.*, 2014). That suggests that the programme should be reviewed and look at the future implementation strategies of the programme that could create awareness and enhance the uptake of the Safe Motherhood Programme.

Although a previous study concluded that the Safe Motherhood Programme has positively influenced antenatal service uptake and hospital delivery in Nepal, the lack of awareness remains the major concern to provide the benefits of the programme to all pregnant women (Shahabuddin, *et al*., 2019). From the experience of women in this research, it can be understood that the programme still needs to address inequality in accessing antenatal health check-ups and promote the programme effectively targeting women in rural areas and from disadvantaged backgrounds, which supports the findings from the previous research (Ensor, Bhatt and Tiwari, 2017). In addition, women who require the most support from this programme are unaware of its benefits, indicating the programme needs to be promoted further. Antenatal education is a key part of maternal health services within the Safe Motherhood Programme, and developing countries see the need for it more due to limited education, lack of empowerment, and challenges with decision-making ability from women (Spiby *et al.*, 2022). This indicates that maternal health services need to provide a more

comprehensive service, not just to check the physical health of the pregnant women but also to provide adequate information to the women who need to be empowered and confident about making their decisions about pregnancy.

Another such programme is the social health insurance policy, which is recommended by the World Health Organisation for developing nations (Hsiao and Shaw, 2007). In this research, a few women who mentioned they had health insurance initiated by the government were not fully aware of the benefits of the insurance. A lack of awareness about the insurance policy among women was identified in this research, and this evidence is consistent with the previous research in Nepal (Subedi *et al.*, 2014). Despite the government's intention to provide health services for all, the lack of awareness about these health service provisions policies and the lack of supply of health services act as barriers to accessing available health services and limit the opportunity for women to seek all the health services they deserve at free of cost or at an affordable cost. Generally, the issues of health services accessibility and availability have two sides (O'Donnell, 2007): One is the supply side, which includes quality of care, cost of care, adequate care in terms of effectiveness, and availability of care locally. Another is the utilisation/demand of the services by people. Hence, promoting health services utilisation needs to solve the problems of both demand and supply sides because they are related (James *et al.*, 2006). Looking at the supply side of the health services, a resources-constrained health services system sits in the exosystem in the ecological theory, which interacts with the macrosystem in which policies or programmes play an important role, and their implementation is the key to success. Nepal seems active in agreeing to all the policies developed by the WHO for developing countries. Still, when it comes to implementation, various challenges are faced because of the lack of adequate resources in health services. This research does not see a successful implementation of maternal health policies such as the Safe Motherhood Programme or health insurance policy.

The narrative from women in this research showed that women felt more confident if they were second time pregnant, as they knew and understood pregnancy-related symptoms and were aware of many routine check-ups and where to go for those health check-ups. However, this applied to women who did not have any negative experiences during their first or

previous pregnancy. Women with previous negative pregnancy experiences were anxious and more likely to experience poor mental health in the second or later pregnancy. For example, in the quantitative data analysis, there was a significant association between the risk of depression and women having experienced unsuccessful pregnancy in the past, which is in line with the discussion from the research in Nepal and other countries (Joshi, Shrestha, and Shrestha, 2019; Statham and Green, 1994). According to women's experience, they receive a card from the hospital during their pregnancies in which the event or histories of unsuccessful pregnancies could be recorded. However, all pregnant women may not bring the card from their previous pregnancies, and the discussion of any previous unsuccessful pregnancies with health professionals may be solely reliant on the pregnant women themselves and their recall value and willingness to discuss this topic. There was no record-keeping system for past histories of patients in the hospital. This meant health professionals were guided by the conversation from pregnant women's narratives, which may not include the experience of an unsuccessful pregnancy. Therefore, health professionals might not be adequately prepared to hold those difficult conversations, which could support the mental wellbeing of these pregnant women. Given the different contexts of the qualitative and quantitative findings of this research, the result cannot answer whether being a second-time mother or having pregnancy experience has any positive benefit for future pregnancy, which can be explored in future research. However, it was noted that a first-time mother may need comparatively more antenatal education. The survey data analysis indicated that if women have experienced unsuccessful pregnancies, they may be at risk of depression compared to other women who never had any negative experience during their previous pregnancies. However, no women discussed that they had received or given any extra support because of their history of unsuccessful pregnancies.

In the Nepalese context, if women are pregnant after marriage, they simply accept this regardless of their own desire or willingness to be pregnant or not. In this context, even if the pregnancy was never discussed or planned, women consider this as natural, and they feel it is planned, as it is expected after the marriage to meet the expectations of the family and society. However, it is important to highlight that awareness about sexual health and women's rights regarding sex, rights to be pregnant and maternal health plays a crucial role

and could influence women's understanding to perceive and determine whether the pregnancy is planned or unplanned. Unplanned pregnancy is one of the serious public health issues in Nepal and globally, and the understanding of unplanned pregnancy in the context of Nepalese women is important. During the qualitative interviews, many women stated their pregnancy was unplanned in an acceptable language (9 out of 20, 45%). However, in the survey, when women were asked directly if the pregnancy was planned or unplanned, only a few (8 out of 128, 6.3%) stated that they had an unplanned pregnancy. The reason could be because of the cultural norms that expect women to be pregnant after marriage, so they considered their pregnancy to be planned when asked a straightforward question in the survey. However, when this was explored in detail within the qualitative interviews, many women realised that their pregnancy was not as planned as they had thought.

Many women reflected and stated that they were hesitant to say that their pregnancy was unplanned since everyone expected them to become pregnant after marriage. Therefore, it was natural and nothing to think about, planned or unplanned. Also, the understanding of unplanned pregnancy in Nepalese society is associated with pregnancy outside the marriage and as a result of sexual violence. For example, in this research, a woman who became pregnant due to sexual violence mentioned that her pregnancy was unplanned. Therefore, many women do not want to associate with the unplanned pregnancy in the marriage relationships. The understanding of unplanned pregnancy in developing countries could be very different compared to the developed countries (UNFPA, 2022). Women in developed countries are better educated and empowered and have better decision-making abilities in relation to their pregnancy and general health and wellbeing. They are also more likely to see themselves in a better position within their family and society with an ability to voice their feelings. In contrast, most women in developing countries see their life after marriage as being restricted to doing the household work, giving birth to babies, and looking after family, with little or no voice of their own towards their lives and decision-making (Jayachandran, 2015). Recently, there have been several changes in the abortion laws to empower women in their decision-making and improve abortion service provision (Puri, 2020; Samandari *et al*., 2012). However, in practice, the service provision and policy cannot be successful among women in rural areas until they understand and recognise with confidence that their

pregnancy is either desirable or undesirable. Empowerment and agency (Kabeer, 1999) play a significant role which helps women to recognise whether their pregnancy was planned or unplanned.

One of the reasons why many women in developing nations would accept their pregnancy as wanted could be a coping strategy for pregnant women. According to Folkman and Lazarus (1980; 1985), this could be because they do not see the way out of their pregnancy in the sociocultural environment in which they live and become pregnant, or they have limited power to negotiate or take action to mitigate the circumstances such as abortion as an opportunity to terminate the pregnancy. Looking at the concept of empowerment and agency, these women may have adopted this approach due to their limited empowerment to mitigate the circumstances due to limited accessibility of health services, limited knowledge about abortion services, being dependent on family, and other related factors (Kabeer, 1999). Although women with unplanned pregnancies sit at the centre of the ecological theory, the context of unplanned pregnancy is directly affected by the influencing factors, such as the individual factors, family support, income, geographical location that sits within the microsystem, sociocultural norms that sits within the macrosystem, and transport, health service accessibility and availability, and quality of health service that sit within the exosystem of the ecological theory.

6.4 How do lived experiences of socioeconomic and cultural factors affect the mental health of pregnant women in Nepal?

The social circumstances, cultural norms and practices that sit within the macrosystem of Bronfenbrenner's ecological theory can have a significant influence on the mental health and wellbeing of pregnant women, though these women have little or no control over these factors. Within the restricted sociocultural norms, pregnant women in Nepalese society are further marginalised when they are not protected and promoted adequately by national and local policies and programmes. Socioeconomic and cultural factors such as the restricted position of women in Nepalese society, cultural norms of marriage, expectations after marriage, educational level and lack of empowerment are some of the major factors that impact the mental health and wellbeing of pregnant women in this research.

The findings from this research suggested that decision-making and freedom of choice in women's lives were often controlled by their husbands or elderly family members, which is in line with other South Asian patriarchal societies (Jayachandran, 2015). Gender roles that restrict women's freedom and decision-making choices were noted to be a complex cultural phenomenon, especially after marriage. Women are expected to leave their families and stay with their husbands and their families, which sometimes would be miles away, and women have to adjust to the new family settings. During this process, women loose all the established networks of people and resources. They are expected to form a new connection with limited access to knowledge and resources within the new context or setting. Moreover, within the Nepalese patriarchal society, women have limited decision-making opportunities due to dependency on the husband's family and the social expectation that women's role is to complete all the household work and look after the family members (Simkhada, Porter, and van Teijlingen, 2011). In addition to household chores, in many cases, women are also expected to support the family by working outside, for example, supporting the family in farming, which is the key source of family income in many rural households. Many women manage this well, and it becomes the story of their daily lives. The challenge starts when they become pregnant. For a pregnant woman, the demands of the body change during the pregnancy could be such that these day-to-day household works become burdensome. Moreover, if pregnant women get less time to rest and struggle to manage the excessive household work, then they are at risk of poor health, such as the risk of preterm delivery, small-for-gestational-age birth, and risk of abortion (Eskenazi *et al*., 1994; Pompeii *et al*., 2005). In such circumstances, even if they expressed their desire for additional support to complete the household chores, in most cases, it was impossible to get any support. Based on the previous research evidence, it can be hypothesised that a number of cases of unsuccessful pregnancy experienced by the pregnant women in this research could be the result of the overburden of household work (Eskenazi *et al*., 1994; Pompeii *et al*., 2005).

Pregnant women in this research expressed their concerns as they experienced pressure from the family and society to become pregnant as soon as they get married and to give birth to a baby boy, which is supported by another research in Nepal (Chalise *et al*., 2022) and in South

Asian context (Jayachandran, 2015). As evident from both the qualitative and quantitative data in this research, gender disparity within Nepalese society starts even before a child is born, when families expect women to give birth to a baby boy. It was also noted that the birth of a baby boy in accordance with parental and social expectations are celebrated, and family members have positive attitude and behaviours towards the new mother and the newborn child; however, the same cannot be seen when a baby girl is born, which was also evident in the previous research by Mesman and Groeneveld (2018). Gender disparity and cultural norms associated with the gender of the unborn baby are also supported by other research in Nepal (Chalise *et al*., 2022) as well as in the wider South Asian context (Channon, 2015). Moreover, a cross-sectional study conducted in mainland China found that the desire for a son in the family, especially from in-laws, puts pregnant women in a stressful situation, resulting in postnatal depression (Gao, Chan, and Mao, 2009). In addition, research in India found appalling evidence of gender discrimination where baby girls are breastfed for a shorter period than boys, and parents and families invest less time and resources in girls as they see less return on investment from the girl child (Barcellos, Carvalho and Lleras-Muney, 2014; Fledderjohann, *et al*., 2014). This cultural practice of preference for boy childbirth negatively impacts the newborn babies, mothers and society, in general, where girls are marginalised and discriminated in the family and society even before they are born.

As children grow up in Nepalese society, they observe the existing patriarchal practices in their day-to-day lives, which often puts boys in a powerful position and girls at the receiving end at the lower position in the family and society (Neetu *et al*., 2017). This phenomenon continues even after marriage when they have to adapt to the new environment around the husband's family and where they have to play the role of a daughter-in-law to take the household responsibilities and care for the family (Bhusal *et al*., 2011; Simkhada, Porter and Van Teijlingen, 2011). From the women's experience, it was noted that the daughter-in-law has the lowest position in the new family environment, even when compared to the daughter of the family, despite being the same gender. Women in this research blamed this discriminatory practice associated with the culture where women have to leave their parental family and the society where they were born and grew up to move in with their husbands after marriage and to live with their husband's families and society. Migration is a global

phenomenon, and the movement of people from one place to another is a norm (Rechel, *et al*., 2013), but in this research, women's migration after marriage seems to be a cultural phenomenon where there is an added responsibility of adaptation in an environment controlled by others rather than freedom to decide to shape their own life. In this context, when they become pregnant, they become reliant on their husband's family members for support and care, which may not always be positive at the same level and as the women might have expected from their own parents, siblings and the neighbourhood in which they were born and grew up. In the reverse scenario of these cultural norms, if women could live with their parents instead of in-laws, they would be familiar with the community where they were born, as noted from the qualitative findings of the women's experience. Overall, as observed in this research and other research (Virupaksha, Kumar and Nirmala, 2014), lack of preparedness due to difficulties in adjusting to the new environment, the complexity and variations of the local authorities, support and health system, and lack of understanding about the available health services and other support systems may put women in a more vulnerable situation resulting in the negative impact on their wellbeing that may deteriorate further when they are pregnant.

A distinct note in the finding from this research suggests that women felt shy about revealing their pregnancy to their family and community, as talking about pregnancy may not always be taken positively within the community. Women could not answer why they felt shy about revealing their pregnancy in the early stage, which was important if they were in need of health care access. A study conducted in Scotland by Ross (2015) found that women may not reveal the pregnancy news or delay the announcement of their pregnancy with others until they feel the risk of a pregnancy loss has decreased and they are more confident about the success of the pregnancy. This is backed by data, which shows about 26% of all pregnancies end in miscarriage, and the risk of early pregnancy loss decreases with increasing gestation age of the pregnancy (Dugas and Slane, 2022). Alongside this, another reason could also be the cultural norm that restricts women from revealing their sexual lifestyles and relationships in the Nepalese community, as noted in the previous PhD research conducted among the young Nepalese population in the United Kingdom (Sah, 2017). Other research suggests that if unmarried girls are pregnant, they try to hide their pregnancy (Izugbara *et al*., 2017; Wall,

2014), which is not the case in this PhD research because all the women in this research were married and pregnant when they took part in this study. This remains an unexplored area of research, and this research could not find any conclusive reason behind that. However, if women are unable to reveal their pregnancy to their families, that may cause delays in health service access, especially in circumstances where most women are controlled by their family members (especially in-laws) in decision-making for access to health services, as it often involves the need of financial resources (Stokes, *et al*., 2008; Matsuoka, *et al*., 2010; Simkhada, Porter and van Teijlingen, 2011).

Most importantly, not revealing the pregnancy news indicates that women are not encouraged to celebrate their pregnancy and share their happiness with the rest of the family and the wider community. Pregnancy should be one of the proudest moments for many women, especially for women with restricted social lives who have very limited opportunities to celebrate achievements in their personal lives. In a situation where pregnancy is unwanted, shyness in revealing the pregnancy news could create challenges if women wish to terminate pregnancy using the abortion services that exist and are legal in Nepal. Concerns about unplanned pregnancies in previous research are a visible and long-term problem in Nepal and highlighted the need for effective maternal health education and awareness of existing abortion services (Adhikari, 2016). Very similar findings were noted from the in-depth interviews of this research where women prioritised their family and husband decision-making towards continuation of the pregnancy, rather than having their own decision about whether they wish to continue their pregnancy or not. Almost half of the participants in the in-depth interviews stated their pregnancy was unplanned, raising serious concerns about poor mental health during pregnancy as the previous research in Nepal found that women with an unplanned pregnancy are at almost double or more risk of depression symptoms compared to planned pregnancy (Aryal, *et al*., 2018; Chalise *et al*., 2022), and similar findings are also noted in many other south Asian countries like Pakistan (Karmaliani, *et al*., 2009) and India (Ajinkya, Jadhav and Srivastava, 2013). In the survey, only eight women said their pregnancy was unplanned. Future research should look at unplanned pregnancy and mental health impact.

Alongside cultural norms that put women in lower societal positions, lack of education, poverty, and financial constraints could be other reasons affecting the health and well-being of the pregnant women in this research. Only three women in the in-depth interviews and 15.6% of the women who participated in the survey were in employment at the time of data collection. As observed from the women's narratives, limited employment opportunities were partly blamed for lower education levels and social perception of women that present restricted norms towards women in education and employment. In this research, the role of most women was to look after family and work in the farmland. The reason could be that many families, especially those living in rural areas, mainly relied on farming to feed their families and had limited or no other source of income. The majority of women in this research lived in an extended family structure, and they relied heavily on farming, which means farming was an added work for many women alongside their care responsibility towards family and household work. Despite these increased workloads for women in Nepal and other South Asian contexts, these works were often counted as unpaid work, which meant that women had only limited economic freedom, as the majority of women were reliant on the family or husband's income, where they made little or no direct monetary contribution (Charmes, 2019; MoH [Nepal], New ERA, and ICF, 2017). Such perceptions and social expectations about the roles and responsibilities of women in society have the potential to put women at risk of poor mental health during their pregnancy as they struggle to manage time to take rest and complete all the work that is expected from them.

Marriage at an early age and pregnancy soon after the marriage are some of the major issues in Nepal that are significantly influenced by the discriminatory sociocultural norms of Nepal, which is also visible in other South Asian countries (Jayachandran, 2015; MoH Nepal, New ERA, and ICF, 2017). In this research, the survey data analysis found that early age pregnancy is associated with the risk of depression symptoms among young mothers, which has also been noted in another study (Oram, Khalifeh and Howard, 2017). From the findings of both qualitative and quantitative data, it was noted that women with lower levels of education were less likely to be in employment and were at risk of early marriage and pregnancy. As observed in this research, women from higher socioeconomic backgrounds were less marginalised than women from lower socioeconomic backgrounds, which supports the

concept of empowerment that argues the most vulnerable women need to be supported the most so that they can make their choices (Kabeer, 1999). Limited empowerment could be the reason the role of women in this research was limited to household chores and looking after their families. Education and employment can play a significant role in making women independent and enable them to make their decisions about their health and wealth (Brody, *et al*., 2017; Kabeer, 1999). Women's empowerment and addressing gender inequality may also play a significant role in promoting the health and wellbeing of women (Heise, *et al*., 2019).

In this research, it was well noted that women live in a very restricted space and position in society and family where very limited mobility is possible that compromises their self-identity, which is also supported by other literature (Niaz, and Hassan, 2006). The lower position of the women could be linked to financial dependency on the male member, which is the common scenario in many South Asian countries (Jayachandran, 2015). In this research, women commonly reported that they had to take permission from their husbands and in-laws for the health check-ups, indicating limited power in decision-making, which is in line with the findings from previous research in Nepal by Simkhada, Porter and van Teijlingen, (2011). A report from the Ministry of Health Nepal (Ministry of Health [Nepal], New ERA, and ICF, 2017) provides evidence that the child mortality rate decreases due to the increasing women's participation in decision-making. Still, not much has been achieved in order to promote women's freedom in the decision-making process towards accessing health care services in Nepal, and more so towards making independent decisions during pregnancy. Findings from this and other research observed that the husband and mother-in-law are often the key people in decision-making about the service uptake in Nepal (Bhusal *et al*., 2011; Simkhada, Porter, and van Teijlingen, 2011). According to the well-known author Kabeer (1999), it can be viewed as women's limited or restricted abilities to mobilise resources as distinct indicators of their limited empowerment. Therefore, pregnant women need more comprehensive support from health service providers, family, community, and structural support to address these concerns.

It is evident that early-age marriage and young mothers may be at risk of violence (WHO, 2009), and this could be one of the reasons women are experiencing gender-based violence in Nepal (Nepal, *et al*., 2022; Puri, Shah and Tamang, 2010; Krishnamoorthy and Ganesh, 2022; Gurung and Acharya, 2016; Rishal *et al*., 2018). Alongside early-age marriage and pregnancy, unplanned pregnancy is one of the major issues in Nepal, where more than half of pregnancies are unplanned, and it has been associated with lower education and poor financial circumstances of the family as well as the issue of intimate partner violence (IPV) (Bastola *et al*., 2015; Chalise *et al*., 2022). There is a strong association between sexual violence within the marital relationship and unplanned or unintended pregnancy in Nepal (Acharya, Paudel, and Silwal, 2019), resulting in women at risk of depression during their pregnancy (Chalise, *et al*., 2022). So far, no research and data suggest any evidence of IPV experienced by men in Nepal. However, in Western countries, there is evidence of men experiencing IPV (Costa, *et al*., 2015; Dias *et al*., 2020b). A report by Ghimire and Samuels (2017) states a cultural norm in Nepal, where masculinity is powerful in society, could be the leading cause of women experiencing IPV. Most importantly, IPV strongly correlates with lower physical and mental health, as observed in previous research in Nepal (Chalise *et al*., 2022) and European countries (Costa *et al*., 2015). Therefore, there should be a discussion about patriarchal norms practising in the country that may lead to a majority of early age marriage and unintended pregnancies, which should be looked at using a holistic approach beyond health service accessibility and availability. In this research, only one woman stated her experience of sexual violence and being pregnant, which is sufficient to make a case that women experience sexual violence in the Nepalese community, but it might not always be reported, and therefore, further research is needed to see the association or interrelationships between patriarchal norm, IPV and other form of violence experienced by women.

6.5 Methodological reflection and limitation of the study

This research was conducted at the Ilam District Hospital of the Koshi Province in the Eastern hilly region of Nepal. The socioeconomic and cultural context, including infrastructure and available health services, varies in different districts, provinces and regions of Nepal. Considering the different socioeconomic circumstances of the population and geographical

variation, pregnant women in different regions of Nepal may have different experiences of mental health during their pregnancy. This research presented the lived experiences of pregnant women who were accessing maternal health services at the Ilam District Hospital, highlighting various determinants of mental health relating to perceptions of support and health service accessibility and availability within the socioeconomic and cultural context of Nepal. This research does not aim to generalise its findings and acknowledge that these determinants may change with the changes in individuals, socioeconomics, politics, and policies. Nevertheless, the findings from this research can still be used to reference the determinants of mental health where similar socioeconomic and cultural context are observed, such as in different regions in Nepal, neighbouring South Asian countries, and other LMICs. I also argue that the application of the theoretical framework allows this research to provide a broader understanding of socioeconomic and cultural context and the intersections of various determinants, which is transferable and can be referenced beyond geographical regions to understand the influence of various determinants on the mental health of pregnant women.

The purposive convenience sampling strategy used in this research allowed me to approach suitable research participants who best fit to answer my research questions. I have attempted to include a diverse participant in terms of their age, parity, stage of pregnancy, living arrangements, socioeconomic status, and geographical location. Data saturation in this research was achieved in the seventeenth interview, but I continued to conduct interviews, and no new ideas or themes emerged from the additional three interviews. This indicated the data saturation from the qualitative interviews (Bryman, 2016; Holloway and Galvin, 2017). However, I acknowledge that there could be pregnant women who would be ideal participants for this research but may not have had the opportunity to participate because of time, personal circumstances, and other barriers. For example, as this research recruited participants at an antenatal clinic in a district hospital, the perspectives of those women who do not access this hospital are not captured in this study, and I acknowledge that they may have different views about their mental health and the support they require during pregnancy. Similarly, there could be women who wished to be part of this research but could not do so because of the time limitations during the antenatal check-ups, as they rush to take

the bus to return home. I have tried to mitigate this to some extent, as many of such participants could complete the survey, which required comparatively less time than the interviews. However, the sample size for the quantitative survey was 128 participants, which could be considered a small sample, and therefore, I understand and acknowledge that it would be challenging to generalise the findings from this quantitative survey.

In the exclusion criteria of this research, women under the age of 18, women with diagnosed mental illness or inability to provide consent, and women who cannot read the information sheet and consent form to provide informed consent were excluded from this research. Opinions of pregnant women experiencing mental illnesses and illiterate women may present different perspectives on their experiences of mental health during pregnancy, but given the evidence of the relationship between mental illness contributing to poor mental health and similar socioeconomic factors may play a role in determining mental illness and poor mental health, I feel confident the voices of pregnant women with mental illness would raise the similar factors influencing their mental health. I also argue that the general socioeconomic and cultural context for pregnant women under the age of 18 would be similar to other pregnant women in the same society and, therefore, are likely to present similar experiences, as presented by the pregnant women in this research.

The interviews conducted in this research were in Nepali, and the survey questionnaire was in Nepali and English. As Nepali is the national language and widely spoken in this region of Nepal, I felt there were limited possibilities of language barriers among the participants in this research, as they were fluent in the Nepali language. However, I acknowledge that some women could have felt more comfortable talking in their mother tongue (local language), which may have allowed them to express their narrations differently and in more detail. Therefore, considerations should be taken in future research to ensure and conduct the research in the local language, especially in other regions of Nepal where not all pregnant women are fluent in Nepali.

The data collection for this research was completed during Covid-19 using virtual communication tools. As the data was collected virtually, there could be a possibility that participant's engagement and willingness to participate may be low compared to the in-

person data collection. However, this cannot be the case in all the research and certainly not in this research for several reasons. This research was one the first in the region where pregnant women were approached to share their lived experiences or day-to-day life related to their pregnancy. It attracted a great interest among pregnant women attending the antenatal clinic at this hospital. In addition, I had previous experience in conducting qualitative interviews as part of my master's dissertation. Therefore, I understood and had practical experience using reflexivity while conducting interviews. This really helped me when conducting virtual interviews for this research, and I navigated through the challenges using my previous experience and a reflexive approach. I acknowledge there is no direct comparison between virtual and in-person data collection, but I feel confident and satisfied that there was no compromise in the quality of data collection. Moreover, I have collaborated with other colleagues to lead a research paper (Sah, Singh and Sah, 2020) to share my experiences, which is published in a peer-reviewed journal and has become one of my most cited papers.

6.6 Conclusion

The discussion in this chapter concludes that very little is known about the determinants of mental health among pregnant women in the Nepalese socioeconomic and cultural context. Social support for pregnant women is inadequate, and more structured social support would ensure pregnant women are more confident about their pregnancy. The lack of adequate strategy to implement existing structured social support, such as Health Mother's Group, is affecting the effectiveness of this programme. Moreover, the existing unstructured social support is just a goodwill gesture based on pregnant women's social network and socioeconomic circumstances, which means many pregnant women are not guaranteed the support they need during their pregnancy. Although health service accessibility and availability depend on the supply and demand of the services, health service supply is noted as insufficient to meet pregnant women's expectations, such as the availability of NICU, cost of the services, and availability of health professionals, and many other factors are discouraging pregnant women from seeking basic antenatal health services and hospital delivery. On the other hand, the demand for basic health service access is influenced by several socioeconomic factors and the intersection of these factors, such as household

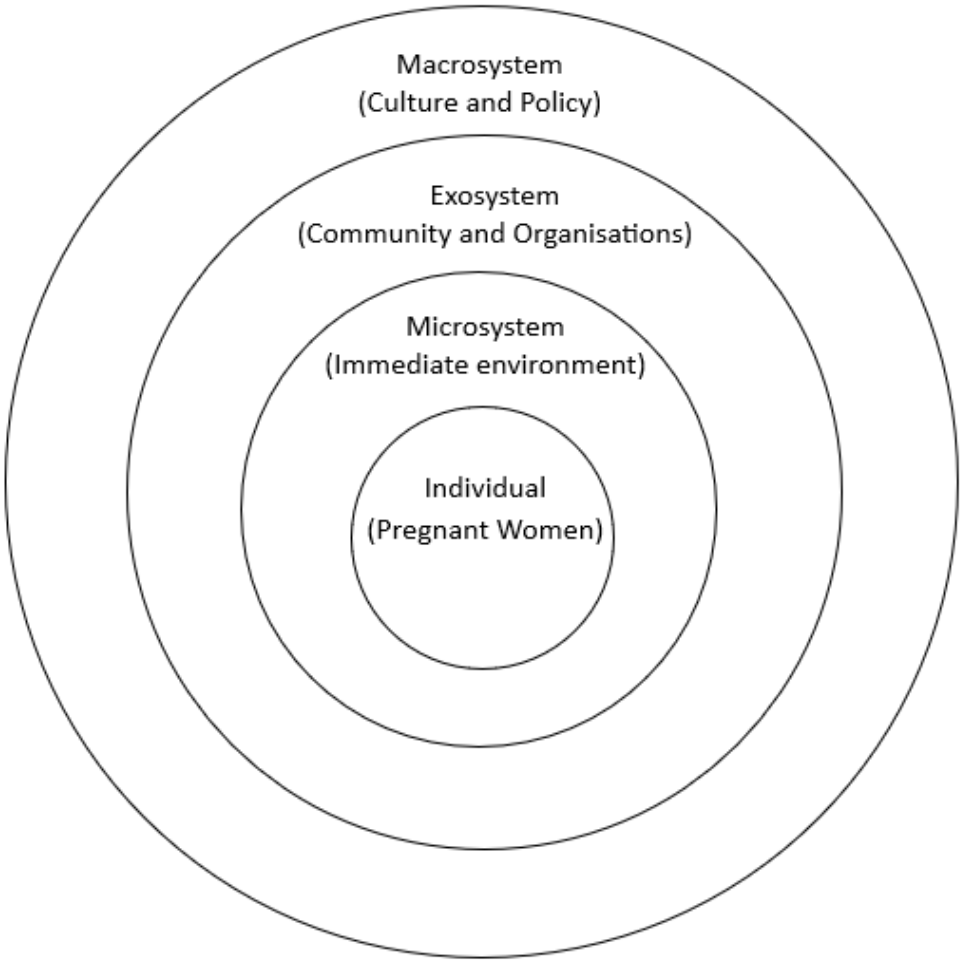
income, family structure, geographical location where women reside, education and employment of the pregnant women. From a sociocultural perspective, pregnant women experienced restrictions in decision-making, freedom of choice and discriminatory practice in policy and practice of the country, putting them at risk of poor mental health during the pregnancy. For example, insufficient maternity leave policy, women moving to new places after marriage, and existing gender power imbalance means women cannot make independent decisions about their health care access independently. These factors intersect with one or the other individual factors to marginalise pregnant women, putting them at increased risk of poor mental health.

Chapter Seven: Conclusion and Recommendation

In this concluding chapter, I summarise the key findings from my research alongside providing methodological reflections, recommendations from this study and my achievements during the PhD study. The first section concludes the major findings by conceptualising the mental health of Nepalese pregnant women within the multiple layers of ecological theory and highlights the importance of intersectional relationships of various factors within these multiple layers that could act together to further marginalise the pregnant women, putting them at the risk of poor mental health. Thereafter, I present recommendations driven by research findings and discussions of this thesis. Finally, I share my achievements from this PhD journey that have motivated me to continue my academic career.

7.1 Thesis conclusion: conceptualising mental health of pregnant women within the multiple layers of ecological theory

This research aimed to explore the social determinants of the mental health of pregnant women in Nepal and looked at three specific areas: social support, health service availability and accessibility, and socioeconomic and cultural influence on the mental health of pregnant women. Within the ecological theory in the context of Nepalese pregnant women (See figure 7.1), pregnant women sit at the centre of the ecology, and they are surrounded by multiple layers, such as microsystem or their immediate environment, exosystem which represents community and organisations that are associated with or is relevant to pregnant women, and macrosystem which highlights the influence of culture and policy on the mental health and wellbeing of the pregnant women. The mesosystem, not shown in the figure below, represents the pregnant woman's relationship with microsystem or immediate environment, which does not function independently but is interconnected with the multiple layers of the ecological theory, and they assert influence upon one another.



(Adopted from Bronfenbrenner's Ecological theory, 1977)

Figure 7.1: Conceptual framework: Influence of social determinants on mental health of pregnant women in Nepal

At the **individual level**, pregnant women's demographic characteristics such as age, sex, educational status, employment, socioeconomic status, place of residence, and living arrangement, as well as their health status, knowledge, attitude and beliefs towards health services and other characteristics play an important role in how they will interact with their immediate environment and other layers of the ecological theory, and that would have a potential influence on their mental health and wellbeing. For example, the intersection of limited or no income and the geographical location of the women where they reside present compounded risks to poor mental health for some women in this research. Also, the early age of pregnancy was found to be significantly associated with the risk of poor mental. The findings also suggested that women who had a pregnancy before the age of 20 years were

less likely to complete ten years of school education, which shows the links between personal health status, such as early-age pregnancy and education status. It was also found that pregnant women's knowledge, attitude and beliefs about maternal health influenced their health-seeking behaviours towards taking action to prevent the risk of poor health, which eventually promotes mental health.

This research also found that pregnant women with better socioeconomic status were more confident during their pregnancy, which supported them to manage their mental health positively. For example, working women in this research were more confident in terms of health service access and finding solutions to cope with challenging situations and had ability for decision-making. Most women in this research considered themselves unemployed, which meant they had less economic freedom and they were reliant on their families for pregnancy-related expenses. In such circumstances, living in a family with limited household income restricted pregnant women's ability to negotiate the priority to find expenses to cover their maternal health check-up costs in order to ensure they have access to health services when they need it most. The lack of security or guarantee for adequate healthcare access made many pregnant women feel more vulnerable to poor mental health, and it was exacerbated further if they had negative pregnancy experiences in the past. For example, this research found that women who experienced unsuccessful pregnancies in the past were at risk of poor mental health in their current pregnancy. For women who had experienced struggle to become pregnant, in some cases for a long time, the current pregnancy was very sensitive, and even a minor concern without proper support or health care access could put them at risk of experiencing poor mental health. Similarly, as noted in this research, pregnancy conceived because of sexual violence had put women at risk of poor mental health, also because these women were not able to receive adequate support within the multilayer of ecology, such as from the immediate environment, organisation and community and also within cultural norms of Nepal, where pregnancy because of sexual violence is not acceptable, and generally victims are blamed and bear the consequences of that pregnancy.

Within the **immediate environment** or the microsystem of the ecological theory, family structure, family income, household work and care responsibility, and support from family

members and neighbours play an important role in contributing towards the experience of pregnant women's mental health. Women's narrative and findings from the survey in this research reported that family support exists for most pregnant women regardless of whether they live in a nuclear or extended family structure. However, the survey analysis found that pregnant women wished for the most support from their husbands during their pregnancy, but that was not always possible in the extended family structure of the patriarchal society in Nepal, as older women in the family, especially mothers-in-law play the key role during all the decision-making process of the pregnancy, with little or no voice from the pregnant women. In other situations, husbands have to leave their wives and families for employment in other cities or countries, and this creates a default situation where the elderly in the families take all the responsibility and become the decision-makers. The majority of women in Nepal live in an extended family, and in such situations, pregnant women often experience or are at risk of poor mental health, and more so during pregnancy, as they are less likely to receive the most desired support from their husbands.

Individual factors such as lack of education and unemployment meant pregnant women were mostly financially dependent on their families. Therefore, they were expected to complete all the household chores and take responsibility for caring for family members, which is the sociocultural norm of the Nepalese patriarchal society. The excessive household work and providing support to a family in outside work, such as farming, which is the major source of household income for many families, affected most pregnant women in this research. In many cases, they experience exhaustion due to excessive household work and lack of opportunity and time to take appropriate rest, which is expected and necessary during pregnancy, putting them at risk of poor mental health. Beyond family, pregnant women in this research also acknowledged the support from extended family members, especially in the context where they had to stay overnight in the city for health check-ups and neighbours in general conversation about pregnancy, but it was noted to be less effective. Few women highlighted that neighbours were also helpful in a situation where they needed financial support, in terms of borrowing money from them for unexpected pregnancy-related expenses. The level of support for pregnant women was very much dependent on their socioeconomic status and the social network they had created in their immediate environment.

The **community and organisations** which sit in the exosystem of the ecological theory include support from village municipalities, NGOs/INGOs, and availability and accessibility of health services, including adequate infrastructure, appropriate resources and health professionals, and a transport system to access the health services. These factors played a significant role in influencing the mental health of pregnant women in this research conducted in the Ilam District hospital of the Koshi province of Nepal. The current health service provision of antenatal check-ups in Nepal is mostly focused on the medical model of health, where the maternal health check-ups include recording, identifying, monitoring and managing physical health risks of pregnant women, such as blood pressure, height and weight, baby growth and sign of anaemia. However, the wellbeing aspects, such as recording mental health and well-being information or assessing risks of the vulnerability of pregnant women, are largely ignored. In this research, pregnant women highlighted that the existing health service provision and practice seems to provide insufficient support towards the mental health needs of pregnant women since the issue of mental health is overshadowed due to other different priorities of the government and the health service providers. The majority of women expressed that one of the sources of mental distress during their pregnancy was inaccessible and inadequate health services, including negative attitudes and behaviours from health professionals, limited health services and overcrowded hospitals, which meant longer waiting times to see the doctors and complete all the health check-ups. The women in this research also found it challenging to complete all the ANC check-ups and attend delivery in a health facility if they lived in a difficult geographical location where the public transport system was unavailable or had limited options to travel. Despite the government of Nepal aims to provide all women with access to health services within 30 minutes by walking or using any means of transport, this target has still not been achieved, and many women travel longer than 30 minutes to access the nearest health services, which poses many other challenges. In addition, the cost of health services related to pregnancy and delivery was a major concern for many pregnant women, and they spoke about the requirement of more structured support from the local/national government as well as the NGOs and INGOs, as there were very limited to no organised and structured support at the current times. In this research, it was evident that people from rural areas have to rely on poor transportation systems, and if

they were from poor socioeconomic backgrounds, they experienced a sense of insecurity and fear of death during their pregnancy, as they saw limited possibilities to reach health services in case of emergency and would have to bear the financial burden, thereby affecting their mental health and wellbeing.

The need and access to social support for pregnant women varied depending on their demographic characteristics, their interaction with the immediate environment and the availability and accessibility of the support and services offered by the community and organisations in which they lived. For example, pregnant women from lower socioeconomic backgrounds expected to receive financial and emotional support, while women from higher socioeconomic backgrounds were more interested in seeking emotional support to have a positive experience during their pregnancy. Similarly, those in rural areas from lower socioeconomic backgrounds were keen to seek support from any health services accessible to them, while those in urban areas from better socioeconomic backgrounds were looking to explore their choices to get the best possible support for themselves. This research concludes that maternal health service access and utilisation can be successful and effective if there are parallel investments in programmes to eradicate poverty, improve universal free healthcare, prioritise maternal health at local and national levels, and take action on promoting women's empowerment.

Within the **culture and policy** context, which represents the macrosystem or the outer circle of the ecological theory, pregnant women highlighted the role of various sociocultural factors in the Nepalese patriarchal society and the importance of national or local government policy that can have a significant impact on women's lives and thereby affecting their health and wellbeing, including mental health. The sociocultural norms discussed in this research included gender discrimination, lack of empowerment and challenges to negotiate to express their views towards decision-making during their pregnancy. Pregnant women in this research highlighted how the social norms of expectations from the marriage create an environment where women are put in a disadvantageous position to achieve optimal health, including maternal and mental health. For example, women in the Nepalese society move to their husband's house after marriage and lives with their husband and his family. After marriage,

they are expected to form a new family and social network, which becomes more challenging, especially when they are also expected to take responsibility for caring for the new family, complete all the household work, contribute to the farmland working, become pregnant, and give birth to a baby boy soon after the marriage. The long list of expectations from the women and then a preference to give birth to a baby boy shows a clear sign of how the gender disparity is experienced within Nepalese society even before a baby girl is born. In many cases, women also felt fear and insecurity due to these expectations from the family and society, affecting their confidence and decision-making in the absence of adequate support for empowerment, which puts them at risk of poor mental health. This also makes them more reliant on family members rather than making their own decisions in relation to their health and wellbeing, including planning for pregnancy, health check-ups during pregnancy or seeking other forms of support during their pregnancy that would help them to celebrate and experience their pregnancy positively. This research also highlighted unplanned pregnancy as an acceptable social norm after marriage, where women are expected to continue with the pregnancy regardless of their decision. Moreover, women were less likely to reveal their pregnancy at an early stage, which was noted as a cultural norm. However, this affected their access to health services at an early stage of the pregnancy.

Looking at the maternal health policy, the government of Nepal implemented the Safe Motherhood Programme a decade ago. However, many of the women in this research showed no awareness of the programme, raising a serious question on the implementation and effectiveness of the programme. Similarly, some pregnant women in this research who were employed at some stage of their career had no confidence in the national maternity leave policy, as it did not provide assurance of their future work or career after the pregnancy. In many cases, they were worried because there was no guarantee that their job would be secured on return after giving birth to a baby. The lack of security or support from policy for career-oriented women can put them at higher risk of poor mental health following pregnancy and childbirth. This research concludes that an adequate policy that supports pregnant women at the workplace and secures their return to the job after pregnancy and childbirth would make them feel secure about their careers and promote mental health during pregnancy.

7.2 Future research and recommendations

Based on the research findings and discussions, I present six recommendations that could support improving the mental health of pregnant women in the socioeconomic and cultural context of Nepal.

A. **Improve maternal mental health through education and empowerment:** Girls' education will provide women with opportunities in the longer term to explore economic freedom, which will empower them and help them to build confidence to understand and take crucial decisions about their pregnancy (Kabeer, 1999). Empowering women through antenatal education, supporting them to take independent decisions related to their pregnancy and access to health services, celebrating their pregnancy without sociocultural constraints, and developing and implementing cost-effective community programmes to empower the women would improve their pregnancy experiences and benefit them with their mental health.

B. **Developing organised social support through increased community-level engagement:** Although there is a community social support group known as the Health Mother's group (Manandhar *et al*., 2022), the effectiveness remains inconsistent, with little awareness among pregnant women. Increasing the community engagement where pregnant women come together to develop the community social support groups in collaboration with the local stakeholders, including the local level health service provides and municipalities, will help to create awareness, ease the pressure on health services and create an environment where pregnant women can share their positive experiences as well as address their concerns collectively, improving their mental health.

C. **Effective Implementation of the *Aama Surakshya Karyakram* to support pregnant women:** Since the decision-making related to health service access of pregnant women depends mostly on the husband and other family members, a health promotion campaign to create awareness about the benefits of *Aama Surakshya Karyakram* among pregnant women and their family members has the potential to increase the uptake of such programmes (Bhusal *et al.*, 2011; Mohammed *et al.*, 2019). Also, revising the programme to meet the financial needs of pregnant women, considering the individuals' socioeconomic circumstances, would support pregnant

women and their families to cope with the financial burden of pregnancy, thereby addressing their poor mental health.

D. **Addressing hard-to-reach women by addressing transport and accommodation issues:** Free-of-cost ambulance services for pregnant women from disadvantaged backgrounds, especially, those women from rural areas with poor access to transport facilities to commute long distances, may boost their confidence during pregnancy. If these pregnant women have to stay overnight, then the maternity waiting homes (Lori *et al.,* 2013*)* in the hospitals where they can stay overnight may provide confidence to the women. It would also save on transportation costs for the women and their families, and they would not rush for health check-ups or get anxious about the last bus they could miss to go home, which would significantly contribute towards improving the mental health of pregnant women.

E. **Providing adequate health services including health professionals:** Although UHC remains the priority for the Government of Nepal, it is important that federal and local authorities prioritise their resources and ensure adequate health services are available for pregnant women. Investing in healthcare professionals by promoting continuous professional development (CPD) to address the issues related to professional attitudes, behaviours, and competencies could be a cost-effective and timely approach to improve the quality of health services benefitting pregnant women as well as health professionals and promoting their mental health (Kayembe and Wier, 2018; Khatri *et al.,* 2021*;* Schostak et al., 2010; Simkhada et al., 2016).

F. **Active community participation in future research:** The lack of active participation from service users was evident in this research, as the pregnant women in this research had one of the rare opportunities where they could be heard or raise their voices. A community approach to research where active participation from service user involvement help to capture their views in the development, delivery and evaluation of programmes which are considered essential for the success of health service provisions (García-Ramirez and Hatzidimitriadou, 2009; MacInnes, et al., 2011). Although Yadav and colleagues (2021) have used a co-design approach to develop an integrated model of care for delivering self-management intervention to multi-morbid COPD people in rural Nepal, Singh and colleagues (2023) highlight the

challenges of involving service users in the health service provision in LMICs. I argue that future maternal health research in Nepal should consider using the co-design approach to develop and implement maternal health programmes and policies so that it can ensure the voices and priorities of service users are included by them and for them.

7.3 PhD achievements and future aspirations

I must acknowledge that this PhD journey has been a great learning phase of my life, and I have achieved both personally and professionally. Although I understood the challenges of a longer time in education when I completed my medical degree in my twenties, this PhD journey has been very different as I had to balance my personal, work and student life simultaneously. This journey has helped me to explore and understand myself as a woman, as a mother, as an academic and as a person. After teaching roles in different institutions, I am currently working as a Lecture in Public Health at the University of Bradford, which is one of the best achievements for me as an academic. Moreover, I have also collaborated with various academics and researchers to work on projects, publish research papers, and disseminate my research findings at national and international conferences. The knowledge and skills I have gained during my PhD journey have contributed immensely to supporting me to achieve the best of my capabilities.

I aim to disseminate my PhD research findings in the local communities of Nepal and use a co-production approach to take my research forward, creating an intervention which can support pregnant women in Nepal towards their mental health. I have already been approached by the stakeholders, such as the hospital and community members, to share the findings and suggestions to improve maternal health and wellbeing in the community. It is important for me to engage with the policymakers, health service providers, community stakeholders, provincial representatives, pregnant women, and other stakeholders to ensure their voices are presented equally and in collaboration to influence the national and local policies that would shape their health and wellbeing, including mental health.

Research Publications during my PhD:

Singh, D.R., Shrestha, S., Karki, K., Sunuwar, D.R., Khadka, D.B., Maharjan, D., **Sah, L.K**., Simkhada, B. and Sah, R.K. (2023) Parental knowledge and communication with their adolescent on sexual and reproductive health issues in Nepal. *PloS one*, *18*(7), p.e0289116.

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Sah, R.K, Singh, D.R., **Sah. L.K.,** & Robinson, S. (2022) 'Public Health', in Robinson, S. (ed.) *Principles and Practice of Health Promotion and Public*. Taylor & Francis, PP. 225-248.

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Singh, D.R., Sunuwar, D.R., Shah, S.K., Karki, K., **Sah, L.K.,** Adhikari, B. and Sah, R.K. (2021) Impact of COVID-19 on health services utilization in Province-2 of Nepal: a qualitative study among community members and stakeholders. *BMC health services research, 21*(1), pp.1-14.

Sah, L.K., Sah, P., Yadav, M.K., Parajuli, S.B. and Shah, R. (2020) Risk of Gender-Based Violence and Poor Mental Health among Nepalese Women during COVID-19 Pandemic: A Review. *Nepal Medical Journal, 3*(2), pp.39-46.

Sah, L.K., Singh, D.R. and Sah, R.K. (2020) Conducting Qualitative Interviews using Virtual Communication Tools amid COVID-19 Pandemic: A Learning Opportunity for Future Research. *Journal of the Nepal Medical Association, 58*(232), p.1103.

Conference Presentations:

Sah, L.K. (2023) *Maternal Mental Health, Levels of Social Support and Confounding Factors During Pregnancy in Eastern Nepal: Findings from a Mixed Methods Exploratory Study*. 43rd Annual Society for Reproductive and Infant Psychology (SRIP) Conference 2023, Lausanne University Hospital, Switzerland,7th September.

Sah, L.K. (2023) *Experience of distress by pregnant women in absence of adequate and accessible health care services while struggling with health concerns*. 20th British Nepal Academic Council (BNAC) Nepal Study Days, University of Huddersfield, 24-25 April.

Sah, L.K. (2020) *Mixed Methods Research Design: social determinants of mental health among pregnant women in Nepal.* Annual Postgraduate Research Conference, Canterbury Christ Church University, 21st May.

Sah, L.K. (2019) *Research Proposal: exploring social determinants of mental health among pregnant women in Nepal.* Social Inclusion Research Hub Conference, Faculty of Health and Wellbeing, CCCU, 11th December.

Sah, L.K. (2019) *Social determinants of mental health among older Nepalese women living in the UK.* Annual Postgraduate Research Conference, Canterbury Christ Church University, 22nd May.

Sah, L.K. (2019) *Factors affecting mental health of pregnant women in the context of developing countries.* CCSU MIDSOC AND CCSU PSYSOC on Maternal Mental Health, Canterbury Christ Church University, 13th March.

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Appendices:

Appendix A: Introductory Letter

Introductory Letter

Dear Sir/Madam,

I am a PhD student/ researcher at Canterbury Christ Church University in the UK. My research topic is '*Exploring the social determinants of mental health among pregnant women in Nepal'.*

The purpose of this PhD study is to explore social determinants of mental health among pregnant women in Nepal. The study aims to explore perceptions of the mental health of pregnant women and support systems available to them.

Being a pregnant woman or working as a health care professional or looking after a pregnant woman, you might have your own thoughts in this topic. I would be happy to invite you to participate in this research and you will have an opportunity to share your opinions and experiences.

Please contact me on (local phone number TBC) or email me l.k.sah852@canterbury.ac.uk at your earliest convenience to schedule your participation in my research.

Sincerely,
Lalita Sah
PhD Researcher
Faculty of Health and Wellbeing
Canterbury Christ Church University
https://www.canterbury.ac.uk/

Appendix B: Participant Information Sheet (Pregnant Women)

Exploring the social determinants of mental health among pregnant women in Nepal

PARTICIPANT INFORMATION SHEET

A research study is being conducted at Canterbury Christ Church University (CCCU) by Lalita Sah. Please refer to our Research Privacy Notice for more information on how we will use and store your personal data *at:* https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Background
I am a PhD scholarship student at Canterbury Christ Church University. The purpose of this PhD study is to explore social determinants of mental health among pregnant women in Nepal. The study aims to explore perceptions of mental health of pregnant women and support system available to them.

What will you be required to do?
Participants in this study will be required to participate in an interview which will last between 30-60 minutes. The interview will be audio recorded using a digital voice recorder. If you are a pregnant woman, you will be asked to share your knowledge, perceptions, and experiences about mental health during this pregnancy.

To participate in this research you must:

- Pregnant women (at any stages of pregnancy)
- Be aged 18 year and over
- Have read this participant information sheet
- Provide informed consent

Procedures
Your participation in this study is completely voluntary. You will be required to read this participant information sheet. You will be requested to participate in an interview. If you agree to participate, you will sign a consent form before the interview starts. Your participation will take place only when we, you as a participant and I as a researcher agree on a mutual and convenient location and time to conduct the interview. The location will at this hospital and time will be decided based on our mutual convenience. The interview will be audio recorded. During the interview, which may take 30-60 minutes, you will be asked to share your knowledge, perception, and experiences of mental health during your pregnancy.

Feedback
There are no known risks for you to take part in this study. This research may not help you directly, but the information provided in this study will help to increase the awareness and understanding of

mental health of Nepalese pregnant women. Results of this research will be disseminated widely which may help to shape the local or national policies and mental health services towards pregnant women in Nepal.

Confidentiality and Data Protection

The following categories of personal data (as defined by the General Data Protection Regulation (GDPR)) will be processed:
Your personal data will be demographic information, such as age, sex, employment, geographic location where you live.

We have identified that the public interest in processing the personal data is:

Demographic information will provide precise and detail information about the population groups who are most at need of the required resources and support. In the long run, the information will be used to understand and explore further the mental health and wellbeing of the population group and to health resource allocation.

Data can only be accessed by, or shared with:

The data access is limited to myself as a researcher, my supervisors and examiners of my thesis.
The identified period for the retention of personal data for this project is 2 months from the date the data collected.
If you would like to obtain further information related to how your personal data is processed for this project please contact Lalita Sah on *local mobile number …..or l.k.sah852@canterbury.ac.uk.*.
You can read further information regarding how the University processes your personal data for research purposes at the following link: Research Privacy Notice – https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Dissemination of results:

The findings of this study will be disseminated through thesis/dissertation, journal articles, chapters in books or monograph, conference paper or poster. The dissertation will also be submitted to CCCU library database CreaTE and British Library.

Process for withdrawing consent to participate

You are free to withdraw your consent to participate in this research project at any time without having to give a reason. To do this *you can ask during the interview or after the interview. My contact details are given below.*
You may read further information on your rights relating to your personal data at the following link: Research Privacy Notice – https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Any questions?

If you need further information about this research have any questions, concerns or complaints about the study at any stage, please contact:

Researcher: Lalita Sah
Email: l.k.sah852@canterbury.ac.uk
Local Phone No: TBC

Supervisor: Professor Eleni Hatzidimitriadou
Email: eleni.hatzidimitriadou@canterbry.ac.uk
Phone No: 01227 928000 Ext. 3596

Appendix C: Information Sheet (Key Informant)

Exploring the social determinants of mental health among pregnant women in Nepal

PARTICIPANT INFORMATION SHEET

A research study is being conducted at Canterbury Christ Church University (CCCU) by Lalita Sah
Please refer to our Research Privacy Notice for more information on how we will use and store your personal data *at:* https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Background
I am a PhD scholarship student at Canterbury Christ Church University. The purpose of this PhD study is to explore social determinants of mental health among pregnant women in Nepal. The study aims to explore perceptions of mental health of pregnant women and support system available to them.

What will you be required to do?
Participants in this study will be required participate in an interview which will last between 30-60 minutes. The interview will be audio recorded using a digital voice recorded. If you are working as a health and social care worker, or family or relatives of a pregnant women who support and provide care for pregnant women, you will be asked to share you working experience and understanding about the mental health issues associated with the pregnant women and the support available to them.

To participate in this research you must:

- Be health and social care professional working to support and provide health and social care needs of pregnant women or family members or relatives of a pregnant women who look after a pregnant woman
- Be aged 18 year and over
- Have read this participant information sheet
- Provide informed consent

Procedures
Your participation in this study is completely voluntary. You will be required to read this participant information sheet. You will be requested to participate in an interview. If you agree to participate, you will sign a consent form before the interview starts. Your participation will take place only when we, you as a participant and I as a researcher agree on a mutual and convenient location and time to conduct the interview. The location will at this hospital and time will be decided based on our mutual convenience. The interview will be audio recorded. During the interview, which may take 30-60 minutes, you will be asked to share your working experiences, knowledge and perception of mental health of pregnant women.

Feedback
There are no known risks for you to take part in this study. This research may not help you directly, but the information provided in this study will help to increase the awareness and understanding of mental health of Nepalese pregnant women. Results of this research will be disseminated widely which may help to shape the local or national policies and mental health services towards pregnant women in Nepal.

Confidentiality and Data Protection
The following categories of personal data (as defined by the General Data Protection Regulation (GDPR)) will be processed:
Your personal data will be demographic information, such as age, sex, employment, geographic location where you live.

We have identified that the public interest in processing the personal data is:
Interview will collect some demographic information. Use of demographic information will provide differences and similarity of participant's understanding towards mental health of pregnant women. Understanding of mental health may vary depending on age, sex, employment and environment where participants live. The information provide by participants will help to identify the population groups who are most at need of the required resources and support. In the long run, the information will be used to understand and explore further the mental health and wellbeing of the population group and to health resource allocation.

Data can only be accessed by, or shared with:
The data access is limited to myself as a researcher, my supervisors and examiners of my thesis.
The identified period for the retention of personal data for this project is 2 months from the date the data collected.

If you would like to obtain further information related to how your personal data is processed for this project please contact Lalita Sah on *local mobile number …..or l.k.sah852@canterbury.ac.uk.*.
You can read further information regarding how the University processes your personal data for research purposes at the following link: Research Privacy Notice – https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Dissemination of results
The findings of this study will be disseminated through thesis/dissertation, journal articles, chapters in books or monograph, conference paper or poster. The dissertation will also be submitted to CCCU library database CreaTE and British Library.

Process for withdrawing consent to participate
You are free to withdraw your consent to participate in this research project at any time without having to give a reason. To do this you can ask during the interview or after the interview. My contact details are given below.

You may read further information on your rights relating to your personal data at the following link: Research Privacy Notice – https://www.canterbury.ac.uk/university-solicitors-office/data-protection/privacy-notices/privacy-notices.aspx

Any questions?
If you need further information about this research have any questions, concerns or complaints about the study at any stage, please contact:

Researcher: Lalita Sah
Email: l.k.sah852@canterbury.ac.uk
Local Phone No: TBC

Supervisor: Professor Eleni Hatzidimitriadou
Email: eleni.hatzidimitriadou@canterbury.ac.uk
Phone No: 01227 928000 Ext. 3596

Appendix D: Consent Form

PARTICIPANT CONSENT FORM

Title of Project:	Exploring the social determinants of mental health among pregnant women in Nepal.
Name of Researcher:	Lalita Sah

Contact details:

Address:	Faculty of Health and Wellbeing Canterbury Christ Church University North Holmes Road Canterbury CT1 1QU United Kingdom
Tel:	00977
Email:	l.k.sah852@canterbury.ac.uk

	Please initial box
1. I confirm that I have read and understand the participant information for the above project and have had the opportunity to ask questions.	
2. (If applicable) I confirm that I agree to any audio and/or visual recordings.	
3. I understand that any personal information that I provide to the researchers will be kept strictly confidential and in line with the University Research Privacy Notice	
4. I understand that my participation is voluntary and that I am free to withdraw my participation at any time, without giving a reason.	
5. I agree to take part in the above project using virtual media that is discussed with me.	

Name of Participant:	Date:	Signature:
Researcher:	Date:	Signature:

Copies: 1 for participant
1 for researcher

Appendix E: Canterbury Christ Church University Ethics Approval Letter

14th April 2020 Ref: ETH1920-0026

Lalita Sah

Email: l.k.sah852@canterbury.ac.uk

Dear Lalita

Project Title: Exploring the Social Determinants of Mental Health Among Pregnant Women in Nepal

Your application was reviewed by the Faculty of Health and Wellbeing Ethics Panel on 8th April 2020. The Panel agreed that the conditions set out in my email of 9th April should be met before final approval could be given.

As Chair of the Panel, I am content that these conditions have now been met in full and I am writing to give formal confirmation that you can commence your research. Any significant change in the question, design or conduct of the study over its course should be notified to me as Chair and may require a new application for ethics approval. You are also required to inform me once your research has been completed.

With best wishes for a successful project.

Yours sincerely

Martin Bedford
Chair, Faculty of Health and Wellbeing Ethics Panel
Tel: 01227 922527
Email: martin.bedford@canterbury.ac.uk

Appendix F: Nepal Health Research Council Ethics Approval Letter

Government of Nepal
Nepal Health Research Council (NHRC)
Estd. 1991

Ref. No.: 159

26 July 2020

Ms. Lalita Kumari Sah
Principal Investigator
Canterbury Christ Church University, UK

Ref: Approval of thesis proposal

Dear Ms. Sah,

This is to certify that the following protocol and related documents have been reviewed and granted expedited from review by the Expedited Review Sub-Committee for implementation.

ERB Protocol Registration No.	356/2020 PhD		**Sponsor Protocol No**	NA
Principal Investigator/s	Ms. Lalita Kumari Sah		**Sponsor Institution**	NA
Title	Exploring the Social Determinants of Mental Health Among Pregnant Women in Ilam and Biratnagar hospital of Nepal			
Protocol Version No	Version 4.0		**Version Date**	19 July 2020
Other Documents	1. Data collection tools 2. Acceptance letter from study site		**Risk Category**	Minimal risk
Expedited Review	Proposal	√	**Duration of Approval** 26 July 2020 to 26 July 2021	**Frequency of continuing review** At least once in a year
	Amendment			
	Re-submitted			
	Meeting Date: 20 July 2020			
Total budget of research	**NRs 1,07,000.00**			
Ethical review processing fee	**NRs 10,000.00**			

Investigator Responsibilities

- Any amendments shall be approved from the ERB before implementing them
- Submit progress report every 3 months
- Submit final report after completion of protocol procedures at the study site

Tel: +977 1 4254220, Fax: +977 1 4262469, Ramshah Path, PO Box: 7626, Kathmandu, Nepal
Website: http://www.nhrc.gov.np, E-mail: nhrc@nhrc.gov.np

Government of Nepal
Nepal Health Research Council (NHRC)
Estd. 1991

Ref. No.: 159.

- Report protocol deviation / violation within 7 days
- Comply with all relevant international and NHRC guidelines
- Abide by the principles of Good Clinical Practice and ethical conduct of the research

If you have any questions, please contact the Ethical Review M & E Section at NHRC.

Thanking you,

Dr. Pradip Gyanwali
Executive Chief
(Member-Secretary)

Tel: +977 1 4254220, Fax: +977 1 4262469, Ramshah Path, PO Box: 7626, Kathmandu, Nepal
Website: http://www.nhrc.gov.np, E-mail: nhrc@nhrc.gov.np

Appendix G: Letter for Field Access

Government of Province
Ministry of Social Development
1No.Province,Heath Directorate
Ilam Hospital

Ref no.:-

Date :- 27th April,2020

To Whom It May Concern

Dr. Lalita Shah(Nepal medical council redg. no. 9753)has contracted us to request access to potential participants for her research study about mental health and well being of pregnant women. we think this is an important area of research , which may help in national policies and improve mental health services of this region of Nepal. we would be willing to support her research once she obtains ethical clerarance from Nepal Health Research Council.

we wish her all the best for her research.

.....

Dr. Prabhu Sah
Medical superintendent

Appendix H: Interview Schedule

In both the interviews and surveys of this research, it would will collect some demographic information. Use of demographic information will provide precise and detail information about the population groups who are most at need of the required resources and support. In the long run, the information will be used to understand and explore further the mental health and wellbeing of the particular population group and to health resource allocation.

In-depth interviews with Pregnant Women

Opening statement

Thank you very much for agreeing to participate in this interview. As you are a pregnant woman, it would be a good idea to interview you, so that I can have more information from your perspectives. I would like to ask you some questions about your experiences you have had about mental health during your pregnancy. I hope to use this information in my research to provide clarity and better understanding about mental health issues pregnant women are facing. The interview should take about 30 to 60 minutes. Are you available to respond to some questions at this time?

- **Transition:** Let me begin by asking you some questions about where you do you live

1. Please tell me a story of your normal one day

Prob:

- How do you spend your day?
- What do you do?
- What is the hardest thing to do?
- Do you like to eat very often in this pregnancy?

2. Can you please tell me what is your experience of being a pregnant woman?

Prob:

- Is this your first pregnancy?
- How are you feeling about your pregnancy?
- Are you enjoying your pregnancy?
- Is there anything you are struggling for?
- Do you think pregnancy is important for women?

3. What are the supports available for you?

Prob:

- How often do you need supports?
- What type of supports are you getting?
- Are you well supported in your family/community?
- Are there any social supports available to you?
- Do you often meet other pregnant women?

4. How is your experience receiving health care services?

Prob:

- Are you happy to receive the health services available to you?
- How do you feel your day in the hospital?
- Do you think the services you are receiving is adequate?
- What could be done to provide better support and care to her?
- Are there any difficulties or barriers that discoursing you to receive the health services?
- Can you tell me your opinion about Safe Motherhood Programme?

Closing Statement

You were very involved talking about your experiences. I appreciate your time and consideration.

- Transition: Well, it has been a pleasure talking to you

Final Question: Is there anything else you think would be helpful for me to know?

Thank you again for your valuable time for this interview.

****

<u>In-depth interviews with Key Informants</u>

Opening statement

Thank you very much for agreeing to participate in this interview. I would like to ask you some questions about your experiences in supporting towards the mental health of pregnant women (appropriate and relevant language was used depending on the key informant being interviewed). I hope to use this information in my research to provide clarity and better understanding about mental health issues pregnant women are facing. The interview should take about 30 to 60 minutes. Are you available to respond to some questions (appropriate and relevant question probs were selected depending on the key informant being interviewed) were selected at this time?

- **Transition:** Let me begin by asking you some questions about where you do you work

1. Can you please tell me what is your understanding of pregnant women?

Prob:

- How often do you see pregnant women?
- Are they happy about their pregnancy?
- Are they well supported in their family?
- Are they struggling to maintain good health?
- Are there any social supports available to them?
- How often does she need supports?
- What type of supports are you providing?
- Is she happy about her pregnancy?
- Is she well supported in her family/community?
- Is she struggling to maintain good health?
- Are there any social supports available to her?

2. How is your experience working here?

Prob:

- Are you enjoying working here?
- Are you enjoying supporting these women?
- Do you think the services they receiving here is adequate?
- Do you enjoy helping them?
- Are they happy to receive the services?
- What could be done to provide better support and care to these women?
- How do you feel about supporting her?
- Are you enjoying supporting these women?
- Do you think the services they receiving here is adequate?
- Do you enjoy helping them?
- Is she happy to receive the services available to her?
- What could be done to provide better support and care to her?

Closing Statement

You were very involved talking about your experiences about supporting pregnant women and their services. I appreciate your time and consideration.

- Transition: Well, it has been a pleasure talking to you

Final Question: Is there anything else you think would be helpful for me to know?

Thank you again for your valuable time for this interview.

****

Appendix I: Survey Questionnaire

Exploring social determinants of mental health among pregnant women in Nepal

This research study is being conducted by Lalita Sah, a PhD student at Canterbury Christ Church University (CCCU), Faculty of Health and Wellbeing. This research is conducted as part of the PhD study, to fulfil the requirements of the PhD thesis.

Your participation in this study is completely voluntary. If you agree to take part in this research survey, you will be required to complete the survey questionnaire which will take 15-30 minutes. In the first part of the survey questionnaires, you are asked to provide some of your demographic information. The second part of the survey is related to your knowledge, perception, and experiences during your pregnancy. The third part of the survey asks your mental wellbeing information. The information you have provided will help me to understand who are at the need forservices and support. Before you take part in this survey, you must have read and understand participant information sheet and completed consent form.

Please circle the most relevant answer to you

Part A- Demographic information

A1. What is your age?	18-20 21-24 25-29 30-34 35-39 40-44 45+
A2. What is your highest level of education?	Primary (1-5 years in school) Lower secondary (6-8 years in school) Higher secondary (9-10 years in school) SLC (completing 10 years in school) Intermediate and equivalent (2-3 years in studyafter SLC) Graduate and equivalent Postgraduate and equivalent or above others
A3. What is your marital status?	Unmarried Married Single mother
A4. Where do you live?	
A5. How far is the nearest hospital from your home?	Less than 30 min 30-60 min More than 60 min
A6. How do you usually travel to the nearest hospital from your home?	Walking Bus/taxi Both walking and by bus/taxi

A7. What is your living arrangement?	Extended family Nuclear family
A8. Are you in employment?	Yes No If yes What is your employment?
A9. Is your husband in employment?	Yes NO If Yes---------- What is his employment?

Part B- Maternal Health Information

B1. Is this your first pregnancy ?	Yes NO If No please answer the questions below B1a. How old were you in your firstpregnancy? B2b. How many pregnancies have you had to date? B3c. Do you have any children – Yes No If YES, please give details – • Child 1, Age /Gender • Child 2 Age /Gender • Child 3 Age/ Gender • Child 4 Age/ Gender Please continue below if you have more children -----
B2. Is this your planed pregnancy?	YES NO
B3. How many months pregnant are you?	Less than three moths Less than six months Less than nine months More than nine months
B4. In some cultures women are expectedto give birth of boy. Have you experienced this?	YES NO Prefer not to say If your answer is 'YES' then please state who is expecting the birth of a baby boy B3a) Yourself (yes No) B3b) Partner/husband (yes No) B3c) Parents (yes no) B3d) In-laws (yes No) B3e) Relatives (yes No) B3f) Community (Yes No) B3g) Cultural norms (yes no)
B5. How many times have you used health services in this pregnancy?	Once 2 times 3 times 4 times 5 times and more

B6. Are you aware about the benefits of Aama Surakshya Karyakram?	Yes No A little
B7. Are you happy with the health services you have received?	YES NO If your answer is 'NO' then please answer why?
B8. Are you happy with the health care professionals who are caring for you in your pregnancy?	YES NO If your answer is 'NO' then please answer why?
B9. It is common to have concerns during pregnancy. Do you have any concern related to this pregnancy?	Yes No If your answer is 'YES' , then please explain
B10. Where do you access help from?	Husband In-laws Parents Relatives Neighbours NGO/INGO Health professionalsOthers ___
B11. Do you feel supported by your family?	Yes No Please comment on your answer
B12. Who provides you with the mostsupport in this pregnancy?	
B13. What support do you think you needduring this pregnancy?	

Part C- Mental Wellbeing Information

Below are some questions about your mental wellbeing. Please circle the answer that comes closes to how you have felt in the past 7 days:

C1. I have been able to laugh and seethe funny side of things	• As much as I always could • Not quite so much now • Definitely not so much now • Not at all
C2. I have looked forward with enjoyment to things	• As much as I ever did • Rather less than I used to • Definitely less than I used to • Hardly at all
C3. I have blamed myself unnecessarily when things went wrong	• Yes, most of the time • Yes, some of the time • Not very often • No, never

C4. I have been anxious or worried for no good reason	• No, not at all • Hardly ever • Yes, sometimes • Yes, very often
C5. I have felt scared or panicky for no verygood reason	• Yes, quite a lot • Yes, sometimes • No, not much • No, not at all
C6. Things have been getting on top of me	• Yes, most of the time I haven't been able to cope at all. • Yes, sometimes I haven't been coping as well as usual • No, most of the time I have coped quite well. • No, I have been coping as well as ever
C7. I have been so unhappy that I have had difficulty sleeping	• Yes, most of the time • Yes, sometimes • Not very often • No, not at all
C8. I have felt sad or miserable	• Yes, most of the time • Yes, quite often • Not very often • No, not at all
C9. I have been so unhappy that I have beencrying	• Yes, most of the time • Yes, quite often • Only occasionally • No, never
C10. The thought of harming myself hasoccurred to me	• Yes, quite often • Sometimes • Hardly ever • Never

Thank you for taking part in this survey.

Appendix J: Demographic Characteristics of Participants for Qualitative Data

Table 1: Demographic Characteristics of Pregnant Women (In-depth Interviews)

Participants	Age	Age at marriage	First pregnancy Yes/no	Age of first pregnancy	Number of pregnancies	Stage of current pregnancy/ trimester	Planned pregnancy Yes/no	Education *	Employment	Husband Employment	Living arrangement (extended/ nuclear family) **	Place of residence	Distance to district-level health facility
P1	24	21	Yes	24	1	2nd	No	Undergraduate	No	Business but currently impacted by covid-19	Extended	Rural	More than 1 hour
P2	18	14	No	14	2	3rd	Yes	Literate	No	Labour job daily basis	Extended	Rural	Less than 30 minutes
P3	21	19	Yes	21	1	Post-dated	Yes	Intermediate	No	Bus driver	Extended	Rural	More than 1 hour
P4	20	18	Yes	20	1	3rd	Yes	Primary	No	Self-employed – contract job	Extended	Rural	More than 1 hour
P5	30	17	No	18	2	3rd	Yes	Lower secondary	No	Farmer	Extended	Rural	More than 1 hour
P6	30	25	Yes	30	1	3rd	Yes	Graduate	No/Past teacher	office worker	Extended	Urban	Less than 30 minutes
P7	24	16	No	17	2	3rd	No	lower secondary school	No	Work in labour market abroad	Nuclear	Rural	More than 1 hour
P8	20	19	Yes	20	1	3rd	No	intermediate	No	Works in bank	Extended	Urban	Less than 30 minutes
P9	45	21	No	27	6	3rd	No	Literate	No	Works abroad in the labour market	Nuclear	Rural	More than 1 hour
P10	33	32	Yes	33	1	3rd	Yes	Upper secondary	No	Farmer	Extended	Rural	More than 1 hour
P11	40	21	No	23	3	3rd	No	Literate	No	Farmer, live sticks	Nuclear	Rural	More than 1 hour
P12	28	22	No	23	2	3rd	No	intermediate	No	Farmer, live stocks	Extended	Rural	More than 1 hour
P13	28	21	No	24	2	3rd	Yes	intermediate	Self-employed - small grocery shop	Vehicle business	Nuclear	Urban	Less than 30 minutes
P14	28	27	Yes	28	1	3rd	Yes	Postgraduate	office worker	Office worker	Nuclear	Urban	Less than 30 minutes
P15	38	37	Yes	38	1	3rd	Yes	Literate	No	Carpenter	Extended	Rural	30 minutes to 1 hr
P16	24	16	Yes	24	1	3rd	Yes	SLC	No	Tea farmer	Nuclear	Rural	More than 1 hour
P17	27	20	No	20	2	1st	No	Upper secondary	Self-employed	Farmer	Nuclear	Rural	Less than 30 minutes
P18	25	18	No	19	2	2nd	Yes	Literate	No	Bus driver	Extended	Urban	Less than 30 minutes

P19	42	27	No	28	4	2nd	No	Intermediate	No	Farmer	Nuclear	Rural	More than 1 hour
P20	31	13	No	16	4	2nd	No	Literate	No	Carpenter	Nuclear	Urban	Less than 30 minutes

* Educational Terminology used in the table above is in line with the Census 2021 Nepal
https://censusnepal.cbs.gov.np/results/files/result-folder/National%20Report_English.pdf
For example, Literate: can read and write but never been to school; Primary: 1-5 years in school; Lower secondary: 6-8 years in school; Upper secondary: 9-10 years in school; SLC: completing 10 years in school, Intermediate and equivalent (2-3 years in study after SLC), Graduate, postgraduate and others.
**Nuclear family: Couple living with children under the same roof; Extended family: Couple living with children and grandparents under the same roof.

Summary of the participants:

1. 14 women resided in rural areas
2. 9 participants stated the current pregnancy was unplanned
3. 9 participants were 1st time pregnant
4. 8 women had the experience of first pregnancy at the age of 20 years or below
5. 5 women married at aged 20 and under
6. 1 woman second time married
7. 8 women live in their nuclear family
8. 6 women – no formal education but able to read and write but literate by definition of the 2021 census of Nepal
9. Only 3 women employed (1 working as in a private sector, office job, 1 woman – selling fruits, veg, and milk in the town, and 1 woman – small grocery shop in a room in the front room of the house where she lives)

Table 2: Demographic Characteristics of Pregnant Women (In-depth Interviews)

1.	Nurse 1	Working in maternity unit at the district hospital
2.	Nurse 2	Working as a nurse and assistant head of Nursing of the hospital
3.	Doctor	A Gynae/Obs doctor working at a Zonal Hospital
4.	A Nursing lecturer/ An Academic	A lecture from nursing background currently teaching nursing students
5.	Previous pregnant woman	A woman with experience being pregnant and delivering a baby in the past
6.	A female activist	Working for wellbeing and rights of women nationwide
7.	Husband of a current pregnant woman	A man with experience of his wife during her pregnancy
8.	Female Community Health Volunteer (FCHV)	FCHV is a local volunteer selected by members of health mothers' group and their role includes advocating healthy behaviours of mothers and community people to promote safe motherhood.

Appendix K: Demographic Characteristics of Participants for Quantitative Data

Table 3: Participant's demographic characteristics- quantitative data

Variables		Frequency	Percentage
Age of participant (years)	18-20	22	17.2
	21-24	34	26.6
	25-29	49	38.3
	30-34	18	14.1
	35-39	5	3.9
Education status of the participants	Primary (1-5 years in school)	7	5.5
	Lower secondary (6-8 years in school)	16	12.5
	Upper secondary (9-10 years in school)	23	18.0
	School Leaving Certificate (SLC, completing 10 years in school)	20	15.6
	Intermediate and equivalent (2-3 years in study after SLC)	48	37.5%
	Graduate and equivalent	12	9.4
	Post graduate and equivalent or above	2	1.6
Marital status of the participants	Married	128	100.0
Participant's place of residence	Rural	91	71.1
	Urban	37	28.9
Living arrangement	Extended family	94	73.4
	Nuclear family	34	26.6
Employment	No	108	84.4
	Yes	20	15.6
Husband's employment	No	56	43.8
	Yes	72	56.3
Distance to reach the nearest health facility	<30min	63	49.2
	30-60min	44	34.4
	>60min	21	16.4
Means of transportation used to reach the health facility	Walking	115	89.8
	Bust/taxi	13	10.2

Appendix L: Sample of thematic analysis tool used to develop an organising theme using an inductive approach

Global theme 1. Poor mental health experiences due to inadequate social support		
Organising themes	Basic themes	Quotes
Family support during pregnancy	Satisfactory support received in working class family	My husband works in the office, I stay home, and my in-laws are old, so they stay at home. They tell me not to do any heavy work. They do help me as much as they can. Today I am here for health check-ups accompanied by my mother-in-law. (P6, Urban)
	Importance of husband during pregnancy	I do feel having my husband with me is better. I share my concerns and happiness, emotions, and wishes with him. Women who do not have husbands with them must be experiencing distressful times. Women cannot share all their emotions with other people or with in-laws. (P18, Urban)
	Limited or no support from husband and family	My husband goes out of the house for daily work. I feel and wish my family could support, care and love me more. My in-laws are okay. They are old people, they think differently. We live in a village, they have lived their whole life in this village. They do not know how things are these days. For example, health check-ups and taking rest during pregnancy. [……..]. I feel my husband's love and care for me is okay, not too much, nor neglected. I wish I could get more support and care from my husband. I think men do not know what to do and how to look after pregnant women. Men are also busy at work, so they cannot care enough or give enough time to their pregnant wives. My husband never comes to this hospital. He says you go. Maybe he is not interested in coming to the hospital during the pregnancy health check-ups. This is a women's thing for him. (P15, Rural)
	The gap in generation and mother-in-law to take lead on supporting pregnant women	My mummy supports her (his wife) in the family, but the difference is in understanding and the generation gap. My mother says, in her time, the practice during pregnancy was like this and that, which does not fit now. (KII 7, Husband of a currently pregnant woman)
	Husband working abroad – no support from husband	He (husband) went to Qatar for labour work after marriage. He went to work for the first time during my first pregnancy. I was 4 months pregnant at that time. He came back after 3.5 years. Then he stayed at home for about 1 year. Then again, he went to Qatar for 2 years. […….]. This time he came for a holiday for 2 months, and he was scheduled to go back. But due to the coronavirus, the lockdown started. I wish my husband is staying at home with me, but he does not have any work here (locally). What to do? We do not have any income

	Absence of husband during pregnancy	sources. Otherwise, he would not go away for work during my pregnancy (P7, Rural) I notice pregnant women are happier if their husbands are with them. Pregnant women feel sad and say their husbands went abroad for work. A very limited people express their happiness to support those women. Many people/family/relatives are supporting these pregnant women for courtesy. Relatives think they just have to support the pregnant women, as a courtesy, and they do so just for a shake-off, such as bringing the pregnant woman for health check-ups. (KII2, Nurse 2)
	Absence of husband during pregnancy as part of the social norms in recent days	Most people, especially lower and lower-middle-class men, after marriage, the man goes back to these foreign countries for work. Men return home after 2-3 years of marriage, just for 2-3 months as a holiday. Their wives have a big pressure that they must conceive a baby by that time. Then their husband returns to work in those countries. Here, women are looked after by the husband's family, especially in-laws. I think that is why women do not have the opportunity to share their excitement of being pregnant with their husbands and do not seem happy. These women think being pregnant is a job they should do. It looks like women are the machine to give birth to a baby. These women must have stressed that their husband is not with them, but they think it is normal as they see many women who do not have their husband with them during their pregnancy. (KII3, an Obs/Gynae Doctor)
	No family support for the most vulnerable pregnant women	I do not have anyone who can help me in this difficult time. I hope these nurses and this hospital will help me. I do not have any support in the society as well. I am worried. Because I do not know where to go, what to eat, how to survive, and how to raise this baby once born. My health is not good. My husband says the man who did the rape is responsible for my future. He (husband) says he is not responsible for looking after me and neither allows me to stay home. I have an illness as well. I don't know what to do. I am worried so much. I don't know where to go, and my family/relatives do not want to see me. I have nowhere to go. Family/relatives and society do not believe that this is a rape case. They think I am lying. They all think I am a bad woman. They think I am characterless. They talk about doing physical violence to me in the village. I do not have anyone who supports me. (P9, Rural)
	Marginalised in the absence of husband	Women are very emotional during pregnancy, and it is hard for them if their husbands are not with them. They may not be looked after well by their in-laws if the women do not have a good relationship with them. In society, these women, if they walk outside or even see or talk to other men, then society blames the women for being characterless. That is a way of marginalising them (women). (KII 6, Women Activist) Many women, my neighbours and relatives, do not have their husbands at home. Their husbands are working abroad or out

		of the village […….]. Many families neglect women because they are daughters-in-law. In our society, the daughter-in-law's position is the lowest while experiencing power within the family. Many women cannot even ask for help when they have leg swelling during pregnancy. They are hesitant to ask for help or to go for a health check-up. Women whose husbands are not with them are experiencing more problems. For example, if my husband is busy with his work, I still feel confident that if something goes wrong, my husband is with me and can come to me anytime I need. I feel so confident. I feel sad for those women who are alone without their husbands with them. (P13, Urban)