A Formative Study on the Adaptation of Mental Health Promotion Programmes for Perinatal Depression in West Chitwan

Prepared by: Prasansa Subba
Student no.: SBBPRA002
Supervisors: Erica Breuer, Petal Petersen Williams, Nagendra Prasad Luitel
Department: Alan J Flisher Centre for Public Mental Health,
Department of Psychiatry and Mental Health,
Faculty of Health Sciences,
University of Cape Town

Declaration

I, *Prasansa Subba*, hereby declare that the work on which this dissertation/thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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Acknowledgements

I am using this opportunity to express my gratitude to everyone who supported me throughout the course of this study. First and foremost, I would like to thank the UK Department for International Development [201446] for the financial sponsorship through which this study was conducted as an output of PRogramme for Improving Mental health carE (PRIME). I would also like to thank Transcultural Psychosocial Organization (TPO) Nepal for allowing me to work on the project during a portion of my working hours.

I would like to express my deepest and sincere gratitude towards my supervisors, Ms. Erica Breuer, Dr. Petal Petersen Williams and Mr. Nagendra Prasad Luitel for their continued support, encouragement, and constructive feedback throughout my study period. I highly appreciate their willingness and effort to guide me through the tough times. Without their contribution of time and dedication, the study would not have been possible. I am sincerely grateful to Dr. Mark J. D. Jordans and A/Prof. Wietse A. Tol for their support in developing the study concept and helping me to think through the project. Mr. Anup Adhikari for coordinating the field level activities and researchers at TPO Chitwan for assisting me in data collection. I am sincerely grateful to the entire PRIME team at the University of Cape Town especially Mr. Amit Makan and A/Prof. Crick Lund for giving me the information about this opportunity and always trusting me on my efforts. Also, to A/Prof. Katherine Sorsadhl and Dr. Claire van der Westhuizen for their invaluable support and motivation. Also, thanks to the University of Cape Town Research Ethics Committee and Nepal Health Research Council for reviewing and approving the research.

I am indebted to my family especially my parents Mr. Om Prakash Subba and Ms. Shanti Subba for their love and support; my colleagues and friends Ms. Pragya Shrestha, Dr. Kamal Gautam, and Dr. Yugal Rai for their technical and emotional support throughout the research period.

Abstract

Introduction: Depression in mothers can have debilitating consequences on the women themselves, their infants and their family. Thus, it is imperative to detect and treat perinatal depression early. Due to lack of awareness and stigma, help seeking, detection and treatment for perinatal depression in Nepal remains low. To counter barriers on lack of awareness, stigma and non-detection of mental health problems including depression, alcohol use disorder, psychosis and epilepsy, the PRogramme for Improving Mental Health carE (PRIME) developed and implemented a community sensitization programme and a Community Informant Detection Tool (CIDT). Neither of these programmes has focused on perinatal depression. This study aims to adapt the depression CIDT and the community sensitization programme to include perinatal depression.

Methods: The CIDT and community sensitization programme were adapted using the following four steps. Firstly, a qualitative study was conducted with perinatal women with depressive symptoms visiting Meghauli and Dibyanagar health facilities or "gau-ghar clinic" (n=26) and service providers (n=34) to develop a culturally relevant content. Secondly, a draft CIDT and community sensitization manual were prepared based on the qualitative findings. Thirdly, a one-day workshop and several consultation meetings were held with mental health professionals (n=16) to ensure that the content was understandable and applicable to the context. Lastly, based on the workshop findings and consultation meetings, the manual and tools were modified and adapted for perinatal depression.

Results: Due to poor awareness and stigma, none of our respondents had ever sought help for depression from the antenatal or postnatal service providers. Using local expressions for common depressive symptoms such as loss of interest, rumination, pessimistic views, extreme worries, restlessness, two separate CIDTs were developed each for antenatal and postnatal depression. Lack of support from the husband and family followed by poverty were the major contributing factors for depression. In addition, cultural factors such as the low position of women in patriarchal society and preference for son exacerbated problems in some women. The community sensitization manual was adapted to include local myths and facts about perinatal depression; causes with examples related to local beliefs; symptoms explained in local idioms; and role of the family. The heads of the families and key community members were recommended as key targets for the community sensitization programmes.

Conclusion: It is important for any intervention to be responsive to local understanding and needs. The adapted CIDT and community sensitization manual has integrated the local issues and expressions of symptoms of perinatal depression for women in the Chitwan district.

Keywords: Adaptation, community awareness, detection, perinatal depression, Nepal

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Acronyms

ANC: Antenatal Care

CIDT: Community Informant Detection Tool

DALY: Disability Adjusted Life Years

DFID: Department for International Development

DHO: District Health Office

DoHS: Department of Health Services

DPHO: District Public Health Office

EPDS: Edinburgh Postnatal Depression Scale

FCHV: Female Community Health Volunteer

FGD: Focus Group Discussion

HP: Health Post

IDI: In-depth Interview

LMIC: Low and Middle Income Countries

MDG: Millennium Development Goals

mhGAP: mental health Gap Action Programme

MoHP: Ministry of Health and Population

NGO: Non-Governmental Organization

NHRC: Nepal Health Research Council

PHCC: Primary Health Care Centre

PNC: Postnatal Care

PRIME: PRogramme for Improving Mental Health CarE

TPO: Transcultural Psychosocial Organization

UCT: University of Cape Town

VDC: Village Development Committee

WHO: World Health Organization

CHAPTER I: INTRODUCTION

Depression is the most common mental disorder (Marcus, Yasamy, van Ommeren, Chisholm, & Saxena, 2012), and is expected to be the second leading cause of disability worldwide by 2020 (Lopez, Mathers, Ezzati, Jamison, & Murray, 2006). Mental illness is interlinked with socio-economic factors in low and middle income countries (LMICs) making the socially and economically disadvantaged more vulnerable to mental illness (Skeen, Lund, Kleintjes, Flisher, & Mhapp Research Programme Consortium, 2010). Women enjoy fewer privileges in patriarchal societies such as the South Asian countries (Brunson, 2010; Mullany, Hindin, & Becker, 2005; Thapa & Niehof, 2013), and this may increase their risk of mental illness. Studies conducted in LMICs show women are more vulnerable to depression than men (Luitel et al., 2013; Marcus et al., 2012; Prince et al., 2007; Weissman & Olfson, 1995) and the risk is even higher during the perinatal period – pregnancy and a year after delivery (Austin, 2004; Gavin et al., 2005; Moshki, Baloochi Beydokhti, & Cheravi, 2014; Weissman & Olfson, 1995).

Perinatal depression in mothers is marked by higher levels of disability and impaired growth of their children and disrupted relationship with family members (Halbreich & Karkun, 2006; V. Patel, Rahman, Jacob, & Hughes, 2004; Sealy, Fraser, Simpson, Evans, & Hartford, 2009). Because of its impact, it is imperative to treat depression early. However, early detection for perinatal depression is very uncommon in LMICs (Glascoe, 2005) and help seeking behaviour for mental illness is impeded by various structural and social challenges such as lack of human resources, limited service centres and stigma (Brenman, Luitel, Mall, & Jordans, 2014; Kohrt & Harper, 2008; Luitel et al., 2015; Saxena, Thornicroft, Knapp, & Whiteford, 2007). Among others, the lack of proper knowledge and stigma attached to mental illness are some of the major challenges encountered in providing mental healthcare (A. Buist et al., 2006). Help seeking and timely identification of mental illness is promoted when an individual is aware of the symptoms and the availability of treatment services (Bandura, 1998; Kelly, Jorm, & Wright, 2007). Hence, the provision of proper knowledge about the condition would be an important step to promote help seeking (Heijnders & Van Der Meij, 2006; Lai, Hong, & Chee, 2000).

Mass education through awareness programmes is a widely used strategy for behaviour change in public health (Heijnders & Van Der Meij, 2006; Lai et al., 2000). Adopting this same strategy, the PRogramme for Improving Mental health carE (PRIME) project (a multinational research project conducted in five countries in Asia and Africa: Ethiopia, India, Nepal, South Africa and Uganda), in Nepal is raising community awareness on four priority mental disorders viz. depression, alcohol use

disorder, psychosis and epilepsy; their causes, symptoms and treatment services in the community. Additionally, with an aim to promote help seeking by facilitating detection and referral, the programme has developed an identification tool called the Community Informant Detection Tool (CIDT) for these priority disorders. The tool consists of contextualized vignettes and associated pictures which can be used by lay people with limited education (See Annex I). A study conducted on the accuracy of the CIDT found the tool to be effective for community use to identify caseness of psychiatric disorders (M. J. D. Jordans, B. A. Kohrt, N. P. Luitel, I. H. Komproe, & C. Lund, 2015). Although community sensitization and the CIDT have been found feasible in awareness raising and detection and referral of mental health problems in the community, both these programmes have not addressed perinatal depression in particular.

In a country where maternal mortality is high and suicide is the leading cause of death amongst women of reproductive age (Suvedi et al., 2009), maternal mental health needs to be prioritized. In order to fill the gap in maternal mental health provision, this study intends to integrate a maternal mental health component in PRIME by developing promotion programmes specifically for perinatal depression. Additionally, to ensure acceptability and applicability in the local context (Dumesnil & Verger, 2009; Herrman, 2001; Hoven et al., 2008; Jorm, Christensen, & Griffiths, 2005; Kelly et al., 2007), the developed programmes are culturally adapted and tailored to the needs of the community.

Aims

To adapt the existing PRIME community sensitization programme and CIDT for perinatal depression among women in Chitwan.

Objectives

a. To explore the understanding, local metaphors, explanatory models, perceived and experienced symptoms of perinatal depression among perinatal women with depressive symptoms and service providers including health care workers, psychosocial counsellors and female community health volunteers (FCHVs)
b. To identify facilitators and barriers to help seeking and receipt of treatment for perinatal depression
c. To determine the acceptability and feasibility of the components of the community sensitization programmes
d. To adapt the PRIME manual for the community sensitization programme and CIDT for perinatal depression based on the findings of this study

CHAPTER II: LITERATURE REVIEW

This chapter initially describes the prevalence and implications of perinatal depression followed by the need of early detection and treatment to promote wellbeing of women. Subsequently, findings of structured review conducted on different methods of identification and educational programmes for perinatal depression are discussed. A brief description of mental health situation in Nepal is presented followed by a section on the importance of cultural adaptation. Against this backdrop, the chapter concludes by giving the rationale for conducting this study.

2.1 Overview of Perinatal Depression

Mental, neurological and substance use disorders constitute 13% of global burden of disease (WHO, 2008) accounting for 7.4% of all disability adjusted life years (DALYs) in 2010 (Whiteford et al., 2013). Of all the mental illnesses, depression is the most common mental illness worldwide affecting at least 350 million people (Marcus et al., 2012). In 2010, depression alone attributed to 40.5% of DALYs caused by mental and substance use disorders (Whiteford et al., 2013). It is estimated that 60% of all suicides committed are attributed to depression and schizophrenia (WHO, 2001). Despite its high prevalence and severity, the treatment gap for depression remains high (56.3%) (Kohn, Saxena, Levav, & Saraceno, 2004).

Psychological distress including depression is the leading cause of disability among women in the perinatal period (K. Clarke et al., 2014). Studies show that women are two or three times more vulnerable to depression than men (Marcus et al., 2012; Weissman & Olfson, 1995) and the risk is even higher during the perinatal period - from the onset of pregnancy extending to one year after delivery (Austin, 2004; Gavin et al., 2005; Moshki et al., 2014; Weissman & Olfson, 1995). Globally, postnatal depression occurring within six weeks after childbirth (V. Patel, DeSouza, & Rodrigues, 2003) is the most common form of affective disorder during the perinatal period (Robertson, Celasun, & Stewart, 2003). It is estimated that 15.6% of women in the antenatal period and 19.8% in the postnatal period in LMICs suffer from a mental disorder (Fisher et al., 2012). Jones and Coast (2013) note that the rate of postnatal depression is much higher in South Asian context than the Western countries. Studies in South Asia have shown prevalence of postnatal depression as high as 36% (Husain et al., 2006). Although there is no specific estimation of perinatal depression in Nepal, available resources show approximately 4.9-12% women in the perinatal period suffer from postnatal depression (K. Clarke et al., 2014; Ho-Yen, Bondevik, Eberhard-Gran, & Bjorvatn, 2006; S. Regmi, Sligl, Carter, Grut, & Seear, 2002).

Although genetic and biological factors can also contribute to the risk of depression (Sullivan, Neale, & Kendler, 2000), environmental factors such as poor marital relationship, previous history of depression, low social support have been repeatedly identified as risk factors to perinatal depression across cultures (Klainin & Arthur, 2009; Lee, Lam, & Lau, 2007; O'Hara & Swain, 1996). A review of studies conducted on risk factors for perinatal depression in Asian cultures identified additional factors such as being a single parent, unplanned/unwanted pregnancy, family discord, experiencing stressful life events (Klainin & Arthur, 2009), which was similar to the finding of a review conducted in other LMICs (Fisher et al., 2012). The link between perinatal depression and cultural preference for a son however, was unique to South Asia (Parsons, Young, Rochat, Kringelbach, & Stein, 2012).

Depression in mothers can have debilitating consequences on the women themselves, their infants and the family as they may express more negative emotions (such as sadness, anxiety, nervousness, and aggression) (Halbreich & Karkun, 2006). Depressed mothers are less likely to attend care (Rahman, Harrington, & Bunn, 2002), lack self-care and may be undernourished (Parsons et al., 2012). A mother with depression, who often is the primary carer of the infant, may have an impaired relationship marked with less affection, interaction and connection with her child (Murray & Cooper, 1997) and may not be able to fulfil her role as a mother which may lead to poor physical, cognitive and behavioural development of the infant (Fisher et al., 2014; Halbreich & Karkun, 2006; Klainin & Arthur, 2009; Moshki et al., 2014; V. Patel et al., 2003; V. Patel & Ooman, 1999). Depressed mothers are more likely to stop breastfeeding early, which may affect the growth of her infant (Henderson, Evans, Straton, Priest, & Hagan, 2003). A systematic review conducted in LMICs found that infants of depressed mothers of South Asia had low birth weight and poor physical growth (Parsons et al., 2012). Murray and Cooper (1997) found that such infants were less sociable to strangers, had sleeping and eating problems, temper tantrums, and separation difficulties. The effect of depression is not only limited to the woman herself and her infant but is extended to her relationship with the family as well. A qualitative study exploring family burden of women with postnatal (major) depression found negative impact on the family's financial status, physical and emotional burnout and deteriorating relationship between husband and wife, and with the children (Boath, Pryce, & Cox, 1998).

Evidence suggests that these consequences can be mitigated through timely detection and treatment (Moshki et al., 2014; Whitton, Warner, & Appleby, 1996). Detection can be improved using tools such as screening, structured diagnostic assessments or by increasing awareness.

Screening tools are often the first step to management of perinatal mental health problems (Gjerdingen & Yawn, 2007; Hanna, Jarman, Savage, & Layton, 2004; Newland & Parade, 2016) and have long been used for initial screening or for case finding (Kagee, Tsai, Lund, & Tomlinson, 2013). They are structured questionnaires whereby each response is assigned a score, the culmination of which is given meaning based on the cut-off score (Zubaran, Schumacher, Roxo, & Foresti, 2010). For example, the most widely used 10- item tool for perinatal depression called Edinburgh Postnatal Depression Scale (EPDS) uses score from 0-3 for each item, which when added together if exceeds above the cut-off score (usually 13 or above), the person is identified to be at the risk of depression (Cox, Holden, & Sagovsky, 1987). Although screening alone does not necessarily detect mental health problems of a person, it has gained popularity as it does improve detection, and referral to treatment (Kagee et al., 2013; Miller, Shade, & Vasireddy, 2009; Sit & Wisner, 2009).

In the health care system, screening tools have been found as one of the essential and feasible methods to identify perinatal depression (Gjerdingen & Yawn, 2007; Newland & Parade, 2016). For postnatal depression in particular, screening tools have been recommended in both obstetric and paediatric clinics (Newland & Parade, 2016) and repeat screening in 6-8 weeks, 3-4 months and 6-8 months to increase detection of missed cases (A. E. Buist et al., 2008). Not limiting to clinical setting, Newland & Parade (2016) suggested that screening can be expanded to community level by incorporating it in maternal and child health programmes aimed at impoverished families, one of the identified risk groups.

Screening tools may be productive when administered to “high risk group” but it can be resource consuming when used in low risk groups (Shibre et al., 2001). The human resource burden on this regards can be reduced to some extent by categorizing patients in any of three groups: a) universal- where everyone is included, b) selected- only those in high risk of developing disorder c) indicated- where those with detectable symptoms are targeted, and prioritizing based on the need of the programme (Austin, 2004).

Although screening tools have been found effective, simple, and cost-effective (Zubaran et al., 2010), they have been criticized for some of their shortcomings. When administered to illiterate patients, it can be time consuming for the health workers to read out and help the patient understand the question (Hanlon et al., 2008). In addition, some health workers may feel uncomfortable asking sensitive questions (Hanna et al., 2004). With self-administered tools, there

is a greater risk that the patient can misinterpret and misunderstand the question (Kerr & Kerr Jr., 2001), which ultimately may lead to over or underestimation of the problem.

Since depressive symptoms vary across cultures, a tool developed in one context may not be replicable to the other (Hanlon et al., 2008; Weobong et al., 2009; Zubaran et al., 2010). For example, the EPDS has been criticized in LMICs as it overlooks somatic symptoms and overemphasises emotional symptoms (Hanlon et al., 2008). Somatic symptoms are common form of expression of depressive symptoms (K. Clarke et al., 2014; Hanlon et al., 2008; Kerr & Kerr Jr., 2001). Excluding them in screening tools may lead to high rates of false negatives in many cultures in LMICs (Eack, Greeno, & Lee, 2006; Kerr & Kerr Jr., 2001), while it is just the opposite in the Western countries (Zubaran et al., 2010).

In addition to screening, diagnostic assessments have been recommended to explore patient's past history, functional impairment, concerns about depressive symptoms (Hanlon et al., 2008; Hanna et al., 2004; Kagee et al., 2013; Miller et al., 2009; Thombs et al., 2012). Diagnostic assessments are helpful to reconfirm diagnosis, prioritize cases and prevent unnecessary referrals of mild and moderate depressive cases to specialist care (Miller et al., 2009). A study conducted in Australia found the semi-structured discussion guided by the screening tool helpful for the health worker to find out the true positives and to choose the appropriate treatment (Hanna et al., 2004). However, conducting routine screening and detailed assessment can add financial and human resource burden especially in a resource poor setting, where specialist human resources are limited and case flow is high. Integrating in primary care by training the non-specialists in that case may be beneficial, but it can pose risk to under- or over- diagnosis of mental health problems (Kagee et al., 2013). Also, when service and referral mechanism is not available, integrating screening in primary health service does not improve health outcomes (Gjerdingen & Yawn, 2007; Kagee et al., 2013).

Apart from screening tools and diagnostic assessment, it is possible to use community informants to help with the identification of people with mental illness. For example, community survey conducted in Ethiopia found the method of teaching the community's key informant about mental health symptoms prior to the in-depth interview as one of the feasible ways to identifying cases of severe mental health problems such as schizophrenia. However, this approach was not suitable for affective problems like depression, where the symptoms are more covert. (Shibre et al., 2002). In terms of identification of perinatal depression, although community health workers in LMICs were found to be capable of providing psychological intervention, there is no compelling evidence

regarding the identification and case-finding (Kagee et al., 2013). Therefore to explore different identification methods for perinatal depression in LMICs, a structured review was conducted (See 2.2).

Over the years, lack of awareness and stigma against mental illness have been found to impede service utilization at the community level (Brenman et al., 2014; C.-L. Dennis & Chung-Lee, 2006; Kohrt & Harper, 2008; Luitel et al., 2015; Saxena et al., 2007). At the health care system level, lack of knowledge about perinatal depression among the health care providers have been found to be the one of the major reasons for non-detection and non-treatment (Edwards et al., 2006; Jordan, Coleman, Hardy, & HUghes, 1999). Education programmes generally aiming at enhancing the target groups' knowledge about certain illness and addressing misconceptions around it have been found effective in reducing stigma associated with both physical and mental health problems (Heijnders & Van Der Meij, 2006). This transfer of knowledge can be done through several ways such as audio-video medium such as presentations, websites, published materials (booklets or brochures), workshops, psychoeducation or through formal/informal discussions in general population at large or with definite group (Heijnders & Van Der Meij, 2006; Moshki et al., 2014; Nyatsanza, Schneider, Davies, & Lund, 2016; Rahman, Mubbashar, Gater, & Goldberg, 1998; Wisner, Logsdon, & Shanahan, 2008).

The three strategies of tackling stigma against mental illness include a) education, b) protest, c) contact (P. W. Corrigan et al., 2001). Often mental health educational programmes having "contact" component were effective altering people's negative attitudes and behaviours. As a part of "contact", service users were mobilized to share testimonies (Pinfold, Thornicroft, Huxley, & Farmer, 2005). Studies have underscored that "contact" with the person undergoing the problem helped to learn about the person, lived experiences which may ultimately reduce stigmatizing and discriminative behaviour (Heijnders & Van Der Meij, 2006; Link & Cullen, 1986; Pinfold et al., 2003).Educational programmes in mental health have been found effective in developing positive attitude and behaviour towards mentally ill, preventing mental illness and promoting mental health through timely identification and treatment (Heijnders & Van Der Meij, 2006; Hoven et al., 2008; Lai et al., 2000). Such educational programmes were conducted at different levels among the different target population. Some were conducted among school children, some with people having mental illness, general community members or key community stakeholders (Pinfold et al., 2005; Pinfold et al., 2003; Weiss, Ramakrishna, & Somma, 2006). Studies particularly investigating the effectiveness of educational programmes on perinatal women found that the women in intervention

group were more aware about their health, had positive attitude and behaviour, and better psychological health (Moshki et al., 2014).

Education programmes are feasible and low cost health promotion programmes that increase the awareness and ultimately improve better mental health however, there is a dearth of literature on effectiveness of educational programmes in LMICs. In context of Nepal, literature shows that educational programmes are common community outreach programmes but no records of educational programmes for mental health were found (Green Tara Nepal, 2015). Thus, to explore the different types of awareness and educational programmes and its impact and effectiveness for perinatal depression in LMICs in particular, a second structured review was conducted. (See 2.2).

2.2 Structured Review

Two separate structured reviews were conducted in order to search literature for detection methods and educational programmes for perinatal depression in LMIC. Both quantitative and qualitative studies, and systematic reviews published in English after 1985 were included in the review. Studies were excluded if the participants were below 15 years or male or conducted in high income settings (with the exception of systematic reviews) as defined by the World Bank (World Bank, 2016). Additionally, for the first review on detection methods, the included studies must have had investigated the detection tools, approaches, processes or exploration of the facilitators and barriers of the detection of perinatal/maternal depression. The second review on educational methods for perinatal/maternal depression, required studies to have investigated awareness programmes, community sensitization or educational programmes that were used as strategies to increase knowledge about perinatal depression ultimately improving help seeking or health outcomes.

Literature was searched in two electronic bibliographic databases, Pubmed and PsycINFO via EBSCOhost, between 11th February and 2nd April 2016 using main search terms: maternal depression, perinatal or peripartum depression, postnatal or postpartum depression and antenatal or antepartum depression. The main search terms were individually combined with secondary search terms. For example “maternal depression” AND “Identification OR Detection OR Diagnosis” AND “low and middle income countries” was used to search literature related to detection of maternal/perinatal depression. Although use of "screening tool" is one of the most common methods for identification of mental health problems, we did not include it in our search terms as we wanted our search to be more general and not too specific on screening tool. Similarly, to search literature related to educational programmes for maternal/perinatal depression, the main

search terms were individually combined with “awareness programme OR community sensitization OR education programme”. For example “maternal depression” and “awareness programme OR community sensitization OR education programme”. Additional search term “low and middle income countries” was included while searching studies in Pubmed but not in PsycInfo since it did not yield any literature.

All the studies that showed up after entering the key search terms were screened by title and duplicate results were immediately removed. Secondly, the remaining studies were screened by their title against the inclusion criteria of the study. Thirdly, a table was prepared in an excel spreadsheet listing the remaining papers’ title, abstract and remarks. After reviewing the abstracts, the third column “remarks” was completed, indicating if the study was included or excluded for full-text review. Finally, a full-text article of the potentially eligible studies was accessed through the online library of the University of Cape Town. The third column “remarks” in the excel spreadsheet was again updated after the full text review. Only those articles that met the eligibility criteria were included in the review.

A table was then prepared in an excel spreadsheet prior to the qualitative analysis of the eligible studies. The table contained eleven columns based on the list of eligibility criteria set for the study review: i) name of the database, ii) title, iii) name of authors, iv) journal, v) year of publication, vi) research design/study type, vii) country of the study, viii) sample details, ix) identification strategy OR educational methods x) key findings and xi) summary of the overall study. After carefully examining the details of each study, the data from these studies were manually synthesized under common themes.

Results and Discussion

The findings and discussion for identification of perinatal depression and educational programmes for perinatal depression are summarized separately.

Results of Identification of Perinatal Depression

For the identification of perinatal depression, 200 articles (Pubmed-184, PsycInfo-16) were found, of which 34 duplicate articles were excluded. An additional 142 were excluded after screening their title and abstracts. Full-text articles of 24 studies were retrieved from which 23 were excluded and only one was included in the study (See Annex II). Table 1 provides a summary of the reviewed article.

Table 1: Summary of Studies on Identification of Perinatal Depression (n=1)

Authors	Year	Research Design	Country	Identification method	Findings
Pendergast et. al	2014	Quantitative/Longitudinal study	Bangladesh, Brazil, India, Nepal, Pakistan, Peru, South Africa, Tanzania	Self-Rating Questionnaire (SRQ)-20	Four items related to psychosomatic symptoms in Self-Rating Questionnaire (SRQ)-20 were common in both PPD and non-PPD women which may have problem of overestimating depression symptoms. Hence, they were excluded.

The cross-sectional, longitudinal study selected for the review had used Self-Reporting Questionnaire (SRQ)-20, a tool developed by WHO, for the identification of postnatal depression across 8 LMICs (Bangladesh, Brazil, India, Nepal, Pakistan, Peru, South Africa, Tanzania). The tool consisted of 20 items which was used in this study to screen maternal depression. The main objective of this study was to identify factor structure of the SRQ and to explore the differences across space and time. In total, the tool was administered among 2028 postnatal women in the first and sixth month post delivery however analysis of only 1799 was done. During the process of structural validation of the SRQ-20 in LMIC settings, including Nepal, it was found that 4 items related to somatic complaints in the tool were not relevant for perinatal depression screening. These four items were about having headaches, uncomfortable feelings in the stomach, digestive problems and sleeping difficulties, which were commonly reported by both depressed and non-depressed women during the perinatal period. If included, the items posed a danger of "overestimating" the problem hence the study concluded removal of these items may better serve in identifying positive probable cases of perinatal depression. Negative emotional expressions such as sadness, worthlessness, nervousness, difficulty concentrating, suicidal ideation however were identified as some of the possible indicators of depression that were unique to women with depressive symptoms (Pendergast et al., 2014).

Discussion of Identification of Perinatal Depression

When using the search terms, we could only find one article that met the full eligibility criteria for our review. This shows that although lots of works have been done on depression, there is very little research particularly on the identification methods of perinatal depression. The other reason for such less reported studies could also be the search term we used for the review. One of the most widely used identification methods for perinatal depression has been screening tools but

since we did not explicitly include “screening” in our search terms. Therefore, it is likely that we found fewer studies that met the full eligibility criteria for our review.

The only one study included in our review also did not result in different identification method other than screening tool. The included study used the Self Rating Questionnaire (SRQ) to screen maternal depression (Pendergast et al., 2014) for research. Similar to SRQ, other scales such as Center for Epidemiologic Studies of Depression instrument (CES-D), General Health Questionnaire (GHQ), Beck Depression Inventory (BDI), EPDS and Patient Health Questionnaire (PHQ) have been frequently used to identify perinatal depression. As mentioned in the literature review, although screening alone does not improve mental health outcomes in a person, they have been widely used in high income countries and LMICs to identify the population at risk and increase their attainment to community based psychosocial services (Kagee et al., 2013).

No studies on other methods of detection of perinatal depression in clinical setting were found in our review. Therefore, this review highlights paucity of studies related to detection and identification of perinatal depression in low and middle income countries and the need for more research in this area.

Results of Educational Programmes for Perinatal Depression

Altogether 201 articles (Pubmed-12 and PsycInfo-189) about education programmes related to perinatal depression were found using the abovementioned search terms from both the databases. From the total, 21 articles were duplicates, and an additional 165 were removed as they were irrelevant to the study objective. In total, 15 articles met the eligibility criteria but two more studies were excluded since full-text manuscripts could not be retrieved. Full-text articles of 13 studies were retrieved and reviewed from which only 2 met the eligibility criteria (See Annex III). Table 2 provides a summary of the reviewed articles.

Table 2: Summary of Studies on Education Programmes for Perinatal Depression (n=2)

Authors	Year	Study Type	Country	Education Method	Findings
Rahman et al.	2013	Systematic Review of Controlled Trials	China, India, Pakistan, South Africa, and Chile, Jamaica, Mexico and Uganda	Group Intervention, psychoeducation, inter-personal therapy, booklets, discussion with professionals, individual parenting education	Increased treatment adherence; health improvements; increased perceived support; increased knowledge about infant care, needs and development; comparative weighty child; better mother-infant relationship, attachment; recognizing and addressing child needs; responsiveness
Sercekus & Mete	2009	Quasi-experimental study	Turkey	Antenatal Education on maternal prenatal and postnatal adaptation	Better prenatal adaptation, fear management, social support outcome in the intervention than the control group.

The findings from the review have been divided according to the different strategies used, their content and the effectiveness of each strategy.

i. Education Strategies

A systematic review of 13 controlled trials evaluating the effectiveness of maternal mental health interventions in eight LMICs found that the interventions although predominantly educational, had used different approaches such as psychoeducation, problem solving approach, cognitive framing, and parenting education to increase knowledge on maternal mental health among perinatal women (Rahman et al., 2013). Another study conducted in Turkey measured the effectiveness of antenatal education on prenatal and postnatal adaptation through its three groups – i) control group- women visiting the hospital who received regular care and no additional intervention of antenatal education, ii) intervention group (I)- women visiting the hospital who received 2 hours of antenatal education individually each week for 5 weeks, and iii) intervention group (II)- women visiting the hospital who received the same content of antenatal education in a group for 2 hours each week for 7 weeks (Sercekus & Mete, 2010).

ii. Education Content

The education content varied according to the type of intervention in the systematic review conducted by Rahman et. al. For example, psychoeducation on the early identification and management of symptoms was provided to increase treatment adherence and better functioning in Chili, and promote help seeking in Mexico; educational programmes conducted in Pakistan and

India were focused on replacing maladaptive thoughts with healthy thoughts by empowering the women and the community to defy harmful notions, practices and beliefs related to pregnancy and the postpartum period (Rahman et al., 2013). The antenatal education project in Turkey was not directly linked with educational content about mental health but it did include some of the components that would ultimately promote maternal mental wellbeing. Since the aim of the programme was to enhance prenatal and postnatal adaptation, the content of the programme dealt with the promotion of overall (physical, psychological and emotional) wellbeing of women including information about nutrition, tests required, childbirth, lactation, and baby care. Some mental health specific components during the antenatal education session included discussion about physiological, psychological and emotional changes after pregnancy, fears and anxiety about childbirth, relationship and support from the family members, and discussion on the strategies to deal with the problems at different levels; and relaxation exercises (Sercekus & Mete, 2010).

iii. Impact of educational Programmes

Overall, all the educational programmes were found effective in enhancing the knowledge about maternal depression and, promoting early detection and treatment. The systematic review of 13 interventions concluded that they were effective in enhancing medication compliance; increasing knowledge about postpartum depression, its causes, symptoms recognition and, encouraging help seeking; building better mother-infant relationships by increasing mother's responsiveness and sensitivity to the infant's needs. For example, an intervention considering the cultural nuances and using local resources such as making dolls and others helped the mother-infant communication. Some of the interventions in the review were delivered in the community at the participant's home, which had an additional advantage as involving family members in the therapy strengthened the social support system (Rahman et al., 2013). Similarly, the antenatal education programme showed that women who had received antenatal education, either individually or in a group, had better prenatal adaptation (more prepared about childbirth), health outcomes (concerned about the wellbeing of self and the baby) and improved relationships with the family compared to those who hadn't. Overall the study findings did not provide any concrete evidence to show either one intervention as superior to the other, however, there were certain areas where individual intervention was better and others where group intervention was more effective. For example, individual intervention was more effective in strengthening relationship issues relating with the family members (husband and in-laws) while group intervention was more effective in bringing out positive outcomes relating with fear and anxiety about childbirth (Sercekus & Mete, 2010).

Discussion of Educational Programmes for Perinatal Depression

Similar to the review of identification of perinatal depression, when restricted to LMIC, we found very little research on educational programmes for perinatal depression. This implies that either our search terms were either too specified or that not much attention has been given to the subject especially in LMICs. Nonetheless, the reviewed studies showed that educational programmes programmes had been used as a common approach to increasing awareness level, promoting help seeking behaviour for perinatal depression and strengthening the bond between mother and child.

Of the two studies included in the review, one was a systematic review of thirteen studies, which were hand searched for more information. The review of these studies found that although the programmes were primarily educational, they had used different ways to transfer knowledge and to improve help-seeking for perinatal depression. Some of the educational methods used included a manual based intervention including educational component about depression followed by a group discussion (Lara, Navarro, & Navarrete, 2010), psychoeducation through the distribution of booklets containing information about postnatal depression (Ho et al., 2009) and childbirth education (Gao, Chan, & Sun, 2012), were effective in lessening depressive symptoms. Similarly, a group therapy consisting of psychoeducation as well as problem solving and behaviour strategies increased adherence to the pharmacological treatment (Rojas et al., 2007) while another Cognitive Behavioural Therapy (CBT) based group intervention about modifying harmful cultural practices showed intervention group with less disability and better functioning (Rahman, Malik, Sikander, Roberts, & Creed, 2008). These were some of the few studies conducted in LMIC that were conducted face-to-face with the patient and facilitated by non-specialists.

Face-to-face interventions such as these can be given either at the individual level or in a group. One of the studies in our review showed that although the antenatal women were given the same intervention, the results varied among women involved in individual and group intervention. Women receiving an individual intervention had positive outcomes in terms of relationships within the family whereas the women receiving group interventions had less fear and anxiety about giving birth. Possible reasons for the differences in individual and group intervention as outlined in the article could be because the women in individual intervention might have felt safe to talk about their family issues after building a strong bonding with the service provider and could discuss comfortably about dealing with those issues. While in a group, women might have been insecure and hesitant to share their family issues with their group members who are likely to be from the same community. Instead they might have felt more comfortable discussing about common issues

such as their fear related with childbirth, and have learnt from experiences and built a support system reporting less anxiety (Sercekus & Mete, 2010).

Although we could not find any study on educational programmes for perinatal depression in Nepal, other studies conducted on maternal education in Nepal showed that the literate women when they gained health information through posters or other information, education and communication (IEC) materials, they were more likely to understand the importance of regular check-ups; resulting in frequent visits to the health facilities and ultimately better health outcomes (LeVine, LeVine, Rowe, & Schnell-Anzola, 2004; LeVine & Rowe, 2009). Increasing awareness of depression can be helpful to counter the risk of non-detection and improve early identification and treatment of postnatal depression (Edwards et al., 2006).

As discussed above, there are different interventions aimed to improve perinatal mental health and different methods to implement them. Each of them has its own strengths and limitations. Thus, rather than identifying which intervention is the best, careful investigation must be done defining the expected outcomes prior to the implementation. Also, the content of the educational programme should also clearly take the cultural nuances into consideration for community buy-in and understanding (Roberts, Montgomery, Lee, & Anderson, 2012).

2.3 Mental Health in Nepal

Studies in Nepal have shown that mental illness is often attributed to spiritual and supernatural factors such as being possessed by evil forces and bewitchment (Brenman et al., 2014; S. K. Regmi, Pokharel, Ojha, Pradhan, & Chapagain, 2004) thereby making the situation of a mentally ill person more difficult because of the stigma attached to it (Brenman et al., 2014; Ganasen et al., 2008; Mendenhall et al., 2014). People with mental illness are stigmatized with names such as “mad” and “crazy” (Brenman et al., 2014) and the word “mental” relating to *dimaag* “brain-mind” problems (referring to cognitive abilities such as decision making, thoughts processing, dysfunction of which is understood as madness) have highly stigmatized connotations in Nepal. The participants in Kohrt and Harper’s study (2008) denied having *dimaag* “brain-mind” problems in order to escape stigma, rather choosing a milder term *maan* “heart-mind” problems (referring to desires and emotions) to express their mental discomforts. Some studies in South Asian contexts showed that mental illnesses are expressed in terms of physical complaints where only symptomatic treatment is sought (K. Clarke et al., 2014; Rodrigues, Patel, Jaswal, & de Souza, 2003; Selim, 2010). Even when formal mental health services are to be sought, like in most LMICs, these are scanty and the available services are costly, centralized and overly institutionalized

(Saraceno et al., 2007). The only mental health hospital in Nepal is located in the country's capital but formal mental health services in rural areas are very limited or almost non-existent (S. K. Regmi et al., 2004). As a result, people often resort to informal sources (Kelly et al., 2007) such as traditional healers (Alem, Jacobsson, Araya, Kebede, & Kullgren, 1999; Brenman et al., 2014; Lauber & Rossler, 2007) due to their accessibility and high acceptability in the community (Subedi, 1989).

In terms of political commitment, there is no mental health act and the mental health policy formulated in 1997 is yet to be operationalized (Luitel et al., 2015; Luitel et al., 2013; S. K. Regmi et al., 2004). Of the total national budget, the government of Nepal has allocated eight percent for the health sector (Mishra & Acharya, 2013) and less than one percentage of the gross health budget is allocated for mental health (Luitel et al., 2013).

With regards to maternal health and child health care, the Nepal government has made a large investment to reduce maternal and childhood mortality (Ban, Tuladhar, Pant, & Suvedi, 2012) but maternal mental health has not received national attention (Pradhan, Poudel, Thomas, & Barnett, 2011). As a part of the global movement of the Millennium Development Goals (MDGs), the country strived to improve maternal health through three of the MDGs: 1) promoting gender equality and empowering women (MDG3), 2) reducing child mortality (MDG4) and 3) improving maternal health (MDG 5) (WHO, 2008). Although mental health is a cross-cutting issue and improving mental health can have significant impact on an individual's social, economic and overall development (Skeen et al., 2010), none of the MDGs had included mental health. Even the routine ante- and postnatal care has largely disregarded mental health of mothers, where the focus of care is more on physical health only (Shrestha & Shrestha, 2011). Although previous studies in Nepal show mental health problems are comparatively higher among women (Kohrt et al., 2009; Kohrt & Worthman, 2009; Luitel et al., 2013) and in perinatal women with an estimation between 5-12% (K. Clarke et al., 2014; Ho-Yen et al., 2006; S. Regmi et al., 2002), maternal mental health still remains neglected. In a country where women are socially and economically disadvantaged, previous studies in postnatal depression has highlighted the need of culturally sensitive screening tools in the routine care and educational programme to improve early detection (K. Clarke et al., 2014; K. Clarke et al., 2014).

2.4 Importance of Cultural Adaptation

It is imperative for any intervention to adapt to specific cultural groups. An intervention that is culturally insensitive overlooks community needs and is likely to result in negative or adverse

outcomes of the programs (Castro, Barrera, & Martinez, 2004). Culturally adapted interventions are more relevant, appropriate and acceptable (Castro, Barrera, & Holleran Steiker, 2010; Castro et al., 2004; Chowdhary et al., 2014; Fisher et al., 2014) and improve detection and help seeking behaviour (Kleinman, 1977; V. Patel, 2001). In Nepal, where socio-cultural factors are critical factors in determining help seeking (NHSSP, 2012), not addressing cultural nuances may have a significant impact on the service utilization (Kaphle, Hancock, & Newman, 2013). For example, pregnancy and the postpartum period were associated with "shame" and "shyness" among Tamang women in rural Nepal, which prevented them from disclosing it to others (March, 1990; Tamang et al., 2002). It also affected their help seeking behaviour from the health facility (Morrison et al., 2014). On the other hand, the "watch and wait" practice was very common, where women were expected to notice abnormal symptoms and only seek help when the problem exacerbates (Mesko et al., 2003). Giving birth was considered a natural phenomenon requiring no medical assistance except in an emergency (Kaphle et al., 2013). Further, perinatal women were also perceived to be more at risk of being harmed by evil spirits resulting in illnesses, for which traditional healers were the first ones to be consulted (March, 1990; Tamang et al., 2002). These local explanatory models about the condition and the community's interpretation of defining "normal" and "severe" is important to understand prior to designing an intervention (Morrison et al., 2014). In a context where women's health is not given much preference, if they have additional mental health problems, it can be more stigmatizing and difficult to seek help. This may further lead to delay in seeking care. In order to understand the cultural realities and to overcome them, it is imperative to understand the local explanation about mental illness. Only by identifying barriers in the first place and addressing them while designing interventions can one promote identification and help seeking (Cauce et al., 2002).

In line with this, the current study takes into account the cultural nuances, metaphors, traditional worldviews and understandings outlined as important key issues for adaptation (Kumpfer, Alvarado, Smith, & Bellamy, 2002) and incorporates it to develop a manual for community sensitization for perinatal depression. Adhering to the "modification of content" form of adaptation (Castro et al., 2004), the content of the existing community sensitization manual was adapted and made specific to perinatal depression. Through the community sensitization program developed from this study, it aims to increase awareness of women amongst their immediate support system about the mental health risks in the perinatal period and its treatment through early detection and timely treatment. This is important, as help seeking behaviour of women is largely influenced by their social networks (Herrman, 2001; Sealy et al., 2009). Additionally, the study further aims to

develop a CIDT for perinatal depression with an aim to increase detection and referral in the community.

There is a paucity of literature on mental health promotion programs in LMICs (Hoven et al., 2008) including maternal mental health. On the other hand, maternal health promotion programs have neglected mental health and are limited to physical health where emphasis is more on antenatal care, medical care and neonatal care (Fisher et al., 2014). Many studies have been conducted in Nepal on perinatal depression (K. Clarke et al., 2014; K. Clarke et al., 2014; Ho-Yen, Bondevik, Eberhard-Gran, & Bjorvatn, 2007; S. Regmi et al., 2002), but this is the first study of its kind in Nepal exploring community perception, metaphors used for perinatal depression and using this understanding of cultural context to promote local understanding about perinatal depression in the development of mental health promotion programs (community sensitization and CIDT).

2.5 Rationale of the Study

Mental health services in Nepal are being provided by few district hospitals. Due to increasing privatizations of health services, some private health organizations are also providing mental health services through the mental health department (Mishra & Acharya, 2013). In addition, NGOs in Nepal have been contributing significantly to mental health through advocacy, capacity building, research and delivering psychosocial and psychiatric services (Luitel et al., 2013; Upadhaya et al., 2014; World Health Organization, 2005).

The Transcultural Psychosocial Organization (TPO) is one of the NGOs in Nepal that has been working actively for the psychosocial and mental health of people affected by conflict, emergencies and other stressful life events over the last ten years. Currently, the organization is implementing a six-year (2011-2017) multi-national research project called PRIME funded by the UK's Department for International Development (DFID). PRIME is a consortium of research institutions and Ministries of Health in five countries in Asia and Africa (Ethiopia, India, Nepal, South Africa & Uganda) with partners in the United Kingdom and the WHO. With an objective to integrate mental health services in primary and maternal health systems, PRIME will contribute to lessen the burden of mental health by generating world-class research evidence on the implementation and scaling up of treatment programmes for priority mental disorders in primary mental and maternal health care contexts in low resource settings (Lund et al., 2012). The program is divided into three phases viz. inception phase - development of an integrated mental health care plan; implementation phase - feasibility, acceptability and impact evaluation of the packages; and scaling up phase – evaluation of the scaling up of the packages of care. Adopting the task-shifting approach, the programme has

trained health workers in primary health care centres on mental health Gap Action Programme (mhGAP) (WHO, 2010) since 2013 to empower them to manage four priority disorders (depression, alcohol use disorder, epilepsy and psychosis). In Nepal, the programme was initially piloted in two health facilities of West Chitwan and has now extended to ten others in the same district.

During the formative work of PRIME, stigma and misconceptions were identified as key barriers impeding mental health help seeking behaviour in the project area (Brenman et al., 2014). These barriers are also reflected in the global context (Dumesnil & Verger, 2009). Stereotypes and stigma are "social constructs" (P. W. Corrigan & Penn, 1999; Heijnders & Van Der Meij, 2006) and thus should be deconstructed socially as well. Many awareness programs conducted for a range of audiences, on different aspects of mental health, have shown substantial positive changes in knowledge, attitude and behaviour (Dumesnil & Verger, 2009; Herrman, 2001; Hoven et al., 2008; Jorm et al., 2005; Kelly et al., 2007). As a part of the PRIME project, TPO is currently conducting community sensitization programs to increase awareness and counter stigma and misconceptions about mental illness in the broader community. Community counsellors have been actively involved in this task apart from providing regular counselling services. The community sensitization programmes are conducted by at least two counsellors in each Village Development Committee (VDC) with an aim to raise awareness and reduce stigma against mental health and mental health problems. First, an initial meeting is conducted with the community at large, which is then followed up by more targeted meetings with smaller groups (e.g. teachers, mothers groups etc.). The current component of the community sensitization programme incorporates the provision of information about general mental health, stigma of mental disorders, the four priority disorders (psychosis, depression, epilepsy and alcohol use disorder), its symptoms and treatment availability at the health facilities through PRIME. No formal study has yet been carried out on the effectiveness of community sensitization programmes, but from programmatic experience and based on the monthly activity update data, service utilization of community members following the implementation of PRIME is quite good. An average of 200-300 community members per month visit the mental health services every month across the 12 health facilities.

Additionally, with an aim to promote help seeking by facilitating detection and referral, the programme has developed an identification tool called CIDT for each priority disorder viz. psychosis, epilepsy, alcohol use disorder, depression and conduct disorder. The tool consists of contextualized vignettes and associated pictures which can be used by lay people (See Annex I). Currently, FCHVs are being mobilized by PRIME for detection and referral of people with priority

disorders from the community to the health facility using CIDT. FCHVs are community volunteers with minimal education mobilized by the government to promote family planning, maternal/neonatal health, and child health (DoHS, 2010; New Era, 2007). Jordans et al (2015) assessed the performance of the CIDT by conducting a structured clinical assessment based on the Composite International Diagnostic Interview (CIDI) on 195 cases identified with CIDTs by community informants. The findings showed that 70 people were identified as true positives out of 110 probable positive while 79 were identified as true negatives out of 85 probable negative when compared with the results.

In a study conducted with 195 cases identified through CIDT procedure by the community informant, 70 were identified as true positives out of 110 probable positive and 79 were identified as true negatives out of 85 probable negative when compared with the results of a structured clinical assessment following the Composite International Diagnostic Interview (CIDI) (Kessler & Üstün, 2004).

These strategies of increasing awareness, detection and referral of priority mental disorders through community sensitization and have been feasible in the community. Although found effective, both the community sensitization and the CIDT have not addressed maternal health in particular (M. J. D. Jordans, Luitel, Pokhrel, & Patel, 2016). Hence, this study addresses this gap by adding and adapting a component of perinatal depression into the existing community sensitization program and developing a CIDT specifically for perinatal depression. This was done by qualitatively interviewing the perinatal women with depressive and mental health service providers to develop the content followed by a workshop with the mental health service providers to finalize the manual and CIDT.

CHAPTER III: METHODS

3.1 Study Design

This study was divided into four phases. Initially, a qualitative study using in-depth interviews and focus group discussions (FGDs) was carried out among the eligible participants to explore the common presentations, myths, beliefs and practices related to perinatal depression that should be taken into consideration while preparing mental health promotion programs.

Secondly, based on the findings of the study, a draft manual of the community sensitization program for perinatal depression along with two CIDTs (one for antenatal depression and the other for postnatal depression) were prepared.

Thirdly, a one-day workshop and several consultation meetings were held with mental health professionals. The draft manual and CIDT were presented and discussed to ensure that the content was understandable and applicable to the context.

Finally, based on the workshop findings and consultation meetings, the manual and tools were modified and adapted specifically for perinatal depression incorporating the common expressions and local metaphors.

3.2 Setting

Nepal is geographically divided into five development regions and 75 districts. Each district is divided into several administrative units called VDC and each VDC is again divided into 9 wards. Comprehensive health services throughout the country are managed by Department of Health Services (DoHS) functioning under the Ministry of Health and Population (NHSSP, 2012). Health services at the regional level are provided through regional, sub-regional and zonal hospitals that have been given decentralized authority whilst at the district level, health activities are managed by the District Health Office (DHO), and District Public Health Office (DPHO). Both DPHOs and DHOs are responsible for implementing essential health care services and monitor activities of all the health organizations functioning in the district such as the District Hospitals, Primary Health Care Centres (PHCCs) and Health Posts (HPs). To make health services available, accessible and affordable to the majority of the population, a network of referral systems exist in hierarchical order where the HP is the initial point of referral followed by PHCC, district, zonal, sub-regional and regional hospitals, and finally to central level hospitals (DoHS, 2015).

A health post is established in all VDCs and its major activities include monitoring the activities of FCHVs, community-based activities and functioning as the referral centre of FCHVs (DoHS, 2015). The FCHV program was initiated in 1988 to support the national goal on health through community involvement in public health activities. One FCHV is assigned in each ward and is responsible for promoting maternal and child care through promotional, preventive and a few curative services (DoHS, 2010). PHCCs are set up in each electoral constituency where they provide advanced health services. Additionally, all these health facilities conduct a four days outreach programme called “gaughar clinic” (the community based clinic) every month in their respective local community building where antenatal care (ANC)/postnatal care (PNC) services, family planning services, primary care for surgical cases and child care services are provided (DoHS, 2012).

The PRIME project is ongoing in 12 out of 39 VDCs in West Chitwan, a district in South-Western Nepal. Mental health services (both psychosocial and pharmacological) through PRIME were initially piloted in two health facilities and then implemented in ten others. At the community level, CIDT trained FCHVs are mobilized in identification and referral of mental health cases identified in the community using the CIDT where a case vignette of each priority disorder is presented. The cases referred by FCHVs are further assessed and treated at the health facility. Both psychosocial and pharmacological services are available at the health facility where the non-prescribers provide psychosocial support whilst the prescribers provide pharmacological services. Complicated cases are referred to professional psychosocial counsellors for focused psychosocial care or to a psychiatrist at the district level for intensive treatment. In addition to counselling services, community sensitization programs are also being run concomitantly by the community counsellors in each ward. The counsellors in coordination with FCHVs arrange time and venue for the program. Normally, these programs are conducted in a community hall or school (if available) or any other common space in the respective VDC. The FCHVs are responsible to inform the community member and confirm their participation. Key community leaders such as the teachers, traditional healers, members of youth group or mother groups, political leaders are invited but interested local community members can also join. Once the date, time and venue are fixed, the counsellors conduct the programme.

A supervision mechanism is strictly maintained for all levels of service providers every month, to ensure the proper management of mental disorders. Community level activities conducted by FCHVs are supervised by community counsellors. Further, the community counsellors and non-

prescribers providing counselling at the health facility are supervised by a clinical supervisor and the prescribers are supervised by the district level psychiatrist.

This study was conducted in the two PRIME pilot health facilities namely Meghauli HP and Dibyanagar HP. While Meghauli has a birthing centre, Dibyanagar does not. However, ANC and PNC services are available at both the health facilities.

3.3 Study Procedure and Population

In the first phase of the study, qualitative data was collected employing IDIs and FGDs methods from August, 2015 until April, 2016. IDIs and FGDs were conducted by the researcher (PS) supported by research assistants currently working on the PRIME project. All research assistants received extensive training (and subsequent follow-up training sessions) on research methods, concepts, ethics and skills (especially sensitive interviewing skills). Training also included responding to adverse events. For this project, additional two-day training was provided for six research assistants prior to the data collection to increase the familiarity with the study, its objective and the interview schedule. Only female researchers were mobilized to conduct IDIs and FGDs.

A workshop was conducted with mental health professionals where the draft content of adapted community sensitization manual and CIDT were reviewed. Incorporating the comments and suggestions from the workshop participants, the manual and CIDT tools were finalized.

The selection and study procedures of each respondent group are described below:

In-depth Interview participants

Women 18 years and above in the perinatal period visiting the health facility or *gau-ghar* clinic for ANC or PNC services in either Meghauli or Dibyanagar VDC were screened for depression using the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987). All those who exhibited depressive symptoms i.e. above the threshold of 13 on the EPDS were invited to participate in an in-depth interview.

Focus Group Discussion Participants

Purposive sampling was used to select health workers, FCHVs and community counsellors for participation in FGDs. Health workers were selected for inclusion if they had: a) training on basic psychosocial care for the management of mental disorders, b) experience on providing basic

psychosocial service as a part of the PRIME project, c) worked in any PRIME implementing health facility, d) knowledge about FCHV mobilization on identification and referral of people with mental health problems to the health facilities using the CIDT. FCHVs were selected for inclusion if they had a) training on CIDT through PRIME and b) experience using CIDT for detection and referral of people with potential mental disorders. Counsellors were selected for inclusion if they were a) employed by PRIME, b) providing psychosocial support through counselling to people with priority disorders, and c) actively involved in current community sensitization programmes and supervision of FCHVs.

Workshop Participants

Purposive sampling was used to select workshop participants. The criteria for selection was a) all the participants should be mental health practitioners with at least one year's experience and, b) should be involved with PRIME programme in Chitwan.

Table 3 (next page) outlines the rationale for the selection of participants for the study.

Table 3: Rationale for Sample Selection

Participants	Role in Mental Health Care	Objectives of data collection
Perinatal women with depressive symptoms	Access care, self-care and actively participating in treatment	To find out the differences between perception of depressed women towards depression, symptomatic presentations, causal attributions, help seeking behaviour, facilitators and barriers to help seeking, pathways to care, expectations from the ANC and PNC in terms of treatment of depressive symptoms
Health Workers	Provide basic psychosocial care to people with priority mental disorders	To identify the common expressions used by depressive patients, local metaphors used in the community to refer to depression and perinatal depression To discuss general components of care to be integrated in the sensitization programs To explore the current practices at the health facility for the management of perinatal depression, areas that need improvements and scope for the adaptation of the changes
Psychosocial Counsellors	Provide focused psychosocial care via counselling Coordination and supervision of FCHVs Conduct community sensitization programs	To understand the community's perception of perinatal depression, its causal attributions, pathways to care, common expressions and local metaphors used in the community to refer depression and perinatal depression and to discuss general components of care to be integrated in the sensitization programs
FCHVs	Involved in safe motherhood programs in the community Actively involved in case detection and referral through CIDT Provide home based care	To understand the community's perception of perinatal depression, causal attributions, pathways to care, common expressions and local metaphors used in the community to refer depression and perinatal depression, facilitators and barriers to treatment
Workshop Participants	Experienced mental health service provider either through psychosocial or biomedical approach	To collect the experts' opinion and feedback on the prepared draft of the community sensitization program and CIDT to ensure its applicability and usability in the community

3.4 Instruments

Edinburgh Postnatal Depression Scale (EPDS)

The EPDS is a tool specifically designed to identify ante- and postnatal depressive symptoms consisting of 10 self-reported items each scoring 0-3, with a maximum score of 30 (See Annex IV). The tool has been validated in Nepal using the local Nepali language amongst postpartum Nepalese women in an urban setting (Kathmandu) with a cut-off score of 13. Compared with DSM IV, the sensitivity and specificity were 100 and 92.6 (S. Regmi et al., 2002).

Interview Schedule

The interview schedule (See Annex V) designed for perinatal women with depressive symptoms are divided into two sections. Section A includes socio-demographic information whilst Section B contains exploratory questions related to their experience of pregnancy and depression, their local understanding, beliefs and terms used for the condition, help seeking behaviour and pathways to care, detection of the problem and referral. Some of these questions are adapted from the AFFIRM's (Africa Focus on Intervention Research for Mental Health) study on maternal depression in Khayelitsha, Cape Town (Lund et al., 2014).

Focus Group Discussion Checklist

The FGD schedule (See Annex VI) for the health workers and psychosocial counsellors contains open-ended questions relating to the general practice at the health facility and community for dealing with depressive patients, common expressions, metaphors used by the depressive patients to refer the condition, local beliefs and attitudes towards the condition as per their experience working in the mental health field. On the other hand, the FGD schedule for the FCHVs concentrates more on the community's understanding of the condition, local attitudes, beliefs about the condition and their experience using CIDT for case detection and referral of priority mental disorders.

Workshop

A one day workshop with the mental health experts and health professionals focused on the finalization of the draft based on three broad categories viz. the language comprehensibility, cultural acceptability and feasibility.

3.5 Qualitative Data Handling and Analysis

All the interviews were conducted and audio-recorded in Nepali by the researchers. The collected data was then transcribed verbatim and translated to English prior to data analysis by PS. Further, the data was closely reviewed and analyzed iteratively.

NVivo 11 qualitative software program was used for data analysis (QSR International Pty Ltd., 2012). The interviews were qualitatively analyzed using the framework approach (Ritchie & Spencer, 1993). The five stages of this framework include:

i. *Familiarization*– becoming immersed in the data by listening to tapes, reading and re-reading transcripts and studying notes. During this stage a coding list was constructed.
ii. *Identifying a thematic framework* – finding the key issues and concepts present in the data and developing themes by which to structure the findings.
iii. *Indexing* – applying the thematic framework to all the data, at the same time checking how it is related to the original aims and objectives.
iv. *Charting* – rearranging data to where it is best suited in the thematic framework.
v. *Mapping and interpretation* – using the charts to create associations between different themes and how these relate to the objectives of the study.

We chose the framework approach over other qualitative data analysis approaches such as the grounded theory approach or thematic analysis due to several reasons. In this study, unlike the grounded theory, which follows an inductive process to develop a new theory, we generally wanted to understand the local expressions for perinatal depression, the women's and the community's perception about perinatal depression, general help seeking behaviour and pathways to care, and trends of detection and treatment of perinatal depression (Backman & Kyngäs, 1999). Based on the study's objective, we used semi-structured interview guide and conducted data analysis on the *a priori* themes. Recurring themes were identified, added and existing themes were modified during the process of data familiarization. A coding matrix was then developed and data was assigned to codes/themes and charted. Fluidity was adopted in drawing associations within themes and between codes during data analysis process to minimize the risk of misinterpretation and ensure that the data is accurately presented (Gale, Cameron, Rashid, & Redwood, 2013; Smith & Firth, 2011). Although thematic analysis and framework approach shares similarities, thematic approach is often criticized for data fragmentation, subjective interpretation of data and lack of transparency (Attride-Stirling, 2001). Framework approach addresses these issues by giving flexibility for the researcher to move back and forth the codes leading to refinement of themes, providing clear guide to data analysis by drawing associations and making meaningful explanation. Additionally,

framework approach in qualitative analysis has been found suitable to make comparisons (Smith & Firth, 2011). In this study, comparisons were made in the experiences of depression between antenatal and postnatal women in few codes where differences were noted.

3.6 Ethical Considerations

Informed Consent

Following recruitment, informed consent was obtained from each study participant prior to the participation in the study. This included a participant information sheet and an informed consent form (See Annex VII). Whilst the literate participants were given the participant information sheet and an informed consent form to read and sign, the information was read out by the researcher to illiterate participants. For the workshop participants, verbal consent was taken for their participation and recording of the audio during the discussion on the draft of the community sensitization program and CIDT. Only those willing to be involved in the study were enrolled. The participant was free to stop the interview anytime she wanted to without giving any reason. Information about the study, study procedure, benefit and confidentiality of the data was clearly mentioned in the form. It was made clear that refusal to participate in the study had no effect on their employment (FGD participants) or on receiving health services at the health facility.

A referral mechanism was set up prior to the start of the study, which ensured that any participant willing to seek support or having suicidal ideation was referred to psychosocial counsellors for psychosocial support that was provided free of cost. Two study participants were referred to the counsellor but only one attended the psychosocial services. The woman who did not attend the service was visiting Chitwan district (parental home) for short period and returned to her home, so she could not attend the service.

All the IDI participants were provided with two USD to cover transportation costs while the FGD and workshop participants were provided lunch as well as transportation costs as per the regulation of the Government of Nepal as a compensation for their participation.

Ethical Approval

Ethical approval to conduct the research was obtained from the Faculty of Health Sciences Human Research Ethics Committee, University of Cape Town and the Nepal Health Research Council (NHRC).

CHAPTER IV: RESULTS

The adaptation of the CIDT and community sensitisation programme for perinatal depression followed four steps namely, 1) qualitative study, 2) draft preparation, 3) workshop for adaptation and 4) finalization of the draft. Details of each step are described below.

4.1 Step 1: Qualitative Study

First, the FGDs were conducted with service providers such as health workers, FCHVs and community counsellors and IDIs were conducted with the service users i.e. antenatal and postnatal women visiting either outreach clinics or health facilities in Meghauli and Dibyanagar VDCs for ANC/PNC services. The findings from the qualitative study are described below.

4.1.1. Socio-demographic Information

Socio-demographic information of the service providers

In total, five FGDs were conducted: two were conducted with health workers (n=13), two with the FCHVs (n=16) and one with the psychosocial counsellors (n=5). A significant number of the participants were female (88%) and had attended some level of formal education (97%). Other socio-demographic details are presented in Table 4.

Table 4: Socio-demographic information of the service providers

	Health Worker	Psychosocial Counsellor	FCHVs	Total
No. of Participants	13	5	16	34
Sex				
Male	2	2	0	4
Female	11	3	16	30
Age				
25-35	4	2	2	8
36-45	4	2	8	14
46 and above	5	1	6	12
Education				
No formal education	0	0	1	1
Primary	0	0	1	1
Lower Secondary	0	0	11	11
Higher Secondary	11	1	3	15
Undergraduate	2	4	0	6
Graduate	0	0	0	0

Socio-demographic information of the service users

Of the 293 perinatal women screened while visiting the health facilities and gaughar clinic in Meghauli and Dibyanagar VDCs, 36 (12.3%) screened positive. All of these were approached to participate in an IDI. Six women refused to be interviewed due to: a) no time for interview (n=3), b) friends/family did not permit further engagement (n=1), c) loss to follow-up (n=1) and d) reluctance to share problems with a stranger (n=1). IDIs were conducted with 29 women but the interview transcripts were only analysed from 26 women as 3 interviews did not provide sufficient information. In addition, one case whose interview could not be conducted in the first screening, did not report depressive symptoms in the follow up meeting. More than half (54%) of the women were in the postnatal period and most participants were from Meghauli (62%) VDC. Most women (77%) were between 18-25 years with a mean age of 24.6 years. Further breakdown of participants by religion, caste, education, occupation, income and number of pregnancies are presented in Table 5 (next page).

Table 5: Socio-demographic information of the service users

Status	No. of participants (N=26)	Percentage (%)
Antenatal	12	46.2
Postnatal	14	53.8
Health		
Meghauli	16	61.5
Dibyanagar	10	38.5
Age		
18-25	20	76.9
26-30	2	7.7
31-35	3	11.5
36-40	1	3.8
Caste		
Brahmin/Chhetri	8	30.8
Dalits	6	23.1
Chaudhary/Tharu	3	11.5
Kumal	4	15.4
Others	5	19.2
Religion		
Hindu	20	76.9
Christian	4	15.4
Others	2	7.7
Education		
No formal education	4	15.4
Primary level (1-5)	6	23.1
Lower secondary (6-8)	6	23.1
Higher Secondary (9-12)	8	30.8
Undergraduate	2	7.7
Occupation		
Housewife	13	50.0
Farmer	8	30.8
Wage/seasonal laborer	3	11.5
Business	2	7.7
Income Sufficiency		
Enough throughout the year	17	65.4
A little insufficient	1	3.8
Not sufficient	8	30.8
Pregnancy		
Primagravida/First pregnancy	13	50.0
Multigravida/Multiple pregnancy	13	50.0

4.1.2. Common depressive symptoms and local terminologies

This section outlines the emotional, cognitive, physical and behavioural expressions used by the IDI participants to describe their depressive symptoms and the impact of these symptoms on their wellbeing. Both antenatal and postnatal women reported feelings of sadness expressed emotionally as loss of enjoyment and happiness *"naramailo/ dukha lagne",* restlessness *"chaatpaati huney",* anxiousness *"chinta lagne", "tension", "piir"*, and feeling of worthlessness *"bacheko bekkar lageko". "Chinta", "tension"* and *"piir"* were used interchangeably to refer to worries and fear about the future more specifically about managing household expenditure and other expenses incurred during delivery and upbringing of the child. Having *"chinta", "tension"* and *"piir"* often led to rumination and mental stress. Too much tension was linked with loss of concentration and forgetfulness which was expressed as feelings as though their "minds have stopped working" or made them go "completely blank". Some reported having nightmares and sleepless nights while few also had suicidal thoughts when they had tension.

Physically, depressive symptoms for antenatal women were expressed as having difficulty in body described mainly in terms of loss of physical strength and laziness *"alchii lagne".* Laziness resulted in loss of interest and also limited some women's capacity to conduct daily activities which they linked with frustration expressed as "*birakta lagne" "dikka lagne"* in local terms. Further, physiological changes were also understood to result in behavioural changes such as diminished appetite and low mood.

Postnatal women associated having a baby as being caught in a web of hassles *"jhanjhat ma faseko jasto hune"* and were frustrated about their changed lifestyle marked with disturbed sleep and lack of time for self-care. Additionally, too many demands from the family to balance their household responsibilities as well as taking care of the baby made some women stressed. They reported not being able to manage well, which made them feel guilty. Feelings of guilt and remorse were common in some women, who had negative views about themselves. One woman said that if something goes wrong in the house, she blames herself as she thinks she is too forgetful. Women, who had given birth to daughters, held them responsible for not being able to make their family happy.

"May be because I gave birth to a daughter that I am not able to stay happy or enjoy things. If I had a son, I would have been happy but I have a daughter. [...] This is it I think may be that's the reason because everyone is sad. Because of this I cannot say a word about it. I have to tolerate everything." – IDI with postnatal woman

Some other behavioural changes noted were feelings of worthlessness, anger and irritation when there were too many things to handle. A postnatal woman shared that she would grow more furious at her children at times when she was deeply troubled. Hence, she tried to maintain distance as much as possible.

"It's like you know, this baby makes me feel as if I am caught up in problems "jhingaleko".. something like that, which makes me feel very irritated. I don't feel like taking care of this baby very well. I feel like some other person would look after this baby. I don't have energy within me. I am growing lazy." – IDI with Postnatal Woman

The FGD participants added depressed women were often seen isolating themselves from others, staring at blank spaces for a long time *"tolaune"*, looking depressed *"jhokrayera basne"*, and being single-minded[1] *"ekohoro huney".* Also, depressed women had reduced interest in regular work *"alchi huney",* had impaired relationships with their infants as well as other family members. For example, they do not take "proper care of their infants *or* breastfeed the children" or get irritated or angry easily *"risaha"* or *"jhagadalu"*. Physical complaints of stomach aches, lack of self-care and in some cases, self-harm and suicide were also reported.

4.1.3. Perceived Causes and risk factors of depressive symptoms

All the FGD and IDI participants had a general understanding that unsupportive family and poverty can put women at risk of developing depression. They also added harmful cultural practices such as females holding a lower status, limited decision making power, the expectation that they do household work only, and the fact that they are considered impure during and post pregnancy as one of the leading risk factors for perinatal depression.

Although the causes varied from one to another, some common themes among these women were: i) unloving and unsupportive husband (n=12), ii) unsupportive family (n=12) iii) financial problems (n=9), iv) an unsatisfying marital experience (n=4), v) unfulfilled desires (n=3), vi) physical health complications of both mother and child (n=3), vii) unplanned pregnancy (n=2), viii) cultural preference for a son (n=2), ix) negative past experiences (n=2). These are explained in detail below.

[1] Single-minded is a local phrase used to explain doing the same thing persistently for a prolonged period of time without considering anything else

i. Unloving and unsupportive husband

Exclusion from decision making with regards to things concerning the women such as household issues or sexual relations, and the expectation that they comply with their husband's decisions not only led to disappointments but also to quarrels. Having an alcoholic husband, disagreements, misunderstandings and fights with the husbands were perceived as stressors. This was particularly marked for women whose husbands were abroad. They said even the small fights hurt them. These women also reported lacking a support system due to their absent husbands.

"My husband was not with me and I was worried what to tell, whom to speak to, what I should do. I was worried and afraid at the same time. I didn't know what to say or how to say or what to do."- IDI with antenatal woman

Many women living with their husbands expected them to understand their needs without having to tell them and to support them practically and emotionally. A few were disappointed when their husbands were overly concerned about the child, its wellbeing but not about them. One woman complained about her husband's ignorance of her health state and placing expectations without trying to understand her situation.

"When a person becomes pregnant, one becomes lazy (alchi lagcha), cannot digest well and vomits often, [..] At such times, he shouts at me saying that I am not cooking or looking after my son. When he says such things, my heart aches a lot." – IDI with antenatal woman

ii. Unsupportive Family

Many women reported having a cold relationship marked with discomfort and fear with their in-laws. Although things were smooth during the first few months after marriage, their relationship grew colder over time.

"I was happy at the beginning of my marriage as everyone loved me in the beginning. But over the time, we started knowing each other, our flaws, our behaviour. My family started saying that I don't speak much and after that .....I lost my happiness/ joy after that.."- IDI with antenatal woman

Women married to men of different cultures shared their difficulty in adapting to the new culture after marriage. Many women agreed that their freedom was snatched away after marriage and that they

had to comply with their in-laws' decisions. Some also reported their fear of being scolded by the in-laws:

"I am scared that they might shout at me. Such fear is obvious. I married a man and now I am staying at their house so I am afraid that they might say something or scold me. That's the reason I am afraid. When I work on my own, they scold me. When something goes wrong, they scold me. When I talk just like that, they get angry. They don't let me talk to anybody."- IDI with postnatal woman

Indifferent attitudes of the in-laws and their expectations from the women to do the same amount of work even during pregnancy and post-delivery made their experience more difficult.

"[...] both my in-laws don't treat me well... they don't help a bit even when I am in my postnatal period. They say that in their generation, they didn't do things like these (taking rest), so why in our generation do we have to do these things? She says that in their times, they started working from the third day after giving birth. She says such things. My husband also doesn't support me that much."- – IDI with antenatal woman

Citing the failure to give enough dowry during marriage, a woman felt that she was discriminated against and mistreated by her in-laws. Another woman, who had married for love rather than by arrangement as is often the case shared that she has not yet been accepted by her in-laws.

"At home, I am scared about my in-laws. They don't understand anything at all. Because this is our love marriage, they think quite bad about me. They say bad about me that's why I don't like to stay at home and I sometimes feel like dying." – IDI with antenatal woman

Women whose in-laws were misusing alcohol complained of mistreatment and conflict whenever they got drunk. One woman defined it as a barrier to their stable financial condition.

"If only he (his father) could look after the house, my husband would go out and earn and it would not have been difficult for us. That's what he says. His father drinks alcohol a lot and gives us "tension" and nags. That's why my husband is not able to leave me and go abroad. [..] If they were good, may be we could make a good house and didn't have any suffering."- IDI with postnatal woman

iii. Financial Problems

Husbands were perceived as the provider of the house hence having an unemployed husband or having unstable source of income had caused some women to worry about their future.

"I can't sleep all night. I keep thinking. My daughter is now studying and my son falls sick quite often. That's it. I just wish that the one who earns (referring to the husband) would earn properly. I just think about it."- IDI with postnatal woman

The antenatal women, although happy to become mothers, were worried about the delivery costs and costs of rearing children. Other concerns included complications during childbirth and being sick regularly resulting in even more costs. Similar concerns related to worries about the cost of feeding themselves, their baby, and meeting their children's needs were also seen among the postnatal women. Women with more than one child were more worried by the increase in expenses.

"..I have three children now. How should I rear them up? How would I send them to school? Where should I send? What should I do to them? These thoughts play into my mind "maan ma kura khelne" very often. These thoughts keep coming. This is the only reason [to worry]."- IDI with postnatal woman

iv. Unsatisfying marital relationship

Women whose relationship with their spouse was marked with lack of affection, infidelity and lack of trust were the most unsatisfied with their marital life. One woman who had an arranged marriage was frequently threatened with a possible marriage to a second wife. On the other hand, even when women married for love, some still reported being unhappy for various reasons including a husband's infidelity.

".....Ours is a love marriage but he is a man after all, when I was in this condition (referring to pregnancy) he dated some other girls. This is what I am sad about the most. This all happened in this one year. [....] I fear that my husband would leave me all of sudden in the middle. That's what I feel and I am scared about it."- IDI with postnatal woman

v. Unfulfilled desires

Women having high aspirations of pursuing education and getting good jobs perceived marriage as a hindrance to achieving their goals. Moreover, they reported losing hope when they learned of their pregnancies. Motherhood, they explained, is a 24 hour job, leaving them little or no time to do anything else. Others believed that their family's lack of support hindered achieving their dreams. A few felt left behind when they saw their friends progressing.

"The thing that I am sad about is that I would have studied well. I would have done something in my life but because of this (pregnancy) I am now hooked up.. because of this I am confined to my home."- IDI with antenatal woman

vi. Physical health complications

Prolonged sickness and bad health of the women themselves and/or their child was explained as causing frustration, mental stress and unhappiness. Some common health complaints in the participants were white water discharge, vomiting, bodyache, wounds from the operation and chronic illness like hypertension. Having these problems resulted in loss of appetite and weakness.

"These problems have increased after my pregnancy. After marriage, I used to feel the same but not as much as I am feeling right now.. but after I conceived I started falling sick more often and I wasn't even able to work.....and due to this there were arguments at home....." – IDI with antenatal woman

A primagravida postnatal woman having breast infection perceived herself as a bad mother when she could not even feed her baby. For multigravida women, who had negative experiences during previous pregnancies, feared that they might have to go to the same difficult procedure.

"It would be very difficult during the delivery. That is what troubles me the most. If it had been the first time, I wouldn't know how it is going to be like. I have already given delivery once to my son and I know it is very difficult. If there is any complication, one has to even undergo operation. During the delivery, they cut the opening a little and it has to be stitched again. It would be very difficult to urinate or stool. When I think of that, I am very much worried." – IDI with antenatal woman

vii. Unplanned pregnancy

Comparatively multigravida[2] women were more unhappy about their pregnancy/birth than the primagravida[3] women. Antenatal women shared being unprepared and the sudden pregnancy left them in fear on managing everything. Two women, who considered unplanned pregnancy as their major cause of distress, were both multigravida women. One of them already had two married daughters and was ashamed about her pregnancy. She was concerned what her friends/community would say or think about her but felt she would be fine if she gives birth to a son. While for another woman, being pregnant was perceived as an additional economic burden.

viii. Cultural preference for a son

Multigravida women, who never had a son, were worried about having a daughter. Although these women said they had no sex preference, they were more worried what others would say about them and feared being scorned and ridiculed by society if they have a daughter again. Having a daughter would "only add sorrow upon sorrows". An antenatal woman said she had a stressful pregnancy, as most of the times she was concerned about the sex of the baby. Failing to give birth to a son invited difficulties in the other woman's life as she was continually threatened by her in-laws that they will kick her out of the family and would bring another wife for their son. At such times, she said she would feel that it is better off for her to die than to live.

Postnatal women, who had a son, were happy as they thought having a son made their family complete and that their sons would continue their lineage. It was also linked with gaining confidence which was expressed in terms of "change".

"I feel happy because of this son. I only have sisters in my family. Everyone used to say that I would have another girl again as what's in the womb will be decided by the lineage of the female counterpart but now that I have a baby boy, I am happy and I have these feelings of changes." – IDI with postnatal woman

ix. Negative past experience

A few women (n=2) shared that they were in despair when they previously had a miscarriage; but being pregnant helped them to be hopeful and spread happiness in the family. One woman, who

[2] Multigravida- a woman who is or has been pregnant for at least a second time
[3] Primagravida- a woman who is pregnant for the first time

had lost her first child at 5 months after delivery, was fearful that she might lose her second child at 5 months again.

4.1.4. Available Resources in the community

Three types of resources were available to treat both physical and mental health problems in the community. These services are divided mainly into two categories based on their location. Formal health services such as diagnosis and biomedical treatment were located at the health facility whereas traditional healing, faith healing were based in the community. Further details of each type of health services are described below:

Health facility services

Health services provided at the primary health facilities included general health services. While all the health facilities had ANC and PNC services, only a few had birthing facilities and a safe abortion programme. To increase the ANC/PNC service utilization of those residing in the rural areas, community outreach programmes and mobile health camps called “gau-ghar clinic” were organized each month. Cases requiring advanced care were referred to the health facility or to tertiary hospitals depending on the level of severity. Further, FCHVs were also mobilized to distribute medication such as iron supplements, deworming medication and vitamin A in the community.

In terms of mental health, although basic mental health services (both psychosocial and pharmacological) were available at the primary health facilities, all the FGD participants admitted not having a separate care package for perinatal mental health. Nevertheless, the health workers had been providing some sort of basic counselling (defined in terms of psychoeducation or helpful suggestions and health advice) to the perinatal women dealing with stress. In communities, where sons were preferred, the FCHVs had been helping by talking to the family about the importance of daughters and discouraging abortion.

Additionally, the psychosocial counsellors had been providing individual, couple and family counselling depending on the needs of the women. Because preference to son was often the most dominant factor for depression in most of the cases they had dealt, psychoeducation about reproductive health was the key component they focused during the counselling. A psychosocial counsellor shared that she used the pictorial presentation of the uterus and chromosomes to explain that it is beyond our control to determine the sex of the foetus. They also shared that they had been using different interventions according to the presenting problems of the women.

"R2- It all depends on the type of the patient coming to us, their level of severity. For example, a man already has 2-3 wives but if re-marries for the sake of getting son, we should provide counseling highlighting the importance of both son and daughter. If an alcoholic husband abuses his wife everyday then the strategy could be different." – FGD with psychosocial counsellors

Community services

Community level services here have been further divided into two i) traditional healing practices and ii) faith healing.

i. Traditional healing practices

Traditional healers were known with different names such as "dhami, "jhakri", "gurau", and "lama". Traditional healing was sought for both physical and mental health problems although the practice was quite common for mental health problems. Especially when people displayed unusual behaviours, they were perceived to be possessed by the spirits hence sought traditional services.

"R2- If someone falls sick, there is a belief that it is because of the ancestral gods who are angry or their spirits. So to appease them, there is a trend of calling out the spirits to know what they are angry about and to know their demands. Once it is fulfilled they think everything will fall on track. "- FGD with the health workers

People preferring traditional healers had a spiritual explanation of diseases thus were perceived to be uneducated or from the underprivileged backgrounds. High caste groups (such as Brahmins/Chhetris according to Hindu caste system) and people of higher socio-economic status, who see themselves as modern, preferred modern biomedical health services.

"R6- Only the low caste people go there. (R5 agrees). High caste people such as Brahmin/ Chhetri are not involved.
R1- The spirit callers are the low caste people.
R5- This trend of calling ancestral spirit is popular. [...] Most of these are in the rural areas." – FGD with the health workers

However, due to its success rate, participants believed it has gained popularity in all communities. Since faith in traditional healers was ingrained in the cultural norm, even the educated or so-called "modern" still were not able to completely discard their faith in traditional healing. There was a

common consensus about the practice of seeking both modern and traditional services. One of the health workers providing counselling services at the health facility shared that her own sister was healed by “lama”. Although being a mental health service provider, she accepted having a strong belief in the traditional healers.

“If there's a faith then, all these illnesses go out of our mind. Let's not say all other things are futile but because of faith, everything is possible. Except for the communicable diseases, I also have the mentality that tension and other common "brain-mind" problems can be healed by the traditional healing practice "fukera" because I have faith in it.”- FGD with the health workers

Still some believed traditional healers were futile and considered it as a “trick” of making money.

ii. Faith Healing

Faith healing practice differed from religion to religion. For Hindus, health problems were considered as the result of the gods being angry *“kul bigreko”,* or bad luck or fate, for which traditional healers as well as the religious leaders such as *“devi”* or astrologers or palm readers *“heraune”* were consulted.

“Some believe [....] it is due to bad luck caused by the astrological positioning of the planets "graha bigreko" or "saadhe saath ko daasha lageko" or "mangal" or "budha lageko" and thus they consult the religious leader [....]. This is usually the last resort of most of the people.”- FGD with the health worker

People of Christian faith believed in miraculous healing and instead of seeking services elsewhere, they first resorted to religious healing.

“I have seen people with grave problems saying that they have gotten better after going there. It is very much popular these days.”- FGD with health workers

Both FGD and IDI participants agreed about the growing popularity of “biswas dharma” religion. Although none of our participants was able to explain what exactly it is, there was a hint from some IDI participants that it is one of the sects of Christianity. Followers of this religion seemed to have a strong belief that god *“pita parmeshwor”* can heal all the problems whether physical or mental. The health workers were concerned however that some patients stop taking medication for conditions such as cancer because they believe their faith will heal them.

"They seek both the services simultaneously. Although it's the medicine that is working on them, they say that it is through the ritual healing that they got better. In other cases, if a person doesn't take medicine but receives ritual healing then, it is through faith that they are getting better but in the end, it is just an illusion."- FGD with the health workers

4.1.5. Help seeking Behaviour and Pathways to Care

For most general health problems, our participants preferred the community based health facilities as a first point for treatment. Only when they required advanced care did they visit tertiary level health facilities, preferably the private hospitals. They also reported visiting other health service providers such as traditional healers and faith healers for problems like infertility and miscarriage, particularly when biomedical services did not work.

Almost all the participants had sought help for physical problems during ANC and PNC visits but not for their depressive symptoms. They believed that only physical health related issues were treated at the health facilities.

".. I have talked to them about my problems like white water discharge, back pain, and others that is going on with me. I only share about these problems not about others like worrying and stuff."- IDI with antenatal woman

"My husband used to say not to take tension, or worry a lot otherwise I would have mental problem and also used to tell me to go to the hospital. [...] I didn't know that I should go to hospital when I have tension or worries. I thought that one goes to hospital only when s/he is sick. I didn't know that." – IDI with postnatal woman

When asked what they did to overcome or manage the depressive symptoms, the IDI participants said they first try to manage it on their own. Only when these coping strategies didn't work, they would then seek support within their primary circle first (See ***"Support System"*** below). However, if these problems worsen in the future, some women reported they might visit the hospital. Others thought that such problems do not need treatment at all.

Coping

Women employed different coping strategies to deal with their problems. Generally, the participants reported using positive strategies to help them cope. Except in some cases, participants adopted

strategies such as sitting idle and contemplating the problem, which made them heavy hearted and generated suicidal thoughts in few others.

The most common strategy reported was self-consolation, which was about embracing both negative and positive aspects of life or attempting to be optimistic even in the worst situations. A significant number of women accepted their battle as fate which helped them to stay at peace.

"There is nothing to be sad about. Well, my parents gave me off in a marriage when I was little. This is what it's written in my fate, so I have to go through it. [....] I just try to console myself."- IDI with postnatal woman

Many women stated that they would cry when they feel heavy-hearted, and after that they would feel much lighter. Few others resorted to their hobbies such as listening to music, watching videos, reading books, carrying out regular work, going for a walk or playing with their babies.

"Sometimes I don't talk to anyone else. If I would like to take a walk, I would just leave and walk to the place I want to go. This helps me to forget my worries. It kills my anger and then I come back home."- IDI with antenatal woman

Additionally, participating in religious activities such as praying, worshipping, visiting religious and having a strong faith that everything would be taken care of supported some women to stay positive.

"[....] I used to worry but it was temporary. I used to then study the religious book and sleep. On Saturdays, I go to the mass. [...] After that, my mind gets diverted and then I am not worried at all." – IDI with postnatal woman

A lot of women preferred to seclude themselves from others. At times when they were deeply troubled, they said they felt irritated and angry to see others. In contrast few also stated that talking with other people especially their close friends helped them to divert their mind and helped them to feel lighter.

"I feel better. At such times, I don't like to talk to anyone else. I go to a cool place, drink water. That's what I do when I am feeling difficult."- IDI with antenatal woman

Support Systems

This section contains details about the source of support identified by the women themselves to help with their problems; some strategies that they think will help to overcome their problems; and the type of support they are actually receiving from the identified sources of support.

Husbands were the primary source of support for women living in a nuclear family (husband and children), whose help was sought for health advice, emotional support, carrying out household chores and making household decision.

"He (husband) says that as long as he is here, nothing would happen. He says that he would take care of me, my son even if it means he has to go hungry. When he says that I feel happy. No matter what others do to me, my husband loves me and I feel happy."-IDI with postnatal woman

Women living with their in-laws had mixed responses. Those who had supportive family sought help for their pregnancy and postpartum related problems from their mother-in-law or husband, depending on the level of intimacy they shared. The support received by the in-laws was more in terms of monetary form, looking after the baby and some help in carrying out household chores.

"When I am in trouble (dukha parda kheri), they (the in-laws) do help me. I have received support. Like when I am in need of money. When I don't have money, they help me by giving some cash. Similarly, when I have difficulty doing household chores, they help me." – IDI with postnatal woman

Some women, who did not receive support from the in-laws, reached out to their friends or family members of their parental home for advice and practical support. The parental home was portrayed as a safe haven by these women, where they were supported and taken care of.

"They (in-laws) used to make me do such things (carry heavy loads). They didn't help me in any work. So I came here to my parental home. I told my mom everything that I have to do so and so things. I am scared of my in-laws and because of their fear, I like to work even though when I can't. I told my mom about it and she told me to stay here and go back if my condition improves. She says that I can stay here and she can look after me." – IDI with antenatal woman

Neighbours were another source of support, who supported them by providing financial support, health advice and looking after the babies when busy. Some even received emotional support and

consolation from close neighbours or friends. Just their presence and willingness to listen was seen as a form of support.

"They say whatever has to happen, happens and there is no use taking tension, worrying. Whatever happens, it's for the good. That's what they advise me. That helps me to calm a bit "maan yesai bujhcha" otherwise I would only worry and take tension."- IDI with antenatal woman

Support outside of the family from healthcare providers was only sought when they could not manage their problems on their own or when the problems persisted after seeking help from the family or loved ones.

4.1.6. Barriers to care

Conventional thoughts and religious beliefs about the causes of mental health problems led people to seek help from the traditional and faith healers often delaying help-seeking at the health facility.

"Most of them go to the traditional healers. People believe that it happened because the gods are angry "devi deuta risako" or ancestral gods are angry "kul risako" when their problems grow severe. Medication takes time to show the effect hence they think that it would be treated by the traditional healers "dhami jhakri le fuke niko huncha". We still have such culture and beliefs."- FGD with Health worker

Similarly, poor awareness and stigma were a dominant theme throughout all the FGDs. The understanding that mental health problems do not require any formal treatment and that medication in-take during pregnancy is harmful had barred women from seeking care from the health facility. Insecurities of being mocked or labelled with stigmatizing names such as having loose mind *"dimag fuskeko"*, mad *"baulaha",* loser *"kehi garnu nasakne",* crazy *"pagal",* "psycho" made some of them reluctant to seek support.

In general having mental health problems were perceived to limit a person's capability, their chance of getting married which would affect their overall dignity and honor *"ijjat".* Also, because mental health problems were believed to be hereditary, due to fear of the whole family being stigmatized, the family themselves would discourage them from seeking care. Even when mental health services are available within the community, people normally preferred seeking care from a different city.

"[...] because of this stigma, people with high status or from a well off background, seek services outside of their communities such as the district hospital. Some travels as far as India, Kathmandu for treatment. [.....] They fear that their status in the community might be ruined. Because of this, we have found that the patients are not coming for the treatment openly as they should." FGD with health worker

The stigma associated with mental health problems was so gravely embedded in the society that everything associated with it was stigmatized. The health workers reported that the word "mental" on the cover page of the patient service card created such trouble that no patient wanted to use it and denied having mental health problem. Mental health problems in the community were understood only in terms of severe conditions such as psychosis or schizophrenia. The psychosocial counsellors shared some incidents where a patient under treatment had suddenly stopped using medicines when they were told that such medicines are only used for "mad" people. Almost all the psychosocial counsellors agreed that the problem was with the word "mental". Instead they said they use the word *"maan"* referring to both heart and mind during their course of work.

"We use "problems related to heart-mind" to refer "mental health problems" during community sensitization and raising awareness in the community. [....] The word "mental" is heavy. Even if I have the problem, I may not accept that I have mental health problem. This word makes me feel difficult." – FGD with psychosocial counsellor

4.1.7. Possible Intervention for perinatal depression

Most of the FGD participants identified timely detection and treatment as key areas that need to be addressed in order to improve the health outcomes for women with perinatal depression. Since this study was conducted in PRIME implementing areas, most participants indicated the CIDT as one of the easier methods to identify cases of mental health problems in the community. Provided with incentives, participants suggested that FCHVs would be well placed to use the CIDT due to their active involvement in the community health programmes including maternal and neonatal care programmes.

"Just as we are using CIDT for four disorders, I think it is necessary for pregnant and postnatal women, too... because pregnant women are naturally worried at this period due to the bodily changes. They need to eat certain nutritious food, they know about it but cannot afford due to which they may have depression. Pregnant women they know that they shouldn't take medicine during pregnancy but they do not know about the mental problems that may occur at this period. For CIDT,

we have FCHVs in every ward. If FCHVs could use CIDT, identify and then counsel them, I guess it would be more effective."- FGD with the FCHVs

Other possible strategy for detection was through observation of behaviour and conduct, which from the service providers' perspective could be best done by the family members.

"The best way to identify is through the behaviour of the person. In order to know, if there's a change in the behaviour before and after pregnancy, it is wise to contact the husband of the woman. During the process of observation, we can assess whether the person (woman) has changed behaviour while conducting household chores, whether or not she is happy about pregnancy [....] If there's a change in behaviour due to various factors as these and if it could be noticed on time, then it can be identified I guess"- FGD with Psychosocial Counsellor

Some perinatal women also reiterated observation would be the best method to identify women with depression. For example, such women would not talk to anyone, have diminished performance, looks worried, do not eat, their countenance looks sad and worried, cry often. Especially for women, who are inexpressive, they said it is difficult to identify since no one can understand what is going within them. They may be feeling one thing but may act the opposite hence, just by judging from their behaviour might be a fallacy.

"Well, they act normally in front of people. No matter how many worries (piir) they have within their hearts (maan). Even if people have lots of worries, they act as if nothing has happened to them. [...] No matter their pain and suffering, they show as if they are happy." – IDI with antenatal woman

Because they have been undergoing the same problem, if others with similar problem come to them and share, they said they can empathize and support one another. Forming peer support groups was recommended by these women, which they thought would help build a close relationship, let them share their problems and ultimately help them identify the problem and seek support from one another. One woman defined the advantage of forming a peer support group as:

"When things are shared among one another, our hearts feel lighter, our worries also feel lighter. When we don't talk to anyone, we feel that our body is heavier (jiu pani bhari huncha), we ruminate even more (maan ma ajhai dherai kura khelne). Well that's the advantage. Because when we share, our body also become "tension free" when we don't, it becomes just like that all alone." – IDI with postnatal woman

Few others emphasized the need of family level intervention. No matter what interventions are developed, if the family environment is not conducive, the problem would persist. The FCHVs also highlighted the role of the family both in identification and long term solution of the problem.

"FCHVs are given a short training and made to do it. People, they listen to us for some time but forget about it. But if the family, husband and in-laws could be involved and a program could be conducted amongst them then it may be better."- FGD with the FCHVs

On the other hand, few others said that the health workers should also provide necessary information and console them, which might make them feel better. The health workers pointed out on the need of more focused intervention for the prevention and promotion of perinatal mental health.

"[….] when we deliver babies, we go through a lot of problem. We are providing them counseling but if there is special focused intervention for this it would be much better... because to have depression during ANC and PNC is a very difficult thing. They won't be able to care for their infants."- FGD with the health workers

The health workers also underscored the need of information dissemination through printed materials (brochures, leaflets, pamphlets), mass media, and community sensitization programmes. School education programmes, and integrating the information about mental wellbeing in the school curriculum was particularly recurring theme in FGDs with both health workers and FCHVs. The health worker citing how the stigma against menstruation was overcome through school education programme, emphasized the same can be done for mental health, too. A need of "collective effort" from the service provider (health workers, FCHV), service users (people with problems) and their caregiver (husband, family member) for the timely detection of perinatal mental health problems was also emphasized.

Women with perinatal depression particularly stressed on educating the head of the family, respected or the key community persons:

"[...] if the head of the family is taught or transferred knowledge about it, then it would be better. I find that a better option because if the head of the family says something, everyone believes him. If

you educate me about this and if I tell about these things in my family, I think nobody would take me seriously."- IDI with postnatal woman

4.2 Step 2: Draft preparation

After conducting the qualitative study, a draft of CIDT and the community sensitization manual was prepared in the second step. For CIDT, first, a table containing the list of "symptoms", "cultural expression", "frequency" and "remarks" was prepared (See Annex VIII). Altogether 47 symptoms were initially listed from the study data. Although the cultural expressions of the symptoms varied, similar symptoms were clustered and a final list of 36 symptoms were prepared. These symptoms and cultural expressions were then ranked based on the frequency of the usage of the terms by the IDI and FGD participants. Under remarks, it was indicated whether the symptom was commonly reported by antenatal or postnatal women, or the service providers. Based on the ranking, major symptoms were included in the case vignettes for CIDT. Preference was given to symptoms reported by antenatal and postnatal women over those of the service providers. In total 13-14 symptoms were included for each case vignette. In addition, frequently endorsed causal factors were included to create context in the case vignette. For example, for postnatal vignette, cultural preference for a male child was used to create a context followed by depressive symptoms. The draft case vignettes were shared with the psychologist for feedback. The psychologist has been working for PRIME in TPO Nepal for more than 5 years. She is responsible for training the health workers on the psychosocial component and supervising community counsellors. She suggested including symptoms related to four areas- physical, emotional, thoughts, and behaviour. Thereafter the draft was reviewed making sure all these symptoms were incorporated especially in the postnatal case vignette where physical symptoms were missing.

Following the content outline for the other four PRIME disorders (depression, alcohol use disorder, epilepsy and psychosis), together with the psychologist, a sub-section on perinatal depression was created under depression, where general information about perinatal depression, its causes and symptoms from the qualitative study were incorporated. Since most of the causes and symptoms were similar to the depression component, they were not repeated in the perinatal depression component. Only unique features were listed in the perinatal depression section. While mentioning the causes for perinatal depression, the cultural context of Nepal was also mentioned. For example, instead of mentioning poverty and financial problems alone as a risk factor, it was mentioned that these symptoms were related more with the worries about meeting needs of the children. Other cultural factors such as cultural preference for a male child and cultural beliefs that the birth of a son

will open doors of heaven/give continuity to the lineage/accrue merit were also included as the causal factors. Conservative thoughts and practices, lack of support from the family, relationship with husband, which were frequently mentioned by the study participants, were also included as stressors.

4.3 Step 3: Workshop for Adaptation

With an aim to finalize the prepared draft of CIDT and the community sensitization manual, a workshop was conducted with the mental health service providers including psychosocial counsellors (n=2), and health workers (n=12). Although two maternal health workers from the district hospital were invited, neither attended the workshop.

After a formal opening of the workshop and a short recap on mental health and mental health problems, all the participants were divided into three groups with 4-5 participants in each. Firstly, each group was asked to come up with a simple definition for depression that can help people in the community to understand what it really meant. Each group had a presenter to share the group's results. Reviewing the three definitions from each group, a single definition was developed, which was later incorporated in the community sensitization manual. Secondly, each group was again asked to list all the possible causes and symptoms of depression. One final list was prepared at the end merging responses from all the groups. Once the depression component was discussed, the participants were again asked to come up with a definition for perinatal depression in their respective groups. A final definition was then prepared after reviewing all three definitions. The final list of all the causes of depression was then reviewed and the participants were asked to filter the causal factors that are applicable to perinatal depression. All the causal factors were indicated to be appropriate however, few causal factors such as the unplanned pregnancy, forced pregnancy, stillbirth, small age gap (gap between babies), being pregnant too early or late in terms of age were added for perinatal depression. Similarly, all the symptoms from the final list for depressive symptoms were indicated to be applicable for perinatal depression but few symptoms related to fatigue and impact on daily functioning were added. Although these two symptoms were also mentioned in the depression component, because they were expressed differently for perinatal depression, they were added in the perinatal depression component. "Fatigue" for perinatal depression was explained more in terms of laziness caused by physiological difficulties while "impact on daily functioning" was more focused on difficulty carrying out household chores.

After adding the symptoms, the participants were asked to rank them based on two criteria – a) common use in the community, b) understandable to most of the community members. The

workshop participants were then shown the case vignettes used in the CIDT for antenatal and postnatal depression. Five questions were asked in order to identify what changes needed to be made in the case vignettes: a) To what extent is the case vignette easy to understand?; b) Has the case vignette included all the major symptoms?; c) What changes need to be made in the case vignette?; d) How can the case vignette be made simpler?; and e) Do you think any information should be added? Both the antenatal and postnatal case vignettes were reported to be simple, clear and easy to understand. Given the limitation that these case vignettes should be brief, the participants indicated that the case vignettes had included all the major and common symptoms and thus needed no changes.

Other symptoms such as lack of concentration, being single-minded, unable to make future decisions or plans were added in the depression component. Similarly, some stigmatizing terms such as being useless *"hutihaara bhayeko",* single-minded *"eksurey bhayeko"* were addressed in the community sensitization manual. Also, common misconceptions about mental health problems more specifically depression that it is caused by spirit possession or angry gods or ill fate were listed under the "myths" section followed by "facts". In a large group, the role of family was discussed through which the participants highlighted the support of family in accompanying a woman to ANC and PNC check up would help them a lot. Similarly, references were also taken from the "Thinking Healthy Programme" (World Health Organization, 2015) from which information related to making preparations for the child's arrival by arranging facilities (such as preparing clothes, deciding the health facility for delivery, saving up money in case of emergency) would help women to stay positive about their pregnancy were added. These points were added in the role of family section for perinatal women.

4.4 Step 4: Finalization of the draft

For the finalization of CIDT, the case vignettes were sent to a psychiatrist for review and feedback, to ensure that major symptoms are correctly presented in the case vignette. The psychiatrist is working at TPO Nepal in a similar project like PRIME, where he is responsible for training and supervising the health workers on detection and management of mental health problems through pharmacological treatment. Although the case vignettes were found appropriate, the psychiatrist suggested that three common symptoms of depression related to low mood, fatigue and decreased interest should be prioritized and should be mentioned before any other symptoms. Therefore, for the antenatal case vignette, symptoms related to low mood expressed by depressive feelings and loss of enjoyment was mentioned first followed by behavioural changes and physical changes (See Figure 1). For the postnatal case vignette, too, depressed mood was added as the first symptom

followed by self-blame, worries and hopelessness (See Figure 2). Duration of the persistence of symptoms was also added in both the vignettes upon the psychiatrist's recommendation. Sleeping disturbance and loss of appetite were the common complaints by depressed patients as per the psychiatrist's experience therefore, these two symptoms were included in both the vignettes. In the postnatal case vignette, a sentence about the protagonist's worries about rearing up the children was removed as per the psychiatrist's recommendation since it relates more to symptoms of anxiety and not depression alone. Additionally, *self-blame* was replaced with the *feelings of guilt; not eating* with *diminished appetite* since it was reported to be more common in depressed women. Once the comments from the psychiatrist were incorporated, the case vignettes were finalized and a consultant artist was hired to develop pictures depicting the major symptoms to include in the CIDT.

Figure 1: Final CIDT for antenatal depression

Name: **Location:**

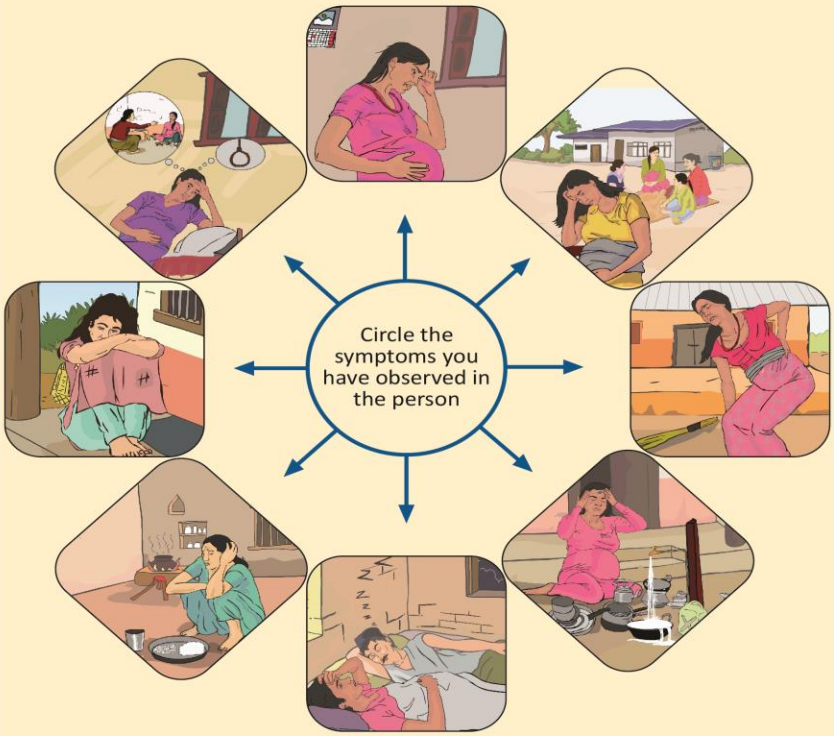
Antenatal depression

Sabina is six months pregnant. For the past two months she has looked depressed and has not been able to enjoy anything. Most of the time, she prefers staying alone and feels irritated upon hearing others talking to her. She complains of having pain in different parts of her body and feels tired most of the time. Despite having difficulty carrying out daily household chores, she is expected to take care of everything. She feels that her family does not understand her problem thus, feels frustrated with her life. When all these things overtake her, she feels restless and wants to run away from all the responsibilities. She has not been able to sleep and has been eating less than usual. She thinks that there is nothing she can do in her life and cries almost every day. Sometimes she thinks it is better for her to die than to live.

Referred by (Name): _____

☐ Teacher ☐ Mother's Group ☐ Traditional Healer ☐ FCHV

OBSERVATION



QUESTIONS

A1. Does this narrative apply to the person you are talking to now?

- No match (description does not apply) ..... 1 } **Finished**
- Moderate match (person has significant features of this description) 2
- Good match (description applies well) ..... 3 } **Go to A2/A3**
- Very good match (person exemplifies description, prototypical case) 4

A2. Do the problems have a negative impact on daily functioning?

- No 1
- Yes 2

A3. Does this person want support in dealing with these problems?

- No 1
- Yes 2

Results: (Total score of items A1, A2 and A3)

Figure 2: Final CIDT for postnatal depression

Name: **Location:**

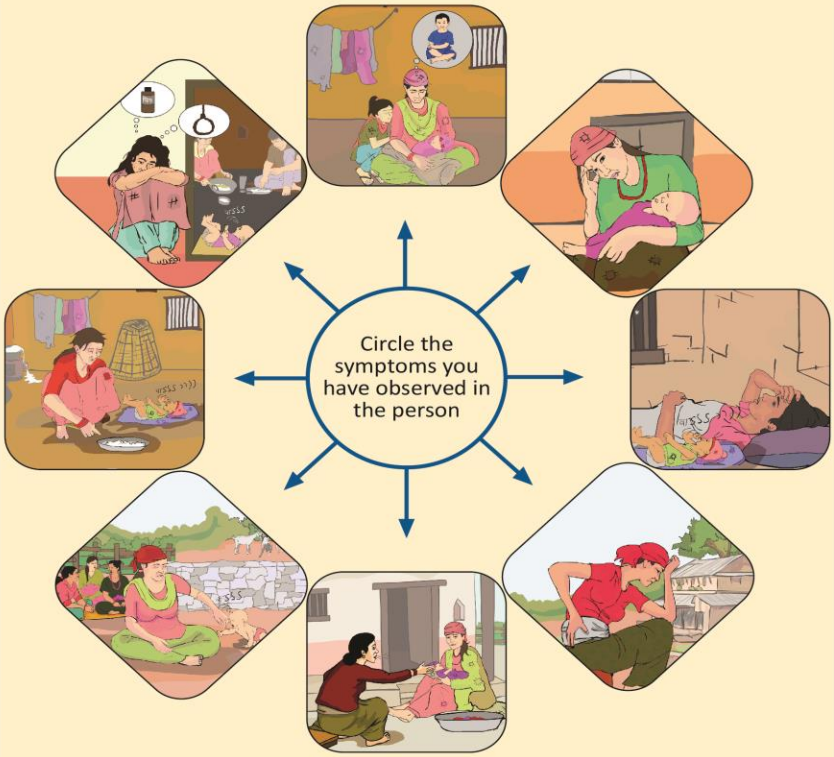
Postnatal depression

Binita is from a poor family and has just given birth to a daughter for the second time. It is just a few weeks after delivery, she looks depressed throughout the day. She has not been able to stay happy even after giving birth. In the same way, she feels guilty for not being able to give birth to a son and make her family happy. Most nights she has not been able to sleep thinking about these things because of which she feels tired and lazy during the day. Binita used to be very energetic, but nowadays, she feels weak and has not been able to carry out her household chores. Similarly, she also feels irritated to look after the newborn baby and gets angry easily with anyone. These days she stays alone most of the time, doesn't eat well and doesn't maintain her personal hygiene. Because she could not do anything as she had imagined, she thinks there is no reason for her to live.

Referred by (Name): _____

☐ Teacher ☐ Mother's Group ☐ Traditional Healer ☐ FCHV

OBSERVATION



QUESTIONS

A1. Does this narrative apply to the person you are talking to now?

- No match (description does not apply) ..... 1 } **Finished**
- Moderate match (person has significant features of this description) 2
- Good match (description applies well) ..... 3 } **Go to A2/A3**
- Very good match (person exemplifies description, prototypical case) 4

A2. Do the problems have a negative impact on daily functioning?

- No 1
- Yes 2

A3. Does this person want support in dealing with these problems?

- No 1
- Yes 2

Results: (Total score of items A1, A2 and A3)

Similarly, after incorporating findings from the workshop, the draft of the community sensitization manual was handed over to the psychiatrist for review. The psychiatrist pointed out that instead of just stating the time duration of “from the past 2 weeks or more”, it is also important to indicate *how much throughout the day such problems are shown.* He added that only when a person has prolonged depressive symptoms most of the times in a day continuously for at least 2 weeks, can it be considered as a problem otherwise it can just be a normal response to abnormal situations. Based on this suggestion, it was corrected in the introduction section of both depression and perinatal depression. Similarly, following the psychiatrist’s suggestion, higher risk in women with previous history or family history of depression was added in the causes. In the symptoms section, rather than just mentioning self-harm and suicide, another symptom related to “risk of causing harm or committing infanticide in few women” was added. After incorporating the suggestions from the psychiatrist, the content for the manual was finalized. (See Table 6 for the adapted version)

Table 6: Adaptation of Community sensitization manual

Adapted Version
(The titles in Bold indicate where changes have been made; the Bold, and Italics text briefly describes the changes)

1. Introduction
    - Background
    - Introduction to the manual
    - Content of the manual
    - Process of community sensitization programme

2. Psychosocial Concept (30 minutes)
    - What is psychosocial?
    - Psychosocial wellbeing and problems
    - Causes of psychosocial problems
    - **Symptoms of psychosocial problems *(symptoms added)***
    - How to identify psychosocial problems
    - **Cultural expressions of psychosocial problems *(cultural expressions added)***
    - Evaluative question: What do you understand by psychosocial?

3. Mental Health Concept *(changed from 1.5 hours to 2 hours)*
    - Mental Health
    - Mental health problems
    - Causes of mental health problems
    - Symptoms of mental health problems
    - **Myths and facts about mental health problems *(few myths and facts about mental health and perinatal depression added)***
    - Types of mental health problems
        - Depression
            - Case Vignette (from CIDT)
            - **Introduction to depression *(Definition revised in the workshop)***
            - **Causes of depression *(Few common causes from the workshop added)***
            - **Symptoms of depression *(Few common symptoms from the workshop added)***
            - **Perinatal depression (*This sub section was added*)**
            - **Case Vignette (from CIDT)**
            - **Introduction to perinatal depression (*Definition derived from the workshop*)**
            - **Causes of perinatal depression (*Common causal factors were added as a result of the qualitative study and the workshop*)**
            - **Symptoms of perinatal depression (*Common symptoms were added as a result of the qualitative study and the workshop*)**
        - Alcohol Use Disorder
            - Case Vignette (from CIDT)
            - Introduction to alcohol use disorder
            - How to identify people with alcohol use disorder?
            - Causes of alcohol use disorder
            - Symptoms of alcohol use disorder
        - Epilepsy
            - Case Vignette (from CIDT)
            - Introduction to epilepsy
            - Causes of epilepsy
            - Symptoms of epilepsy
        - Psychosis
            - Case Vignette (from CIDT)
            - Introduction to psychosis
            - Causes of psychosis
            - Symptoms of psychosis

4. Stigma (10 minutes)
    - Impact of stigma on wellbeing
    - How to tackle stigma? (includes some practical strategies that can help)

5. Treatment (20 minutes)
    - **Role of family to help people with mental health problems *(Findings from the literature review and workshop added)***

- Available psychosocial and mental health services at the health facilities

6. References (*Added references*)

CHAPTER V: DISCUSSION

With an aim of promoting help-seeking behaviour and improving utilization of formal health resources for perinatal depression, this study was conducted to adapt the current CIDT and community sensitization manual used in PRIME for perinatal depression. Two CIDTs each for antenatal and postnatal depression were developed while a different sub-section of perinatal depression was incorporated under the "Depression" section in the community sensitization manual as a result of this study. This was done in four steps where the content for the adaptation of both CIDT and community sensitization manual was informed by the qualitative study followed by draft preparation, workshop with stakeholders, and finalization of the detection tool and community sensitization manual.

In this chapter, I will present my main findings and locate them in the wider literature, after which I will discuss the challenges faced during the study period followed by recommendations for future research, and implications for policy and practice.

5.1 Summary of findings

Experienced symptoms

Depressive symptoms reported by the IDI participants were exhibited more in terms of emotional and psychological expressions such as loss of interest, rumination, pessimistic views, extreme worries, restlessness, feeling of worthlessness locally expressed as *"alchi huney", "maan ma dherai kura khelne", "jhanjhat ma faseko jasto hune", "piir/dukha lagne", "chaatpaati huney", "bacheko bekkar lageko"*. As in the study by Clarke et. al (2014), the participants used the term "tension" frequently. "Tension" in this study was referred to both as a factor for and outcome of stress or a stressful situation. As a factor, "tension" was described as stressors such as lack of support, having unfulfilled desires, economic problems, having a sick child, which in turn aggravated their situation further by adding more worries and mental stress.

Physical problems such as backache, headache, nausea, were considered normal during and after pregnancy. In cases of illness, such as breast infection or a sick infant, women cited physical health problem as their main reason to worry. Unlike other studies conducted in depression using tools like General Health Questionnaire (GHQ), Beck Depression Inventory (BDI), Revised Clinical Interview

Schedule (CISR) (Hanlon et al., 2008; Kerr & Kerr Jr., 2001; Pereira et al., 2007), very few women expressed their depressive symptoms in terms of somatic complaints in the EPDS. Because EPDS is heavily focused on psychological symptoms (Hanlon et al., 2008) and also since our in-depth interviews focused further discussion on the same symptoms reported in EPDS, somatic symptoms might not have been reported as often as the psychological symptoms.

Onset of the depressive symptoms

During the interviews, most women shared that they started having depressive symptoms right after marriage, which were aggravated with each pregnancy. Marriage and having children meant more responsibilities, more compromises and less freedom for women. Women in a patriarchal society such as in South Asian context are perceived to be docile and dependent, where her opinions are not taken in decision making (Matsumara & Gubhaju, 2001; Niaz & Hassan, 2006; Shah, Khan, Naushad, Jadoon, & Alam, 2006; Thapa & Niehof, 2013), her mobility is controlled and her presence is invisible (Morgan & Niraula, 1995; Niaz & Hassan, 2006). Known risk factors such as these and harmful cultural practices such the condoning of domestic violence when there was not enough dowry, and cultural preference for a male child expose women to greater risk for psychological distress (Niaz & Hassan, 2006). The current study also found that preference for male children for some women could act as a risk factor for depression and in some cases excess pressure from the family even led to develop suicidal ideation, which has been identified as one of the leading causes of death among women in reproductive age in Nepal (Suvedi et al., 2009).

Risk factors for perinatal depression

As in the previous studies conducted on perinatal depression in Asia (Ho-Yen et al., 2007; Klainin & Arthur, 2009), our qualitative findings also reconfirm lack of support, financial problems, unsatisfying marital experience, unplanned pregnancy, previous experience of complications during and after pregnancy as probable determinants of depression. Family pressure to give birth to a son was higher in multigravida women with daughters than in primagravida women. This finding is similar to a study conducted in India (V. Patel, Rodrigues, & DeSouza, 2002), where similar Hindu socio-cultural beliefs and values are shared. Women, who married for love, cited the lack of acceptance by their in-laws as a major factor for psychological distress, which is in line with the previous study conducted in Nepal (Ho-Yen et al., 2007).

Socio-demographic differences in reported stressors were apparent in our study. Generally, women with low education and low economic background cited economic burden, unplanned pregnancy, family pressure to give birth to a son as stressors. Because women in a patriarchal society are

generally poorly educated and are economically dependent, they could not challenge the harmful cultural and continually suffer within themselves (Trivedi, Mishra, & Kendurkar, 2007). Contrastingly, women, who had completed at least higher secondary level cited unsupportive in-laws, difficulty adapting to different culture after marriage, limited freedom to exercise their agency and ill health as major stressors.

Previous history of depression was identified by almost a quarter of the participants as one of the major risk factors for depression in a study by Ho and colleagues (Ho-Yen et al., 2007) but this was not reported by any of our participants. On one hand, this may be a unique case for women in Chitwan while on the other, factors like low detection (Beck, 2001), low help seeking for depression (Andersson et al., 2013; Azale, Fekadu, & Hanlon, 2016; Boerema et al., 2016; Mathias et al., 2015) and lack of resources for mental health (Brenman et al., 2014; Sikander et al., 2015) might have contributed to depression being undetected.

Help-seeking behaviour and Pathways to care

Although the women in this study had attended ANC/PNC clinics several times, none had shared their depressive symptoms with the health workers. Despite the pervasive effect of depressive symptoms on overall (physical, emotional and cognition) wellbeing, only a few women in our study had ever sought help (2/26). This is comparable to other studies conducted on depression with women in Ethiopia (Azale et al., 2016) and general population in India (Mathias et al., 2015) but significantly low compared to other middle (Andersson et al., 2013) and high income countries (Boerema et al., 2016).

Depressive symptoms were understood not as a health problem but more as a personal problem rooted to family and economic issues. Hence, the women tried to resolve these problems using coping strategies such as consoling self, indulging in their hobbies or conducting religious activities. Some also sought support from their husbands, parental home, or close friends/neighbours. Support especially in carrying out daily chores, seeking health care, looking after the baby, having enough time to rest was received more in their parental home than when at the in-laws home. A study on maternal health care utilization in Nepal showed women were likely to attend ANC services when they lived in their parental home as they had less work burden and had time to attend the clinic (Simkhada, Porter, & van Teijlingen, 2010).

When coping strategies at a personal level or support from the immediate support system did not help, women sought external help. Despite the availability of mental health services in the community at free of cost, none had ever utilized these services. Even if the problems persisted,

very few of our IDI participants showed willingness to seek external support; others believed that these problems do not need any external support at all.

Several reasons for low help-seeking among the women in reproductive age in LMICs are associated with socio-economic and infrastructural challenges (Namasivayam, Osuorah, Syed, & Antai, 2012; Silali & Owino, 2016). Stigma associated with mental health is so embedded within the community that even when the services are available, people are still hesitant to seek services (Reay, Matthey, Ellwood, & Scott, 2011). Additionally, lack of health information (Namasivayam et al., 2012; Parvin, Jones, & Hull, 2004) and lack of authority to make decisions about their health (Das & Sarkar, 2014; Namasivayam et al., 2012; Silali & Owino, 2016; Tamang et al., 2002) have further barred women to seeking care. If women are more informed about their health and services, they are more likely to seek services (LeVine et al., 2004; LeVine & Rowe, 2009; Silali & Owino, 2016). The community sensitization programmes, which have been successful disseminating health information at the local community level in PRIME, could be one of the ways to reach out to these women. Such programmes are deemed effective when reliable and respected community members are mobilized. For example, in Kenya, the community health workers were identified as reliable and accessible source of information through whom many women accessed care (Silali & Owino, 2016). Similarly, in Nepal the FCHVs, who have been instrumental in delivering basic health services and motivating community people to seek care, could be the best fit to conduct community activities including sensitization. Even for the detection and referral of perinatal depression, the role of the FCHVs could be instrumental as they have been actively engaged in maternal and neonatal care programmes since decade and also in CIDT in the recent years. A recent study on the effectiveness of CIDT found that the CIDT was effective to both identify mental health cases and engage them to care (M. J. Jordans, Kohrt, Luitel, Lund, & Komproe, 2017).

Barriers to Care

Low mental health literacy and stigma were key barriers to help seeking among the study participants. Conventional thoughts and religious interpretation that mental health problems are caused by sinful acts, angry gods or bad luck had led many people to seek care from traditional healers and faith healers. Lack of awareness that emotional problems are also a part of health problems for which treatment is required was evident among the participants. Emotional problems were understood as personal problems and the health facility was portrayed to be limited to treatment of physical problems only, which is similar to the perception of Bangladeshi women where the health workers were perceived to be helpful for physical problems and “inappropriate” person to

talk to about their emotional problems (Parvin et al., 2004). The women seemed to be aware only about the biomedical approach of treatment at the health facility. Since the women had no knowledge of the psychosocial approach and their instilled fear of being prescribed medicine during perinatal period, some had not shared their problems with the health workers. A review of literature on postnatal depression showed that both antenatal and postnatal women were hesitant to use medicines as they were worried that it would affect their fetus/infant (Pearlstein, Howard, Salisbury, & Zlotnick, 2009). In such case, psychological and psychosocial intervention such as interpersonal therapy, cognitive behavioural therapy, counselling, peer support group could be more appropriate, (Fitelson, Kim, Baker, & Leight, 2010) about which the women with perinatal depression must be educated about.

Additionally, due to the fear of being labelled with stigmatizing names such as having loose mind *"dimag fuskeko"*, mad *"baulaha",* loser *"kehi garnu nasakne",* crazy *"pagal",* "psycho", and also being questioned on the person's capability, many participants with mental health problems preferred to keep problems within themselves. A commentary discusses that deep rooted stigma against mental illness diminishes a person's confidence; and the fear of being stigmatized prevent a person from seeking care, which ultimately deters timely help-seeking and treatment adherence (P. Corrigan, 2004).

Possible Interventions

There is an emerging evidence that these barriers to care can be overcome through preventive activities, timely identification and treatment (Beck, 2001). As a preventive activity, community based awareness programmes were highly recommended by our participants. Our participants had various traditional and spiritual understanding about mental health problems. Some attributed mental health problems with possession of evil spirits while some linked it as bad luck or fate for which traditional healers, faith healers or astrologers could be the best people to consult. Very few (2/26) understood mental health problems as health problems and sought help from health providers. Self-understanding of the problem can highly influence the decision of choosing the service provider (Subedi, 1989). For example, women who had spiritual explanation for their problems sought help from the traditional healers while those who believed their problems were caused by "angry gods" preferred seeking services from the religious leaders. In such cases, instilling the appropriate facts about the condition can be the first step to promote help-seeking (P. Corrigan, 2004). In this current study, I found that the lack of knowledge, misconception and stigma against mental health problems as some of the barriers to help-seeking, hence, information focusing on the problem (perinatal depression), local myths, misconceptions about mental health problems and replacing it with the

facts, types of treatment, treatment availability and role of family were incorporated in the community sensitization manual.

Selecting the audience for such programmes is also an equally important task. Studies conducted in Nepal showed high utilization of health services by women when their husbands were involved (Mullany, Becker, & Hindin, 2007; Thapa & Niehof, 2013). Enhancing knowledge of the husbands about women's susceptibility to depression in perinatal stage (Khan, 2011) and strengthening the social support system have also been deemed helpful improving mental health outcomes among Asian women (Roberts et al., 2012). Although educating husbands was emphasized by our participants, they also showed the urgency to educate the head of the family (father-in-law) and respected key community members, as they have more power to influence decision about almost everything. Since mother-in-law is more in control of decision making and uptake of health services at perinatal period, (Simkhada et al., 2010), involving the mother-in-laws could be beneficial, too. Awareness programmes were not only deemed helpful in increasing the awareness level, it was endorsed helpful to promote detection and help-seeking.

Additional programmes, such as using the CIDT were recommended by the FGD participants while the perinatal women recommended peer support groups to improve detection as well as to strengthen support system. Peer support groups for depression (Bolton et al., 2007; Bolton et al., 2003; Pfeiffer, Heisler, Piette, Rogers, & Valenstein, 2011) and postnatal depression (C. L. Dennis et al., 2009; Rahman et al., 2008; Rojas et al., 2007), either delivered through e-mail or phone (C. L. Dennis, 2010, 2014; C. L. Dennis et al., 2009) or face to face (Rahman et al., 2008; Rojas et al., 2007) have been effective in symptom reduction and functioning when compared against the controlled group. In Nepal, where access to technology such as email or phone is limited, face to face intervention could be more effective. However, while conducting face-to-face intervention, special concerns for confidentiality must be prioritized. This can be done by creating a homogeneous group based on age of the women, number of children, ethnicity, which are likely to improve the effectiveness (C. L. Dennis, 2010).

Cultural Adaptation

For the adaptation of the community sensitization, we partly modified the depression section by creating a new sub-topic for perinatal depression. We created two new vignettes with pictures for antenatal and postnatal depression for the CIDT. While the main symptoms for antenatal and postnatal depression were extracted from the interview, a local professional artist was hired to draw pictures for each of the major symptoms. The pictures used in the CIDT depicted a typical Nepali

woman from a rural area wearing *saree* or maxi with a scarf on her head (cultural significance of a postnatal woman) and with a special type of necklace called *"potey"* (generally worn by married woman). Similar adaptation on the pictures showed wider acceptability in a study conducted in Vietnam (Fisher et al., 2014). The three areas of adaptation as Castro (2004) suggests about comprehensibility, relevance and motivation were all taken in to consideration during the finalization of the interventions where the mental health stakeholders from the health facility and community level reviewed and modified the draft carefully based on the three areas. All the content were presented in the local community language (Castro et al., 2010) where technical terms were replaced with exact same local idioms used during the interviews and discussions. Similar method of language adaptation has been mentioned in a systematic review conducted by Chowdhary et. al (2014). Since there is a risk of losing "fidelity" in terms of trying to be "fit" to a culture (Castro et al., 2004), we consulted with the psychiatrist to ensure the language and content used hold clinical values as well as the cultural aspect. Although other studies on adaptation conducted a practical testing employing qualitative or quantitative methods to measure the effectiveness, acceptance of the intervention (Beeber et al., 2010; Ell et al., 2010; Fisher et al., 2014; Gater et al., 2010), however, we could not conduct it due to study constraints. Despite this we still believe that the local community buy-in of the developed interventions would be high since the content is grounded on the local community beliefs and practices that were reported in our qualitative study.

5.2 Study limitations

The current study is subject to the following limitations:

i. Firstly, this study included only those who could communicate in Nepali. Although all the women engaged in our study could communicate in Nepali, one potential participant had to be excluded during screening as the researcher and the person had difficulty understanding each other's pronunciation.
ii. Secondly, an adapted Nepali version of EPDS was used for screening the potential respondents in the study. EPDS is exclusively focused on emotional symptoms (Hanlon et al., 2008) hence women having different idioms of distress particularly related to somatic symptoms might have been missed and excluded in the study.
iii. Thirdly, there was no separate room in both Meghauli and Dibyanagar health facilities to conduct in-depth interview. Even when a separate room was used, there were frequent disturbances from the health workers who would check in from time to time. In the case of postnatal women, they usually came for the PNC care with their children resulting in divided attention during the interview. Interviews were interrupted frequently by crying infants.

Since “gaughar clinic” is a mobile outreach clinic usually conducted outdoor on the roadway side, it was difficult to find a space to conduct the interview. There were cases where we had to conduct interviews beside the cowshed, or request the community people to provide their space for the interviews. Although interviews were conducted in private, some women were hesitant to speak about their problems fearing that others will know about their problem if they see them giving an interview. Additionally, the use of recorders made many women hesitant to talk openly.

iv. Next, the transcription, translation and coding of the interviews were carried out by one researcher (PS). This might possess risk of personal bias in data interpretation and data representation.

v. Next, the study was conducted in only two VDCs of Chitwan district hence the findings may vary for women residing in different geographical and/or cultural contexts. Despite these limitations, the findings from this study may at least be representative of similar contexts, and the tools developed can be useful in educating the community and in detection and referral of perinatal depression cases to specialized care.

vi. Lastly, due to some unavoidable situations such as the earthquakes in Nepal in April and May 2015, and the fuel crisis from September 2015-February 2016, the study took longer than what was planned. The data collection was completely stopped for 6 months (from 22nd September-8th February 2016).

5.3 Recommendations

For Future Research

Studies conducted in mental health in Nepal have been carried out in different small geographical areas, which is representative of that particular area only. A national level epidemiological study estimating the prevalence of mental health problems with perinatal depression in particular is needed. This will not only inform the magnitude of the problem but also serves as evidence to draw attention of the policy makers and planners.

Of the studies conducted on perinatal depression in Nepal (K. Clarke et al., 2014; K. Clarke et al., 2014; Ho-Yen et al., 2007; S. Regmi et al., 2002), all have focused on validating a tool, finding out the prevalence, and analysing risk factors. Although these studies have recommended some interventions, no study on intervention for perinatal depression has yet been carried out yet. Thus, future research should focus more on developing and evaluating interventions for perinatal depression based on the findings from the previous studies. It would be worth considering if future

studies could also explore the perceptions of the family and community. This would not only inform about the local understanding of perinatal depression but also give future directions to develop culturally appropriate interventions.

Further, the findings from this study show lack of family support as the major cause of psychological distress. Thus, if studies exploring association between socio-demographic differences such as level of education, settlement (whether rural or urban), economic status of the family members, and their attitudes and beliefs about pregnancy and postnatal period are conducted, it would be helpful for the intervention developer to decide on what areas to focus on.

Existing evidence shows that higher education is positively associated with help-seeking behaviour (LeVine & LeVine, 2002; LeVine et al., 2004). Contrastingly, studies on help-seeking have showed people from affluent areas, who are most likely educated, are actually less likely to utilize mental health services (Oliver, Pearson, Coe, & Gunnell, 2005). In Nepal, where higher education cannot be offered by low income groups, further research could be done to reconfirm the association between economic status, education, and help-seeking behaviour for mental health problems could be interesting.

Future research is also needed to evaluate the effectiveness of the developed CIDT and community sensitization programme in detecting and promoting help seeking behaviour of women with perinatal depression.

For Policy and Practice

Although the government of Nepal has increased its efforts in improving maternal health in the recent years (Ban et al., 2012), not much have been done for the promotion of maternal mental health (Pradhan et al., 2011). Since perinatal depression in women can have significant impact on the development of the infant, there is an urgent need to develop strategies that will encourage early detection and treatment. In Nepal, between 5-12% women have perinatal depression (K. Clarke et al., 2014; Ho-Yen et al., 2007; S. Regmi et al., 2002) and suicide is the leading cause of death among women of reproductive age (Suvedi et al., 2009). As much as the government has worked to reduce maternal mortality rate, the government should prioritize and increase investment in maternal mental health. PRIME in Nepal has successfully pilot tested, implemented and now scaled up the mental health care plan (MHCP) for four common mental disorders (depression, alcohol use disorder, epilepsy, psychosis) (M. J. D. Jordans et al., 2016). Similar model could be adopted for perinatal depression as well, where detection through CIDT and awareness programmes take place

at the community level, mental health services are available at the health facility level and advocacy is done at the health organizational level.

As a first step to increase rates of mental health case detection and promote help-seeking of perinatal depression, the CIDT developed as a result from this study could be tested and implemented. Previous studies on CIDT showed that the tool has a property to rightly identify cases of mental health problems by lay community volunteers such as the FCHVs (M. J. Jordans, B. A. Kohrt, N. P. Luitel, I. H. Komproe, & C. Lund, 2015). Mobilization of FCHV for perinatal depression has an added value since they are already engaged in maternal and neonatal health programmes under the government's system. However, certain things should be taken into consideration before mobilizing them. Firstly, in the recent years, non-governmental organizations have been increasingly mobilized FCHVs in many health programmes and they are already overburdened with work. Secondly, their motivation and time availability must be assessed beforehand as some FCHVs are also engaged in other income generating activities together with the community health programmes. Thirdly, as a motivation, some monetary incentives should be arranged upon carrying out the task as failing to pay the community volunteers may have serious implication on the programme. Once assessment is made on these grounds and the person is identified using CIDT, referral of the positive cases should be made to the health facility for further psychosocial assessment and services.

Although general mental health services comprising of basic psychosocial and pharmacological for 4 disorders are already in place, the health workers pointed out not having a separate care package for perinatal depression as one of the reasons for missed out cases. Interventions that have shown positive improvements in lessening depressive symptoms in perinatal women in different contexts such as Pakistan (Rahman et al., 2008), India (Sikander et al., 2015), Vietnam (Fisher et al., 2014) could be adapted or tested in local Nepali context. Previous study conducted by Clarke et. al (2014) in Nepal recommended the need to integrate social intervention along with biomedical and psychological intervention for perinatal depression. Since women in South Asian patriarchal societies usually have low education and are economically dependent on their male counterparts, some activities that would empower them and help them become independent and confident enough to make decision for themselves may help. Also, inter-personal therapy that could focus on strengthening the family relationship, cooperation, and initiating a practice to be develop healthy activities could be given. Our findings also envisaged building support system would help perinatal women to improve their wellbeing as well as promote their help-seeking behaviour.

Preliminary results on PRIME model of care found that the uptake of services was highest when supervision of the ongoing work and community sensitization programmes were conducted. Regular supervision of the service providers such as the FCHVs and the health workers must be conducted regularly in order to ensure quality work. Also, it is deemed effective if the community sensitization programmes are conducted hand in hand with the community detection in order to aware the community about the problem as well as the available services. As our findings suggest, while conducting the community sensitization programmes, we must ensure the representation of head of the family, key community people and mother-in-laws. Since they are the key decision makers of a household, they must be informed about the risk during pregnancy, role of family member and treatment availability. Although the manual for community sensitization programme we developed is informative, we believe a planned educational to educate them detail about the importance of the treatment, types of treatment and role of the family. Such information could be incorporated in the ANC/PNC component and could be given either in individual or group level. It may be also essential to educate about family planning methods, as unplanned pregnancy was reported as one of the stressors.

Studies in Nepal (Subedi, 1989) and a similar context (Azale et al., 2016) have showed that people in the community still prefer to consult traditional healers for their health problems. Although our findings suggest that the trend is slowly shifting towards modern care, some communities still prefer visiting traditional healers, religious leaders over biomedical care. Therefore, these sources could be involved in the service delivery or be mobilized as a point of referral to modern care if mental health interventions are further planned or designed.

5.4 Conclusion

Lack of knowledge about the problem and its treatment, and stigma associated to mental health were some of the barriers to low help-seeking for modern care, for which increased awareness about the problem, early detection and timely treatment was recommended for the promotion of overall wellbeing of the women with perinatal depression. These interventions must be responsive to the local culture in order to be effective and increase health care utilization. In light of this, local perceptions were incorporated to adapt the already existing awareness programmes and community informant detection tool, which went through several rounds of finalization process where community participation and clinical perception was ensured. The final manual and tool has taken into consideration the cultural nuances and is appropriate and responsive to the local culture of women

in Chitwan. Future research can focus on the evaluation of effectiveness of the adapted tool and manual in promoting the help seeking behaviour of women with perinatal depression.

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Annex I: Community Informant Detection Tool (CIDT) for Depression

Name: **Location:**

Depression

Since the last Dashain festival, Ram Bahadur looks reallydown and sad. It seemed to have started when his wife died. Nowadays, along with the loss of interest in his work, he doesn't feel like doing anything, not even taking care of his baby son. These days, as he cannot fall asleep at night and has difficulty sleeping, he feels weakand fatigue. He has started to get angry and irritated with his family and friends even abouttrivialmatters. As he feels easily tired and weak, he has started thinking that he cannot do anything in his life. Since past few days, he has started feeling that his future is dark, because of which he does not want to live or feels that his life is useless. For 5 months he has hardly worked on the field anymore, he just sits at home all day.

Referred by (Name): _____

☐ Teacher ☐ Mother's Group ☐ Traditional Healer ☐ FCHV

OBSERVATION

QUESTIONS

A1. Does this narrative apply to the person you are talking to now?

- No match (description does not apply) ..... 1 } Finished
- Moderate match (person has significant features of this description) 2
- Good match (description applies well) ..... 3 } Go to A2/A3
- Very good match (person exemplifies description, prototypical case) 4

A2. Do the problems have a negative impact on daily functioning?

- No 1
- Yes 2

A3. Does this person want support in dealing with these problems?

- No 1
- Yes 2

Results (Total score of items A1, A2 and A3) _____

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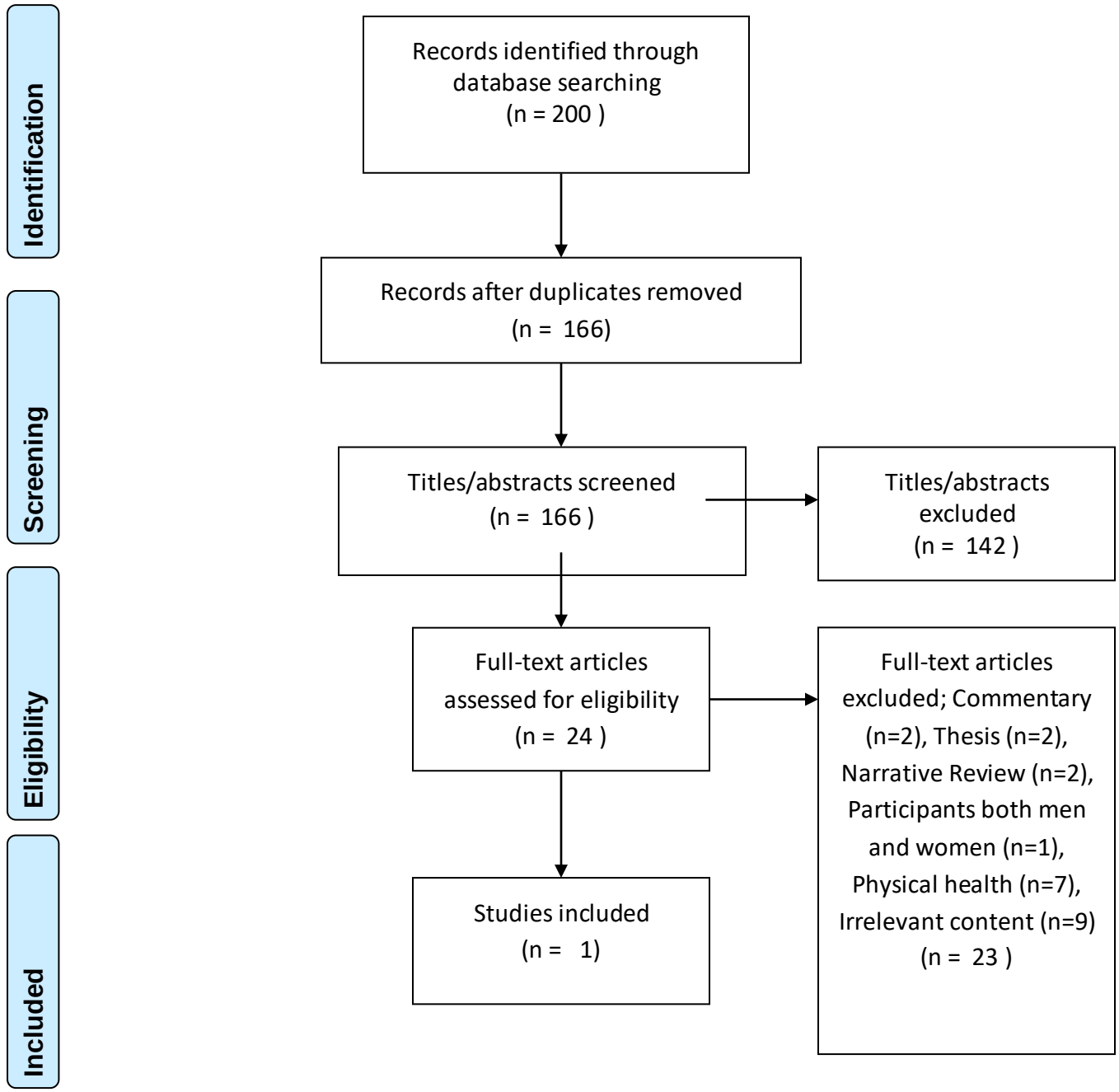
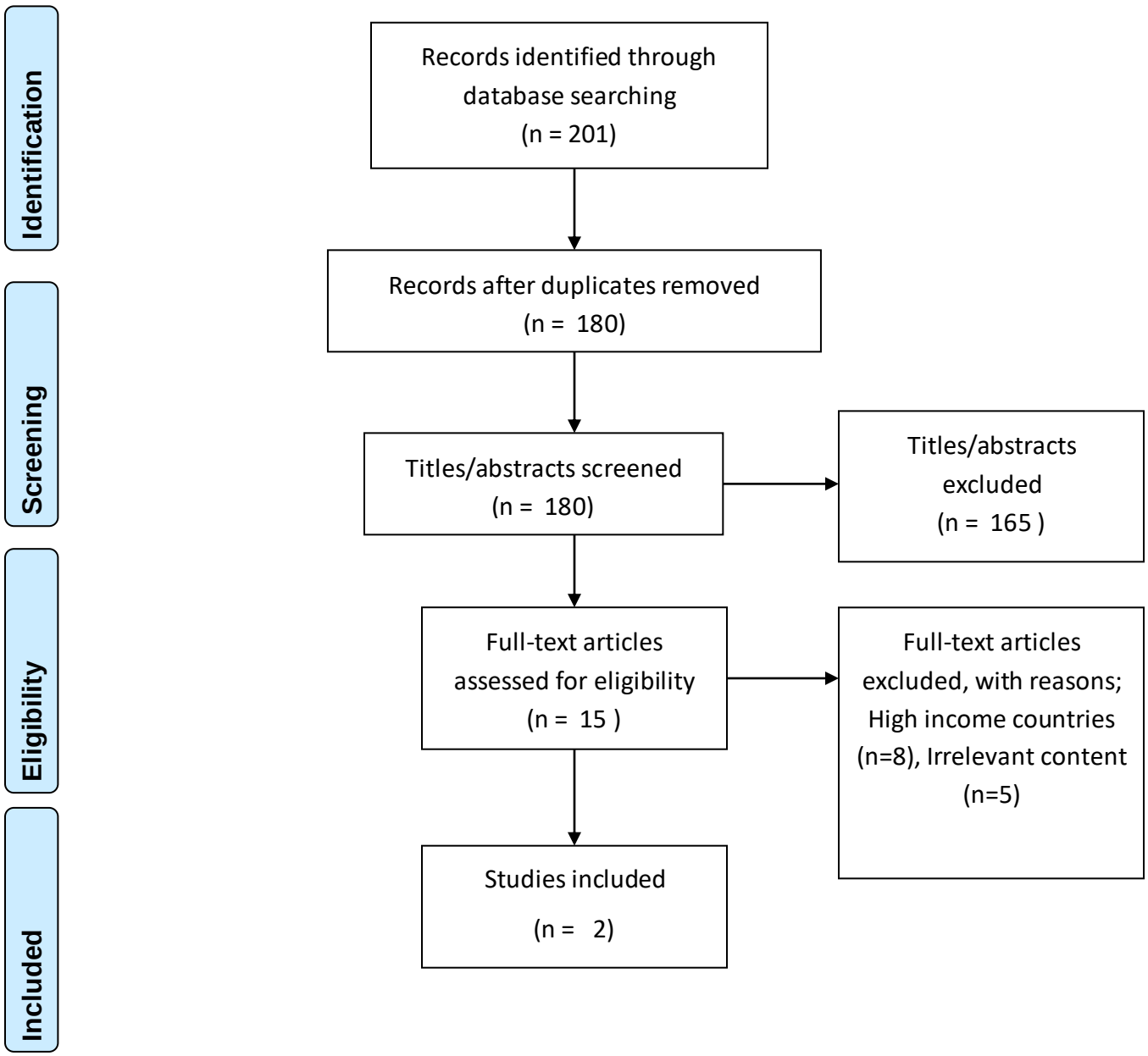
Annex II: PRISMA Flow Diagram of Identification Methods for Perinatal Depression



Annex III: PRISMA Flow Diagram of Educational Programmes for Perinatal Depression



Annex IV: Edinburgh Postnatal Depression Scale

Name: _____ Address:_____

Date/Expected date of delivery: _____

As you are currently pregnant or have recently had a baby, we would like to know how you are feeling. Please tick the box to the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

In the past 7 days ……..

1. I have been able to laugh & see the funny side of things 0) As much as I always could 1) Not quite as much now 2) Definitely not as much now 3) Not at all	**6. * Things have been getting on top of me** ☐ Yes, most of the time I haven't been able to cope ☐ Yes, sometimes I haven't been coping as well as usual ☐ No, most of the time I coped quite well ☐ No, I have been coping as well as ever
2. 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	**7. * I have been unhappy that I have had difficulty sleeping** ☐ Yes, most of the time ☐ Yes, sometimes ☐ Not very often ☐ No, not at all
3. I have blamed myself unnecessarily when things went wrong ☐ Yes, most of the time ☐ Yes, some of the time ☐ Not very often ☐ No, never	**8. * I have felt sad or miserable** ☐ Yes, most of the time ☐ Yes, quite often ☐ Not very often ☐ No, not at all
4. I have been anxious and worried for not good reason ☐ No, not at all ☐ Hardly ever ☐ Yes, sometimes ☐ Yes, very often	**9. * I have been so unhappy that I have been crying** ☐ Yes, most of the time ☐ Yes, quite often ☐ Only occasionally ☐ No, never
5. I have felt scared or panicky for no good reason ☐ Yes, quite a lot ☐ Yes, sometimes ☐ No, not much ☐ No, not at all	**10. * The thought of harming myself has occurred to me** ☐ Yes, quite often ☐ Sometimes ☐ Hardly ever ☐ Never

Total Score: .....

SCORING THE EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

QUESTIONS 1 – 5

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 6-10 marked with an *

Are reversed scored, with the top box scored as a 3 and the bottom box scored as 0.

Scores of 13 (in context of Nepal) or above distinguish borderline and probable cases from non cases

Annex V: Interview Schedule for Perinatal Women with Depressive Symptoms

Section A: Socio-demographic Information

Socio-demographic Information			
Name of the Health Post			
1.	Name of the respondent		
2.	Caste/Ethnicity		
3.	Age		
4.	Address		
5.	**For pregnant women:** How many months pregnant are you?		
6.	**For pregnant women:** What's the expected date of delivery?		
7.	**For postnatal women:** When did you deliver the baby?		
8.	What is your religion?	Hindu	1
		Buddhist	2
		Muslim	3
		Christian	4
		Others [Specify]	77
9.	What is the highest level of education you have attended?	Illiterate	1
		Non-formal Education	2
		Primary level (Grade 1-5)	3
		Secondary (Grade 6-8)	4
		Higher Secondary (Grade 9-12)	5
		Undergraduate	6
		Graduate and above	7
10.	What is your marital status?	Never Married/Single	1
		Married	2
		Widow	3
		Divorced	4
		Separated	5
		Other [Specify]	77
11.	What is your occupation?	Housewife	1
		Agriculture	2
		Business	3
		Serivce	4
		Other [Specify]	77
12.	Is the income sufficient to sustain your family throughout the year?	Sufficient throughout the year	1
		Quite sufficient throughout the year	2
		Not sufficient throughout the year	3
13.	Do you have any children?	Yes	1
		No [Skip to Q. 15]	2
14.	How many children do you have? (specify the sex)	Male [Specify the number]	
		Female[Specify the number]	
15.	Have you ever had lost a child or had a miscarriage?	Yes	1
		No	2

Section B (only for those scoring 13 or higher in EPDS)

S.No.	Theme	Core Questions	Probe
1.	Ice Breaker	Can you tell me about your visit *[today or refer to the date EPDS was administered]*?	Which ANC/PNC visit is/was it? Problems Type of service sought/received
2.	Pregnancy (For Antenatal Women)	What were your feelings when you found out that you were pregnant?	Things that made happy and sad after finding out about pregnancy Feelings related to those happy and sad moments Spoken to anyone (family, friends) about your pregnancy Expectations from friends and family during pregnancy
	Delivery (For Postnatal women)	Now that you have already given birth to a baby, can you tell me about your feelings?	Gender of the baby Most enjoyable and bothersome experience being a mother Impact on daily life/schedule Support from immediate family members and family Expectations from immediate family members and family
3.	EPDS	Please tell me more about the problems (*repeat the symptoms the respondent has listed in the EPDS scale*) you are currently experiencing.	Onset (each problem) Perceived causes (psychological, physical and social) Impact on daily life Spoken to anyone (family, friends) about your pregnancy Community's understanding about the problem (common symptoms/terms/*"idioms of stress"* used to refer people with such problems)
		Please share me your experience of a day when these feelings are really bad?	Feelings at such times Coping mechanism
5.	Help Seeking and Pathways to Care	What do the community people do when they have these problems? How are problems like these treated at the community?	Available services (Traditional treatment, modern treatment)
		Personal level: Could you please explain me in detail what have done when you had such problems?	Consulted sources for the problem Pathways to care Reasons to seek care from certain source Advantages and disadvantages of each source Plan to continue from the same source/ recommend others to seek service from that source.

4.	Detection of perinatal depression	There may be others who may have been undergoing similar problems as yours. Do you think their problems are identified and treated properly?	How and who could identify Potential advantages and disadvantages Protective factors

Annex VI: Focus Group Discussion Guide for Counsellors, Health workers and FCHVs

Focus Group Discussion Number	
Date of discussion	
Interviewer Name/s	
Notetaker	
FGD start time	
FGD end time	

List of Participants

Name	Age	Sex	Representing body (organization/health facility)	Post/Role	Education Level

FGD Checklist

S.No.	Themes	Core Questions	Probe
1.	**Icebreaker Question**	**For Counsellors & FCHVs:** Can you tell us about mental health situation in the district?	• Common mental illnesses • Common practice to deal with mental illness
		For Health Workers: Can you tell us about your health facility?	• General health services • Mental health facilities
2.	**Working experience in mental health**	**Care (For Counsellors & Health workers):** What are the general components of care you have been providing for people with mental disorders? **For FCHVs**: What is your understanding about depression and perinatal depression?	

		How are you involved in mental health programme in your community?	
		Identification: How do you identify someone having depression?	• Any instruments, standards, guidelines • Common expressions/ symptoms/ idioms of stress used by people with depression
		Vulnerability: Who do you think are more at risk for depression? (gender, caste/ethnicity/poor) Why particular <group that the participants mention> are more at risk?	
3.	**Local beliefs and attitudes towards depression**	How does the community perceive someone with • Depression? • Perinatal Depression?	• Local understanding about depression & perinatal depression (Any association with witchcraft or any superstitious beliefs or cultural beliefs) • Perceived causes • Common terms/metaphors used to refer depression/perinatal depression • Behaviour towards people with depression (Stigmatizing behaviour)
4.	**Help seeking and pathways to care for depression**	What is done when people have • Depression? • Perinatal Depression?	• Available services at the community (traditional and modern care) • Common practices • Pathways to care • Facilitators and barriers
5.	**Detection of perinatal depression**	**Community:** Do you think perinatal depression is prevalent in your community? How are they identified at the community level?	• Who could identify? • How could they be identified? • Barriers to identify perinatal depression
		PHC (for health workers only): How are perinatal cases detected at the health facility?	

Annex VII: Informed Consent Forms

1. Consent form for Screening using EPDS

Namaste! My name is……. I have come from TPO Nepal based in Kathmandu. TPO Nepal works in the field of psychosocial and mental health and has been providing psychosocial support to the people affected by conflict, natural disasters, human trafficking, domestic violence and HIV/AIDS during the last 10 years. In addition, TPO Nepal has also been conducting several studies on different heart-mind related issues.

Currently, the organization is running a six year program called **PR**ogramme for **I**mproving **M**ental health Car**E**(PRIME), which aims to generate world-class research evidence on the implementation and scaling up of treatment programs for depression, alcohol use disorder, epilepsy and psychosis in primary and maternal health care contexts in low resource settings. For the past few years, mental health services are being provided from twelve health facilities of West Chitwan.

Today, we have come here to learn about "heart-mind" related problems faced by women in the pregnancy period and in the first year after the birth. We have a questionnaire which has 10 questions. All you have to do is go through the questions one by one and tick in the appropriate option. If you can't read or write, we will read out the question for you and you can tell us the most appropriate option that describes your condition so that we can tick it for you. It will not take more than 5-10 minutes to go through these questions.

It is totally up to you to decide whether or not to participate in this study. Your decision would have no effect on the services you are receiving. If you decide to opt out from the study, you can do so at any time without giving reasons. Please note that your information will be kept confidential and that you will not be paid for participation.

If you agree to complete the questionnaire, we may also ask you to participate in our in-depth interview to discuss your problems further so that we can incorporate your concerns in future while designing interventions for women like you.

Are you ready to participate?

Yes.....1

No.....2

2. Consent form for perinatal women with depressive symptoms

Purpose
Thank you for agreeing to participate in the first section of our study. We have already discussed a few of the problems you have been facing lately. Now, we would like to discuss more in detail about your health problems, your experiences with the problems and treatment services you have sought for those problems, if any. As mentioned earlier, we are designing a programme to increase awareness in the community about these problems and a tool to ensure that such women are properly detected and referred for the right treatment. The knowledge and experience you will share would be an asset to us in developing programmes and tools for other women with similar condition. If you decide to participate, we will not take more than an hour for this study.

Procedures
During the interview, we will record (your voice only) your response for future reference for extracting information, preparing reports and designing programmes. The recording will not be played or broadcasted for anyone in public such as radio, TV, newspaper, etc.

Voluntary Participation
Participation in this study will be voluntary, that is it is up to you whether or not you want to participate in the study. You can stop the interview at any time you wish and may also opt out from the study without giving reasons. Whether you decide to participate or not to participate in the study, it would not affect the services you are receiving for your health conditions.

Confidentiality
The information you give will be kept strictly confidential. Your name and personal details will not be used anywhere in published reports, manuals or in verbal form. The information you give will be kept secure in a locked drawer at the office.

Potential Risks or Harm
There are no foreseeable major risks or harm upon agreeing to participate in this study. However, if you experience any emotional difficulty during the interview, please let us know so that our psychosocial counsellors can provide you with further psychosocial assistance.

Benefits
This interview is designed to learn more about the experiences of women in the pregnancy period and in the first year after the birth and to increase its detection and referral in the community by developing programmes and tools. The tool developed from this study will be used to help women in the pregnancy period and in the first year after the birth facing similar problems in the future. We will also provide Rs. 200 (USD 2) to compensate your time given for the study.

Questions
If you have any questions about anything you do not understand or if you would like more information, you can contact Mr. Nagendra Luitel at 01-4431717, or Prasansa Subba at 977-9841305980 or psubba@tponepal.org.np.

Regarding the study, you may also contact the following address:

Nepal Health Research Council (NHRC) Ram Shah Path Po. box no.: 7626 Kathmandu, Nepal	Prof. Mark Blockman Chair, Faculty of Health Sciences Human Research Ethics Committee Old Main Building

Contact no.: +977-1-4254220, 4227460 Fax: +977-1-4262469, 4268284 E-mail: nhrc@nhrc.org.np	Groot Schuur Hospital University of Cape Town. Observatory Tel: +27-21-406 6333 E-mail: Marc.Blockman@uct.ac.za

Consent

We will give you a copy of this form to keep. By agreeing to take part in this interview, you understand that your interview will be recorded (audio only), your name and personal information will not be included in any reports, your participation will be voluntary and you can stop the interview at any time you wish.

Are you ready to participate?

Yes……..1

No……..2+

If yes,

_____ _____ _____

Name of person consenting Signature Date

_____ _____ _____

Name of witness Signature Date

Informed Consent Form

Participant's Slip

By agreeing to take part in this interview, I understand that my interview will be recorded (audio only), my name and personal information will not be included in any reports, my participation will be voluntary and I can stop the interview at any time I wish. For more information or for further details about the mental health services, I can contact research coordinator Mr. Nagendra Luitel at 01-4431717, or Prasansa Subba at 977-9841305980 or psubba@tponepal.org.np.

For further details about the study I am involved in, I can contact in the following address:

Nepal Health Research Council (NHRC) Ram Shah Path Po. box no.: 7626 Kathmandu, Nepal Contact no. +977-1-4254220, 4227460 Fax: +977-1-4262469, 4268284 E-mail: nhrc@nhrc.org.np	Prof. Mark Blockman Chair, Faculty of Health Sciences Human Research Ethics Committee Old Main Building Groot Schuur Hospital University of Cape Town. Observatory Tel: +27-21-406 6333 E-mail: Marc.Blockman@uct.ac.za

_____	_____	_____
Name of person consenting	Signature	Date

_____	_____	_____
Name of the witness	Signature	Date

3. Consent form for FGD participants

Namaste! My name is……. I have come from TPO Nepal based in Kathmandu. TPO Nepal works in the field of psychosocial and mental health and has been providing psychosocial support to the people affected by conflict, natural disasters, human trafficking, domestic violence and HIV/AIDS during the last 10 years. In addition, TPO Nepal has also been conducting several studies on different heart-mind related issues.

Currently, the organization is running a six year programme called **PR**ogramme for **I**mproving **M**ental health Car**E** (PRIME), which aims to generate world-class research evidence on the implementation and scaling up of treatment programs for depression, alcohol use disorder, epilepsy and psychosis in primary and maternal health care contexts in low resource settings. As you are aware, for the past few years, mental health services are being provided from twelve health facilities of West Chitwan.

You must also be aware about the community sensitization programs we are running at different VDCs lately and the use of CIDT for identification and referral of four mental health problems. We are now planning to sensitize the community also about perinatal depression and to increase its detection and referral from the community using the same methods. Since you all have been involved in mental health service delivery in different ways, today we have come here to learn about your experience working with people with mental health problems especially depression and community's perception and beliefs towards it. Based on our discussion with you, we will develop a draft of a community sensitization program and CIDT specifically for women with depression during pregnancy and post pregnancy period. We will then present this draft amongst the experts in the field and finalize the document.

Purpose
We are designing a program to increase awareness in the community about perinatal depression and CIDT tool for perinatal depression. The knowledge and experience you will share would be an asset to us in finalizing this program and tool. If you decide to participate, we will not take more than an hour or two for this study.

Procedures
During the interview, we will record (your voice only) your response as a future reference for extracting information, preparing reports and designing programs. The recording will not be played or broadcasted for anyone in public such as radio, TV, newspaper, etc.

Voluntary Participation
Participation in this study will be voluntary, that is it is up to you whether or not you want to participate in the study. You can stop the interview at any time you wish and may leave without giving any reasons. Your decision would not affect you in any way in your profession.

Confidentiality
This focus group includes discussions of personal opinions and therefore extra measures will be taken to protect each participant's privacy. Even though we will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future. Therefore, we encourage you to be as honest and open as you can, but remain aware of our limits in protecting confidentiality. The researcher will begin the focus group by asking the participants to agree to the importance of keeping information discussed in the focus group confidential. She will then ask each participant to verbally agree to keep everything discussed in the room confidential, and will remind them at the end of the group not to discuss the material outside.

Potential Risks or Harm
There are no foreseeable risks or harm upon agreeing to participate in this study.

Benefits
Although there might not be any personal benefit in a tangible form, the tool developed from this study will be used to help women in the pregnancy period and in the first year after the birth experiencing depressive symptoms. Upon participating, we will provide you with some amount to reimburse your travel cost. We have also arranged a lunch after the discussion.

Questions
If you have any questions about anything you do not understand or if you would like more information, you can contact Mr. Nagendra Luitel at 01-4431717, or Prasansa Subba at 977-9841305980 or psubba@tponepal.org.np.

Regarding the study, you may also contact the following address:

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Consent

We will give you a copy of this form to keep.

Are you ready to participate?

Yes……..1

No……...2

If yes,

_____ _____ _____

Name of person consenting Signature Date

_____ _____ _____

Name of witness Signature Date

Informed Consent Form

Participant's Slip

Consent

By agreeing to take part in this interview, I understand that my interview will be recorded (audio only), my name and personal information will not be included in any reports, my participation will be voluntary and I can stop the interview at any time I wish. For more information or for further details about the mental health services, I can contact research coordinator Mr. Nagendra Luitel at 01-4431717, or Prasansa Subba at 977-9841305980 or psubba@tponepal.org.np.

For further details about the study I am involved in, I can contact in the following address:

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_____ _____ _____

Name of person consenting Signature Date

_____ _____ _____

Name of the witness Signature Date

Annex VIII: Workshop Schedule

Time	Content	Methodology	Materials
10:00-10:30	Welcome Ground rule Introduction		
10:30-11:00	• Introduction to PRIME, community sensitization, and CIDT • Objective of workshop	• Lecture • Discussion	Powerpoint
11:00-11:30	Mental Health and mental health problems • Concepts	• Group work • Discussion	
• Start by asking how the participants define mental health and mental health problems. After 2/3 answers, the facilitator then briefly talked about mental health problems.			
11:30-11:45	Break		
11:45-1:30	Depression • Concepts • Causes • Symptoms	• Group work • Presentation • Discussion	Newsprint, marker, masking tape
• The participants were split in 4 groups where they were asked to briefly describe depression in their own words. The facilitator read out the definition prepared by each group and asked the participants to form a single definition in a large group. • In the same group formed earlier, the facilitator asked the participants to prepare a list of causes and symptoms of depression. • One presenter from each group presented and after all the presentations, one final list including all the causes and symptoms was prepared. • General understanding of such symptoms in the community (myths and facts/stigma related to the illness) was also discussed in a large group.			
1:30-2:15	Lunch Break		
2:15-4:30	Causes of Perinatal Depression Symptoms of Perinatal Depression Role of family for women with perinatal depression	• Group work • Presentation • Discussion	Newsprint, marker, masking tape
• The participants were asked to come up with a simple definition of perinatal depression in their groups. After 10-15 minutes of group work, the facilitator asked one presenter from each group to read out the definition prepared by each group. A single definition was prepared from the all three definitions. • Introduction section about perinatal depression used in the manual was showed. The participants were asked if they think it should be modified or not. • The list of causes of depression prepared by the participants earlier was reviewed and the participants were asked if they wanted to add/remove any causes for perinatal depression in particular. • The list of causes of perinatal depression from the manual was showed and in a large group it was discussed whether or not it needed any changes. • The list of symptoms of depression prepared by the participants earlier was reviewed and the participants were asked if they wanted to add/remove any symptoms for perinatal depression in particular.			

- The list of symptoms of perinatal depression from the manual was showed and in a large group it was discussed whether or not it needed any changes. The participants were then asked to rank the symptoms for perinatal depression. Cultural expression for each symptom was asked. (Prioritization of symptoms done for the adaptation of CIDT)
- Draft CIDT or perinatal depression was shown and feedback was collected if there is any based on the list prepared.
- Any additional information about myths and facts related to perinatal depression in particular that should be included in the manual was discussed.
- The role of family for women with perinatal depression in particular was discussed.

Annex IX: List of Symptoms

S.N.	Symptoms	Cultural Expression	Frequency	Remarks
1.	Worries especially about future	*"piir lagne"* *"dukha lagne" "tension"*	20	Reported by both antenatal and postnatal women (antenatal worried about delivery expenses as well as rearing up the child; postnatal- worried about educating, rearing up the child)
2.	Preferring to stay alone; *stay far from home; don't feel like seeing anyone else*	*"eklai basna man lagcha", " tadha gayera basnu maan lagne", "ghar chodera hidna maan lagne", "kosailai herna pani maan lagdaina"*	17	Reported by both antenatal and postnatal
3.	Fatigue, loss of energy or loss of interest in work (expressed in terms of laziness or weak body)	*"alchii lagne"* *"alasyata" "sarir bhari huney"*	14	Reported by both antenatal and postnatal - as a result of physiological difficulties
4.	Irritation (*feel irritated to talk to anyone; feeling like nobody would come and to talk to her*)	*"jhijo lagne"* *"jhingaleko" " koi pani ma sanga nabolidiye hunthyo jasto lagne"* *"Aru le bolda jharko manne; koi herna maan nalagne"*	13	Reported by both antenatal and postnatal, but for postnatal women: irritation was also linked to additional burden of taking care of the baby or just looking at the baby

5.	Thoughts about suicide or self-harm or thinking that it would be better off to die	*"marnu maan lagne" "marau marau lagne"* *"bachnu bhanda ta marekai thik" "marey dhukkai hunthye" "afi lai hani garne soch"*	11	Reported by both antenatal and postnatal: such feelings would come when they were very worried or had extreme physical pain
6.	Stare at blank space	*"tolaune"/ "tolayera basne"*	9	The counsellors and health workers and few women reported this complaint is frequently reported by the depressed patients. (observable behaviour)
7.	Restlessness (expressed as frequent thoughts about what should she do or where should she go to avoid the problem; also expressed as not wanting to stay at home)	"*kati khera kata jaam huney"* *"chaatpaati huney".*	9	Reported by both antenatal and postnatal
8.	Sleeplessness (mainly due to *piir-worries/rumination/stress*)	*Nindra nalagne (translation)*	8	Reported by both antenatal and postnatal
9.	Loss of appetite	*khana maan lagthena*	8	
10.	Depressed/ frustrated face	*"jhokrayera basne"*, *"udaas dekhincha" "uraath biraath dekhiney"*	7	Highly used by service providers and moderately by service users
11.	Ruminating/contemplating	*"maan ma dherai kura khelne",* *sochdai basirahaney*	7	Reported by both antenatal and postnatal
12.	Angry or furious even in trivial matters or without reason	*"chin-chin mai ris uthne"* *jolai dekhey ni ris uthyo*	7	Reported by both antenatal and postnatal. Postnatal women expressed it they try to stay away from their

				children otherwise she would end up hurting them.
13.	Anxious (about future that something might go wrong or not being able to take care of the baby)	*"chinta lagne"* *"aatiney"*	7	Reported by both antenatal and postnatal
14.	*Forgetfulness*	*Birsiney*	6	Reported by both antenatal and postnatal but most commonly reported by postnatal women
15.	Crying	*"runu maan lagne"*	6	Reported by both antenatal and postnatal - as an expression when they are very worried
16.	*Physical complaints like headache, stomachache*	*Nepali translation: "tauko dukhne", "pet dukhne"*	5	Few antenatal women had complaints of stomachache but was indicated common by the service providers
17.	Sad/Unhappy (esp not receiving support from family); feeling bad	*"naramailo lagne"; "namajja lagne"*	4	Reported by both antenatal and postnatal
18.	Feeling worthless, useless, hopeless	*"bacheko bekkar lageko".*	4	Reported by both antenatal and postnatal
19.	Lack of self-care		4	Only one postnatal but was most commonly reported by the service providers
20.	Looks worried	*"niraas"/"chintit"*	4	Commonly reported observable behaviour reported by the antenatal

				and postnatal women as well as the service providers
21.	Dark face	*"adhyaro mukh"*	4	Commonly reported observable behaviour reported by the antenatal and postnatal women as well as the service providers
22.	*Lack of concentration*	*Nepali translation: "dhyan kata kata huney"*	4	Mainly reported by health workers and psychosocial counsellors. Depressed people show lack of concentration when they are talked to.
23.	Being single-minded	*"ekohoro huney"*	3	Mainly reported by health workers and psychosocial counsellors. Common depressive symptom
24.	Frustration (Similar to feeling irritated about added burden or extreme worries; frustrated looking at their lives)	"*birakta lagne" "dikka lagne" "baccha bhako dekhera dikka lagne"*	3	Reported by both antenatal and postnatal
25.	Lack of zeal (explained as effortless and unhappy talking to others)	*"maan naramayera boleko, naramailo tarika le boleko"*	3	Reported by one postnatal case and service providers
26.	Guilty; self-blame	*Nepali translation: "doshi thanney"*	3	Common for Postnatal women: Blaming self for all the wrongdoings- if the child is sick or not being able to perform or carry out works effectively

27.	Nightmares	*Nepali translation: naramro sapana (??)*	2	Antenatal women- related with fear of delivery
28.	*Apathetic*	*Aruko wasta nagarney*	2	Mainly reported by health workers and psychosocial counsellors.
29.	*Not able to control the mind*	*Dimag fuskinu ateko jasto huney*	2	Too many thoughts seemed to make women like this. Reported by postnatal case
30.	*Feel heavy hearted (expression of having lots of troubles)*	*Maan bhari huney*	1	Reported by Antenatal women
31.	Caught up in trouble	*"jhanjhat ma faseko jasto hune"*	1	Reported by Postnatal women
32.	*Pounding heart*	*Maan bhut bhut huney*	1	Reported by psychosocial counsellor
33.	take alcohol, cry and shout, or mumble to self,	*Nepali translation: dherai pir parera rakshi khancha, binakaran karaucha, runcha wah afai sanga bolirakcha*	1	Observable behaviour of depressed women
34.	*Burning sensation*	*Maan bhat bhat polney*	1	Reported by psychosocial counsellor
35.	*Difficulty breathing*	*Saas fernu garho huney*	1	Reported by psychosocial counsellor
36.	*Feeling like something is blocking the heart*	*Mutu ma k adkeko jasto huney*	1	Reported by psychosocial counsellor