DEVELOPING A MANUALISED TASK-SHARING COUNSELLING INTERVENTION FOR PERINATAL COMMON MENTAL DISORDERS IN THE SOUTH AFRICAN CONTEXT

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DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate Date: 11 March 2021

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ABSTRACT

Background: Symptoms of depression and anxiety are highly prevalent amongst perinatal women in low-resource settings of South Africa, but there is no access to standardised counselling support for these conditions in public health facilities. The aim of this study was to report on the development of a maternal mental health counselling intervention for routine treatment of mild to moderate symptoms of depression and anxiety for primary healthcare in South Africa, as part of the Health Systems Strengthening in sub-Saharan Africa (ASSET) study.
Methods: A four-phase study process informed the counselling intervention and training manual designed to train lay health workers. We first conducted a review of manuals from seven counselling interventions for depression and anxiety in low- and middle-income countries and two local health system training programmes to gather information on common counselling components used across maternal mental health and other evidence-based task-sharing interventions. Thereafter, semi-structured interviews were conducted with 20 health workers and 37 pregnant women from four Midwife Obstetric Units in Cape Town to explore mental health views and needs. In the third stage, multi-sector stakeholder engagements further informed the choice of intervention design and service provider. In the final phase, a four-day pre-implementation pilot training with community-based health workers refined the counselling content and training material.
Results: The manual review identified problem-solving, psychoeducation, basic counselling skills and behavioural activation as common counselling components across interventions. The interviews found that participants mostly identified symptoms of depression and anxiety in behavioural terms and lay health workers and pregnant women demonstrated their understanding through a range of contextual terms. Perceived causes of symptoms related to interpersonal conflict and challenging social circumstances. Stakeholder engagements identified a three-session counselling model as most feasible for delivery as part of existing health care practices and community health workers in ward-based outreach teams as the best placed delivery agents. Pilot training of a three-session intervention with community-based health workers resulted in minor adaptations of the counselling assessment method.
Conclusion: The study demonstrates how common therapeutic elements can be adapted to a local context and developed into an evidence-based manualised therapeutic programme while remaining sensitive to a health system's needs. While a problem-solving counselling approach, delivered in a structured format, was best suited for training lay health workers, input from health workers and perinatal mothers informed the manualised counselling content. The latter was a critical supplement to align the programme with contextual needs. Stakeholder

engagements helped to align the intervention design to health system requirements and guidelines. Structured training practices and ongoing supervision of mental health workers are vital to develop counselling skills over time and to enhance personal support.

Keywords: perinatal, depression, anxiety, task-sharing, psychological intervention, primary health care, low- and middle-income countries

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CHAPTER 1

INTRODUCTION

Mental health disorders affect more than a billion people worldwide, making them one of the largest contributors to the global burden of disease and disability, with major health implications for populations, health systems, and individuals (Pike et al., 2013; Rehm et al., 2019). Women are more likely than men to be affected by common mental disorders (CMDs), such as depression (Piccinelli & Wilinson, 2000). Pregnancy is particularly a vulnerable period for a woman due to the physical, social, and emotional changes associated with this phase (Biaggi et al., 2016; Clarke et al., 2013; Redinger et al., 2017; World Health Organization [WHO], 2008). Worldwide, maternal mental health is a public health concern and addressing depression and anxiety during the perinatal phase, the period from conception up to one year after birth, is a major public health priority. This is of particular relevance in low- and middle-income countries (LMICs) where primary health resources are mainly invested in medical and obstetric care and infant well-being, as supposed to maternal mental healthcare needs (Chaaya et al., 2002; Clarke et al., 2013; Sawyer et al., 2010; WHO, 2014). The current study reports on the development of a maternal mental health counselling intervention for primary healthcare in South Africa, a context where maternal mental health difficulties are both prevalent and undertreated.

1.1 Maternal Mental Health in LMICs and South Africa

Perinatal Common Mental Disorders (PCMDs), such as depression and anxiety, are highly prevalent in LMICs (Dennis et al., 2017; Woody et al., 2017). Worldwide, approximately 10–13% of perinatal women experience CMDs (O'Hara et al., 1996). In LMICs, socio-economic risk factors and a lack of access to effective mental health care increases prevalence rates further to approximately 19% for perinatal depression and 34% for perinatal anxiety (Dennis et al., 2017; Woody et al., 2017). Due to contextual and cultural diversity amongst the South African population, the national prevalence rates of perinatal depression and anxiety may be deemed less reliable. However, studies conducted in antenatal clinics in low-resourced communities of the Western Cape and KwaZulu-Natal reported prevalence rates between 35% to 41% for postnatal (after birth) and antenatal (during pregnancy) depression, respectively (Cooper et al., 1999; Hartley et al., 2011; Van Heyningen *et al.*, 2017). Even though the burden of perinatal anxiety is less documented in South Africa, studies have

reported estimate prevalence rates of 15% to 23% for any anxiety (Redinger et al., 2018; van Heyningen et al., 2017). These prevalence rates are noteworthy, as even though symptoms of depression and anxiety can present independently, evidence suggests that a high level of comorbidity often exists (Biaggi et al., 2016; Redinger et al., 2017), potentially worsening responses to treatment and general functioning (Field et al., 2010; van Heyningen et al., 2017).

In various South African studies (Biaggi et al., 2016; Fisher et al., 2012; van Heyningen et al., 2017), contextual risk factors such as poverty, unintended pregnancy, lack of spousal or social support, and a history of mental health difficulties are considered consistent predictors of perinatal depression and anxiety, with multiple stressors increasing the risk. Another precipitating factor for maternal depression and anxiety is the high incidence of domestic violence in South Africa, with evidence suggesting that 39% of women have experienced some form of violence in their lifetime (Chipatiso et al., 2014; Howard et al., 2013; van Heyningen et al., 2017). A strong association has also been found between symptoms of perinatal depression, anxiety, post-traumatic stress disorder (PTSD), and experiences of domestic violence (Howard et al., 2013). This highlights the urgent need to promote the safety and support of perinatal women who are exposed to domestic violence or abuse.

Mental health difficulties during and after pregnancy put the health and well-being of both the mother and child at risk (Dennis et al., 2017; Fisher et al., 2012; Gelaye et al., 2016; Woody et al., 2017). Untreated symptoms during pregnancy may increase the risk of maternal depression and anxiety after birth and impact foetal development, leading to a shorter gestation period or reduced birth weight (Robertson et al., 2004). Postpartum symptoms during the early period after birth may reduce the quality of infant care that a mother provides, affect the mother-infant bond, and negatively influence a child's cognitive, emotional, and behavioural development (Cooper et al., 1999; Moore et al., 2013; Redinger et al., 2018; Robertson et al., 2004). Even so, there is a lack of evidence-based psychosocial interventions for maternal mental health in LMICs (Baron et al., 2016), including in South Africa.

As endorsed by the WHO Millennium Development Goals (MDGs), integrating maternal mental health care as a component of routine public health care is a priority in low-resourced settings of LMICs (Tsai & Tomlinson, 2012; WHO, 2013). Integrating a standardised evidence-based psychological intervention into routine primary health care, which provides approximately 86% of health services in South Africa (Health Profile South Africa, 2016), can promote access to mental health care in low-resourced communities (Cuijpers, 2016). This in turn can help address the 92% mental health treatment gap that currently exists in South Africa (Docrat & Lund, 2019). Therefore, introducing an evidence-based maternal

mental health psychological intervention as part of routine primary health practices is a high priority.

1.2 Maternal mental health interventions in South Africa

Over the last 10 years, various South African studies have investigated the prevalence, detection, and treatment of maternal mental health in the public health sector, calling for a brief, scalable, evidence-based counselling intervention to improve mother and child health outcomes as part of primary health care in low-resource communities (Hartley et al., 2011; Honikman et al., 2012; Lund et al., 2014; Meintjies et al., 2015). In support of this recommendation, a situational analysis of maternal mental health care services, which included South Africa amongst four other LMICs (Uganda, Ethiopia, Nepal, and India), found a lack of evidence for effective psychosocial interventions. The need for integrated maternal mental health care was also identified (Baron et al., 2016). These findings were corroborated by a Lancet review which indicated that maternal mental health disorders, primarily depression, remain underrecognised and undertreated, despite the huge burden on mother and child health (Gelaye et al., 2016).

However, the scarcity of mental health specialists at primary health level poses challenges to integrating maternal mental health into this level of care and novel methods of treatment delivery need to be prioritised. A task-sharing approach is considered an effective and suitable method to address the scarcity of specialised mental health care in LMICs (Rahman et al., 2013). Even though various task-sharing preventative interventions have been developed to promote mother and child health and well-being (Cooper et al., 2009; Le Roux et al., 2013; Richter et al., 2014), a gap exists for an evidence-based psychological intervention to treat perinatal depression and anxiety as part of routine primary healthcare. In turn, several studies support real-life immediate psychosocial challenges associated with low-income communities often give rise to feelings of distress (Fisher et al., 2012; Hartley et al., 2011; Kazi et al., 2006; Lund et al., 2010; Sawyer et al., 2018; Walker et al., 2007). Therefore, a need exists to address contextual challenges as part of an intervention. This calls for an intervention flexible enough to handle comorbidity and a range of contextual problems in one unified treatment programme (Lund et al., 2019). Even though some evidence exists for offering task-sharing maternal mental health interventions as part of routine primary healthcare in South Africa, the duration of training programmes for existing study-led interventions for LMICs are lengthy, which poses a challenge to already overburdened health systems. Therefore, an effective yet brief intervention delivered over a shorter period is required. Furthermore,

adapting psychological interventions to a given context and culture is a global mental health research priority (Collins et al., 2011; Patel et al., 2017). Local studies emphasise the importance of providing culturally appropriate treatment (Sorsdahl et al., 2012) and recognising the views and needs of local service providers and users to promote the relevance and acceptability of interventions to local communities (Davies et al., 2016; Nyatsanzsa et al., 2016). This confirms the need for an effective, scalable, cost-effective, and culturally sensitive psychological intervention to augment existing mother-and-child support packages available to low-resourced communities in South Africa. It is this identified gap that the current study seeks to address.

1.3 Aims and Objectives

This study aimed to develop a manualised psychological counselling intervention for perinatal depression and anxiety, adapted to local contexts and suitable for primary health service provision in the Western Cape. The study is nested within the Health Systems Strengthening in sub-Saharan Africa (ASSET) project. ASSET is a multi-country study focused on strengthening primary healthcare systems through maternal mental health awareness, detection, referral, and brief evidence-based task-sharing treatment.

The objectives of this study were to:

1) Explore what evidence-based therapeutic approaches have been used by task-sharing maternal mental health counselling interventions for low-resourced areas in South Africa and other LMICs.
2) Investigate health service providers' and users' understanding of symptoms of perinatal depression and anxiety, perceived causes of these symptoms, and context-relevant coping strategies.
3) Engage with multiple stakeholders to further inform and align the maternal mental health counselling intervention with the needs and resources of the primary healthcare system.
4) Describe the processes involved in adapting a manualised evidence-based task-sharing intervention to meet both the needs of service users and health system requirements.

1.4 Thesis Outline

Chapter 2 will provide a review of literature relevant to the study, focusing on maternal mental health interventions in LMICs and the South African context. Chapter 3 describes the methodology employed in this study.

Chapter 4 reports on the study findings. Finally, Chapter 5 discusses the findings in light of the existing literature, considers the possible implications of the findings for future research and service delivery, and reflects on the limitations of the study.

CHAPTER 2

LITERATURE REVIEW

The following section expands on the background discussion provided in Chapter 1 and reviews available literature on existing maternal mental health interventions developed in South Africa and other LMICs. The section further explores cross-cultural adaptations pertaining to evidence-based counselling interventions developed in similar contexts before discussing how the shortages of human resources can be addressed through workforce strategies known as task-shifting and task-sharing.

For the purpose of this review, the researcher searched for literature on maternal mental health interventions in LMICs. Studies were obtained through a comprehensive search of the following academic databases: PsycINFO, MEDLINE, Academic Search Premier, PubMed, Academic Online, SAGE Journals, Psychiatry Online, and Google Scholar. In addition, related resources suggested by colleagues, supervisors, and reviewed article reference lists were considered and included where relevant. The studies that formed part of this review were qualitative and quantitative in nature and were published in English.

2.1 Perinatal Common Mental Disorders (PCMDs) and Associated Consequences

The *perinatal period* refers to the time from conception until one year after birth and includes the *antenatal period* (the phase during pregnancy) and the *postnatal period* (the phase after birth). CMDs experienced during this period are referred to as perinatal common mental disorders (PCMDs) (National Institute of Mental Health [NIMH], n.d.). These disorders generally include depression, anxiety, and somatic disorders, and symptoms often occur comorbidly (Biaggi *et al.*, 2016; Redinger *et al.*, 2017). The latter refers to physical symptoms, such as pain or fatigue, which may restrict functioning or cause distress (Clarke et al., 2013). Prolonged or more severe experiences of perinatal depression and anxiety can have adverse effects on the health and well-being of the mother, infant, and child, yet symptoms are often underdiagnosed and untreated (Cooper et al., 1999; Dayan et al., 2006; Field, 2011; Gelaye et al., 2016; Moore et al., 2013; Wachs et al., 2009). Even though extensive research exists on the significance of postnatal depression, attention has only recently been given to the high prevalence and consequences of antenatal depression (Grace et al., 2003; Redinger et al., 2018).

For the antenatal mother, untreated depression and anxiety may result in the lack of selfcare and following through on routine medical care or, in some cases, can promote alcohol use and smoking during pregnancy (Davis et al., 2016; Falah-Hassani et al., 2016). Evidence further suggests that antenatal symptoms of depression increase the risk of postnatal depression (Bonari et al., 2004; Robertson et al., 2004) and may reoccur in later pregnancies (Underwood et al., 2016). For the infant, the effects of antenatal depression and/or anxiety may negatively influence foetal development, lead to preterm birth or result in lower 'weight-for-age' (WAZ) as well as 'head circumference-for-age' (HACZ) at birth (Bonari et al., 2004; Brittain et al., 2015; Schetter & Tanner, 2012).

After delivery, a period known as the 'baby blues' is typically experienced between the first 3 to 14 days by some, especially new mothers. This period is characterised by a sudden change in hormones, often accompanied by stress and tiredness, resulting in mood swings, anxiety, a sense of feeling overwhelmed and tearfulness (National Health and Medical Research, 2000). The 'baby blues' differs from postnatal depression in that the latter involves more severe and longer lasting symptoms, potentially impairing a mother's usual functioning and putting the well-being of the infant at risk. Untreated postnatal symptoms may influence the mother-infant bond during the crucial early stages of the infant's life and pose further cognitive, emotional, or behavioural developmental challenges in early childhood (Cooper et al., 1999; Field, 2011; Gelaye et al., 2016; Moore et al., 2013; Wachs et al., 2009).

These far-reaching consequences justify the need for early detection and highlight the importance of effective treatment and support options for perinatal mothers (Honikman et al., 2012). Symptoms of PCMDs vary from person to person and can range from mild to moderate and severe, which in turn informs the treatment guidelines and the type of support required to manage or improve symptoms (NIMH, n.d.). An international review of best practice treatment guidelines for perinatal depression conducted by Molenaar et al., (2018) found that psychosocial support and integrated therapeutic interventions were encouraged as first line treatments for mild to moderate perinatal depression and psychopharmacological treatment was recommended for more severe symptoms. Further evidence suggests that mild to moderate symptoms of depression can be managed effectively with less intensive counselling and support, and strategies such as activity scheduling, cognitive behavioural therapy, and interpersonal therapy were considered suitable treatment approaches. Furthermore, an absence of evidence of the effectiveness of treatment of perinatal anxiety and trauma-related disorders was reported (Nillni et al., 2018).

2.2 Risk Factors of PCMDs in LMICs

Research suggests a link between mental disorders and social factors (Blas et al., 2010; WHO, 2014). Population sub-groups such as perinatal women from low resource settings in LMICs are more vulnerable to developing PCMDs than those in high- income countries (HICs) due to various psychosocial and socio-economic disadvantages suffered, already placing an infant at a disadvantage before birth (Allan et al., 2014; Fisher et al., 2012; Patel et al., 2010). Even though buy-in from multiple levels (governments, community sector, and private initiatives) is required to mitigate the social risk factors, understanding the nature of risk and protective factors associated with specific settings can help to inform preventative and psychological intervention designs (Lund et al., 2018; WHO, 2014).

There is commonality between risk factors of perinatal depression and anxiety in various LMICs, with only a few variations associated with specific contexts. Systematic reviews conducted on the determinants of PCMDs in LMICs by Fisher et al., (2012) and Biaggi et al., (2016) identified the following challenging circumstances that put perinatal mothers at risk of PCMDs: unintended pregnancies, lack of physical and emotional support from a partner or family, exposure to violence or long-term abuse, and a history of mental illness (Fisher et al., 2012). Moreover, Fisher et al.'s (2012) review found socio-economic difficulties and being a young single mother additional risk factors, whereas employment, social support, and education served as protective factors. Furthermore, Biaggi et al.'s (2016) study found that stressful life events, antenatal complications, and still births were associated with antenatal depression and anxiety. Similarly, in South Africa, early antenatal risks factors during the first trimester, including a lack of support from a partner and/or family, and related stressors were identified as key determinant of PCMDs, suggesting the involvement of significant others to be a protective factor (Redinger et al., 2018). Additional determinants across the antenatal phase were identified as socio-economic difficulties, food insecurity, unintended pregnancies, positive HIV status, stressful life events, a mental health history, and experiences of violence (Brittain et al., 2016; van Heyningen et al., 2018; Rochat et al., 2008; Sawyers et al., 2010). Experiences of violence were consistently identified as a risk factor for low-resourced perinatal women (Brittain et al., 2016).

Worldwide, one in three women are exposed to experiences of physical or sexual violence (WHO, 2013), most commonly by an intimate partner (IPV). The WHO's 2013 study on the global estimates of violence against women (VAW) indicated that pregnant women who are exposed to IPV are twice as likely to experience symptoms of depression and consider a

termination of pregnancy, while 16% have a baby with low birth weight (because of early labour or foetal developmental delays) commonly associated with stress. In addition, women exposed to sexual assaults are twice as likely to revert to substance use and more than twice as likely to develop symptoms of depression and/or anxiety (WHO, 2013). Rates of VAW are particularly high in Africa when compared to other countries (WHO, 2015). While South Africa is known as a country with one of the highest rates of VAW (Crime stats, 2017), pregnant women are particularly vulnerable (Field et al., 2018). A noteworthy context relevant precipitating factor for maternal depression and anxiety is the high incidence of domestic violence, which warrants the need for treatment and support for mothers who are exposed to violence in their domestic environment (Field et al., 2018; Howard et al., 2013; Meintjes et al., 2015; van Heyningen et al., 2017). Domestic violence is defined as a violent act by an intimate partner, family member, or anyone a person has a domestic relationship with that puts a perinatal women's physical safety or health and emotional well-being at risk (WHO, 2002). A 2014 gender-based violence indicator study found that 39% of women in the Western Cape region had experienced some form of violence in their lifetime (Chipatiso et al., 2014), while 29% of women in South Africa reported experiences of IPV, a form of domestic violence, in 2003/2004, with high prevalent rates during the antenatal period (Gass et al., 2011; Schneider et al., 2018; WHO, 2011). Evidence suggests a strong association between IPV and perinatal depression (Fisher et al., 2012; WHO, 2013). Worryingly, less than 10% of perinatal women are detected and receive appropriate care within the primary health care sector (Joyner & Marsh, 2012). Exposure to a violent and unsafe living environment marked by prolonged stress poses a maternal health risk (WHO, 2013), which warrants the need for an urgent intervention.

Due to consistent psychosocial and socio-economic vulnerabilities experienced by perinatal women in low resource settings of LMICs, mental health treatments should consider treatment designs and therapeutic approaches suitable to address comorbidity – perinatal depression and anxiety – yet flexible enough to address a range of contextual challenges (Lund et al., 2018).

2.3 Improving Access to Maternal Mental Health in LMICs

Over a decade ago, the WHO's MDG 5 (2013) prioritised maternal and child health as part of primary healthcare to improve universal mother and child morbidity and mortality rates (Tsai & Tomlinson, 2012; van Heyningen et al., 2017; WHO, 2008). However, many LMICs have not made sufficient progress to meet the targets set by the MDGs, and maternal healthcare remains an ongoing concern and healthcare priority, particularly in LMICs with limited access

to care (MDGs Report, 2013). In 2015, the United Nation's (UN) Sustainable Development Goals (SDGs), also called 'Global Goals', served as a worldwide action plan to improve maternal health, mental well-being, and social circumstances in the next ten years (UN, 2015). One key strategy to encourage overall maternal health and well-being is to integrate mental health support into routine primary healthcare services (Rahman et al., 2013). With the objective in mind, various maternal psychosocial interventions have been developed; however, evidence of the effectiveness and the best way to implement these interventions is lacking and a need continues to exist for mental health care in low-resource settings (Baron et al., 2016; Lund et al., 2014).

In an attempt to lessen the burden of the 92% mental health treatment gap in South Africa, the shortfall between treatment needs and available services (Docrat & Lund, 2019), a task-sharing approach is an affordable and cost-effective method to address the scarcity of specialised healthcare providers and in turn increase access to mental health services (Herman et al., 2008; Jack et al., 2014; Lund & Flisher, 2009; WHO, 2008). This approach is considered common practice in LMICs with inadequate health services (Lehmann et al., 2009). With this said, task-sharing and task-shifting are often used interchangeably, and even though they are similar in some respects, there are some differences. The WHO (2008) defines 'task-shifting' as using human resources already part of the health system to augment the shortfall of health service delivery. It involves the delegation of tasks to less qualified health workers and includes brief competency-based training programmes. This approach was adapted a decade ago in response to the HIV/AIDS epidemic in Africa and gave rise to the more recent term called 'task-sharing'. The latter incorporates a knowledge-based component, moves away from the delegation of duties, and follows a collaborative approach that includes the support of a professional in the provision of care (United Nations International Organisation of Migration [IOM], 2010). Task-sharing therefore involves training a non-specialist health worker with the aim of reaching more people, but under the guidance of a professional health worker. Various studies support the suitability of a task-sharing approach to treat PCMDs (Clarke et al., 2013; Rahman et el., 2013) and further emphasise that treatment by individuals from the same community allows for an understanding of cultural practices, language, and may promote a sense of community relatedness and acceptability of the intervention (Murray et al., 2013; Nyatsanza et al., 2015; Rahman et al., 2013). Furthermore, the findings of a systematic review and meta-analysis that pooled the outcomes of ten trials found that psychological interventions delivered by non-specialists were beneficial to treat PCMDs (Clarke et al., 2013).

Considering which workforce is best suited for task-sharing, various task-sharing feasibility studies found community health workers (CHWs) effective in the delivery of psychosocial interventions, provided that robust training programmes and routine supervision forms part of the overarching intervention programme (Clark et al., 2013; Gilmore et al., 2013; Meyers et al., 2018; Nxumalo et al., 2013; Rahman et al., 2013). The role of a CHW ranges from home-based care maternal and childcare, health promotion, and HIV related support (Nxumalo et al., 2013). A CHW is defined as someone from the same local community who performs a function as part of the healthcare system, with training practices that are directed towards skills-based functions (Deek et al., 2013). Although a systematic review that explored the global definition of a CHW found that various definitions exist, a dominant theme across all definitions related to the function of a CHW, referring to the provision of culturally appropriate healthcare within a given setting (Olaniran et al., 2017). This is an important finding when considering the best suited cadre to deliver a context relevant mental health intervention in a country with diverse communities such as South Africa. Evidence therefore supports the integration of maternal mental health services into primary care through a task-sharing approach as a cost-effective method to increase access to health services and improve outcomes (Jack et al., 2014; Petersen et al., 2014). However, cultural awareness is required, and maternal mental health interventions should be adapted to be context specific and culturally sensitive (Patel et al., 2017).

2.4 Maternal Mental Health Interventions in LMICs

An international systematic review that investigated the effectiveness of perinatal psychosocial interventions developed for low-resourced settings in LMICs assessed ten maternal and child health programmes developed in countries such as South Africa, Columbia, Mexico, Argentina, Cuba, Brazil and China (upper middle income) and Pakistan and India (lower middle income). The results distinguished between evidence-based treatment interventions (e.g., cognitive behavioural, and problem-solving therapy) and preventative interventions (health promotion and psychoeducation) and suggested that although both intervention types produced positive outcomes, the psychological intervention had a greater effect (Clarke et al., 2013). None of the interventions included treatment for stress or anxiety. This study highlighted the need for perinatal psychological intervention type studies and noted the lack of interventions that address stress and anxiety. A point to consider is that although extensive evidence of the efficacy of maternal health interventions exists in other countries,

little is known about the effectiveness of these interventions in the South African context (Sorsdahl et al., 2012; van't Hoff et al., 2011).

In 2015, the WHO introduced an updated version of the Mental Health Gap Action Programme (mhGAP) which included evidence-based treatment guidelines developed to treat mental, neurological and substance disorders in LMICs. These guidelines were specifically developed to train health workers in low-resource settings in the delivery of mental health treatment programmes and to facilitate the implementation of the Mental Health Action Plan 2013–2020 in LMICs (WHO, 2015). The WHO Problem Management Plus (PM+) Programme supplements these guidelines by including a combination of problem-solving and behavioural strategies with the aim to treat both psychological (e.g., anxiety, depression) and practical problems (e.g., life stressors, family conflict). Although not specifically aimed at perinatal women, the guidelines provide recommendations for evidence-based treatment methods for LMICs to be adapted to local cultures and contexts, particularly if the intention is to scale up services (Sorsdahl et al., 2012). Apart from South Africa, these interventions have found practical use in various LMICs. An evidence-based counselling intervention called the Thinking Healthy Programme was developed to treat perinatal depression in India, and used information based on the formative and pilot research phase to adapt the WHO treatment recommendations to local settings (WHO, 2015). These adaptations involved shifting from facility to home-based delivery and integrating the support of significant others into the treatment programme. The intervention design and training programme (designed for female community-based workers) was developed as a pictorial guide to aid the delivery of evidence-based techniques such as cognitive behavioural, problem-solving, and behavioural components. The overall programme included 16 sessions, delivered over a period of 11 months on a monthly basis from the third trimester up to ten months postnatally. The results indicated that, in terms of effect size, the intervention had a moderate effect on remission rates for postnatal depression up to six months after birth. However, the length of the intervention resulted in an increased workload on the non-specialist community counsellors (Fuhr et al., 2019).

In the South African context, alongside the Department of Health and Social Development's First 1000 Days campaign aimed at promoting awareness and mother and child health from conception up to two years after birth, various models have been designed to offer psychosocial support to mothers during the perinatal phase. The Perinatal Mental Health Project (PMHP), in addition to upskills training for professional health workers, is an ongoing

initiative that promotes access to maternal mental primary health care through pro bono psychological counselling. This service is offered by a registered counsellor and linked to one midwife obstetric unit (MOU) and is therefore restricted to one area (Honikman et al., 2012). A less intensive and costly method of delivery is required to augment access to mental health services (Lund et al., 2019). Between 2009–2014, three randomised controlled trials (RCTs), two in the Western Cape and one in KwaZulu-Natal, involved programmes to enhance the mother-infant bond, HIV, and psychosocial education, respectively. The KwaZulu-Natal intervention (Masihambissana: peer mentor support) delivered 8 clinic-based sessions and was predominantly focused on HIV psychoeducation with depression as a secondary outcome. In the two Cape Town interventions, the Improving Mother-Infant Relationship programme delivered 16 home-based visits and the Philani Intervention Programme provided 8 home-based sessions. Both showed an overall improvement for mother and child wellness, but no significant difference was noted in the reduction of depressive symptoms within the first 6 months postpartum (Cooper et al., 2009; Le Roux et al., 2013; Spedding et al., 2015). The KwaZulu-Natal study that involved pregnant women living with HIV, supported at clinics by peer mentors, showed significant improvement in symptoms of depression but low retention rates (Richter et al., 2014; Spedding et al., 2015). As in the case of India and UK, these studies in South Africa suggest an emphasis on preventative intervention types, and the results indicated the success of these interventions in addressing mother and child wellness.

The African Focus on Intervention Research for Mental Health (AFFIRM) conducted an RCT to determine the effectiveness and cost-effectiveness of an evidence-based task-sharing psychological treatment for perinatal depression in the Western Cape. IsiXhosa pregnant mothers from a resource-constrained area with symptoms of depression were included in the treatment group. They received six structured manual-based counselling sessions delivered by community health workers at the facility or at home (Nyatsanzsa et al., 2016). A qualitative formative research phase aimed at adapting the basic evidence-based content of the manual to enhance the relevance and acceptability to the local culture, found a strong association between symptoms of depression and psychosocial stressors. Local isiXhosa idioms and words for ‘depression’ (*ukudakumba*), ‘stress’ (*unxunguphalo, ucingakakhulu*), and scared (*ukoyika*) as well as vignettes were integrated into the manual content which consisted of evidence-based approaches such as psychoeducation, problem solving, behavioural activation, healthy thinking, relaxation and birth preparation, respectively. In addition, basic counselling skills were included in the manual content and overall training of lay workers in an attempt to

enhance the verbal and nonverbal counselling skills of community health workers. This was the first RCT to test the efficacy of a dedicated task-sharing psychological intervention in this population in the Western Cape. The study found that task-sharing did not effectively treat depressed mothers in the resource-constrained setting of the Western Cape but it did significantly reduce psychological distress, measured using the EPDS (Lund et al., 2019). The study set the foundation for further consideration of intervention designs. For example, the need for a less complex, structured, brief and scalable intervention focused on a core approach (problem-solving), with optional components (psychoeducation and coping) to address mood and psychosocial challenges. In addition, enhancing basic counselling skills, a well-structured training manual, robust training practices, and routine supervision of lay health workers are imperative to a counselling intervention design (Spedding et al., 2015; Lund et al., 2019).

2.5 Cross-Cultural Adaptation of Evidence-Based Interventions

Developing and implementing a flexible and culturally sensitive intervention is imperative to promote the acceptability of such an intervention amongst various cultures (Davies et al., 2016; Patel et al., 2017), particularly in a highly diverse country such as South Africa. In support of this, various studies conducted in LMICs have outlined the importance of acknowledging cultural beliefs, norms, discourses (Campbell & Burgess, 2012; Davies et al., 2016; Murray et al., 2013; Summerfield, 2012; Woods-Jaeger et al., 2017), and suggest taking a "culturally humble approach" when developing a task-sharing mental health intervention (Woods-Jaeger et al., 2017, p. 236). Evidence suggests that cross-cultural acceptability can be achieved by collaborating with community stakeholders to inform treatment programmes and, in addition, by incorporating the following considerations: using language that is easy to understand and relevant to a particular community, with less psychological jargon; incorporating culturally appropriate metaphors and scenarios; promoting social, personal, and community support, and avoiding the use of diagnostic labels (Davies et al., 2016; Murray et al., 2013; Patel et al., 2017).

Some studies conducted in LMICs suggest suitable methods to support cross-cultural adaptation of mental health interventions; however, limited research currently exists on how cross-cultural and cross-contextual adaptation can best be achieved in the South African context. One qualitative study conducted in Cape Town as part of the AFFIRM trial explored the perceptions, language, and descriptions of perinatal depression of isiXhosa-speaking perinatal mothers and women (Davies et al., 2016). The study found the use of idioms acceptable to describe symptoms such as sadness, withdrawal, and distress, and incorporated

these findings into a task-sharing evidence-based intervention for perinatal mothers in this community. Similarly, a task-sharing primary health care intervention designed to treat adult depression in Zimbabwe, called “The Friendship Bench”, adapted the intervention to include local Shona terms to describe emotional distress (Chibanda et al., 2011). In south Asia, an evidence-based psychological intervention study designed to treat adult depression found a patient explanatory model (describing how something works and why it works a certain way) a useful tool to adapt psychoeducation and intervention type to cultural needs as well as inform target outcomes (Aggarwal et al., 2014).

Two trauma-focused cognitive behavioural therapy studies conducted in Tanzania, Kenya, and Zambia highlighted the importance of cultural awareness and being respectful of local customs, beliefs, and norms (acceptable behaviour) when working with a specific community (Murray et al., 2013;Woods-Jaeger et al., 2017). The effectiveness of the intervention’s cross-cultural intervention development and application is two-fold: a) a core treatment framework is designed to achieve key therapeutic goals and promote fidelity; and b) the *method* of delivery is adapted to take local cultures norms and needs into account through local narratives, metaphors, and creative strategies (Woods-Jaeger et al., 2017; Murray et al., 2013).

These studies provide some guidance in developing a manualised intervention flexible enough to adapt to cultural norms and needs through the use of narratives, metaphors, and idioms, and emphasise the level of cultural awareness of the service provider. However, a gap exists for systematic and practical cross-cultural and cross-contextual guidelines adapted for the South African context.

2.6 Conclusion

A strong body of knowledge emphasises the negative effects of PCMDs on the mother and child, yet access to routine mental health care is limited in South Africa and other LMICs. Even though various preventative maternal health interventions (typically focused on health and psychoeducation) have been developed in the South African context, holistic care that integrates mental health support is lacking. Therefore, a need exists for an evidence-based and context relevant maternal mental health counselling intervention. Research suggests that incorporating such an intervention into primary healthcare through task-sharing can combat the scarcity of mental health professionals. A task-sharing approach is deemed an effective and cost-effective method to promote access to mental health services in low-resourced communities. The literature emphasises that the following pertinent points should be

considered when developing a task-sharing evidence-based psychological counselling intervention: (i) real-life immediate psychosocial challenges causing distress; (ii) brief evidence-based interventions and techniques to enhance resilience (Lund et al., 2019); (iii) basic counselling skills to promote the therapeutic relationship in addition to evidence-based strategies (Spedding et al., 2015); (iv) views and needs of local service providers and users to develop or adapt intervention designs and promote the acceptability of such an intervention (Nyatsanzsa et al., 2016) and (v) due to the high comorbidity of perinatal depression and anxiety interventions should include treatment for maternal stress and anxiety. Furthermore, robust structured training methodologies and consistent ongoing mentorship and supervision support should be developed to effectively train service providers and continue to develop core counselling competencies over a period (Davies et al., 2017; Honikman et al., 2012; Lund et al., 2014; Nyatsanza et al., 2016; Spedding et al., 2015). The next chapter presents the setting, data collection and analysis processes that form part of this study.

CHAPTER 3

METHODOLOGY

This chapter clarifies the research questions and describes the research design and methodology employed in this study. The context of the study is defined through an outline of the ASSET cluster-randomised controlled trial. Particular attention is given to the research setting, sampling procedure, and participants recruited to participate in the study. The data collection and analyses processes are outlined for each of the four main phases of the study. The processes used to ensure the trustworthiness and credibility of the research are also described, along with the positionality of the researcher. Finally, ethical considerations adhered to are discussed. A brief conclusion rounds off the chapter.

3.1 Research Questions

The research questions guiding this study towards the development of a brief maternal mental health intervention for the existing South African primary health system were formulated as follows:

1) What evidence-based therapeutic approaches have been used by task-sharing maternal mental health counselling interventions for low-resourced areas in South Africa and other LMICs?
2) What are health service providers' and users' understanding of symptoms of perinatal depression and anxiety, perceived causes of these symptoms and context relevant coping strategies?
3) According to key health system stakeholders, what requirements does the existing health system pose for a counselling intervention for maternal mental health?
4) How can a manualised, task-sharing maternal mental health intervention based on the existing evidence base be adapted for the South African primary healthcare system to meet both the needs of service users and health system requirements?

3.2 Study Design

The current study utilised a qualitative case study research design based on a triangulation of methods that integrated information from multiple data sources. In a complex health system with various cadres and socio-demographic representations, a case study approach allows for an in-depth exploration and understanding of maternal mental health and how a counselling intervention can a) be developed to better fit the socio-demographic context,

and b) be integrated into existing primary health system processes in a manner that will strengthen existing healthcare, with the possibility of future adaptation and application (Baxter & Jack, 2010; Vaismoradi et al., 2013). The use of various methods to gather information from a range of sources about the same topic also increases the reliability and validity of the research findings (Babbie & Mouton, 2005; Baxter & Jack, 2010).

As depicted in Figure 3.1 below, the development of a maternal mental health counselling intervention involved four phases.

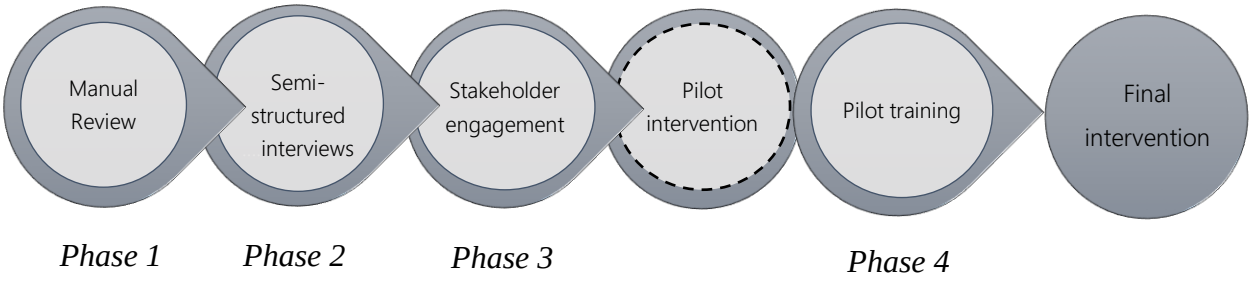

Figure 3.1. Overview of the four-phase study process that informed the counselling intervention and training manual design.

The **first phase** consisted of a review of evidence-based, task-sharing manualised mental health counselling interventions and of existing local health system training programmes to establish commonalities in intervention designs and training methodologies and explore existing counselling knowledge in lay health worker training programmes.

In the **second phase**, interviews with pregnant women and health workers were conducted to explore their understanding and descriptions of symptoms of depression and anxiety, the causes of these symptoms, and context relevant ways of coping. The value of counselling as a form of maternal mental health support was also explored.

The **third phase** entailed engagements with (1) managers from the Western Cape Department of Health (WCDoH) from each of the four health sub-districts, (2) facility-based management teams, and (3) co-ordinators of non-profit organisations (NPOs) to explore how best to adapt and align a maternal mental health counselling intervention with existing primary health care services in the Cape Metro. A counselling intervention manual was then developed based on the three phases above.

In the **fourth phase**, a four-day classroom style pilot training in delivery of the treatment manual was conducted with CHWs and supervisors from one NPO, during which feedback on the manual content was obtained from lay health workers and their respective

supervisors to inform further content adaptations. Insights obtained from the pilot study informed the final version of the intervention design and training manual.

3.3 Health System Strengthening in sub-Saharan Africa (ASSET)

ASSET is part of a multi-country study with an overarching aim of strengthening healthcare systems in sub-Saharan Africa. ASSET Work Package 6, focused on the Western Cape, South Africa, is a cluster randomised controlled trial designed to develop and evaluate the impact of a health systems strengthening intervention (awareness, detection, referral, and treatment) on processes of care and outcomes for perinatal women with CMDs and experiences of domestic violence. It includes three phases: a diagnostic stage (2018), a development stage (2019), and a pilot and intervention stage (2020), each with its own study design. In collaboration with the WCDoH, the shift to community-based care through the introduction of the Ward-based Primary Health Care Outreach Team strategy, comprising of professional and lay health workers, is linked to contracted NPOs that provide support aimed at the prevention and management of TB/HIV, hypertension, diabetes, and maternal and child health support (which consists of supporting perinatal women with overall child health and development related matters) at household level.

The ASSET study attempts to strengthen an integrated shift from facility-based to community-based care (Kaminer et al., 2018; Petersen & Lund, 2012) by integrating maternal mental health treatment as part of existing routine care practices. This involves equipping lay health workers/CHWs with the necessary knowledge and counselling skills to deliver a context-relevant brief evidence-based counselling intervention for perinatal women as part of routine primary health care at household level.

3.4 Setting

The ASSET study was conducted in the Cape Metro Health District, an area divided into four sub-structures: Northern/Tygerberg, Western/Southern, Mitchells Plain/Klipfontein, and Eastern/Khayelitsha (Figure 3.2). Based on the Cape Metro District Health Plan (2018/19-2020/21), the population estimate across the Cape Metro is 4,140,565 million and access to basic services such as water, toilet facilities, and electricity is high. However, unemployment levels are also high with an estimated percent of households earning less than R4,800 per year and living in informal dwellings.

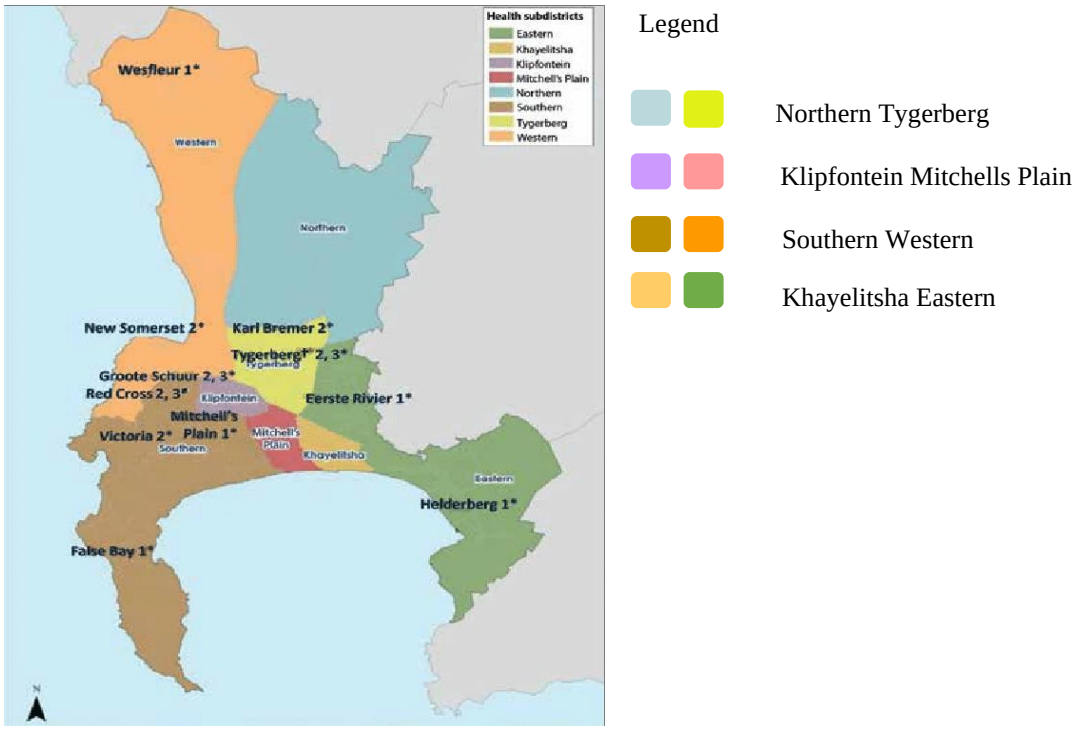

Figure 3.2. Map of health sub-districts in the Cape

(Source: Western Cape Government, 2021)

Four community health centres (CHCs) in Cape Town and associated midwife obstetric units (MOUs), each in a respective sub-structure, were nominated and approved by the WCDoH as study sites for the diagnostic phase of the ASSET study. The selected study sites are located in Bishop Lavis, Hanover Park, Vanguard (Bonteheuwel), and Macassar. Over the last decade, research studies and community-based initiatives in these four areas, such as Community Action Towards a Safer Environment (CASE) and the Bishop Lavis Action Committee, reported on the high level of unemployment, poverty, violence, drug abuse, and gangsterism in these previously disadvantaged and low socioeconomic communities (Meintjes et al., 2015; Reckons & Becker, 2005). The majority of the communities in these areas describe themselves as Coloured. In South Africa, the term 'Coloured' is commonly used to refer to individuals who are of mixed-race ancestry (Adhikari, 2005). While the predominant language is Afrikaans, isiXhosa- and English-speaking community members from neighbouring areas also attend these facilities. Antenatal care is predominantly provided at MOUs by nursing staff and non-specialist health workers. The Department of Health's ward-based outreach teams (WBOTs), managed by professional nurses, receive referrals from designated CHCs and provide community-based integrated health care services at a household level.

3.5 Methodology

This section presents the methodology employed in this study. Included is a description of the sampling, the methods of data collection used, as well as the data analysis procedure for each of the four phases.

3.5.1 Phase one: Manual review

The first phase involved a review of manualised, task-sharing maternal mental health and other counselling interventions with an evidence-base in South Africa or other LMICs. The inclusion criteria for this review included: (i) evidence-based psychological treatments (that is, published work that reports on psychological treatment methods with a positive outcome), that (ii) used a task-sharing model, (iii) in a LMIC. The review also included (a) an unstructured basic counselling skills guide designed for training lay health workers in MOUs of the Western Cape and (b) a primary health in-service training programmes for lay health workers, to identify counselling components deemed to be important in the South African primary healthcare system.

3.5.1.1 Data collection

Maternal mental health manuals for this review were obtained by the researcher through resources and references provided by experts in the field, such as the ASSET principal investigator, and co-investigators of the African Focus on Intervention Research for Mental Health (AFFIRM), and Perinatal Mental Health Project (PMHP). Further to expert recommendations, it was suggested to broaden the scope of the manual review to include broader task-sharing depression counselling treatments and interventions that integrated transdiagnostic evidence-based task-sharing approaches adapted to local cultures and contexts in LMICs. District and facility-based health system stakeholders shared in-service training programme guides to explore standard training methodologies and guidelines. In addition, a systematic search of the WHO database by the researcher provided evidence-based intervention guidelines. Moreover, community organisations and DoH stakeholders were contacted to obtain "grey knowledge", which refers to knowledge that is developed from innovation in practice, rather than published in research literature (Adams et al., 2016).

The final manual review included the following sources: six manualised evidence-based task-sharing counselling interventions, namely: AFFIRM (Lund et al., 2019); Thinking Healthy Programme (Rahman et al., 2008); Friendship Bench (Chibanda et al., 2017); Healthy Activity Programme (Patel et al., 2017); Problem Management Plus (Dawson et al., 2015), Common Elements Treatment Approach (CETA) (Murray et al., 2014); one basic perinatal

counselling skills guide for health workers in South Africa developed by the PMHP (Honikman et al., 2012) and two health systems in-service training guides for HIV and community-based counselling.

3.5.1.2 Data analysis

The manuals and related journal articles selected for review were analysed by the researcher to extract the following preselected categories: (1) intervention description, (2) mental health treatment focus/outcome, (3) primary treatment approach(es)/modality, (4) total sessions, (5) length of a session, (6) frequency of sessions, (7) delivery method and setting, (8) additional therapeutic components to enhance the counselling process, and (9) adjunct treatment strategies to promote resilience.

3.5.2 Phase two: Interviews with health service providers and users

3.5.2.1 Sampling and recruitment

The second phase involved interviewing facility-based participants that were recruited from the four MOUs, situated in associated primary health care (PHC), as follows:

a) Health service users: Pregnant women

A purposive sampling method (Kelly et al., 2000) was used to select pregnant women from each respective MOU, to interview for the diagnostic phase of the ASSET study. The inclusion criteria included: (i) pregnant women, that (ii) screened positive for either depression or had experiences of violence in the past three months, (iii) were resident in Cape Town, and (iv) were 18 years or older (to provide informed consent). Pregnant women were approached by a member of the ASSET team while waiting in line at the clinic and invited to take part in the study. They were provided with a detailed information sheet about the study (Appendix A) and important aspects such as voluntary participation and consent were discussed. Those willing to participate were requested to read and sign a consent form (Appendix B). An Edinburgh Postnatal Depression Screening (EPDS) tool and a bespoke violence questionnaire were administered in English, Afrikaans, or isiXhosa. Women who scored >13 on the EPDS or indicated experiences of violence, and met the inclusion criteria for age and residency, were invited to participate in the study. Recruitment continued until data saturation was achieved (Crocker, 2009). A total of 37 pregnant women were interviewed for the study. The mean age of the pregnant women was 29 years. A total of 18 pregnant women were either employed or self-employed, while 19 were unemployed and dependent on family to meet their basic needs. All except one woman had experienced a previous pregnancy.

b) Health service providers: Lay and professional health workers

A critical case sampling method was used to select professional and lay facility-based health workers involved in the care of pregnant women. This is a suitable sampling method to select individuals based on the role that they play, or the position that they hold, in a particular setting (Crocker, 2009). For the purpose of this research, it relates to health workers directly involved in the management or treatment of perinatal women. The health workers were approached by two members of the ASSET team at their place of work, provided with a detailed information sheet about the study (Appendix C) and important aspects such as voluntary participation and consent were discussed. Health workers willing to participate were requested to read and sign a consent form (Appendix B) and were invited to participate in a face-to-face audio recorded, semi-structured interview. A total of 20 health workers were interviewed for the study.

The cadres included the following:

1) Facility-based professional health workers and management staff consisted of four registered nurse midwives/nurses, four facility managers, three psychiatric nurses, and two social workers. One psychiatric nurse declined to take part in the research.

2) Facility-based lay health workers consisted of three health promoters, four HIV/TB lay counsellors, and four breastfeeding lay counsellors. One health promoter declined to take part in the research.

3.5.2.2 Data collection

a) Health service users: Pregnant women

Perinatal women attending MOUs who agreed to take part in the study were invited to an individual 60-minute semi-structured interview (Appendix D), in a private office, to ensure confidentiality. Interviews were audio recorded and conducted in the first language of the participants, which was English, Afrikaans, or isiXhosa. No translators were required as the research team could assist participants in any of the three languages. The interviews were conducted by the ASSET project manager, the researcher (a registered counsellor), and a research assistant (an experienced maternal mental health fieldworker), under the guidance of the principal investigator (a clinical psychologist). All team members were trained to administer the semi-structured interview schedules in an empathic manner, and to probe in a sensitive way to determine a participant's personal experience of pregnancy, understanding of depression/anxiety, experiences of domestic violence, support network, coping methods, and preferred mental health treatment methods. The safety protocol involved referring distressed perinatal women to either a psychiatric nurse or social worker for further support. The researcher followed up telephonically the next day to ensure that participants received support.

A token of gratitude in the form of a grocery voucher was provided to every perinatal mother who completed the interview process.

b) Health service providers: Facility- and community-based health workers

Health workers from the four MOUs who consented to take part in the study were invited to an individual audio recorded semi-structured interview (Appendices E, F, G) in a private office space. The duration of the interview was between 45–60 minutes, and was offered in either English or Afrikaans, as participants indicated these two language preferences. The interviews were conducted by the research project manager and the researcher. Interviews were conducted in an empathic manner using the necessary probes. Participants were asked about their role in terms of providing care to pregnant women, and their understanding of depression, anxiety, and associated causes. A token of gratitude in the form of a snack pack was provided to every participant who participated and completed the interview process.

3.5.2.3 Data analysis

The audio recorded semi-structured interviews that were conducted with both the health workers and pregnant women were transcribed verbatim by an experienced bilingual transcriptionist. Interviews conducted in isiXhosa were first translated into English, before analysis began. Thematic analysis was used to analyse the transcripts (Braun & Clarke, 2006; Lacy & Luff, 2009). This is a popular approach in health science research, as it is an effective method to obtain specific information and recommendations within a short period of time. It is a suitable tool to use across multiple methods of data collection and helps to examine commonalities and patterns between data items in a systematic way for richer and more detailed information (Braun & Clark, 2006; Lacey & Luff, 2009). The theoretical flexibility inherent to this approach is of particular benefit to this study. It draws on the theoretical foundation of contextualism to inform the theoretical framework and methodology, seeking to investigate a collection of viewpoints to understand subjective views of health system service users and providers, while considering the impact of the broader social context on the development of an intervention (Braun & Clarke, 2006). Thematic analysis provides systematic stages that clearly define the methods from which the results were obtained (Lacy & Luff, 2009). A breakdown of these stages is illustrated in the five-step process in Figure 3.3 below.

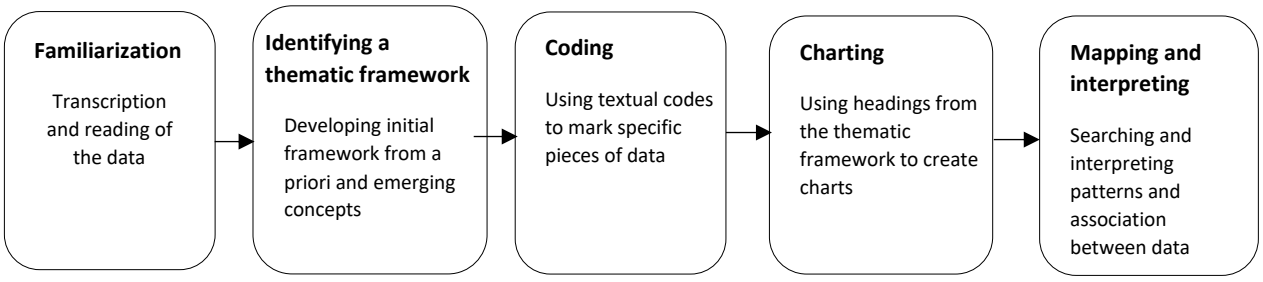

Figure 3.3: Framework approach that includes a five-step process to analyse qualitative data

(source: adapted from Lacey & Luff, 2009, p. 11)

The development of the thematic framework was guided by the interview topic questions, and further emergent concepts were identified and captured through in-depth reading of the transcripts. Transcripts and data were managed using NVivo 12 Pro qualitative data analysis software (QSR International Pty Ltd). The researcher and two other team members were involved in the coding process of the transcripts. Three coders were involved in the transcription of the health worker transcripts. To establish the inter-coder reliability, 10% of the transcripts were randomly selected for coding and 78% of the codes were the same across all coders. Disagreements were discussed amongst the coders under the guidance of the principal investigator, and the most suitable and appropriate code was selected. Each analysed a third of the remaining transcripts. Two coders were involved in the transcription of the pregnant women transcripts. To establish inter-coder reliability for these transcripts, 10% of the transcripts were randomly selected for coding and 87.3% of the codes were the same between the two coders. Disagreements were discussed amongst the coders under the guidance of the principal investigator, and the most suitable and appropriate code was selected. Each analysed half of the remaining transcripts.

3.5.3 Phase three: Stakeholder engagements

3.5.3.1 Participants

Quarterly meetings with a DoH working group of six (6) district-level senior managers responsible for oversight of primary health facilities and associated management teams within a given health district, were held to stay abreast of primary healthcare in-service skills development programmes, and to align the research with health systems processes and recommendations. Other stakeholder engagements involved active collaboration with MOU facility management to present preliminary research findings and to integrate feedback into the development processes. Iterative stakeholder engagements led to further referrals and network

opportunities to better understand existing facility and community-based treatment programmes.

3.5.3.2 Data collection

The typed minutes of the meetings of the DoH working group were included by the researcher as a source of data to guide development of the ASSET treatment manual. This included recommendations and suggestions about how the intervention could best be adapted to fit into existing health systems, which was discussed at these meetings.

3.5.3.3 Data analysis

Iterative engagement with stakeholders informed the initial draft of the manual and subsequent stakeholder meetings and provided regular feedback throughout the diagnostic phase. Stakeholder feedback helped to align the manualised intervention components, frequency of sessions, and mode of delivery to fit community and facility-based perinatal mental health needs. In the data analysis of the proposed project, the iterative process of manual adaptation based on stakeholder meetings will be narratively described.

3.5.4 Phase four: Pilot training

The counselling processes and training tools were piloted at one of the pre-implementation phase MOUs. Lessons learnt and feedback received from healthcare workers involved in the pilot study were incorporated into the final counselling manual design.

3.5.4.1 Participants

To conduct a pilot training of the treatment manual developed for the ASSET study, a purposive sampling method was used to select seven community-based workers from one NPO designated to deliver community-based services to the Macassar MOU study site. The researcher collaborated with NPO management staff (one [1] NPO manager and two [2] NPO supervisors) to develop the maternal mental health counselling training selection criteria for CHWs. The training was conducted by the researcher and aimed at piloting the manual content and basic counselling processes with CHWs in the Macassar community, to assess whether further adaptations were needed. The inclusion criteria for training included: (i) CHWs that completed the DoH in-service, community-based care training programme, (ii) with a proven record of empathic skills (as per feedback from supervisors), (iii) with an interest in mental health and counselling training, (iv) three years or more of community work experience, and (v) no recent personal traumas. A total of five (5) CHWs and two (2) supervisors were identified as suitable candidates. The candidates were given an information sheet about the study and were invited to attend the training by means of an official enrolment form. The

research was introduced in a group format through a presentation and question-and-answer session, arranged prior to the commencement of the training. Important issues such as the purpose of the training and consent were discussed. A total of seven (7) participants (five [5] CHWs and two [2] supervisors), after providing written consent, took part in the training process. In addition, the training group included one (1) bilingual trainer (also the researcher), and one (1) isiXhosa co-trainer (to translate and assist with role-plays).

3.5.4.2 Data collection

Data collection during the pilot training involved verbal discussions between the trainer (also the researcher for the proposed study) and the participants about community case scenarios, psychosocial challenges, and "local language" to integrate into the content of the manual. Observations of role-plays provided insight into basic counselling skills and the application of structured counselling sessions. Training survey forms, completed by the participants at the end of every training session, provided an opportunity for open-ended anonymous feedback about the content of the manual and the application of the skills. Daily post-training debriefing meetings with supervisors provided feedback about the level of complexity of concepts and activities. Participants' verbal feedback and trainer observations were recorded by the trainer in personal notes during the training process (Pietkiewicz & Smith, 2014). These reflective notes were included as a source of data for the study.

3.5.4.3 Data analysis

Analysis during the pilot training was a dynamic process. Participant role-play observations, verbal feedback sessions during training, and post-training debriefing sessions served as guidelines to adapt manual content, case scenarios, language, and activities throughout the training process. Recommendations were integrated by the researcher into the manual content from day to day and tested during the pilot process. Data obtained from training survey forms, at the end of the training process, were divided by the researcher into categories, as per the survey question guides, to obtain an overview of the most valued counselling components, counselling components deemed difficult to understand, and recommendations to improve the manual. The researcher's field notes on her observations of participant role-plays, verbal feedback from participants during training sessions, and post-training debriefing sessions, and the ways in which these sources of data informed final adaptations to the manual, will be narratively described in the findings chapter.

3.6 Ethical considerations

This section discusses a number of ethical issues and how they were handled, including the importance of first obtaining ethical approval from the necessary authorities; obtaining informed consent; protecting the privacy of the participants; the risks and benefits of participation; and the storage and handling of the data.

3.6.1 Ethical approval

Ethical approval to conduct the study was obtained from the Human Research Ethics Committee at the University of Cape Town (UCT) (Ref No: 139/2018) (Appendices H and I) and the Psychiatry, Nursing and Midwifery Research Ethics Subcommittee at Kings College London (Ref No: 17/18-7807) prior to collecting the data. In addition, the WCDoH approved the use of the research sites (Ref No: WC_201807_008).

3.6.2 Informed consent

This section describes the process of obtaining consent from the interview and training participants before the commencement of the research. Informed consent is a core component of ethical research. It entails informing participants of the key elements of the research study and what their participation will involve.

3.6.2.1 Interview participants

Informed consent processes followed standard procedures, as set out in the attached consent form (Appendix B). As per these procedures, participants were advised on the ethical principles of informed consent, privacy, and anonymity. All participants were given an informed consent form to sign. There were also informed that participation was completely voluntary, and that they could withdraw from the study at any time without repercussions.

3.6.2.2 Training participants

Participants invited to take part in the training were provided with a written information sheet with details pertaining to the study and training programme, either face-to-face or telephonically. On the day of the training, ethical principles of informed consent, privacy, and anonymity were discussed verbally, and participants signed the informed consent forms. They were informed of voluntary participation, and their right to withdraw at any time with no negative consequences.

3.6.3 Privacy

This study employed strict measures to protect the anonymity of the study's participants and safeguard their confidentiality. This was done by the removal of: a) personal identifying information on the forms, and b) information identifying specific facilities that could be linked

back to health care workers or perinatal women. In addition, names were replaced with codes on the audio recordings to prevent transcriptionists from identifying the participants. Correspondence related to stakeholder engagement meetings did not involve naming specific role-players. Privacy of the data was ensured through the data safety plan which is described below.

3.6.4 Risks and benefits

The nature of the research topics and type of enquiry, which involved depression, anxiety, and experiences of domestic violence, called for a careful and sensitive approach to the interview process. The participants were informed ahead of time of the nature of the interview. They were offered the choice to take part and advised that they could stop the interview process at any time during the interview. They were also informed that they have the right not to answer a question. Counselling services were made available should the need for additional support arise. A follow-up call the next day served as standard protocol to enhance safety. There were no direct benefits for participation other than the opportunity to gain from a contextually relevant evidence-based treatment in the future.

3.6.5 Data handling

Data was processed according to the General Data Protection Regulation 2018 (GDPR). The study's project files, consent forms, transcripts, and training notes are stored in locked filing cabinets in a locked UCT office located in a research centre. All names were excluded from the audio recordings and codes were used to identify interview content. The interview recordings are stored on a database secured by a firewall, protected by the UCT server, which is password protected. Project files associated with this project are only available to the research team that were directly involved in the data collection process.

3.7 Conclusion

This chapter described the methodology employed in this study. Particular attention was given to the data collection and data analyses processes for each phase of the research. The core ethical principles that were followed to ensure that this research was of a high ethical standard were also outlined in the chapter. The next chapter presents the study's findings.

CHAPTER 4

RESEARCH FINDINGS

The previous chapter discussed the setting, study design, and introduced the multiple sources (presented in four phases) that informed the data collection and analysis part of this study. The current chapter reports on the findings of each phase. Phase one details the findings from the manual review of maternal and other evidence-based mental health task-sharing counselling interventions for LMICs. Phase two outlines the findings from the semi-structured interviews with the health service providers (professional and lay health workers) and health service users (pregnant women with symptoms of depression and anxiety) as it developed through a five-step framework analysis process (Lacey & Luff, 2001). Phase three describes the outcome of stakeholder engagements with important health systems role-players. This section is followed by a description of the pilot counselling intervention design and the layout of the training manual. Phase four announces the findings from the pilot training with community-based health workers, using the pilot training manual. The last section of this chapter describes the final adjustments that were made to the intervention and training manual after the pilot training. A few concluding remarks follow, wrapping up the chapter. The multiple sources that informed the intervention design and development of the training manual are illustrated in Figure 4.1 below.

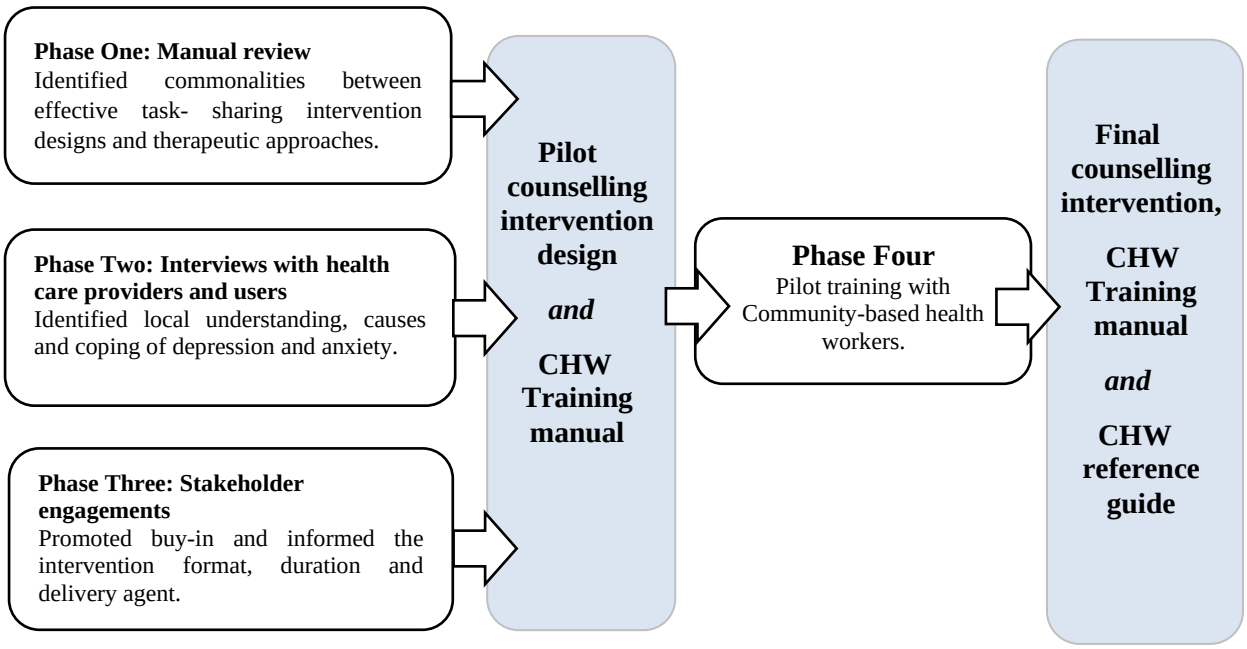

Figure 4.1: Multiple sources that informed the intervention development process

4.1 Phase One: Manual Review

This section presents Phase one – the manual review – as well as a discussion and summary of the findings.

4.1.1 Introduction

Phase one involved a review of six manualised, task-sharing mental health counselling interventions with an evidence base in South Africa and other LMICs. The review process also included one unstructured basic counselling skills guide designed for training lay health workers in MOUs of the Western Cape and two primary health in-service training programmes for lay health workers, to identify counselling components deemed to be important in the South African primary healthcare system. Similar to other LMICs, primary health facilities in South Africa present with a scarcity of human resources and limited access to maternal mental health care (Baron et al., 2016; Clark et al., 2013; Honikman et al., 2012). Therefore, the cost-effectiveness and the capacity for scaling up an intervention are important considerations to take into account when developing an intervention. The delivery method of a session is also important, e.g., a group intervention may be cost-effective (Araya et al., 2006; Siskind et al., 2008), whereas individual sessions promote confidentiality. These are also important considerations when working in low-resourced communities where mental health is stigmatised (Patel et al., 2010). The number, length, and frequency of counselling sessions are central factors that need to be considered.

In light of the above-mentioned factors, the structure, format, and counselling content of the seven counselling intervention designs and psychosocial support modules of the two training programmes were categorised according to the following nine categories: intervention description, mental health treatment focus or outcome, primary treatment approach(es)/modality, total number of sessions, length of a session, frequency of sessions, preferred delivery method (e.g. individual or group) and setting where counselling is delivered, additional techniques incorporated into the intervention design, and adjunct, or secondary components to promote coping.

The characteristics of each intervention included in the review, according to the nine categories of interest, are summarised in Table 4.1 below.

Table 4.1: Characteristics of task-sharing psychological interventions

Intervention description	Mental Health Treatment focus/ outcome	Primary treatment approach(es)/ Modality	Total sessions	Length of a session	Frequency of sessions	Delivery method and setting	Additional therapeutic components	Adjunct components
Task-sharing mental health counselling interventions								
AFFIRM To equip community health workers (CHWs) with skills to offer counselling support to mothers in low resources settings.	Perinatal Depression	• Problem-solving • Behavioural activation • Cognitive behavioural therapy • Psycho-education	6	60 m	bi-monthly	Individual home-based visits	• Basic counselling skills • Symptom check • Safety check	• Relaxation
THINKING HEALTHY To equip lay health care workers with skills to assist to take better self-care, bond with their baby, and enhance social support.	Perinatal Depression	• Cognitive behavioural therapy • Problem-solving • Psycho-education	16	45 - 60 m	Varied – integrated into routine visit	Individual, home-based visits	• Basic counselling skills	• Relaxation • Family engagement or social support
HEALTHY ACTIVITY To strengthen counselling skills and better equip lay health workers to deliver a culturally appropriate treatment.	Depression	• Behavioural activation • Problem-solving • Psycho education	6-8	30 - 40 m	Spread over 2-3 months	Individual, facility-based visits	• Basic counselling skills • Safety check	• Family engagement or social support

THE FRIENDSHIP BENCH To provide lay health workers with the skills to deliver a problem-solving counselling intervention for common mental health disorders (CMDs) related to HIV.	Depression and anxiety	• Problem-solving • Psycho-education	6	60 m	Spread over 2-3 weeks	Individual, facility-based visits	• Basic counselling skills	• None
Problem Management Plus (PM+) To provide lay health workers with the skills to deliver a low intensity psychological intervention to improve a client's ability to manage their emotional distress.	Depression anxiety and stress	• Problem-solving • Behavioural activation • Psycho-education	5	90 m	Weekly	Individual, home-based visits	• Basic counselling skills	• Relaxation • Family engagement or social support
Common Elements Treatment Approach (CETA) To provide lay counsellors with the skills to deliver an evidence-based transdiagnostic therapeutic treatment programme.	Depression, anxiety, PTSD	• Problem-solving • Behavioural activation • Cognitive behavioural therapy • Psycho-education	6-10	90 m	Weekly	Individual, facility or community-based visits	• Basic counselling skills • Safety check	• Social support • Relaxation techniques

Basic counselling skills guide								
Perinatal Mental Health Project - Basic Counselling Skills To education and empower maternal health workers with the skill to support perinatal women in distress.	Maternal mental health awareness and empathic skills	• Person-centred • Problem management • Psycho-education	2-3	NR	NR	Individual, facility or community -based visits	-	• Caring for the counsellor
Primary health in-service training programmes								
HIV counselling training for lay counsellors.	Prevention and management of HIV	Problem-solving method integrated into the training programme	NR	NR	NR	Individual, facility based	• Psycho-education • Basic counselling skills • Pre- and post-counselling	-
Ward-based community health worker training programme.	Seven core community -based health service delivery skills	Problem-solving method integrated into the training programme	NR	NR	NR	Individual, community based	• Health promotion • Confidentiality • Communication skills • Screening • Tracing • Psycho-social support	-

NR: Not Reported

4.1.2 Findings

The duration of the task-sharing interventions ranged widely between 6 to 15 structured counselling sessions, while the basic counselling skills guide included a total of 2 to 3 unstructured counselling sessions. In all the interventions, the length of a session, where reported, ranged from 30 to 90 minutes; method of delivery were individual sessions; and frequency of delivery varied between once-weekly and once-monthly. Problem-solving therapy (PST) (D'Zurilla & Goldfried, 1971), or an adapted version of this counselling method, commonly referred to as "problem management" (Egan, 1998; 2013), was integrated into all the task-sharing interventions and both health system training programmes, as were components of psychoeducation (Anderson et al., 1980; Sarkhel et al., 2020) and basic counselling skills (Rogers, 1986; 1957). Components of Behavioural Activation (BA) (Beck, 1964, 1970) were included in four of the six task-sharing intervention manuals and Cognitive Behavioural Therapy (CBT) (Beck, 1964; 1970) was incorporated into three of the six. To promote resilience, adjunct components, also known as "additional counselling techniques", were used concurrently with the primary treatment component in five of the task-sharing intervention manuals. Common adjunct components included relaxation techniques, engaging social support, and enhancing safety. Basic counselling skills, also termed "communication skills", were integrated into all the counselling training manuals to train the lay health workers. Similarly, the two primary health in-service training programmes also included a module on basic counselling skills, such as verbal (non-judgemental attitude, asking open-ended questions) and non-verbal communication (body language), and confidentiality, to enhance health worker-patient interactions. In addition, the training programme also included a section on mental health psychoeducation and engaging support through an integrated problem-solving method. Adult based learning principles, which involves learning through experiences (Bryan et al., 2009), informed the task-sharing training manuals. To promote adult-based learning, various context relevant scenarios, group activities, and illustrations were integrated into the training manuals. Furthermore, the findings indicate that PST was the most common therapeutic technique adopted as either a primary (as a core treatment approach) or secondary treatment approach (as an additional skill to enhance coping) across all the interventions. The reasons for selecting PST as a treatment method may be that it is a safe and empirically supported approach, suitable for task-sharing (Chibanda, 2017), and is as effective as other evidence-based psychosocial therapies in reducing distress, particularly depression (Bell & D'Zurilla, 2009; Hamdani et al., 2017). Another important point to consider is the link between

psychological distress and socio-economic adversities (such as unemployment, poverty, lack of education, housing difficulties, interpersonal conflict, or other unexpected life challenges) that are highly prevalent in low-resourced communities in South Africa and other LMICs (Fisher et al., 2012; Hartley et al., 2011; Kazi et al., 2006; Lund et al., 2010; Sawyer et al., 2018; Walker et al., 2007). The PST method, or adaptations thereof, strives to enhance an individual's capacity to manage socio-economic problems and engage with opportunities to improve difficult situations. The process involves identifying and defining the problem that is causing distress, generating possible solutions, deciding on the most achievable or realistic solution, implementing an action plan to operationalise the solution, and then evaluating the implementation thereof (D'Zurilla & Goldfried, 1971; Egan 1998; 2013). This step-by-step approach makes positive change seem more manageable within a specific timeframe and context. In turn, engaging in this form of support can help to regain a sense of control and agency over life problems, which is an important factor for improving symptoms of depression (Seligman, 1975). A South African pilot study described PST as "taking control", and found an adapted shortened version of PST, delivered in a manualised and group format, feasible, effective, and an acceptable treatment for CMDs in four low-resourced communities of Cape Town (van't Hof et al., 2011). Another therapeutic intervention designed to reduce substance use amongst low-resourced communities in South Africa, showed that a blended motivational interviewing and problem-solving approach was more effective than motivational interviewing alone (Sorsdahl et al., 2015).

In addition to problem-solving, BA was the primary treatment approach for one intervention while an additional three designs integrated components of this method. BA is an effective structured therapeutic technique used to treat depression (Dimidjian et al., 2017). This approach suggests that an individual is depressed due to life changes or maladaptive behaviours (e.g., withdrawal, reduced activity, or avoidance). The treatment involves targeting reduced activity and promoting behavioural change by developing a personalised plan to re-engage with activities that will promote joy and/or achievement (Chan et al., 2017; Cuijpers et al., 2006). A randomised clinical trial designed to evaluate the effectiveness of BA amongst depressed pregnant women attending healthcare facilities in the United States found BA to be an effective treatment modality for depression, anxiety, and stress symptoms (Dimidjian et al., 2017). In South Africa, Magidson et al., (2019) found an adapted version of BA appropriate and acceptable to treat substance use amongst HIV patients in low-resourced communities. However, the efficacy of this intervention had not been tested at the time of publication (Magidson et al., 2019).

CBT was the primary treatment approach for one intervention while two intervention designs incorporated elements of CBT as part of a blended intervention design. A CBT approach assumes that unhelpful thought patterns have a negative influence on feelings and behaviour. Treatment involves using strategies to identify and change these negative thoughts patterns and, in this way, regulate emotional responses and manage unhelpful behaviour (Dobson, 2008; Woolman et al., 2010). A systematic review by Verhey et al., (2020) found a CBT approach feasible, acceptable, and appropriate, while various other task-sharing studies effectively adapted this approach to treat CMDs and substance-use disorders in LMICs (Hofmann et al., 2012; Murray et al., 2015; Rahman, 2008; Verhey et al., 2020; Wiles et al., 2012). Similarly, in South Africa, a Cape Town clinic-based CBT treatment for HIV adherence and depression, adapted to two local low-resourced settings, showed that a CBT strategy was accepted and effectively promoted the overall well-being and functioning of the participants (Everitt-Penhale et al., 2019).

In addition to the theoretical approaches that informed the treatment designs, psychoeducation, a process that provides information about a condition to improve knowledge and competence (Anderson et al., 1980; Sarkhel et al., 2020), was integrated into all the interventions. Psychoeducation components focused on priority health and mental health conditions, such as depression, as well as on understanding stress, risk factors, causes, and consequences. Even though limited evidence exists that substantiates the efficacy of psychoeducation, a growing body of knowledge supports this as a feasible treatment method to reduce mild to severe symptoms of distress (Donker et al., 2009; Zhao et al., 2015).

Basic counselling and communication skills such as empathy, listening skills, and attention to non-verbal communication were incorporated into all of the reviewed manuals to enhance empathic psychosocial support and interactions between non-specialist health workers and patients. Spedding et al., (2015) argue for the importance of promoting basic counselling competencies of lay health workers to enhance overall interactions and promote therapeutic processes in task-sharing interventions for mental health (Spedding et al., 2015).

In light of the above discussion, a brief summary of the findings is provided next.

4.1.3 Summary of Phase one

The findings suggest that the overall structure and duration of the counselling interventions varied widely between 6 to 15 sessions. The duration and frequency of a counselling session was predicted by the selected therapeutic model and specific intervention design. PST and psychoeducation formed part of all the intervention designs. While PST

mostly focused on managing the negative effects of stressful events and improving coping skills, psychoeducation involved information about mental health and associated symptoms. Basic counselling skills were included in all intervention designs to promote the verbal and non-verbal communication skills of lay health workers. Additional evidence-based approaches included in selected interventions were BA and CBT. BA focused on promoting activity levels to improve mood, while CBT strategies focused on negative automatic thoughts triggered by life challenges. Adjunct treatments formed part of most of the intervention designs and were included to promote coping or enhance safety. Having introduced and discussed Phase one in section 4.1 above, attention now shifts to Phase two.

4.2 Phase Two: Interviews with Primary Health Care Providers and Users

This section introduces Phase two – interviews with primary health care providers and users. Included is a discussion of the findings supported by participant excerpts. The themes and sub-themes that emerged during this phase of the research are also presented. Finally, a brief summary of the findings concludes this section.

4.2.1 Introduction

Phase two involved qualitative interviews that were conducted with nine facility-based professional health workers (professional nurses), 11 facility-based non-specialist health workers (lay counsellors), and 37 health service users (pregnant women with mild to moderate symptoms of depression and anxiety) attending MOUs for routine clinic visits. As discussed in the preceding chapter, a thematic framework analysis involving a five-step process was followed to analyse the data (Lacy & Luff, 2009). After a comprehensive analysis of the data, the findings were interpreted and the following thematic areas were identified: understanding of depression and anxiety; causes of symptoms of depression and anxiety; coping mechanisms; and the value of counselling as a form of support. Each thematic area had a number of themes and sub-themes, as discussed below.

4.2.2 Findings

A summary of the thematic areas and themes that emerged are outlined in Table 4.2 below. The proportions of study participants who reported certain themes are presented in the narrative description that follows, but it must be noted that the denominator varies across themes, according to the number of pregnant women that were asked a specific question. A detailed description of how findings informed the pilot intervention design and counselling content will be discussed in the development of the counselling intervention and training manual section.

Table 4.2: Outline of thematic areas and themes

Thematic areas	Themes
1. Understanding of depression and anxiety	Physical and behavioural signs and symptoms Emotional signs and symptoms Cognitive signs and symptoms Inability to recognise signs and symptoms Contextual descriptions and metaphors
2. Causes of symptoms of depression and anxiety	Social circumstances Unintended pregnancy as a stressor Interpersonal conflict, domestic violence and abuse
3. Coping mechanisms	Support from significant others Engaging in activity
4. Perceived value of counselling support	

4.2.2.1 Thematic area 1: Understanding of depression and anxiety

The first thematic area encompassed health service providers' (facility-based professional and lay health workers) and health service users' (pregnant women with mild to moderate symptoms of depression and anxiety) understanding of depression and anxiety. Participants shared their understanding of signs, symptoms, and experiences of depression and anxiety based on their knowledge, work experiences, or personal experiences with perinatal mental health, through the following four themes: *physical and behavioural signs and symptoms; emotional signs and symptoms; cognitive signs and symptoms; inability to recognise signs and symptoms;* and *contextual descriptions and metaphors.* These are described in more detail below.

Physical & behavioural signs and symptoms

Lay and professional health workers commonly described perinatal symptoms (during pregnancy and after birth) of depression that can be grouped together as physical and/or behavioural signs, such as tiredness, increased sleep, lack of self-care, social withdrawal, crying, and a change in usual daily functioning (15/20):

> *"It [depression] involves crying, suicide, you withdraw and don't talk, you want to sleep, you stop brushing your teeth and hair" (Lay health worker BL01).*

"Feeling down, not wanting to do things they usually do, not understanding why, not wanting to get up, avoiding your questions, withdraw, crying" (Lay health worker HP04).

One professional health worker used the following example to explain how a depressed perinatal mother typically presents during a clinic visit:

"[A depressed mother would say] I don't want to go out anymore, do things with my family and friends, talk to my husband, he wants to know why I am looking like this. I don't cook, I don't clean, I don't bath my children, I don't listen to them, I feel irritable and have outbursts. Signs [I look for is] not eating, not sleeping, suicidal ideation, interfering with normal functioning"(Professional health worker HP05).

Similar to these findings, pregnant women more frequently reported experiencing symptoms of depression in behavioural terms (28/37). This mainly involved a change in usual behaviour due to a lack of energy and tiredness (15/28); social withdrawal from family and friends (13/28); intermittent crying spells without any particular reason (13/28); change in eating and sleeping patterns (11/28); and outbursts (5/28):

"I don't cook, I don't clean, I don't bath my children, I don't listen to them, I feel irritable and have outbursts. I don't want to go out anymore, do things with my family and friends, talk to my husband" (Pregnant woman HHP05).

"I was very depressed. I was crying all the time…" (Pregnant woman VNP53).
"I stress a lot with my son, yes, shout at him a lot and so because it is like the things that he do[es], it is almost like it gets on my nerves" (Pregnant woman HHP05).

"I am normally the bubbly one and talks a lot and everyone would know when I am there but for the past few months, honestly, people, and I do not blame them for seeing a change in me. It is like I am being drawn into the background. I am just taking myself away from everyone" (Pregnant woman HHP07).

Physical complaints such as headaches (5/28) and self-harm (3/28) were less commonly reported:

"I get these headaches [when stressed] sometimes"(Pregnant woman HHP07).

"With my younger child [previous pregnancy] at a time I felt depressed and I felt like cutting myself in the stomach" (Pregnant woman VNP05).

Furthermore, the findings suggest that the health workers' main observations and descriptions of perinatal depression, which emphasised behavioural and physical symptoms, closely matched the experiences and descriptions of depression shared by pregnant women. Common signs and symptoms described by both participant groups included reduced activity levels (or tiredness), lack of interest in usual daily tasks, and social isolation.

Emotional signs and symptoms

In line with their understanding of depression and anxiety, all the participants were asked what words they would use to describe depression and anxiety. Professional health workers associated words such as feeling "down" (3/9); "sad" (3/9); "hopeless" (1/9) and "irritable" (2/9) to depression; and "overwhelmed" (4/9); "panic" (4/9); "worry" (6/9); and "nervous"(1/9) to anxiety. Only one professional health worker was less clear in her description as illustrated below:

"Depression is similar to anxiety; you feel tired and can't sleep" (Professional health worker HP02).

Lay health workers were inclined to describe experiences of depression using local terms or metaphors (see section on 'contextual descriptions and metaphors' below). They also referred to depression as a sense of feeling "sad' or "down" (3/11). Only a few lay health workers were familiar with the signs and symptoms of anxiety (3/11):

"When you are feeling flushed, you have to remember to breath; you can see it on someone's face, a person feels worked up"(Lay health worker BL01).

While most others vaguely distinguished between anxiety and depression (8/11):

"The person is 'itchy'. You can see they are uncomfortable, quiet, and withdrawn, have no patience and don't want to touch the baby, similar to depression" (Lay health worker BLO2).

Similar to the health workers, pregnant women referred to feeling "sad" (9/37) and "down" (9/37), but some also used words such as "alone" (5/37) and "angry" (4/37) to describe how they feel when in a depressive state. Anxiety was associated to feeling "stressed" (8/37), "nervous" (6/37), "scared" (6/37), and "worried" (1/37). However, some pregnant women used the word "stressed" interchangeably to describe both depression and anxiety (6/37).

"I think when you have depression you stress too much" (Pregnant woman HPP33).

"I would say it [depression] is like stress" (Pregnant woman VNP08).

In addition, the findings suggest that even though a range of context relevant words were used to describe depression and anxiety, health service providers and users alike preferred words such as "sad" or "down" for depression and "stressed" for anxiety.

Cognitive signs and symptoms

Even though health workers less frequently associated depression or anxiety with cognitive signs and symptoms, some related a "negative state of mind" and "preoccupied thoughts" to depression (7/37), as illustrated in the three excerpts below:

"You have a bleak outlook on life" (Professional health worker VN01).

"You look at the dark side of things" (Lay health worker VN05).

"She [pregnant woman] will stare at one place and her mind is preoccupied" (Professional health worker VN06).

A few pregnant women correlated symptoms of depression and anxiety with "preoccupied" or "ruminating thoughts" (11/37):

"Sometimes it's just randomly [the thoughts] and then I just lay. I think about things and then I start crying or I just feel sad [the] whole day" (Pregnant woman HPP48).

"I have been thinking a lot, like thinking non-stop…" (Pregnant woman HPP19).

"When I think of the future, I do not know why, as I am talking to you now, it is actually making me anxious because I am not sure. I do not know if when I am not there one day, if my son will be fine, if my kids will be fine, will they be loved, will they be taken care of?" (Pregnant woman MCP06) .

Inability to recognise signs and symptoms

Supporting the view of a few professional health workers who reported that pregnant women often don't understand their symptoms or know why they are feeling the way that they do (4/37), this study also found that some pregnant women participants were unable to identify or elaborate on their symptoms or provide a reason for the change in their feelings and behaviour (8/37). This sentiment is captured in the excepts below:

"I have asked myself that question [why I am behaving this way?] a lot of times because as I told you, I wake up like that" (Perinatal woman MCP08).

"I don't know [if I am depressed]. I do not think so because I am handling it, but I do not know" (Pregnant woman BLP10).

"There was a time where I did not want anyone around me at all, and I would literally sit on the sofa alone and just cry and I would not know why I am crying (Pregnant woman MCP06).

While some of the pregnant women were uncertain of the difference between depression and anxiety, others struggled to identify how they are feeling or why they are feeling the way that they do. Pregnant mothers that generally struggled to identify or link symptoms to depression or anxiety also felt a sense of hopelessness. These participants lacked a framework to interpret and understand their experiences and make sense of why they are feeling this way.

Contextual descriptions and metaphors

Participants commonly demonstrated their understanding of depression and anxiety through metaphors rather than using symptom terms (8/11):

> *"She* [*pregnant women*] *is in a dark hole and can't get out, not by herself. She is fidgety and thinking where I can go, what can I do and looking for solutions" (Lay health worker BL03).*

> *"When everything is too much, you feel there is no way out, you feel that you are in a rut, you are stuck" (Lay health worker VN04).*

> *"Depression feels like you are stuck in a dark place, you cannot get out. You cannot see a way out because I felt that there is no way out, you are suffocating. You are always tired and just want to sleep" (Pregnant woman MCP08).*

Even though professional health workers demonstrated clinical knowledge of depression and anxiety, it was interesting to note that they also used context relevant descriptions similar to that of lay health workers and pregnant women, as illustrated in the following two examples:

> *"[When depressed] You can't face a new day, everything is just too much" (Professional health worker BL05).*

> "*You want to sit in the corner by yourself and not see the rest of the world (Professional health HP01).*

Similarly, one pregnant woman also used the metaphor of being "stuck in a dark place" to describe depression:

> *"You are in this dark place; you cannot get out. You are in this dark place" (Pregnant woman MCP08).*

Even though the findings reveal that both lay health workers and pregnant women employed metaphors to describe their perceptions of distress, comparing the experience to "being in a dark place" or "a hole" stood out the most.

4.2.2.2 Thematic area 2: Causes of symptoms of depression and anxiety

The second thematic area reflected health service providers' and users' perceptions and experiences of the causes of depression and anxiety through the following three themes: *social circumstances*, unintended pregnancy as a stressor, and *interpersonal conflict, domestic violence and abuse.* The denominator varies across the themes, according to the number of pregnant women that were asked a specific question.

Social circumstances

Both health workers and pregnant mothers expressed that a high level of unemployment amongst pregnant mothers caused them to be reliant on family members or a partner to meet their basic needs such as food, clothing, and shelter. This level of dependency on others left some pregnant women (9/24) feeling stuck with stressful home circumstances and little hope for change. In this regard, the comments of some of the pregnant women are captured below:

> *"Because I do not have a proper income and I do not work, and my mommy wants money that I do not have… I have a lot of stress with money stress. I do not work, and my mommy is also going on" (Pregnant woman BLP5).*

> *"Financially, we are actually both [husband and wife] unstable. So, that is the main reason for stress and depression" (Pregnant woman BLP30).*

> *"I [am] feeling shame about me because I have a lot of children and I am still young, and I am not working. I am not even on grant" (Pregnant woman HPP21).*

Similarly, health workers expressed that narratives about unemployment were commonly shared by antenatal and postnatal women (14/20) during routine clinic visits.

> *"We [the antenatal nurses] often hear, I am unemployed, my husband is unemployed, and the pregnancy is unwanted" (Professional health worker VN02).*

"It is mostly money, you know with being dependent on the husband, the husband is working. So, I [a perinatal woman] will rather go through all these things here but as long as I [a perinatal woman] have a place to stay" (Lay health worker VN05).

Due to the fact that pregnant women often live with family, challenging living conditions, such as overcrowding and lack of access to basic resources, were commonly reported frustrations (11/24):

"You just stay in your side where you stay in the yard and you use an "emmertjie" [bucket] to pee, or get your bottle to drink or fetch your water, or go collect by the people in the street for your water because your mommy do[es] not want you in the house for water and to use [the] toilet, and so on. So, it is a lot of stress for me. Sometimes they pull out my plug because I do not have money to buy electricity. Then I must just lay there in the dark, there is nothing I can do about that" (Pregnant woman BLP03).

Unintended pregnancy as a stressor

Although all the pregnant women reported unintended pregnancies (37/37), most of them accepted the pregnancy; however, a few were anxious or "stressed" about the future and providing for the child (8/37):

"When I think of the future, I do not know why, as I am talking to you now, it is actually making me anxious because I am not sure. I do not know if when I am not there one day, if my son will be fine, if my kids will be fine…" (Pregnant woman MCP06).

"[I am] disappointed. It was not what I wanted now, because why, I just started to begin to enjoy life and it made sense and now I have a baby. But like they say, this was meant to be …" (Pregnant woman BLP05).

While most of the pregnant women felt that they could rely on at least one family member to support them through the pregnancy (25/37), others experienced a lack of emotional and

physical support from family (e.g., someone to talk to that will not judge them) and/or a partner (e.g., that can offer financial support or help with the baby), exacerbating their feelings of distress (12/37).

> *"It hurts because, I mean, we are family. We are supposed to look out for each other. We live in the same house; we live on the same yard. How can you take my hand and then stab me with the other hand? So that is why I pulled myself away from them [and don't talk about the pregnancy]" (Pregnant woman BLP30).*

> *"I was worried because the father is maybe not going to support me when I am not even going to my peace job. I have an infant so; I did think he was going to support this child if he is not giving me the money for the child. So, that is why I worry" (Pregnant woman HPP01).*

Interpersonal conflict, domestic violence and abuse

Some participants reported that challenging life circumstances are often a catalyst for disagreements between family (11/24). The findings suggest that financial pressure because of unemployment, struggles to meet basic needs (9/24), and substance abuse (9/24) were the main drivers of domestic violence and abuse, as illustrated in the following examples:

> *"I am not happy with that [living with her mother] and my mommy is going on every day about money and food, and 'jasis', it is so a lot of stress at home" (Pregnant woman BLP03).*

> *"I can just see money that can go for other stuff, is going for substance abuse" (Pregnant woman VNP53).*

Verbal abuse in the home environment by a partner or family members was commonly reported by participants (11/24). In some cases, this was a regular occurrence, while at other times verbal abuse intensified when a boyfriend or husband had been drinking, or at the end of a month when a mother sought a financial contribution towards the household. Verbal abuse mainly comprised swearing and shouting, but in some cases, it also included emotional abuse such as name calling or blaming a mother for falling pregnant:

"He [her boyfriend] started drinking during the week and he was rude when he came home. Not rude like hit me or stuff like that but with words. The talking is rude. He does not have a way of talking, then the next day he wants to apologise for stuff he said" (Pregnant woman VNP15).

"She [boyfriend's mother] does it [argue and cause conflict] with everybody ... She does not care about other people's feelings" (Pregnant woman HPP33).

A large proportion of the pregnant mothers (11/24) reported previous or recent experiences of physical violence in the home environment, with financial pressure, infidelity, and family conflict being the main drivers. In all these cases, the violence involved a partner or husband:

"He [the boyfriend] just gives me strong words when I try to stop him; he become[s] angry and then he hit[s] me" (Pregnant woman VNP30).

"We were arguing about his cousin and he [the boyfriend] start[ed] hitting me, slapping me, kicking me, choking me. I was trying to fight back but that made him more angry. He used to abuse me before, but that was a year ago" (Pregnant woman BLP26).

From a health worker's perspective, it was interesting to note that even at times when a health worker suspected physical violence during routine clinic visits, perinatal women were reluctant to disclose such incidences or they would refuse to take action against the perpetrator. Health workers perceived the reasons for this to be a fear of the consequences, such as being kicked out of the house and the possibility of a criminal record against the perpetrator that could affect employability (10/20):

"Some of the ladies just don't talk about physical abuse or violence" (Professional health worker BL05).

"The men beat their women but then the women don't want to hear nothing about the men. If we want to do something, then she will say, no" (Professional health worker BL03).

"Not all of them are gonna tell you about it. You know. They don't usually speak about it. And when they do, it's ... they're obviously ashamed ..." (Professional health worker HP04)

In some cases, perinatal mothers would make excuses or minimise abusive behaviour, as reflected in the following quote by a professional health worker:

"They [perinatal women] will say, "he did not mean to do it", you know, "he did not mean to do it", or the next time she will say, "sister, he actually apologised"(Professional health worker VN02).

Attention now shifts to a discussion of Theme 3 and its related sub-themes that emerged during the data analysis.

4.2.2.3 Theme 3: Coping mechanisms

The third thematic area reflected the strategies used by health service users to manage distress caused by social adversities and interpersonal conflict. Participants shared accessible ways of coping most useful to them, given their unique circumstances, through the following two sub-themes: *support from a significant other* and *engaging in activity.*

Support from significant others

While most pregnant mothers reported living in challenging home environments and lacked support from family (12/37), most were able to identify at least one significant other such as a mother, sister, partner, or friend as a source of support during challenging times (24/37):

"My mommy calms me down when I am stressed. She would tell me I must count to 10, breath in and out, and she would do it with me" (Perinatal mother MCP06).

"I always sit by my one cousin's house and I go complain there by them" (Perinatal mother MCP06).

"Then I sit there and I wait for my boyfriend to come, and I just go by him somewhere else, and I am not going home anymore. Then I sit there, when it is time to go sleep, then we go in"(Perinatal mother BLP03).

This indicates that being able to identify a supportive person in their naturally occurring social network was an important source of support for pregnant women. Despite the social withdrawal and feelings of hopelessness that often form part of the depression experience, many participants were able to mobilise one supportive relationship to help them cope.

Engaging in activity

Some health service users indicated that they found it helpful to engage in some form of activity, ranging from reading and sport to socialising with family or friends (10/37):

"I am the eldest there and I can play table tennis, do you understand? Now, maybe an hour or half an hour I will spend after work there. Just to release and laugh a little bit and so" (Perinatal mother BLP05).

"I was a very active person. I used to do exercises and things like that. So, when I was pregnant with my firstborn, I would literally take walks. I would put on my running shoes and put on my tights and I would take a walk. It really helps me, and you are alone. You are thinking and you release all those negative thoughts … someone can swear at me and I would 'ag, whatever'. I would not care" (Perinatal mother MCP06).

"To see them [her children] play, the memory of them, seeing them play, seeing them laugh. I felt relaxed again. I read a lot as I said already … the reading is taking [me] away from the reality" (Perinatal mother MCP06).

Moreover, some pregnant women relied strongly on their faith to get them through challenging times. Thus, they were less inclined to engage in activities other than prayer or attending church (7/37):

"So, I pray, then I say: 'God, please, I do not want to feel like this, take this feeling away because I am going to be like this the whole day or maybe another day'" (Pregnant woman VNP08).

"Church is a big support for me" (Perinatal woman VNP08).

Pregnant women demonstrated a strong ability to cope with difficult life circumstances and distress. In addition to employing various coping strategies, they provided examples of appropriate and suitable engagements and activities to manage distress within given contexts. In turn, existing ways of coping provides a framework to enhance current or introduce new ways of coping.

Perceived value of counselling support

The fourth thematic area reflected health service users' views on counselling as an acceptable form of mental health support. Pregnant women were asked whether they think counselling would be an acceptable form of support for symptoms of depression, anxiety, or experiences of violence. Almost all of the participants found counselling helpful (36/37). To promote uptake, it was also important to understand which aspects of the counselling were valued most. Amongst this population, the value of counselling was found in having a trusted person that will listen to you without judgement, relating closely to the characteristics of a counsellor. Interestingly, all of the pregnant women who were less likely to share their problems with family or friends (17/37), accepted counselling as an effective form of support and demonstrated a willingness to attend counselling (16/37):

"I think it would be good, yes, because talking about it makes you feel much better, and for me, talking to a stranger is much better than talking to people that knows you" (Pregnant woman HHP32).

"It [talking about the situation] hurt[s]. It actually, it shows me how much I have been hiding and how much it really affects me without me actually knowing about it" (Pregnant woman MCP15).

Other health service users felt that family and friends often gave them "advice" instead of listening to them, and found a non-judgemental attitude and willingness to listen valuable components of counselling:

> *"Sometimes you do not need advice, you just need somebody to listen. And then afterwards, that person can then say something and that something will make a lot of sense to you. Maybe by you thinking too much and trying to analyse every problem you have on your own will not help always. You need the next person's perspective also to see life in a more different way" (Pregnant woman BLP05).*

> *"… because then there is someone that listens to you. You see, besides your mommy, because they [she] will tell you something, 'ag, it is fine, it will be ok'. It is always like that. But then you have someone that speaks positive stuff to you (that can help)" (Pregnant mother VNP32).*

Participants' emphasis on active listening skills, a space to share thoughts and feelings, and confidentiality, correspond well with non-specific counselling components that are associated with the characteristics of a counsellor, such as the ability to demonstrate a warm and caring attitude, empathy, acceptance, trust, respect, and genuineness.

In overview, the findings from both Phase one (manual review and associated literature) and Phase two (qualitative interviews) highlighted the importance of the therapeutic relationship. It is therefore suggested that the incorporation of non-specific treatment components as part of an evidence-based therapeutic intervention could benefit the overall delivery of the evidence-based intervention.

4.2.3 Summary of Phase two

Facility-based health workers described their understanding of CMDs with associated symptoms, causes, and common forms of violence observed in the community and clinic settings. In turn, pregnant women described experiences of symptoms and perceived causes from their own perspectives. Similarities between health service providers' and users' perceptions and descriptions were explored. The findings suggest that the participants frequently associated depression with physical and behavioural symptoms, particularly lack of activity and withdrawal. This indicates that a behavioural activation would be useful to, and valued by, both service providers and service users. Social adversities and stressful life

events such as unintended pregnancies, overcrowding, unemployment, interpersonal conflict, and a lack of support were perceived by both health workers and pregnant women as linked to depression and anxiety. Verbal and physical abuse, exacerbated by substance abuse, were identified as common forms of abuse experienced by pregnant mothers. These findings suggest that a problem-solving approach, aimed at capacitating pregnant mothers with skills to address multiple forms of adversity in their lives, would be valuable. While the interviews revealed that some of the pregnant women in this setting struggled to understand what they were experiencing, others reported feeling "different" but were unable to elaborate on the reason for their physical and emotional change. The word "stressed" was frequently used as an overarching term to describe either symptoms of depression or anxiety. This finding indicates that psychoeducation about the nature of depression and anxiety, their causes and their treatment, would be useful for helping pregnant women better understand their symptoms and how these could be addressed. Even though the health workers felt that the pregnant mothers struggled to cope with their adverse circumstances, the majority showed an ability to engage in some coping strategies to try to manage their distress (primarily seeking social support and engaging in meaningful activities). All of the participants felt that counselling would be helpful. Finally, the interviews highlighted some local metaphors for describing depression and anxiety that could be incorporated into a local intervention.

Having presented Phase two in the sections above, describing the thematic areas and themes, and summarising the core findings of the phase, the focus now shifts to Phase three of the research, which is presented below.

4.3 Phase Three: Health System Stakeholder Engagements

This section presents Phase three of the research which comprises health system stakeholder engagements. Following the brief introduction below, a description of multiple stakeholder engagements is provided, along with a discussion of the main outcomes thereof in terms of health system needs.

4.3.1 Introduction

Evidence suggests that health systems, described by the WHO as resources, institutions, and organisations aimed at improving health through responsive, affordable, and quality healthcare, play an important role in making health service interventions more accessible to low-resourced communities in LMICs (Semrau et al., 2015). Therefore, a sustainable and scalable mental health intervention needs to form part of routine primary health care services. Cuipers et al., (2016) corroborate the importance of a thorough

investigation of health system processes to understand how best to integrate an intervention into primary health care. In the current study, multi-sector stakeholder meetings formed a critical part of the intervention development. This process involved iterative engagements at district, facility, and community levels. A breakdown of these processes is detailed in the following section.

4.3.2 Description of multiple stakeholder engagements

District-level decision makers included senior managers that represented the four sub-districts, with knowledge of facility and community health policies, processes, and challenges. Meeting discussions and feedback confirmed the lack of, and need for, standardised routine maternal mental health counselling care. From these engagements, it emerged that a prominent primary health care challenge is the scarcity of professional human resources to deliver mental health counselling and the high workloads of lay health workers. In turn, senior managers indicated that primary healthcare systems were moving towards a community-based approach and that this involved phasing out facility-based lay health workers. In line with this approach, the National Department of Health introduced a new community-based programme to extend basic health services from the facility to the community. This initiative involved the rollout of the first national community health worker programme called "ward-based outreach teams" (WBOTs). These teams consisted of CHWs trained by the Department of Health training centres to deliver integrated community-based health programmes, under the guidance of a professional nurse, called an "outreach team lead" (OTL).

Facility-level engagements involved various staff members responsible for the implementation of policies, procedures, and operations, such as facility managers, antenatal nurses, and lay counsellors. Feedback at this level suggested that depression and anxiety was a common occurrence amongst perinatal mothers, mainly due to contextual challenges associated with low socio-economic communities. In turn, the high workload of professional and lay health workers remained a common concern. Although some felt that the new initiative to introduce integrated care at house-hold level will require more time to get used to, offering counselling support at community-level was strongly supported and viewed as an opportunity to decant supportive services, and in this way, support facility-based functions.

Community-level collaborations involved managers and OTLs from NPOs linked to the respective facilities. Engagements with community organisations and service delivery role-players clarified the implementation details of the WBOTs and identified community-based challenges and needs. Community-based management teams recognised the need for a mental

health counselling component to enhance existing integrated community-based treatment programmes. While the WBOT programmes include maternal mental health psychoeducation and a direct referral to the clinic, they lack an evidence-based counselling component. High workloads of non-specialist health workers were emphasised as an ongoing concern and careful thought had to be given to the type of evidence-intervention (difficulty level), training requirements, and length of the intervention design and duration of a session (Aitken, 2013).

Role-players, on all respective levels, considered the newly introduced community health worker programme as a suitable platform to introduce a mental health component and CHWs from WBOTs as the best suited delivery agent. The main drivers that supported these recommendations were as follows: The introduction of a brief task-sharing evidence-based counselling intervention can help to: (1) supplement the skills of CHWs already in contact with perinatal mothers through home-based visits, and (2) promote access to maternal mental health treatment for mild to moderate symptoms of perinatal depression and anxiety as part of routine care. The community health worker programme involves the delivery of integrated care programmes which include TB/HIV, hypertension, diabetes, and maternal and child health care (e.g., postnatal care and keeping track of clinic visits). To deliver these programmes, CHWs receive training that involves seven core community-based service delivery skills: confidentiality and ethical work, health promotion, communication skills, screening, tracing and psychosocial support (empathic listening, containing, and referral). These skills set a firm foundation for developing further counselling skills, and therefore, could serve as a prerequisite for counselling training. The counselling intervention served to complement the WBOT in-service programme psychosocial component.

4.3.3 Main outcomes of stakeholder engagement and health system needs

While stakeholder recommendations on all three levels predicted the best suited delivery agent and setting, the duration of the intervention design had to be negotiated and adapted to align with health system needs. Informed by findings from the manual review and two evidence-based task-sharing study-led problem-solving interventions, an initial six-session intervention design was proposed as a suitable framework to integrate psychoeducation and behavioural activation components, as well as three problem-solving sessions and one termination session. However, all stakeholders expressed concern over the high workload of both professional and lay health workers. For example, facility-based health workers, such as Antenatal Care (ANC) nurses, expressed concern about their heavy workload and felt that large patient numbers allowed them limited time with each patient. Therefore, the integration of a

counselling component to the ANC portfolio was not feasible. CHWs were best suited, and motivated, to offer counselling support as part of their portfolio, however, on condition that the counselling programme complement the WBOTs community health worker portfolio and not extended their existing workload.

In addition to informing the overall intervention design collaborations with the relevant role-players promoted stakeholder buy-in and provided insights into health system management processes that could potentially support or challenge the integration of a maternal mental health counselling intervention into routine health care.

This concludes the introduction and discussion of Phases one (section 4.1), two (section 4.2) and three (section 4.3) and their related themes that emerged from the analysis of the data. Building on the findings of these three phases, a pilot counselling intervention and training manual was developed. This is described in more detail in the sections that follow.

4.4 Development of a Pilot Counselling Intervention and Training Manual

4.4.1 Introduction

The pilot counselling intervention and training manual was informed by the following three data sources: (1) Phase one – Manual review of similar task-sharing mental health evidence-based interventions designed for communities in South Africa and other LMICs. This phase also included a review of available literature on the efficacy of other treatment specific and blended task-sharing mental health counselling approaches and designs (section 4.1) (2) Phase two – Emerged themes from the semi-structured interviews with the primary health service providers and users of health services provided details on perceived causes and manifestations of depression and anxiety and on valued aspects of a counselling intervention (section 4.2). (3) Phase three – Directives from multi-sector stakeholders guided the length of the overall intervention, including the duration of a session, the choice of delivery agent, and a suitable setting (section 4.3). How these findings relate to the development of the intervention and training manual is discussed in the current section (section 4.4) and its related sub-sections.

4.4.2 Features of the counselling intervention

This section presents the main features of the counselling intervention, focusing on the design and primary approaches that are found to be most suitable.

4.4.2.1 Intervention design and primary approaches

Based on stakeholder recommendations and in line with strengthening existing health service programmes, a brief three-session 45–minute counselling intervention delivered by CHWs on a weekly basis was acceptable to address health system needs. CHWs delivered

individual home visits. Therefore, individual sessions were deemed feasible. Furthermore, the findings from the manual review together with those of the interviews with the pregnant women and health workers, contributed to the design of a specific counselling intervention to address the lived experiences and mood of perinatal women in low-resourced settings. While considering evidence of effective maternal mental health and other task-sharing strategies in LMICs, appropriate counselling strategies for this specific intervention were ultimately determined by the participants' views and needs, and adapted to the given context, as follows:

PST was selected as the best suited approach to address challenging life experiences, for example, unemployment, and unfavourable living conditions, such as overcrowding, interpersonal conflict and abuse, lack of support, and unintended pregnancies, identified through qualitative processes with pregnant women. These social adversities were key precipitating factors of depression and anxiety during and after pregnancy. In support of the efficacy of this evidence-based strategy, particularly in a task-sharing intervention, various studies (Bell & D'Zurilla, 2009; Chibanda, 2011; Hamdani et al., 2017; Sorsdahl et al., 2015) have found PST a safe and empirically supported approach suitable for task-sharing, and as effective as other evidence-based psychosocial therapies in reducing distress, particularly depression associated with life difficulties, HIV, substance abuse, or other interpersonal difficulties (Bell & D'Zurilla, 2009; Chibanda, 2011; Hamdani et al., 2017; Sorsdahl et al., 2015).

Furthermore, BA was selected as the best suited strategy to address reduced activity levels, social withdrawal, and re-engage perinatal mothers with usual activities to improve mood, common symptoms identified through qualitative processes with pregnant women and health workers. Not only is BA user-friendly, but it has also proven to be highly effective in reducing social isolation; increasing social engagement; promoting daily activity; reducing symptoms of depression, anxiety, and stress during pregnancy (Dimidjian et al., 2017); and treating moderate to severe symptoms of depression amongst adult populations in low-resourced communities of LMICs (Patel et al., 2017). To adapt this component to local contexts and promote relatability, coping strategies identified in the narratives of the pregnant woman were integrated into context relevant examples to encourage existing coping or boost alternative ways of coping, such as joining a community initiative, knitting for a charity, or going to visit the park.

Additionally, psychoeducation was informed by the findings from the interviews in two ways, namely: (1) Lay health workers were inadequately equipped to identify the difference between depression and anxiety and associated warning signs when working with perinatal

mothers; and (2) Some of the pregnant mothers were unaware of why they feel the way they do or the reason for their symptoms. These findings informed the content of psychoeducation training for lay health workers to promote maternal mental health knowledge. In turn, psychoeducation on maternal mental health for perinatal women, adapted to local contexts, were integrated into the counselling intervention.

To boost existing coping skills, the following two adjunct treatments that were identified in the manual review process were considered as well: (1) mindfulness and belly breathing to manage anxiety, and (2) enhancing social support to promote problem-solving and encourage social engagement. Even though not as prominent as in the manual review, the findings indicated that interpersonal conflict was a commonly cited precipitant of depression and anxiety. Therefore, conflict management was worth considering as an additional tool to effectively manage conflict.

To meet the health system requirement and needs of health service providers and users, these therapeutic components had to be integrated into a three-session intervention design, relevant for local contexts. How this was achieved is described in more detail below.

4.4.3 Counselling session content

This section describes the three sessions and the content thereof. The incorporation of adjunct components, or alternative targeted techniques, are also explained further below.

Session 1 – Psychoeducation and Behavioural Activation

The first session provides an opportunity for the CHW to do psychoeducation on perinatal depression and/or anxiety. This process involves sharing information about symptoms of depression and/or anxiety; validating associated changes in thoughts, feelings, and behaviours; linking possible causes (as identified in the qualitative processes); encouraging treatment; and providing realistic hope. This is followed by an exploration of a woman's unique circumstances and symptoms, and provides an opportunity to share concerns in a confidential space with someone who is trained to listen. To guide a lay health worker and perinatal women through this process, an illustration of a "depression and worry pit" (Figure 4.2) was developed based on a metaphor describing the experience of depression and anxiety as that of being stuck in a dark place or hole.

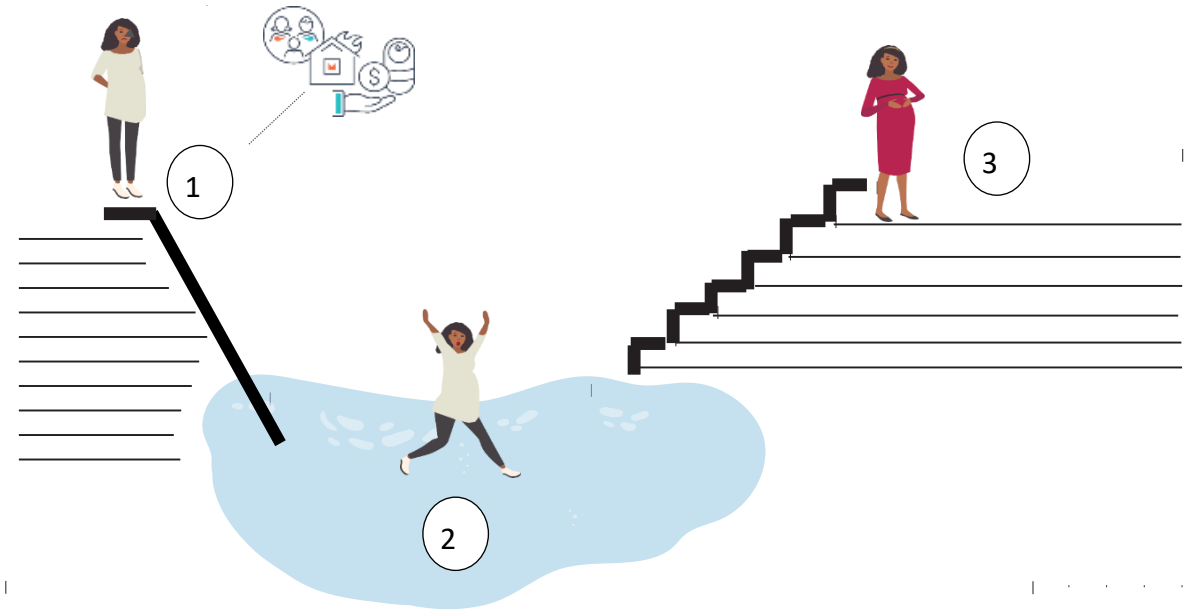

Figure 4.2. The "depression and worry pit"

Based on Figure 4.2 above, the process involves: (1) identifying life difficulties causing distress (the cause of sliding down the pit); (2) exploring thoughts and feelings when feeling "low", "down", or in a "dark place" (feeling stuck in the pit); and (3) incorporating BA, termed "get moving", by collaborating to select activities that provoke a sense of joy and mastery, one step at a time (moving out of the pit). At this point, context relevant examples of coping are incorporated, building on existing coping skills for the women to try at home.

Session 2 – Problem-solving steps

The second session provides an opportunity for the perinatal woman to identify the problems that are causing her distress, understand which problems are within her control to change, and find ways to manage or solve these problems. During this process, the counselling relationship and confidentiality remain important. The problem-solving process has been structured in a stepwise manner that includes the following six steps:

1) *Identifying and describing the problem:* rework the existing problem list created in session one, dividing the problems into those that can be controlled and those that cannot. Immediate problems that the perinatal mother has some influence over are considered. For longer-term problems, alternative referrals might be required. Collaborate to identify and select one problem to work with.
2) *Thinking of solutions:* collaborate, engage, and encourage to identify various solutions that may remedy the problem.

3) *List the positives and negatives:* consider possible solutions, weighing up the positives (pro's) and negatives (con's) of each.
4) *Select the best suited solution:* select the most achievable solution to start with.
5) *Create action steps:* a plan is needed to put the solution into practice. This involves exploring with the women how they can make the solution/plan work. The process includes discussing the best time, place, and who can offer support if needed.
6) *Review:* this forms part of the next session.

Session 3 – Review of action steps and reinforcing steps

The third session is a follow-up of the problem-solving steps to determine whether the perinatal mother was able to put the action steps into practice. If she was able to follow the steps successfully, a new problem can be addressed in the session by following the same steps noted above. If the mother struggled to accomplish the action steps, the same problem must be reworked by exploring alternative solutions. Ultimately, this session aims to reinforce a problem-solving way of thinking and, in this way, facilitate the process of helping the women regain control during a time when various life difficulties may leave her feeling overwhelmed and helpless. As this is the third and final session, CHWs are encouraged to continue brief basic check-ins during ongoing routine visits to encourage perinatal mothers to continue to practice the skills.

Adjunct components (optional)

In addition to the three counselling sessions (primary treatment), alternative targeted techniques were included into the overall intervention design to help regulate feelings and manage challenging situations. The following two adjunct components (secondary treatment) identified in the manual review process were included: (1) mindfulness and belly breathing to manage anxiety (Heermann et al., 2016), and (2) enhancing social support to promote problem-solving and encourage social engagement (Redinger et al., 2018). Even though not as prominent in the manual review, the findings revealed that interpersonal conflict was a commonly cited precipitant of depression and anxiety. Therefore, conflict management was considered as an additional skill to manage conflict. Lastly, the findings also suggested that the lay health workers and pregnant mothers linked ruminating or anxious thoughts with either depression or anxiety. It was therefore deemed important to consider a treatment component that creates awareness of how thought processes can affect feelings and behaviour, and enhance coping through changing unhelpful thinking patterns. As identified in the manual review process and associated literature, CBT is considered a user-friendly and effective primary or

adjunct treatment strategy to address unhelpful thinking patterns and reduce distress (Hofmann et al., 2012; Murray et al., 2015; Rahman et al., 2008 ; Wiles et al., 2012). However, due to the brief nature of this intervention, the study sought to incorporate a CBT component to identify and change unhealthy thinking patterns to reduce distress and promote coping as an adjunct component. In overview, the above noted adjunct components were grouped together as "coping skills" and included in the overall intervention designed as optional elements to promote resilience.

The following coping skills were included:

- Mindfulness and belly breathing (for relaxation)
- Helpful thoughts (to identify and replace unhelpful thinking patterns)
- Social support (to promote social contact and enhance safety if needed)
- Conflict management and communication (to defuse conflict, improve communication, and enhance safety).

The inclusion of these skills meant that CHWs would be trained to understand the rationale of each skill and to identify when to introduce a given skill in a stepwise manner, as part of a session.

4.4.4. Structure of a counselling session

Even though all three sessions had different session goals, they were designed to have a similar five-step structure. The structure of each session integrated basic counselling skills, ethical principles, symptom checks, safety questions, and session goals. The idea behind the five-step structure was to keep the delivery of each session uniform, while reaching all the intended goals of the session and in turn using this format to train a non-specialist health worker to manage a counselling session from the beginning to the end in a professional and ethical manner. The first step of each session consists of an introduction. This step includes building rapport, affirming confidentiality, and conducting a brief assessment and safety check. Step two follows with an explanation of what can be expected of the session before, moving on to steps three and four which encompass specific goals. Step five signals the end of a session and involves the option of introducing a coping skill, followed by a summary of the session, encouragement, and providing realistic hope. It also confirms the logistics of the next session. This structured approach to counselling helps to reach session goals, aid training processes, encourage and manage fidelity checks, and provide an opportunity for CHWs to have experience that will improve skills and reach a sense of mastery over time. The development of the training manual is discussed next.

4.4.5 CHW counselling manual

The training manual was designed to facilitate the training of CHWs, to serve as a reference guide for ongoing counselling skills development, and to promote fidelity of the intervention (Balaji et al., 2012). In a South African review that suggested low fidelity rates of task-sharing service delivery protocols, Balaji et al., (2012) highlighted the importance of a manual-based protocol to promote fidelity of an intervention (ensuring the content is delivered in the intended way) (Petersen et al., 2014). In turn, a manual-based intervention not only ensures that a protocol can be tested, but also promotes the opportunity for replication and uniform training of non-specialist health workers (Dawson et al., 2015; Spedding et al., 2015). Therefore, the counselling intervention is presented in a manualised format.

The counselling training manual is divided into five sections. The sections are structured in a sequence to facilitate knowledge and skills development of non-specialist health workers before the introduction of the treatment-specific evidence-based counselling intervention and adjunct treatments. The first three sections are intended for the trainees and include psychoeducation, basic counselling skills, and assessment and safety risk. The fourth and fifth sections introduce the counselling intervention in a stepwise manner that clearly illustrates the goals of each session and the five-step structure of each session from start to end. Speaker prompts with examples are included to clearly demonstrate a warm and caring attitude. The content of each section of the manual is developed based on adult-based training methodologies (focused on experiential learning), and comprise a combination of reflective exercises, case-scenarios, group activities, discussion points, role-plays, demonstrations, and illustrations to emphasise key concepts and learning opportunities. A breakdown of the five sections of the training manual is provided below:

Section one: Psychoeducation on maternal mental health

This section provides information to enhance a non-specialist counsellor's awareness and knowledge of maternal depression, anxiety, and experiences of domestic violence.

Section two: The skilled helper

This section provides information about basic counselling skills to develop counselling qualities and communication skills; to promote the counselling relationship; and to deliver the problem-solving steps in a warm and caring manner.

Section three: Assessment and safety risk

This section introduces the type of observation that is necessary to form an overall impression of a perinatal woman, for example, general appearance, and overall health, mood, and

behaviour. It also includes the methods used to gather more information about a perinatal women's symptoms, how long she has been feeling this way, the impact thereof on her life, and exploring existing support. Safety risk questions are also introduced, and an immediate referral safety protocol is included.

Section four: Counselling intervention

This section introduces the three-session counselling intervention and provides a detailed step-by-step guide that takes a counsellor through the aims and objectives of each session in a structured way. Activities are included to help achieve the counselling goals.

Section five: Coping skills

This section provides information, and the application, of four basic coping skills to help manage distress and enhance the problem-solving process.

Having designed the intervention, the content of the counselling sessions, and put together the counselling manual, it was necessary to conduct pilot training to see if any changes or adjustments needed to be made. This is described next.

4.5 Phase four: Pilot Training

This section describes the pilot training process. Following the brief introduction below, the core findings are presented, along with a discussion of the challenges that were experienced.

4.5.1 Introduction

A four-day pilot training was delivered by the researcher, who is a registered counsellor with the Health Professions Council of South Africa (HPCSA), and a certified trainer (SB). CHWs and their respective supervisors (OTLs) were trained together. To encourage experiential learning, the pilot group size was limited to seven participants. Training was guided by the manual and active learning was facilitated through activities such as scenario-based group discussions, trainer demonstrations, role-plays, and interactive participant feedback sessions.

4.5.2 Description of pilot training findings

Session one was well received in that the participants understood the concept of "the depression and worry pit" and could follow the steps as depicted in the illustration. They found the illustration a useful guide to navigate them through psychoeducation and preferred a concrete example instead of simply talking about symptoms. Sessions two and three introduced the rationale and a review of problem-solving, based on the six problem-solving steps. The concept of problem-solving and collaborating with the client, instead of advising the client,

proved difficult to some CHWs at first. Therefore, more time was required to explain the rationale, to demonstrate it practically, and to facilitate practice of it. Most of the participants related better to the concept of problem-solving when using examples of personal experiences or practical problems in their lives, instead of unfamiliar scenarios. A training technique found most effective to introduce the coping skills during the training process involved a three-step process, namely: (1) Introduce rationale, (2) trainer demonstration, and (3) participant role-play and feedback. Participants found the coping skills most helpful and could relate to the personal benefit of belly breathing, mindfulness, and helpful thoughts. Morning debriefing sessions with the participants indicated that the introduction of coping skills increased their level of awareness and ways of coping with their own distress. Some participants shared their narratives of how they applied certain skills during the week. Role-play observations underlined the following two challenges: (1) CHWs consistently veered "off track" during the "information gathering" (assessment) phase at the start of each session; and (2) CHWs found it difficult to contain a "distressed" client during role-plays without giving advice or immediately launching into the problem-solving process on behalf of the "client". These challenges were addressed during training through trainer demonstrations. The penultimate section below provides the final version of the counselling intervention. The information presented is tabled to simplify the data and facilitate comprehension.

4.6 Final Counselling Intervention, Training Manual and Associated Resources

Lessons from the pilot study informed the final version of the counselling intervention design and training manual. The idea of a pocket-size reference guide was viewed as a valuable tool to serve as an in-session "signpost" to promote fidelity to key session goals and help CHWs develop skills over time. To guide the in-session delivery of the assessment process, the option of a pictorial rating scale to track symptom changes between sessions, instead of asking open-ended questions, was discussed with supervisors. A mood assessment rating scale illustration was designed and incorporated into the existing CHW reference guide.

Table 4.3 below provides a breakdown of the final version of the three-session counselling intervention and associated in-session reference guide to support a CHW with the successful delivery of the intervention.

Table 4.3. Overview of final three-session counselling intervention

Session goals	Approach	In-session techniques	In-session reference guide
Session 1 Developing the counselling relationship; educating and identifying unique symptoms; engaging in activity to improve mood.	● Behavioural activation "get moving"	● Psychoeducation ● Basic counselling skills ● Engagement ● Normalise, validate ● Engaging coping skill (optional)	● *Basic assessment:* Pictorial rating scale ● *Common symptoms* List of symptom words ● *Safety:* 3 standard questions Steps to enhance safety ● *Psychoeducation:* Depression and worry pit illustration ● *Activity scheduling options:* Context relevant examples
Session 2 Identifying problems causing distress and finding ways to manage or cope with these problems.	● Problem-solving (introduction) - Identify the problem - Think of solutions - Positives and negatives of each solution - Select the best solution - Create an action plan	● Basic counselling skills ● Problem-solving steps ● Encourage action steps ● Explore barriers ● Engaging coping skill (optional)	● *Basic assessment:* Pictorial rating scale ● *Safety:* 3 standard questions Steps to enhance safety ● *Problem-solving steps:* Question guide ● *Resource guide (referrals)* Local resources

Session 3 Reviewing the action plan and practicing problem-solving skills.	● Problem-solving (review)	● Basic counselling skills ● Problem-solving steps (review) ● Encourage action steps ● Promote daily coping skills and remind of benefits	● *Basic assessment:* Pictorial rating scale ● *Safety:* 3 standard questions Steps to enhance safety ● *Problem-solving steps:* Question guide ● *Resource guide (referrals)* Local resources
Enhancing coping skills (optional)	● Mindfulness and belly breathing ● Helpful thinking ● Social support ● Conflict management		

Based on the insights obtained in the discussions above, some concluding remarks follow next, wrapping up the chapter.

4.7 Conclusion

This chapter presented the main findings of the study. A counselling intervention was designed, piloted, and refined based on the three phases that informed the process, namely: Phase one, which comprised the manual review; Phase two, which comprised interviews with health care providers and users; and Phase three, which consisted of stakeholder engagements. These multiple sources informed the intervention design and development of the training manual presented in this chapter.

CHAPTER 5

DISCUSSION AND CONCLUSION

This final chapter presents an overview of the study's findings, the strengths and limitations of the research and recommendations for future research and the development of interventions in the area of maternal mental health.

Nested within the ASSET study, the aim of this study was to develop a manualised psychological counselling intervention for symptoms of perinatal depression and anxiety, adapted to local contexts and suitable for primary health care service provision in the Western Cape. The development of the intervention and training manual was based on input from various data sources, including: (1) a review of manualised task-sharing psychological interventions (Phase one); (2) semi-structured interviews with health service providers and health system users (Phase two); (3) stakeholder engagements (Phase three); and (4) a pilot training with delivery agents (Phase four).

5.1 Discussion and Summary of Findings

Reviewing existing evidence-based mental health counselling interventions designed for LMICs as well as context relevant training frameworks for lay workers is a valuable place to start when seeking to develop a task-sharing counselling intervention. Various LMIC task-sharing evidence-based counselling interventions have found PST, BA, CBT and psychoeducation strategies to be user-friendly and cost-effective methods to address CMDs, particularly those associated with psychosocial challenges (Chibanda et al., 2016; Lund et al., 2014; Natesan et al., 2016; Patel et al., 2017; Rahman et al., 2008; Van't Hof et al., 2011; WHO, 2008). In addition, the research suggests that the efficacy of these evidence-based treatment techniques is not limited to specific groups, e.g., perinatal women, but can be effectively applied to other adult populations in low-resourced communities (Chibanda et al., 2017; Cuipers et al., 2016; Patel et al., 2017). The manual review process further identified that the structure, length, and content across task-sharing counselling interventions varied widely, ranging between 6 and 16 sessions.

This study-led intervention adopted a three-session counselling framework, primarily to align with health system needs. Based on the high workload of professional and lay counsellors, a brief intervention was vital to strengthen existing primary healthcare practices. Notable in the intervention development process is the involvement of multiple health stakeholders. Iterative engagements on district, facility, and community level were vital to

identify health system needs and align the structure of the intervention to meet these needs. In addition, multiple stakeholder engagements were important to promote key stakeholder buy-in and to encourage a sustainable and scalable intervention. A three-session requirement therefore meant streamlining the counselling intervention design to include just a few key components to fit the brief framework, while still considering the views and needs of perinatal health service users. Such a brief evidence-based maternal mental health intervention has not been done in South Africa before, nor in other LMICs to the researcher's knowledge.

In the South African context, various task-sharing preventative counselling and support interventions with a focus on mother and child health and well-being have been established (Cooper et al., 2009; Le Roux et al., 2013; Richter et al., 2014). However, there is a scarcity of structured, evidence-based counselling interventions for perinatal depression and anxiety as part of primary healthcare support. An intervention designed for perinatal depression in a peri-urban setting of Cape Town integrated a multifaceted treatment approach by including components of PST, BA, CBT, psychoeducation, and relaxation as part of a six-session design to address mood and life challenges in one intervention; however, it was found that the structure of this intervention was too complex for task-sharing (Lund et al., 2019; Nyatsanza et al., 2016). This study developed a less complex task-sharing intervention design and focused on PST as the primary treatment. Consistent with various other maternal mental health studies in South Africa, this study identified social stressors as precipitators of perinatal depression and anxiety (Hartley et al., 2011; Nyatsanza et al., 2016; van Heyningen, 2017). This highlighted the need to address life difficulties as part of a task-sharing psychological intervention (Lund et al., 2019) as done in Zimbabwe in a problem-solving intervention study that successfully integrated and treated CMDs associated with HIV, as part of primary health care services (Chibanda et al., 2011).

In addition to PST as a core treatment, components of psychoeducation (to enhance maternal mental health awareness and the ability to identify unique symptoms) (Donker et al., 2009) and behavioural activation (Dimidjian et al., 2017; Patel et al., 2017;) to improve mood by engaging in usual activities were integrated into the three-session intervention. Even though the manual review and associated literature identified "what" (effective common therapeutic strategies) to include, the study further explored "how" to adapt content to be relatable and suitable to local contexts. In so doing, the study sheds light on the importance of the views and needs of health service providers and users and how their understanding of mental health can inform the counselling content and guide the selection of appropriate counselling strategies. To encourage the suitability, acceptability, and uptake of the intervention, adapting the content to

local contexts formed an essential part of the intervention development (Davies et al., 2016; Campbell & Burgess, 2012).

Formative processes explored pregnant mothers' experiences of depression in the South African public health system and were conducted with both service users and service providers. Health service providers and users frequently described and identified experiences and symptoms of depression and anxiety in behavioural terms. This suggested that BA would be an acceptable and suitable strategy to address the lived experiences of perinatal mothers and reduce distress to improve mood and/or promote coping skills. BA is a strategy that targets reduced activity by promoting engagement in meaningful, pleasurable, self-reinforcing activities and is a key coping strategy in depression (Chan et al., 2017; Cuijpers et al., 2006). Similar to these findings, a systematic review conducted to understand how depression manifests worldwide reported a loss of energy, change in eating and sleeping patterns, social isolation, crying spells, change of interest in usual activities and suicidal thoughts the seven most frequently mentioned features of depression across Western and non-Western populations. By region, the study indicated that the most frequent features associated with depression in sub-Saharan Africa included a depressed mood, change in sleeping patterns and appetite, tiredness, social isolation, and loneliness (Haroz et al., 2016). In South-Africa, a study of Xhosa-speaking perinatal women in Khayelitsha showed that social withdrawal and less engagement in usual activities were most commonly reported as symptoms of depression amongst participants (Davies et al., 2016). This underscores the need for an intervention designed to respond to symptoms such as loss of energy, social isolation, loss of interest in daily tasks, and eating and sleeping problems. An impairment in daily functioning and withdrawal can have a negative impact on infant care and development as well as mother-child bonding (Cooper et al., 2009). Despite evidence of the benefits of activities for addressing depression, BA as part of a treatment strategy is very seldom introduced at primary health level (Craft & Perna, 2004).

Findings further identified that local terms such as "feeling low", "sad", "tired", "stressed" and "nervous" were commonly used to describe depression and anxiety. This closely matched a Khayelitsha task-sharing intervention study for perinatal depression that explored local explanations of depression (Davies et al., 2016). In this study, participants associated words such as "sad" and "unhappy" and "stressed" and "scared" with depression, while a rural KwaZulu-Natal study also revealed that women most frequently described depression as feeling "sad" (Davies et al., 2016; Rochat et al., 2011). Various mental health counselling intervention studies in the LMICs identified the phrase "thinking too much" as a common

expression to describe a symptom of depression, particularly rumination (Chibanda et al., 2011; Davies et al., 2016; Patel et al., 2015). However, this study found that the term "thinking too much" was frequently used to describe depression and anxiety interchangeably. In addition, a systematic review by Kaiser and colleagues (2015) that highlighted the relevance of idioms of distress to promote public health communication, synthesised the global use and meaning of commonly used "thinking too much" idioms. Their study reported that idioms overlapped with psychiatric constructs in various ways, and that context relevant experiences and interpretations varied from culture to culture. Locally used descriptions of depression and anxiety, used by both health service providers and users, were therefore integrated into the intervention design (Campbell & Burgess, 2012; Davies, 2016). To develop counselling content that builds on the existing worldview and internal capacities of participants (Summerfield et al., 2012), a metaphor in the form of a "depression and worry pit" illustration was used. The idea corresponded with a study by Davies and colleagues (2016) that established that depression was presented as a constant presence of "darkness". This metaphor seemed appropriate to use as an illustration to incorporate psychoeducation and BA components as part of the first counselling session. Sessions two and three incorporate the six PST steps, presented in a stepwise manner to address life difficulties causing distress. In an attempt to keep the intervention brief while acknowledging the need for an intervention flexible enough to handle comorbidity and a range of contextual problems in one unified intervention, the study opted for the inclusion of secondary treatment components or adjunct treatments to include as part of the counselling process on a needs basis (Lund et al., 2019; Murray et al., 2014). This concept of additional treatment components and level of flexibility is similar to the Common Elements Treatment Approach (CETA) (Murray et al., 2014; Murray et al., 2018). This approach encourages the decision-making skills of CHWs over time but demands robust and standardised training and routine supervision practices (Gilson et al., 2007 & Murray et al., 2018). These processes highlight the importance and value of collaborating with both health service providers and users and demonstrates how an in-depth understanding of context relevant needs can guide the development of a relatable and relevant counselling intervention (Summerfield et al., 2012).

In relation to context relevant needs, a strong link between difficult life circumstances and perinatal symptoms of depression and anxiety were identified in this study. The results align with mental health research which suggests that perinatal women are more vulnerable to depression and anxiety in LMICs due to higher socioeconomic risk and often find themselves stuck in a cycle of socioeconomic hardship and depression (Biaggi et al., 2016; Clarke et al.,

2013; Fisher et al., 2012; Howard et al., 2013; Lund et al., 2018; Meintjes et al., 2015; Patel & Kleinman, 2003; van Heyningen et al., 2017). This study found that various life difficulties faced by pregnant women, and their inability to meet basic needs due to unemployment, led to a high level of dependence on others – a situation that exacerbated a sense of hopelessness and anxiety about the future and taking care of the baby. This left many pregnant women feeling overwhelmed because of "stress" or "thinking too much" and/or without mental and physical energy to address immediate life challenges within their control to change. These findings further support PST as a suitable task-sharing evidence-based therapeutic strategy to improve a pregnant mother's capacity to manage challenges causing distress and regaining a sense of control (Bell & D'Zurilla, 2009; Chibanda et al., 2017; Hamdani et al., 2017; van't Hof et al., 2011). This is of particular importance in the case of domestic violence, a strong determinant of depression and anxiety, that is often intensified by social pressures (Howard et al., 2013; Meintjes et al., 2015; van Heyningen et al., 2017).

In addition to inputs from health service providers and users, and identifying context relevant needs, training and support for non-specialist health workers are an important component of the intervention development. Introducing a counselling intervention in a manualised format is vital, particularly within a task-sharing framework. As part of this study, a training manual was an essential component to facilitate the training of CHWs. In addition, this study suggests that a structured manual is imperative to ensure standardised high quality training practices (Balaji et al., 2012; Dawson et al., 2015). The intervention was therefore manualised, and the manual was piloted with a group of CHWs and their respective WBOT supervisors. CHWs found the manualised format of the counselling intervention easy to follow. Furthermore, they found the stepwise structure of the three-session intervention, context relevant case scenario discussions, and associated trainer demonstrations most useful during training. They felt that the counselling structure helped them to understand what is expected of each session. In addition to the three-session counselling design, the manualised format of the intervention also allowed for the inclusion of supplementary training components according to the needs identified during the qualitative processes. These additional sections include maternal mental health psychoeducation and safety steps to facilitate the knowledge and skills development of CHWs. It also included adjunct treatment components (such as belly breathing, mindfulness, and helpful thoughts) that CHWs could introduce as part of the counselling process to enhance existing coping skills. CHWs found the adjunct treatments user-friendly and practical to manage distress and readily applied these skills in their own lives. Role-play observations during the pilot training identified that CHWs found the concept of problem-

solving through collaborating instead of giving advice difficult, particularly when working with a very distressed person. Asking open-ended questions during the initial introduction phase of the counselling session often initiated lengthy problem-saturated replies from distressed persons which was difficult for a CHW to contain. In these situations, most CHWs initiated problem-solving strategies and therefore missed various session steps. This observation was discussed with CHWs and in this way brought to their attention. The challenge of giving advice was integrated into the training programme and addressed through trainer demonstrations and role-plays. To further address the challenge of open-ended questioning during the introduction phase of the counselling, the format was changed to a simpler and more structured "information gathering" rating scale illustration. The illustration was designed in a manner to check specific symptoms, the intensity of the symptoms, and to identify a change in symptoms between sessions. In turn, the rating scale illustration was included in pocket size CHW reference guide to serve as a "road map" in a session.

To further facilitate a favourable counselling environment and promote emphatic skills, basic counselling skill was integrated into the training manual (Ardito et al., 2011; Kohrt et al., 2015; Stange & Ferrer, 2009; Strupp, 2001). CHWs were introduced to non-specific (basic counselling) skills first before the evidence-based strategies and were encouraged to develop these skills over time and under supervision.

A strong body of knowledge highlights the importance of incorporating non-specific counselling elements such as collaborative goal setting, ritualised procedures, promoting engagement, providing realistic hope, normalising and validating thoughts and feelings, encouraging commitment to counselling, considering belief systems when presenting treatment explanations, and involving significant others or other forms of context relevant support (Singla et al., 2017). While some evidence suggests that non-specific counselling components receive little attention as part of task-sharing interventions in LMICs (Jordans et al., 2013; Kabura et al., 2005), findings from the manual review process suggested that basic counselling skills, such as verbal and non-verbal skills, were integrated into all of the task-sharing interventions. This may suggest a possible shift towards acknowledging the importance of a conducive therapeutic environment and that basic counselling skills are universal therapeutic elements that need to be integrated a counselling process to promote effective delivery of evidence-based components (Barth et al., 2012; Walpole, 2011). This is further substantiated by a systematic review of psychological treatments in LMICs by Singla et al., (2017) that identified five commonly acknowledged and endorsed non-specific counselling elements integrated into task-sharing interventions, namely: empathy, collaboration, active listening, normalising, and

engaging social support (Singla et al., 2017). In addition, a review of South African task-shifting psychosocial public mental health interventions, Spedding et al., (2015) further emphasised that the quality of the counselling relationship supersedes the therapeutic approach (Lundahl et al., 2013; Spedding et al., 2015).

5.2 Limitations of the Study

This study had a number of limitations, which need to be acknowledged. First, the intervention has not yet been evaluated (either in terms of processes of implementation or its outcomes), and therefore, questions regarding acceptability, feasibility, and effectiveness remain unanswered at this stage. Carry on here. Your next point is directly related to this point.it is unclear whether a three-session intervention is sufficient to facilitate change in depression, anxiety, and experiences of violence amongst pregnant mothers utilising the South African public health setting. Many of the adverse social and economic circumstances that drive experiences of depression and anxiety are still present in these settings, and therefore the delivery of a counselling intervention may only have limited impact, without also addressing the social determinants of mental health conditions. Third, the search for manuals was based on a structured review of the literature. Since it was not systematic, perinatal task-sharing counselling manuals from LMICs may have been missed. Fourth, the intervention content was developed for a specific low-resourced setting in the Western Cape and may require adaptations for use in other LMICs. Fifth, the researcher was involved in the development of the manualised intervention as well as reporting on these processes as part of this research study, which may have introduced some biases in the analysis and reporting of findings. Acknowledging the power associated with the creation of knowledge, ethical principles were strictly adhered to in the research process. Being aware of the strong possibility of subjectivity and bias, and to maintain integrity and authenticity, the researcher worked in collaboration with the principal investigator (a registered mental health practitioner and experienced global mental health intervention research specialist), while having regular weekly engagements with an advisory panel of experts in the field to maintain ethical integrity throughout the research process.

5.3 Recommendations

With regard to the development of maternal mental health interventions in LMICs, the findings of this study suggest that inputs from multiple stakeholders are vital to develop a counselling intervention suitable for primary health care practices in low resource settings. While district-level engagements helped to identify systemic challenges and develop an

intervention design best suited to health system needs, the views and observations of health service providers and the lived experiences of health service users provided counselling content that is relevant, relatable, and acceptable at facility and community level.

While context relevant content is vital, the use of evidence-based psychological therapies should inform a counselling intervention framework, particularly when considering a task-sharing approach. As part of this intervention, evidence-based components such as PST, BA and CBT (all previously evaluated in rigorous randomised controlled trials) provided an effective foundation for the adaption and delivery of the intervention. To address the enormous perinatal mental health treatment gap in low-resourced settings, it is critical that effective interventions are made more broadly available. On a broader scale this includes processes such as training clinical and counselling psychologists in training and supervising non-specialist health providers and taking on a more public mental health role within the healthcare system. Routine supervision is imperative to foster quality care, skills development, and support of mental health facility and/or community workers. Therefore, mental health counselling training and routine supervision practices, as part of the health system protocols, requires further research to promote sustainability and scalability of mental health interventions.

5.4 Conclusion

Multi-sector stakeholder engagements are critical to align a counselling intervention design with health system needs and requirements. Failure to collaborate and engage with stakeholders on district, facility, and community level may restrict acceptability, sustainability, and scalability of such an intervention. Adapting counselling content to local contexts is vital to ensure the suitability and acceptability of a mental health intervention by both health service providers and health service users. Training practices and ongoing support of mental health workers are as important as the intervention itself.

I would like to close this study with the following quote:

"Mental health is important for a balanced and good quality of life for mother and child. It is more than just the absence of a mental disorder".

– Western Cape Department of Health (October 2012)

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APPENDIX I: Information sheet for perinatal women

Health System Strengthening in Sub-Saharan Africa (Asset): Maternal Health in the Western Cape Study

Information Sheet: Perinatal Women

I would like to invite you to participate in this research project. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

Many girls and women experience depression or anxiety when they are pregnant or after having a baby, and many are victims of violence during this time. The University of Cape Town is doing this study to research maternal mental health and experiences of violence among pregnant women in Cape Town. The project is called *Health Systems Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape*. It is a collaboration between the University of Cape Town and King's College London in the United Kingdom. This study is looking at ways to provide counselling services and protection for pregnant girls and women with depression or anxiety or those who are victims of violence, so that they can be protected and develop skills to manage and cope with distress. We want to develop appropriate and cost-effective health services for these women, and we hope that the information obtained will help to improve health services in South Africa.

Why have I been invited to take part?

You are being invited to participate in this study because we are asking pregnant girls and women attending antenatal clinics in Cape Town some questions.

What will happen if I take part?

If you choose to take part in this study, we will ask you some questions about yourself, and about depression, anxiety and experiences of violence. We will ask you the same questions at your first booking visit, a few weeks before you give birth and after you've had your baby. We would also like to look at your Maternal Case Record and take some photos of the notes the nurses have made in your book. The questions we'd like to ask you will take about 1 hour to complete. We will ask you the questions while you're waiting to be seen at the clinic so that you do not lose your place in the queue. Some of the questions we ask may be sensitive. All information you give us will be kept strictly confidential. You can refuse to answer any questions that you feel uncomfortable answering

or stop the interview at any time. The information you give us will be used to help us design a cost-effective counselling intervention to help girls and women who are suffering from depression, anxiety or experience of violence.

Do I have to take part?

Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in anyway. If you decide to take part we will ask you to sign a Consent Form if you are over 18 years old. If you are younger than 18 years old, we will ask you to sign an Assent Form and ask your parent/legal guardian to sign a Consent Form. You will be given a copy of this information form to keep.

We will give you 30 minutes to consider whether you want to take part. If you want more time to consider or arrange for a parent/legal guardian to provide consent, you can contact us again after 24 hours to arrange an interview.

Incentives

To thank you for taking part in the study and answering our questions, we will be giving you a R100 grocery voucher every time we ask you the questions.

What if I change my mind about taking part?

You are free to withdraw from the study without having to give a reason. Withdrawing from the study will not affect you or the treatment you receive in any way. If you choose to withdraw from the study after completion of the interview, your information will be removed from the study.

What are the possible risks of taking part?

There should be minimal risk in participating in the interview. You may become upset by thinking about the questions, but you can stop participating at any time, or choose not to answer a question. If you are identified as needing further care, you will be offered a referral for counselling. This counselling is free of charge, but it is not compulsory for you to accept the offer.

What are the possible benefits of taking part?

We hope that the recommendations that you make can be used to improve care for perinatal women. We also hope that the information obtained will help to improve health services in South Africa and other countries in sub-Saharan Africa.

Data handling and confidentiality

Your data will be processed in accordance with the General Data Protection Regulation 2018 (GDPR). Your identity will be anonymous, and your information will be combined with that of all the other participants so that no information linked to your personal identity will remain. After the information is analysed, the recordings will be destroyed. This information will only be seen by the researchers. When we have finished the study, the information that you provide to us could be used by researchers outside of this study. However, your name and personal details will never be given to any of these researchers. They will never be able to identify who you are.

Data Protection Statement

The data controller for this project will be King's College London. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your

personal data for research purposes under GDPR is a 'task in the public interest'. You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you. You have the right to access information held about you. Your right of access can be exercised in accordance with the General Data Protection Regulation. You also have other rights including rights of correction, erasure, objection, and data portability.

Questions, comments and requests about your personal data can also be sent to the King's College London Data Protection Officer Mr Albert Chan info-compliance@kcl.ac.uk. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

How is the project being funded?

This study is being funded by the National Institute for Health Research.

What will happen to the results of the study?

The results of this study will be published in journals, theses, conference proceedings and reports, and shared through the Community Advisory Board. Your identity will be anonymous, and your information will be combined with that of all the other participating women so that no information linked to your personal identity will remain.

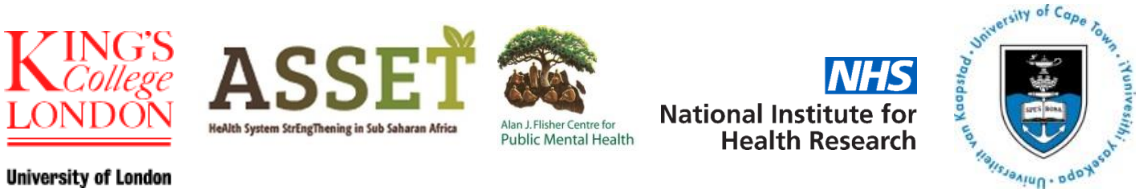
What if I have further questions, or if something goes wrong?

If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact the Human Research Ethics Committee, University of Cape Town on 021-406 6626, or the Chair of the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) at King's College London' at rec@kcl.ac.uk

Who should I contact for further information?

If you have any questions or require more information about this study, please contact Sonet Boisits (researcher) or Dr Zulfa Abrahams (project manager) in the Department of Psychiatry and Mental Health at the University of Cape Town at sonet.boisits@uct.ac.za or zulfa.abrahams@uct.ac.za, 021-650 5704.

APPENDIX II: Consent form



Health System Strengthening in Sub-Saharan Africa (Asset): Maternal Health in the Western Cape Study

Consent Form for Participants of Research Studies

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

		Please tick (✓) or initial
1	I confirm that I understand that by ticking/initialling each box below I am **consenting to that part of the study**. I understand that it will be assumed that unticked/initialled boxes mean that I DO NOT consent to that part of the study. I understand that by not giving consent for any one part, I may be deemed ineligible for the study.	☐
2	I confirm that I have **read and understood the information sheet** August 2018 v2 for the above study. I have had the opportunity to consider the information and asked questions which have been answered to my satisfaction.	☐
3	I **consent voluntarily to be a participant** in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐
4	I consent to the **processing of my personal information** for the purposes explained to me in the Information Sheet. I understand that such information will be handled in accordance with the terms of the General Data Protection Regulation.	☐
5	I understand that my information may be subject to **review by responsible individuals from King's College London** for monitoring and audit purposes.	☐
6	I understand that **confidentiality and anonymity** will be maintained, and it will not be possible to identify me in any research outputs.	☐
7	I agree that the research team may **use my data for future research** and understand that any such use of identifiable data would be reviewed and approved by a research ethics committee. (In such cases, as with this project, data would/would not be identifiable in any report).	☐
8	I consent to my interview being audio/video recorded.	☐

Name of Participant	**Date**	**Signature**

APPENDIX III: Information sheet for health workers

Health System Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape study

Information Sheet: Health Workers

uld like to invite you to participate in this research project. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

1. What is the purpose of the study?

Many women experience depression and anxiety, or experience violence when they are pregnant or after having a baby. The University of Cape Town is doing this study to research maternal mental health and experiences of violence among pregnant women in Cape Town. The project is called *Health Systems Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape*. It is a collaboration between the University of Cape Town and King's College London in the United Kingdom.

This study is looking at ways to provide counselling services and protection for pregnant women and women with depression or anxiety or those who have experienced violence, so that they can be protected and develop skills to manage and cope with distress. We want to develop appropriate and cost-effective health services for these women, and we hope that the information obtained will help to improve health services in South Africa.

2. Why have I been invited to take part?

You are being invited to participate in this study because we are interviewing health workers and managers who provide or oversee care of women during pregnancy and after they've given birth. We're interested in your views regarding a routine screening and counselling service for perinatal women with depression, anxiety and experiences of violence.

3. What will happen if I take part?

If you choose to take part in this study you will participate in a private, semi-structured interview that will last between 30 and 45 minutes. In this interview we will ask you about your views regarding a routine screening and counselling service for perinatal women with depression, anxiety and experiences of violence. You can stop the interview at any time, or refuse to answer any questions that you feel uncomfortable answering. The information you

give us will be used to help us design a cost-effective counselling intervention to help mothers who are suffering from depression.

4. Do I have to take part?

Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in anyway. If you decide to take part we will ask you to sign a consent form and you will be given a copy of this consent form to keep.

5. What if I change my mind about taking part?

You are free to withdraw from the study without having to give a reason. Withdrawing from the study will not affect you or your job in any way. If you choose to withdraw from the study after completion of the interview, your information will be removed from the study.

6. What are the possible risks of taking part?

There are no risks associated with participating in this study. We are only interested in your views regarding a routine screening and counselling service for perinatal women with depression, anxiety and experiences of violence.

7. What are the possible benefits of taking part?

We hope that the recommendations that you make can be used to improve care for perinatal women. We also hope that the information obtained will help to improve health services in South Africa and other countries in sub-Saharan Africa.

8. Data handling and confidentiality

Your data will be processed in accordance with the General Data Protection Regulation 2018 (GDPR). Your identity will be anonymous, and your information will be combined with that of all the other participants so that no information linked to your personal identity will remain. After the information is analysed, the recordings will be destroyed. This information will only be seen by the researchers.

When we have finished the study, the information that you provide to us could be used by researchers outside of this study. However, your name and personal details will never be given to any of these researchers. They will never be able to identify who you are.

9. Data Protection Statement

The data controller for this project will be King's College London. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under GDPR is a 'task in the public interest'. You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

You have the right to access information held about you. Your right of access can be exercised in accordance with the General Data Protection Regulation. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the King's College London Data Protection Officer Mr Albert Chan info-compliance@kcl.ac.uk. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

10. How is the project being funded?

This study is being funded by the National Institute for Health Research in the United Kingdom.

11. What will happen to the results of the study?

The results of this study will be published in journals, theses, conference proceedings and reports, and shared through the Community Advisory Board. Your identity will be anonymous, and your information will be combined with that of all the other participants so that no information linked to your personal identity will remain.

12. What if I have further questions, or if something goes wrong?

If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact the Human Research Ethics Committee, Groote Schuur Hospital on 021-406 6626, or the Chair of the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) at King's College London' at rec@kcl.ac.uk

13. Who should I contact for further information?

If you have any questions or require more information about this study, please contact Sonet Boisits (researcher) or Dr Zulfa Abrahams (project manager) in the Department of Psychiatry and Mental Health at the University of Cape Town at sonet.boisits@uct.ac.za or zulfa.abrahams@uct.ac.za, 021-650 5704.

APPENDIX IV: Interview guide for perinatal women

Health System Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape study

Interview guide:

Pregnant women/mothers of young babies with depression, anxiety or experiences of violence

At the moment in South Africa, many people who suffer from problems like depression, anxiety or violence [*select which is important, depending on which they endorsed in the screening*] can't get treatment or support because there are not enough professionals to deliver the care. In this study we are working with the Western Cape Department of Health to try to help make this situation better. We are interested to hear about your opinions on how women with depression, anxiety or who experience violence can be helped, so that we can make sure that services in the future are relevant to you and people in your community.

Thank you for agreeing to participate and giving your time. This is not a test and there are no right or wrong answers.

A. Pregnancy

1. Are you married or single?
   a. Never married
   b. Married
   c. Divorced/separated
   d. Widowed

2. Are you and your partner/husband still together?
   a. Yes
   b. No

3. Does your partner/husband live with you?
   a. Yes, all the time
   b. Yes, some of the time
   c. No

4. Does your partner/husband give you financial support?
   a. Yes, all the time
   b. Yes, some of the time
   c. No
5. If 'No' or 'Some of the time', how do you support yourself financially?

6. How did you feel when you found out that you were pregnant?

7. If happy…..What were you happy about when you found out you were pregnant?

8. Were you worried about anything when you realised that you were pregnant? What were you most worried about? Can you tell me more about those feelings?

9. Have you told your family and/or partner that you are pregnant?
   a. If 'Yes', …. What did they say when you told them you were pregnant?
   b. If 'No', …. What are the reason(s) why you haven't told them?

10. Is this your first pregnancy
    a. Yes…..Do you have other children?
    i. If Yes, how many do you have
    ii. If No, ….have you ever lost a baby or a child? Can you tell me more about it?
    b. No… go to Section B

B. Understanding of maternal depression/anxiety

Through the questionnaire we have just done with you, you have mentioned a few things that relate with what we call 'depression' or 'anxiety', such as: *(Mention some factors they have identified in EPDS. Do NOT mention factors they have not identified with).*

....blaming yourself

....being anxious or worried or stressed

....feeling scared

....having difficulty sleeping, ,...being sad.

....being unhappy,

....feel like harming yourself

1. What words would you use to describe the feelings I have just mentioned?
   (Probe: for example - Thinking too much, deep sadness, feeling stressed, painful heart, worrying a lot, feeling down, nerves, etc.) NOTE these for question 11 and 12.

2. How would you know if a person has these problems (*use their words***)**?

3. Have you heard of the words depression or anxiety before?
   a. yes
   b. no

c. not sure/don't know

4. Do you think you are depressed or anxious?
   a. yes
   b. no
   c. not sure/don't know
   (Probe why she gave these answers)

5. Has anyone told you that you are depressed or anxious?
   a. yes
   b. no
   c. not sure/don't know

6. How do these feelings that you have change your daily life?

(Probe: What problems has it caused in your life?)

7. When did you first start having these feelings of *(their words for depression/anxiety)? (Tick)*

   a. in the last week
   b. 2 – 4 weeks ago
   c. 1 – 6 months ago
   d. 7 – 12 months ago
   e. 1 – 2 years ago
   f. more than 2 years ago.

8. What do you think caused these feelings?

(Probe: for example, illness, lack of money, death of someone close to you, lack of family support, lack of support from partner, unwanted pregnancy, stigma and discrimination, or witchcraft etc.)

9. Do you think these feelings will go away or do you think they will always be there?

10. Think about days when these feelings are really bad. Tell me what such a day is like.

11. Can you describe days when you feel better?
    Probe:
    a. What makes it better?
    b. Was there anything you did yourself?
    c. Was there someone who helped you to feel better? If so, who, and what did they do?

12. How does feeling like this (being depressed/anxious) change or affect the way you look after yourself?
    (Probe: In what ways do these feelings stop you from caring for yourself or stop you from looking for help for yourself?)

13. Do you feel that you have lost confidence in yourself since you have had these feelings?

    a. yes

b. no
c. not sure/don't know

14. What do you think would make you feel more hopeful and confident?
15. Do you miss out on socialising and being part of groups because of these feelings? Please give examples and explain your answer.

C. Depression/anxiety and pregnancy

1. Do you remember when you started feeling depressed/anxious?

a. before the pregnancy? – If so for how long have you been depressed/anxious?

b. during pregnancy? (If this is not your first baby, were you depressed/anxious in other pregnancies?)

c. after giving birth? For how long were you depressed/anxious after the birth?

2. How does feeling depressed/anxious affect how you feel about having a baby?

What makes the situation difficult?

3. Are there times when you didn't or don't feel so good about having a baby?

a. yes *(probe: can you tell me more about this, and how you coped with these feelings)*
b. no
c. not sure/don't know

D. Stigma and Discrimination

1. How do you think people with depression/anxiety are treated by health workers?

2. Have you ever had such an experience of being treated like this because of depression/anxiety?

3. What about your family and community, what do they think about people with depression/anxiety?

E. Experiences of violence

Earlier I asked you whether you had been a victim of physical or sexual violence during the last 3 months, and you indicated that you had.

1. Can you tell me more about what happened? (*Probe sensitively for circumstances, relationship with the perpetrator*).

2. Are you safe in the place you are currently living or working? (*If the participant is not safe, ask if she would be willing to speak to a social worker who can assist with a protection order or other statutory procedures*).

3. What has happened as a result of these events? (*Probe for injuries, effects on mood, thoughts and behaviour and effects on personal relationships for her or other members of the family*).

4. How are you planning to deal with this situation going forward? Do you need any assistance (for example I could refer you to a social worker or the police)?

I have asked you a lot of questions about depression/anxiety, violence and being a mother. Thank you for answering them. Now we are going to look at ways that we can help you and also help others like yourself.

F. Pathways to Care

1. Have you or someone you know who is depressed, anxious or experienced violence ever looked for help for this problem?

a. yes (go to Q2)
b. no/never (go to **Q25g)**
c. not sure/don't know (Skip to **Q25g**)

2. If yes, ask the following questions:

a. What made you (or them) look for help?
b. Who did you (or they) seek help from?
c. How did you (or they) know where to get help from?
d. *[If she looked for help herself,]* Please describe the help you got and how you felt about it. Would you get help from this place or these people again for your depression/anxiety or experience of violence?

- yes (go to Q25f) Please explain the reasons for your answer.

- no/never (go to Q25g-i) Please explain the reasons for your answer.

- not sure/don't know (go to Q25g-i) Please explain the reasons for your answer.

25f) *[If she looked for help for herself]*. Did this help change your feelings or depression/anxiety or how you managed the situation with the threat of violence? Can you give me examples of how it made a difference?

➔ **25g)** How can we find people with depression/anxiety or victims of violence in the community?
25h) How can we make it easier for mothers to get to the health and social services?
25i) If such services are closer to where people live, will it help them to use the services?

26a) What services are offered by the clinic or hospital or any other organisation to help people with depression, anxiety or being a victim of violence?

Could you use these services easily?
1. yes
2. no
3. not sure/don't know

What make it easy or difficult to use these services? examples to explain your answers.
(Probe for further examples)
1. Distance or transport
2. Cost of services and/or of transport
3. Finding someone to go with you
4. People understanding/not understanding how you feel

5. Stigma or discrimination
6. Other - explain

26b) If NO, do you think that if services were available, people like yourself would want to use them? What would be the most helpful kind of service in these circumstances?

F. Attitudes to Task Shifting

The word/name "Counselling" involves somebody helping you by listening to you talking about your problems, and helping you to find some solutions to those problems. It doesn't mean the counsellor will fix your problems for you, but they can help you find ways to solve some of your own problems, by giving you new skills that you can use.

27. Do you think that counselling could help you with your feelings of depression/anxiety or experiences of violence? In what way could it help you?

28. Do you know what a Community Health worker is, and what they do?

29. Do you know who the Community Health Workers are in the area where you live?

30. Have you seen or been helped by them before?

30a) If YES,

1. Where were they from? (what organisation?)
2. What did you think of them and of the help that they gave you?

31. If you could choose, would you want to see a nurse, a community health worker, or an HIV counsellor to get counselling for your depression/anxiety or experience of violence? Explain why you gave that answer.

1. nurse
2. CHW
3. HIV Counsellor
4. Traditional Healer
5. Someone else *[ask who that person would be]*
6. I don't know

32. If you could see a counsellor to help with (depression/anxiety or violence), would you rather see that person at the clinic or at your home? *(Tick)* Explain why you gave that answer.

1. at the clinic
2. at my home
3. It doesn't matter – either one
4. I don't know

33. If you could choose, what type of person would you like to give you counselling?

- 1. Man or 2. Woman
- What age? 1. Young 2. Middle age 3 Older person
- What qualification or training should they have?

- What language should they speak?
- What race should they be?
- What status should they have in the community?

34. How many times in a month would you like to see the person?

35. If someone came to your home,

- What would your family think?
- What would your community think?
- Do you think it would be safe for that person to come and visit you?

36. If someone came to your home, do you have any private space where you can talk?

G. Interventions for depression

37. What makes it easier to manage having a baby?

Probe: Is it something you do? Or is it something someone else does?

37a) Is there anyone in the house who helps you look after your baby?

37b) Is there anyone in the house who helps to clean the house?

38a). If you could imagine the best way to help people like yourself who are troubled by depression/anxiety or violence in this community, what would it be?

38b) Would it be best done alone or in a group with other people who are also depressed/anxious or victims of violence? *(Tick)* Explain your answer.

1. Alone
2. In a group
3. Either is fine
4. I don't know/not sure

38c) Where should it take place?

38d) Who should provide this help?

38e) What could be done by nurses?

38f) What could be done by Community Health Workers?

38g) What could the community do to help?

38h) What do you think some of the problems to getting this help might be?

39 a). Do you have a smart phone?

39b) Do you think it would be helpful to receive messages of support or counselling through your cell phone?

39c) What do you think would be more helpful: to have SMS/text messages or a telephone counselling session when you talk to someone on the phone about your problems? (*probe for both: what would be more helpful/appealing, or less helpful/appealing?*)

39d) Would you be willing to join an online chat group about these kinds of problems, using your phone? What would be more or less appealing about this?

Thank you for sharing your knowledge and experience, which are very helpful to us in conducting this study.

APPENDIX V: Interview guide for professional facility-based health workers

Health System Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape study

Interview guide: Health Service Managers and Nursing staff

We are wanting to work with health service staff at Department of Health clinics to find out ways to deliver counselling services to women with depression, anxiety and/or who have experienced violence, in a way that is most efficient, while benefiting mothers and their babies. We are doing this project so that we can find ways to increase the provision of mental health services (such as counselling) and protection from violence to many more people.

Thank you for agreeing to participate and giving your time. This is not a test and there are no right or wrong answers.

A. I'd like to talk about your understanding of anxiety and depression

1. What is your understanding of anxiety?
2. How would you as a health practitioner know if someone is feeling anxious?
3. Have you come across mothers who are anxious?
4. In your experience what has been the cause of the anxiety?
5. Do you think there is a difference between anxiety and depression?
6. What is your understanding of depression?
7. How would you as a health practitioner know if someone is feeling depressed?
8. Have you come across mothers who are depressed?
9. In your experience what has been the cause of the depression?
10. How do women that attend this facility describe feeling anxious and or depressed? What words do they use?
11. In the work that you do, how often do you come across women who are feeling anxious or depression, for example, in a week?

B. Now I'd like to ask you about your work experience

1. Do you know what mental health counselling is? *(If uncertain, explain: It is when a health worker tries to help people who are depressed or anxious. They do this by listening to their problems and helping them to develop skills to deal with their problems and feel better.)*
2. Have you had any formal mental health counselling training? If so, what is the training/qualification called?

3. What experience do you have in working with mental health, particularly depression and anxiety?

C. Next I'd like to talk about providing services to help people with depression or anxiety

1. Do you know whether pregnant women who attend this facility get routinely screened for depression and anxiety?
2. What do you think about introducing routine screening for depression and anxiety at antenatal clinic visits? Do you think it is important to do so? Why do you think so?
3. Who do you think would be best positioned to do this screening as part of their routine antenatal check-up (midwives/enrolled nurses/other staff)? What sort of support would they need to do this (eg training or supervision)?
4. What do you think about using digital technology such as smart phones or tablets to do the screening? How would this fit into current routine health management information systems? What kind of training/support would staff need to use technology for screening in your routine practice?
5. Do you think that counselling can be helpful to treat women with symptoms of depression and/or anxiety?
6. When do you think women would benefit most from counselling? While they are pregnant or after they have given birth?
7. Do you think a counsellor should have specific characteristics i.e. a specific gender, age, race, culture, training or qualification, personality etc.?
8. What is the current care pathway for perinatal women with depression or anxiety? Who would the women be referred to? If there are no current services, what kind of services would need to be in place to provide care for these women?
9. What is the current care pathway for perinatal women with suicidal ideas or plans? Who would the women be referred to? If there are no current services, what kind of services would need to be in place to provide care for these women?
10. Do you think it's better to counsel women at the clinic or in their homes? Why do you think so?
11. Do you currently have a private space available at the facility? If not, would you be able to make such a space available?
12. How often do you think a counsellor should see women who are depressed or anxious?
13. What do you think about group counselling?

D. I'd like to ask you about your views on managing disclosure of violence

1. What is your understanding of the different forms of violence? ***(If uncertain, explain physical, sexual, financial, verbal and emotional abuse.)***
2. What are the most common forms of violence that you see amongst woman who attend this clinic?
3. At this clinic, who would women be most likely to tell about their experience of violence? How is this information managed? ***(probe: what do you say, what do you do)***

4. Can you tell me about the steps that are followed to manage the situation?

E. Lastly, I'd like to ask you some questions about using technology to provide counselling and support

1. What do you think bout using smart phones or tablets to screen women for depression, anxiety and experiences of violence?
2. What do you think about using cell phones or tablets to provide counselling to women who are depressed and or anxious or have experienced violence?
3. What do you think the advantages and disadvantages of using cell phones or tablets for this purpose might be?
4. Do you think that a group chat to support women with depression or anxiety will work?
5. Have you heard about Nurse-Connect? Can you tell me a bit about it? What is your opinion about the usefulness of Nurse-Connect?
6. Have you heard about Mom-Connect? Can you tell me a bit about it? What is your opinion about the usefulness of Mom-Connect?

Thank you for sharing your knowledge and experience, which are very helpful to us in conducting this study.

APPENDIX VI: Interview guide for facility-based lay health workers

Health System Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape study

Interview guide: HIV Counsellors/Breastfeeding Counsellors and Health Promoters

We are wanting to work with health service staff at Department of Health clinics to find out ways to deliver counselling services to women with depression, anxiety and/or who have experienced violence, in a way that is most efficient, while benefiting mothers and their babies. We are doing this project so that we can find ways to increase the provision of mental health services (such as counselling) and protection from violence to many more people.

Thank you for agreeing to participate and giving your time. This is not a test and there are no right or wrong answers.

A. Introduction and role as a lay worker:

Let's start by discussing your role as a … HIV Counsellor/Breastfeeding Counsellor/ Health Promoter;

1. Tell me a bit about yourself and your role at the Clinic ***(probe i.e. what a typical workday involves, length of employment etc)***
2. Who do you report to (supervisor/coordinator/other) and how often do you meet?
3. Tell me a bit more about what these meetings are like and what you discuss?
4. How many patients do you currently see in a day (or week)?

B. Understanding of anxiety and depression:

Next, I'd like to discuss your understanding of anxiety/depression;

1. What is your understanding of anxiety?
2. How would you as a health practitioner know if someone is feeling anxious?
3. Have you come across mothers who are anxious?
4. In your experience what has been the cause of the anxiety?
5. Do you think there is a difference between anxiety and depression?

6. What is your understanding of depression?
7. How would you as a health practitioner know if someone is feeling depressed?
8. Have you come across mothers who are depressed?
9. In your experience what has been the cause of the depression?
10. How do women that attend this facility describe feeling anxious and or depressed? What words do they use?
11. In the work that you do, how often do you come across women who are feeling anxious or depression, for example, in a week?

C. Training and qualification:

I'd like to ask you about the training you've received and your work experience;

1. What training did you do to become a ….HIV Counsellor/Breastfeeding Counsellor or Health Promoter.
2. Do you know what mental health counselling is? *(If uncertain, explain: It is when a health worker tries to help people who are depressed or anxious. They do this by listening to their problems and helping them to develop skills to deal with their problems and feel better.)*
3 Have you had any formal mental health counselling training? If so, what is the training/qualification called?
4. What experience do you have in working with mental health, particularly depression and anxiety?
5. Do you think that providing information on caring for and bonding with baby would help a mother feel less anxious and/or depressed? If yes, what kind of information should be included?

D. Providing a screening and counselling service:

I'd like to talk about providing services to help pregnant mothers with depression/anxiety:

1. If we train you on the questions to ask and the signs to look for, would they be able to screen women for depression and anxiety as part of your current work?
2. Do you think that counselling can be helpful to treat women with symptoms of depression and/or anxiety?
3. When do you think women would benefit most from counselling? While they are pregnant or after they have given birth?
4. Do you think a counsellor should have specific characteristics i.e. a specific gender, age, race, culture, training or qualification, personality etc.?
5. In your capacity as a …., would you be interested in developing a skill to do counselling with depressed and/or anxious mothers**?** *(If yes, probe why they are interested and how this will benefit them)*
6. How many women do you think you could counsel in a day?
7. Do you think it's better to counsel mothers at the clinic or at their homes?
8. What would you say are the advantages and disadvantages of meeting the mother at home for counselling and/or at the clinic for counselling?
9. Do you think it's better to counsel women alone or in a group?

E. Disclosure of violence:

I'd like to ask you about your views on managing disclosure of violence;

5. What is your understanding of the different forms of violence? *(If uncertain, explain physical, sexual, financial, verbal and emotional abuse.)*
6. What are the most common forms of violence that you see amongst woman who attend this clinic?
7. At this clinic, who would women be most likely to tell about their experience of violence? How is this information managed? ***(probe: what do you say, what do you do)***
8. Can you tell me about the steps that are followed to manage the situation?

F. TECHNOLOGY TO SUPPORT COUNSELLING:

Lastly, I'd like to ask you some questions about using technology to provide counselling and support

7. Do you own a cell phone, and can you get/do you use WhatsApp?
8. What do you think about using cell phones or tablets to provide counselling to women who are depressed and or anxious or have experienced violence?
9. Would you be willing to use your own cell phone to do this kind of counselling ***(provided the costs of data were covered)?***
10. Would you be interested in learning more about an App that could offer counselling support to woman?
11. What do you think the advantages and disadvantages of such an APP would be to the mother and to the health worker?
12. Do you think a group chat to support women with these kinds of problems will work?
13. Have you heard about Mom-Connect? Can you tell me a bit about it? What is your opinion about the usefulness of Mom-Connect?

Thank you for sharing your knowledge and experience, which are very helpful to us in conducting this study.

APPENDIX VII: Interview guide for community-based health workers

Health System Strengthening in sub-Saharan Africa (ASSET): Maternal health in the Western Cape study

Interview guide: Managers/Coordinators of NGOs dealing with health issues

We are wanting to work with health service staff at Department of Health clinics to find out ways to deliver counselling services to women with depression, anxiety and/or who have experienced violence, in a way that is most efficient, while benefiting mothers and their babies. We are doing this project so that we can find ways to increase the provision of mental health services (such as counselling) and protection from violence to many more people.

Thank you for agreeing to participate and giving your time. This is not a test and there are no right or wrong answers.

A. I would like to start by asking you some questions about your NGO.

1. Can you please tell me a bit about your NGO and describe the kind of services it provides? ***(How many lay counsellors? Which other MOUs do they work at)***
2. Can you tell me a bit about your role in the organisation?
3. How does your NGO work with the Department of Health? Can you describe the care pathway by which women reach your NGO from Department of Health or other services?

B. Now I'd like to talk about how you understand anxiety and depression.

1. What is your understanding of anxiety?
2. How would you know if someone is feeling anxious? What are the symptoms or behaviour?
3. What do you think is often the cause of the anxiety?
4. Do you think there is a difference between anxiety and depression?
5. What is your understanding of depression?
6. How would you know if someone is feeling depressed? What are the symptoms or behaviour?
7. What do you think is often the cause of the depression?

C. Next I'd like to talk about providing services to help people with depression or anxiety

1. Do you think that the lay counsellors you supervise would be able to provide routine screening to pregnant women as part of their current work? If we train them on the questions to ask and the signs to look for, would they be able to provide a screening service?
2. Do you know what mental health counselling is? ***[If uncertain, explain: It is when a health worker tries to help people who are depressed or anxious. They do this by listening to their problems and helping them to develop skills to deal with their problems and feel better.]***
3. Do you think that counselling can be helpful to treat women with symptoms of depression and/or anxiety?
4. When do you think women would benefit most by counselling? While they are pregnant or after they have given birth?
5. Do you think that the lay counsellors you supervise would you be interested in developing a skill to do counselling with depressed and/or anxious mothers? ***(If yes, probe why they are interested and how this will benefit them)***
6. How many women do you think they could counsel in a day?
7. Do you think it's better to counsel mothers at the clinic or at their homes?
8. Do you think it's better to counsel women alone or in a group?

D. Lastly, I'd like to ask you some questions about using technology to provide screening and counselling and support

1. What do you think about using digital technology such as smart phones or tablets to do the screening?
2. What do you think about using cell phones or tablets to provide counselling to women who are depressed/anxious?
3. What do you think the advantages and disadvantages of using cell phones or tablets for this purpose might be?
4. Do you think a group chat to support women with these kinds of problems will work?
5. Have you heard about Mom-Connect? Can you tell me a bit about it? What is your opinion about the usefulness of Mom-Connect?

Thank you for sharing your knowledge and experience, which are very helpful to us in conducting this study.