PREVALENCE OF POSTNATAL DEPRESSION SYMPTOMS AND ASSOCIATED SOCIAL FACTORS IN A PRIMARY HEALTH CARE CLINIC IN ATTERIDGEVILLE, PRETORIA

By

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Supervisor

PROF KEBOGILE MOKWENA

2014
Declaration

I declare that the dissertation hereby submitted to the University of Limpopo for the degree of Masters in Public Health has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.

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AD Shiba                                                                                      Date

Student number: 201216806
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Abstract

Introduction: The global high prevalence of depression has been declared a global crisis and in South Africa, depression has been found to rank second among the twenty causes of years lived with disability. Depression that occurs in the immediate period after child birth is known as postnatal depression and has been found to contribute immensely to poor health outcomes for both babies and mothers. Despite notable challenges brought about by postnatal depression, in South Africa it has not received adequate enquiry in terms of prevalence, contributing factors and interventions to mitigate its impacts.

Aim of the study: The study sought to screen for postnatal depression by using the Edinburg Postnatal Depression Scale among women attending a primary health care clinic in Atteridgeville, Pretoria.

Methodology: A quantitative and cross-sectional design was used. The Edinburgh Postnatal Depression Scale was used to interview two hundred and eleven women who had delivered a live infant within 12 weeks of the study period, and were attending Atteridgeville Primary Health Care Clinic. Data were analyzed using descriptive statistics, bivariate analysis and then multivariate logistical regression. With a possible maximum score of 30, participants who had a score of 12 and above were considered to have a high likelihood of postnatal depression.

Results: 49, 3% of the participants had scores of 12 and above, which is substantially greater than the global prevalence. On bivariate analysis postnatal depression symptoms were significantly associated with level of education (p=0,039), financial support by the baby’s father (p=0.000), whether the baby was planned (p=0,016), baby’s health status (p= 0,027); partner/husband support (p=0.000); social support (p=0,011); partner/husband violence (p=0,001); partner/husband alcohol use (p=0,030); and partner/husband having other sex partners (p=0,000). On multivariate analysis postnatal depression symptoms were significantly associated with partner/husband support (p=0.002, 95% CI -4.092389 - -0.891) and severe life stressor in the previous six months (p=0.005, 95% CI 0.3213331–1.80).
Conclusion: The 49.3% prevalence of scores of 12 and above is the highest that was ever found in any study in South Africa and indicates that postnatal depression may be high in this community. The results are a red flag for health services because there are currently no services or programs that screen for postnatal depression at primary health care facilities. The results highlight the impact of social factors on health for this sample of women. The results also identified the need for interventions for postnatal depression at primary health care facilities. The recommendation from this study is that it should be duplicated across health districts and provinces, which will give a realistic picture of the prevalence of high scores of depression symptoms, as depicted by the Edinburg Postnatal Depression Scale.
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>EPNDS</td>
<td>Edinburgh Postnatal Depression Scale</td>
</tr>
<tr>
<td>PND</td>
<td>Postnatal Depression</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>NVD</td>
<td>Normal Vaginal Delivery</td>
</tr>
<tr>
<td>DSM</td>
<td>Diagnostic and Statistical Manual</td>
</tr>
<tr>
<td>BMI</td>
<td>Body mass index</td>
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## Definition of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tr>
<td><strong>Depression</strong></td>
<td>Depressed mood and/or loss of interest or pleasure in life activities for at least 2 weeks with at least five of the following symptoms: depressed mood most of the day; diminished interest or pleasure in all or most activities; significant unintentional weight loss or gain or change in appetite; insomnia or sleeping too much; agitation or psychomotor retardation noticed by others; fatigue or loss of energy; feelings of worthlessness or excessive or inappropriate guilt; diminished ability to think or concentrate, or indecisiveness; and recurrent thoughts of death or suicide that cause clinically significant impairment in social, work, or other important areas of functioning almost every day (American Association of Psychiatry, 2000).</td>
</tr>
<tr>
<td><strong>Postnatal Depression</strong></td>
<td>Onset of depression within 4 weeks and up to 12 weeks after giving birth (American Association of Psychiatry, 2000; Stewart et al, 2003).</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td>Number of pregnancies that attained the gestational age of 24 completed weeks or above that a woman has had irrespective of the outcome experienced (Opara and Zaidi, 2007).</td>
</tr>
<tr>
<td><strong>Primigravida</strong></td>
<td>A woman who has conceived once (Danish et al, 2010).</td>
</tr>
<tr>
<td><strong>Primipara</strong></td>
<td>A woman who has had one pregnancy that resulted in one or more viable young (Cleary et al, 1996)</td>
</tr>
<tr>
<td><strong>Inter-generational</strong></td>
<td>Affecting more than one generation.</td>
</tr>
<tr>
<td><strong>Nguni languages</strong></td>
<td>IsiZulu, SiSwati, IsiXhosa and IsiNdebele.</td>
</tr>
<tr>
<td><strong>Partner violence</strong></td>
<td>Threatened, attempted, or actual physical or sexual violence by a current or former intimate partner</td>
</tr>
<tr>
<td><strong>Birth to 20 cohort</strong></td>
<td>The largest and longest running birth cohort study of child and adolescent health and development that began in 1990 to track the development of 3 273 newborn infants with a plan to monitor them until they were twenty years old in 2010.</td>
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CHAPTER I: INTRODUCTION AND BACKGROUND

1.1. Introduction

Over the last few years, depression has been increasing and has now been declared a “Global Crisis” (Mayosi et al, 2009; World Federation for Mental Health, 2012). If the current trends for demographic and epidemiological transition continue, the global burden of depression is predicted to increase to become the second leading cause of disability-adjusted life years lost, after ischemic heart diseases by 2020 (World Health Organization, 2001). In South Africa depression has been found to rank second among the twenty causes of years lived with disability (Norman et al, 2006), and is more common in females than in males (Tomlinson et al, 2009).

Depression that occurs after a woman has given birth is known as postnatal depression. The clinical presentation of postnatal depression is like that of other depressive disorders, with symptoms of depressed mood, diminished pleasure, marked change in appetite and sleep, psychomotor agitation or retardation nearly every day, lack of energy or fatigue nearly every day, feelings of worthlessness or inappropriate guilt, difficulty in concentrating or making decisions nearly every day, and frequently occurring thoughts of death, suicide or suicidal plan. The symptoms often occur within four weeks following child birth and cause significant impairment or distress in social, vocational or other important daily living functions (American Psychiatric Association, 2000).

Several studies have found the prevalence of postnatal depression to be lower in high income countries when compared to low and middle income countries (Cooper et al, 2009; Gavin et al, 2005; Husain et al, 2006; Ho-Yen et al, 2007; Ramchandani et al, 2008; Tannous et al, 2008) whilst the associated factors for postnatal depression have been found to include husband’s alcoholism, polygamy, poor emotional and practical support from the partner, intimate partner violence, poor financial support from the partner, previous depression, depression during pregnancy, higher levels of psychological distress during the antenatal period, a body mass index (BMI) below the
normal range, younger maternal age, stressful life events, multiparity, being primigravida, smoking, lower social support, increased stressful life events in the preceding year, poor socioeconomic status, unplanned and/or unwanted pregnancy, not having the desired baby gender and poor health status of the baby (Cooper et al, 1999; Beck, 2002; Abiodun, 2005; Husain et al, 2006; Ho-Yen et al, 2007; Tannous et al, 2008; Ramchandani et al, 2008; Kakyo et al, 2011; Beydoun, 2012).

Postnatal depression has also been linked to several unwanted health outcomes for babies including lower infant length and weight, higher rates of malnutrition and stunting, higher rates of diarrhoeal diseases, infectious illnesses, frequent hospital admission, reduced completion of recommended schedules of immunizations in children, early cessation of breastfeeding, mother’s insensitive engagement with the infant, disturbances in the mother-infant relationship, poor cognitive, social, behavioral, and emotional development of the child and also contributes to mortality in children up to five years (Cooper et al, 1999; Henderson et al, 2003; Patel et al, 2003; Rahman et al, 2004; Adewuya et al, 2007; Papinczak and Turner, 2007; Wachs et al, 2009; Chen et al, 2011).

Because the impact of postnatal depression is intergenerational, far reaching, affect social and developmental issues over and above health issues, and puts the child's future at stake, some scholars consider that failure to address it is equivalent to human rights violation (Wachs et al, 2009). This view is also supported by the fact that postnatal depression interferes with parental and family functioning, and results in long lasting effects.

In South Africa, few studies have focused on the prevalence of postnatal depression, and these were not national but mainly confined to specific parts of a city. There are therefore significant variations among these studies. A study conducted at Khayelitsha in the Western Cape by Cooper et al (1999), found the prevalence of postnatal depression to be 34, 7 %, contrasting with the prevalence of 16, 4 % found in Soweto (Ramchandani et al, 2008). The findings of both studies are above the estimated global postnatal depression of 10-15% (Halbreich and Kalkun, 2005) and although both
studies provided some information about postnatal depression, they do not provide information to estimate the national burden of postnatal depression, in the absence of other studies that will mediate between the two findings. Although other studies by Hartley et al (2010) and Peltzer & Shikwane (2011) measured the prevalence of postnatal depression in South Africa, their target group was HIV positive women. Both these studies found the prevalence of postnatal depression to be higher among HIV positive women when compared to the findings by Cooper et al (1999) and Ramchandani et al (2008) suggesting a link between a HIV positive status and postnatal depression.

The fact that data for both the study by Cooper et al (1999) and Ramchandani et al (2008) was collected during the 90s when the prevalence of HIV and AIDS in women around child birth was lower than what it is currently, (Allen et al, 2000; National Department of Health, 2011) is another limiting factor to estimating the prevalence of postnatal depression in this country currently considering the findings that suggests a link between the HIV positive status and postnatal depression. Also the high prevalence of HIV infection among women of child bearing age in general in this country that was found by Shisana et al (2008) is another cause for concern taking into consideration the findings that link HIV positive status around childbirth and postnatal depression. Moreover, Cooper et al (1999) conducted the study more than a decade ago on a sample of 147 women whilst the study by Ramchandani et al (2008) used data collected from the Birth to Twenty Cohort in 1990 which, as acknowledged by the researchers themselves as part of the study limitations, was confounded by high political tensions and violence in South Africa and in Soweto in particular. The prevailing circumstances could have influenced the findings.

The South African government has identified “Decreasing maternal and child mortality” as one of the four key outputs that the health sector aims to achieve. As a means towards achieving this output a lot of focus is being given to the physical component of health of the mothers and babies but little attention is given to the mental and social aspects of their health and yet the three components of health are interdependent such that it may not be possible to attain one without the other. The link between postnatal
depression and poor health outcome for the mother, the baby and the family suggests that not addressing postnatal depression may be the missing link in the efforts to improve health outcomes for mothers and children in this country.

1.2. Problem statement

Although postnatal depression has been identified as having a significant impact to maternal and child health, this area of mental health has not enjoyed adequate focus. The few studies that have been conducted have indicated that the prevalence may be high in this country whilst the factors associated with it are different and mostly preventable.

Despite notable challenges brought about by postnatal depression, and the availability of simple screening tools to detect it and low cost effective treatment to manage it, less attention is given to it in South Africa in terms of scientific evidence including its prevalence, contributing factors and interventions. The study intended to determine the prevalence of postnatal depression as well as social factors that are associated with it in a primary health care clinic in Atteridgeville, Pretoria. The findings of the study may inform interventions aimed at improving the health outcomes for mothers and children and to assist the country in the efforts towards achievement of one of the targeted outputs, which is “Decreasing maternal and child mortality”.

1.3. Research questions

The research questions for this study were the following:

1. What is the prevalence of postnatal depression symptoms among women attending a primary health care clinic at Atteridgeville in Pretoria?
2. What are the social factors associated with postnatal depression symptoms among women attending a primary health care clinic at Atteridgeville in Pretoria?
1.4. Aim of the study

The aim of the study was to screen for postnatal depression symptoms and identify associated social factors among women attending a primary health care clinic at Atteridgeville in Pretoria.

1.5. Objectives of the study

The objectives of this study were the following:

- To determine the prevalence of postnatal depression symptoms among women attending a primary health care clinic at Atteridgeville in Pretoria.
- To determine the association between symptoms of postnatal depression, demographic and economic factors in this sample.

1.6. Significance of the study

Knowledge about the prevalence of postnatal depression is important to understand the extent, as well as the factors associated with it in order to guide policy makers in prioritizing interventions that have rippling effect and impact on a number of health outcomes affecting a larger group of people. For an example if the prevalence of postnatal depression is high among women visiting primary health care facilities, this will indicate a need to institutionalize screening and management of postnatal depression at this level given the negative impact of postnatal depression on both the mother and her baby as well as its intergenerational impact. In addition, understanding the factors which are associated with postnatal depression is crucial so as to be able to identify high risk groups in this population and target them with preventive interventions.
CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Literature on postnatal depression in low and middle income countries is scanty. Much of the available evidence on postnatal depression is from studies conducted in high income countries yet postnatal depression affects more women in lower and middle income countries (Gavin et al, 2005; Husain et al, 2006). Similarly, knowledge on the prevalence as well as associated factors for postnatal depression is scanty in South Africa. The literature review will first define what postnatal depression is and then focus on tools used in the detection of postnatal depression, prevalence of postnatal depression, factors associated with postnatal depression, the effects of postnatal depression on the baby and prevention and management of postnatal depression.

2.2. Defining postnatal depression

Depression can be described as a mental disorder characterized by depressed mood and/or loss of interest or pleasure in life activities for at least 2 weeks with at least five of the following symptoms: depressed mood most of the day; diminished interest or pleasure in all or most activities; significant unintentional weight loss or gain or change in appetite; insomnia or sleeping too much; agitation or psychomotor retardation noticed by others; fatigue or loss of energy; feelings of worthlessness or excessive or inappropriate guilt; diminished ability to think or concentrate, or indecisiveness; and recurrent thoughts of death or suicide that cause clinically significant impairment in social, work, or other important areas of functioning almost every day (American Association of Psychiatry, 2000). Postnatal depression refers to onset of depression within 4 week and up to 12 weeks after giving birth (American Association of Psychiatry, 2000; Stewart et al, 2003).

2.3. Tools used in the detection of postnatal depression

Various tools have been used internationally for screening and diagnosing postnatal depression (Stewart et al, 2003; Zubaran et al, 2010). Screening tools for postnatal depression that have been used in studies on postnatal depression internationally
include the Edinburgh Postnatal Depression Scale (Cox et al, 1987), the Postpartum Depression Screening Scale (Beck and Gable, 2001); the Bromley Postnatal Depression Scale (Stein and van den Akker, 1992); the Hamilton Rating Scale for depression (Bagby et al, 2004); Montgomery-Asberg Depression Rating Scale (Montgomery & Asberg, 1979); Beck Depression Inventory (Beck et al, 1996); the revised Clinical Interview Schedule (Lewis et al, 1992); Pitt Depression Questionnaire (Pitt, 1968); Self Reporting Questionnaire -25 (World Health Organization, 1994); the General Health Questionnaire (Goldberg, 1978); the Zung Self Rating Scale (Zung, 1965); the Center for Epidemiological Studies Depression Scale (Radloff, 1977); the Inventory of Depressive Symptomatology (Rush et al, 1996); and the Patient Health Questionnaire-9 (Kroehnke et al, 2001).

Among these only the Edinburgh Postnatal Depression Scale, the Postpartum Depression Screening Scale and the Bromley Postnatal Depression Scale were specifically designed for screening postnatal depression. The others were designed to screen for general symptoms of depression and associated distress and not specifically postnatal depression.

In studies conducted in South Africa different instruments were used to measure postnatal depression. Cooper et al (1999) used the Structured Clinical Interview for DSM –IV Diagnosis (Spitzer et al, 1992) which is a diagnostic instrument. Ramchandani et al (2008) used the Pitt Depression Questionnaire and Hartley et al (2010) and Peltzer and Shikwane (2011) both used the Edinburgh Postnatal Depression Scale. Both the Pitt Depression Questionnaire and the Edinburgh Postnatal Depression Scale are screening instruments. Whilst the Edinburgh Postnatal Depression Scale was specifically designed to screen for postnatal depression symptoms (Cox et al, 1987), the Pitt Depression Questionnaire was designed to screen for general symptoms of depression (Pitt, 1968). The Edinburgh Postnatal Depression Scale was validated for use in South African urban context among South African women (Lawrie et al, 1998).
The Edinburgh Postnatal Depression Scale is by far the most widely used instrument in postnatal depression studies and for population based screening in both the developed and the developing countries (Stewart et al, 2003; Zubaran et al, 2010).

2.4. Prevalence of postnatal depression in South Africa

Like in most low and middle income countries, research on postnatal depression including its prevalence and contributing factors is low in South Africa. Cooper et al (1999) found the prevalence of postnatal depression in Khayelitsha in Western Cape to be 34.7% whilst another study conducted in Soweto almost ten years later found the prevalence of postnatal depression to be 16.4% (Ramchandani et al, 2008), which is very less than what had been found by Cooper et al, (1999). Cooper et al, (1999) findings are above the trends in high income countries where the prevalence has been found to be between 6.5% and 12.9% (Gavin et al, 2005). Of note is that the prevalence of postnatal depression has been found to be even higher among HIV positive postnatal women in South Africa where as high as 45.1% postnatal depression prevalence has been found in this group (Hartley et al, 2010; Peltzer and Shikwane, 2011). The high prevalence rates of postnatal depression that have been found among HIV positive postnatal women are much higher than the highest prevalence rate of 34.7% that has been found in the previous studies conducted among postnatal women in general in South Africa (Cooper et al, 1999) suggesting that HIV positive women may be even more at risk for postnatal depression.

2.5. Prevalence of postnatal depression in other low and middle income countries

Prevalence rates of postnatal depression in other low and middle income countries including India, Nepal, Brazil, Pakistan, Nigeria and Uganda has been found to range from 6.1% to 43% (Chandran et al, 2002; Patel et al, 2002; Abiodun, 2006; Ho-Yen et al, 2006; Husain et al, 2006; Nakku et al, 2006; Tannous et al, 2008; Kakyo et al, 2011). These prevalence rates are in line with the findings from the South African studies where prevalence as high as 45.1% has been found among HIV positive postnatal
women (Hartley et al, 2010; Peltzer and Shikwane, 2011 and lowest prevalence found being 16, 4% (Ramchandani et al, 2008). At 6, 1%, the findings by Nakku et al (2006) in a study conducted in Uganda are very low when compared to the findings by a study that was conducted in the same country five years later which found the prevalence of 43% (Kakyo et al, 2011). Nakku et al (2006) findings are also very low when compared to findings from studies conducted in other low and middle income countries including South Africa (Cooper et al, 1999; Chandran et al, 2002; Patel et al, 2002; Abiodun, 2006; Ho-Yen et al, 2006; Husain et al, 2006; Ramchandani et al, 2008; Tannous et al, 2008; Hegde et al, 2012).

The contrasting prevalence rates for postnatal depression that has been found in Uganda where a study conducted in a urban setting found a prevalence of 6, 1% (Nakku et al, 2006) whilst another study conducted by Kakyo et al (2011) five years later in a rural setting in the same country found the prevalence rate to be 43% may be factual but may also be due to the different methodology and instruments used to determine depression in the two studies. Nakku et al (2006) used two instruments, one of them a screening instrument (25-item Self reporting questionnaire) and the other one a diagnostic instrument (Mini International Neuropsychiatric Interview) whilst Kakyo et al (2011) used only the Edinburg Postnatal Depression Scale which is a screening instruments. Another difference is that Nakku et al (2006) conducted the study among women at six weeks postnatal whilst Kakyo et al (2011) study population was women up to twelve weeks postnatal. Because the onset of postnatal depression can be up to twelve weeks post-delivery (Stewart et al, 2003), some women that were not identified by Nakku et al (2006) as having postnatal depression at six weeks post delivery may actually have developed symptoms of depression later that could have been picked up if they were interviewed later.

The high postnatal depression prevalence rates that are seen in low and middle income countries when compared with high income countries support the findings by Patel et al (2002) and Muneer et al (2009) that have linked postnatal depression to low socioeconomic status when one considers the fact that socioeconomic status is one of the key differentiating factors between the high income and low and middle income countries.
The prevalence rates for postnatal depression in South Africa and in other low and middle income countries that have been discussed in this section suggest that the prevalence of postnatal depression may be high in these countries though the prevalence cannot be properly estimated due to the large differences in the findings by the studies that have been conducted specifically in South Africa and Uganda. More research is needed in this area to properly inform planning. Findings from the present study will further contribute to the knowledge on postnatal depression that is currently lacking in South Africa.

2.6. Impact of postnatal depression on the health and development of the baby

Symptoms of depression have been linked to global role impairment on the sufferer (Tomlinson et al, 2009) whilst mothers with postnatal depression scored higher in the Brief Disability Questionnaire indicating that they had problems in carrying out daily activities (Patel et al, 2003). The debilitating nature of depression symptoms have an added disadvantage when the sufferer is a mother of a baby because it can affect her capability to care and provide necessary attention and stimulation to her baby. This was confirmed by a study that was conducted by Cooper et al (1999) in South Africa which find mothers who were depressed to be insensitive when they engaged with their infants.

Health outcomes of the baby have been found to be affected by postnatal depression. In low and middle income countries postnatal depression has been linked to infant underweight and poor growth (Patel et al, 2003; Anoop et al, 2004; Rahman et al. 2004; Adewuya et al, 2008), poor mental and cognitive development in babies (Patel et al, 2003) increased infant diarrhoeal episodes and other infectious diseases (Rahman et al, 2004; Adewuya et al, 2008), incomplete immunization (Rahman et al, 2004), high mortality risk in under five years old children (Chen et al, 2011) and stopping breastfeeding earlier (Adewuya et al, 2008). Postnatal depression therefore put the future of children and future generation at stake. It is this intergenerational impact that postnatal depression has that has made Wachs et al (2009) to argue that not
addressing postnatal depression is equivalent to human rights violation over and above it being a health, social and developmental issue.

South Africa is currently facing high infant and child mortality ratios which, at 42 deaths per 1000 live births, are higher than the global average (National Department of Health, 2013). One of the Strategic goals of the Department of Health for the 2013/14-2015/16 term is to “Decrease child mortality ratios from the current rate to 38 deaths per 1000 live births or less by 2014”. The Department has put in place a number of strategies towards achieving this objective but addressing postnatal depression is not one of these. This is despite the evidence that has linked postnatal depression to poor health outcomes for babies and children including its link to high mortality among children and the evidence that shows that postnatal depression is a potentially treatable mental disorder.

However the fact that there is not enough evidence on the prevalence of postnatal depression and its effects on child health outcomes in this country may be a rationale for government not to include addressing postnatal depression in the strategies to improve child health outcomes but rather focus on factors where enough evidence is available hence a need for more studies on postnatal depression like this study to inform planning for health at all levels of health care.

2.7. Factors associated with postnatal depression

Prevention of postnatal depression requires identification of its risk factors to guide its prevention interventions. Various studies have identified various social factors to be associated with postnatal depression. This section will list and discuss the social factors that have been found to be associated with postnatal depression in low and middle income countries which include South Africa.

Studies conducted in low and middle income countries including in Sub-Saharan African countries, have found social factors associated with postnatal depression to include, experiencing stressful life events during pregnancy or the early puerperium, low levels of social support, poor relationship with partner, husband or partner having other sexual
partners, husband’s alcoholism, domestic violence/partner violence, mother living with a male partner, being single, low socioeconomic status, high parity, young maternal age, infant’s ability to breastfeed, current physical illness in both mother and newborn, unwanted sex of the baby, whether the pregnancy was planned, unemployment and financial constraints and lower per capita income (Cooper et al, 1999; Chandran et al, 2002; Robertson et al, 2004; Tomlinson et al, 2004; Abiodun, 2006; Ho-Yen et al, 2006; Husain et al, 2006; Nakku et al, 2006; Ramchandani et al, 2008; Tannous et al, 2008; Kakyo et al, 2011; Hedge et al, 2012).

Recent studies conducted in South Africa have linked postnatal depression to an HIV positive status (Hartley et al, 2010; Peltzer and Shikwane, 2011). Among HIV positive women in South Africa postnatal depression was associated with discrimination experiences, lack of social support and having had a sexually transmitted infection in the past twelve months (Peltzer and Shikwane, 2011).

2.7.1. Negative major life events during pregnancy or the early peuperium

Studies conducted in India, Pakistan, Nepal and Uganda found an association between negative life events during pregnancy or in the preceding year and postnatal depression (Chandran et al, 2002; Husain et al, 2006; Nakku et al, 2006; Ho-Yen et al, 2007; Hedge et al, 2012). In these studies negative life events that had a significant association with postnatal depression included illness or death of a close person, financial problems, domestic violence and legal problems. The link between postnatal depression and having experienced a stressful life event that has been found by these studies is not surprising because scientific studies have found a causal relationship between stress exposure and depression (Bartolomucci and Leopardi, 2009). Ramchandani et al (2008) found that witnessing a violent crime or being in danger of being killed was one of the major risk factors for postnatal depression in South Africa.
2.7.2. Low levels of social support

Studies have found an association between postnatal depression and lack of social support (Teo et al, 2013). This may be because childcare can be very demanding on a new mother. Having low levels of social support has also been found to be a contributing factor for major depression in the general population suggesting that it is not a factor only among pregnant women but in the whole population as well. The association between postnatal depression and lack of social support was confirmed by several studies that were conducted in Pakistan (Husain et al, 2006), Nepal (Ho-Yen et al, 2007), South Africa (Ramchandani et al, 2008; Peltzer and Shikwane, 2011) and in India (Hedge et al, 2012).

2.7.3. Having depression during pregnancy or a history of depression

Studies conducted in Nepal (Ho-Yen et al, 2007) and in India (Hedge et al, 2012) have found a significant association between previous history of depression and postnatal depression. However, studies which associate previous depression and postnatal depression in South Africa and other sub-Saharan countries were not found.

2.7.4. Problems in marital or partner relationship

Studies conducted in India (Chandran et al, 2002) and in Uganda (Kakyo et al, 2011) found risk of postnatal depression to be significantly higher among women that reported problems in their marital relationships. These same findings were found in a study conducted in South Africa which found reporting difficulties with partner to be one of the strong predictors of postnatal depression (Ramchandani et al, 2008).

2.7.5. Husband having other sexual partners

A study conducted in Nepal found that women living in polygamy were significantly more likely to be depressed than women living in monogamy (Ho-Yen et al, 2007). The study found that marital discords in polygamous marriages were associated with high levels of distress. Another study conducted in Uganda (Kakyo et al, 2011) found
statistically significant association between postnatal depression and the number of other sexual partners that the husband has.

2.7.6. Husband or partner’s alcoholism
A study conducted in Nepal (Ho-Yen et al, 2007) found a strong association between the husband’s alcoholism and postnatal depression. Alcoholism has been defined as a chronic progressive and often fatal disease characterized by impaired control over drinking, preoccupation with alcohol, use of alcohol despite adverse consequences, and distortions in thinking, most notably denial (Morse and Flavin, 1992). The development and manifestation of the disease is influenced by genetic, psychosocial, and environmental factors (Morse and Flavin, 1992). It is not surprising for husband’s alcoholism to be associated with postnatal depression when one considers the manifestations of alcoholism as defined above.

2.7.7. Domestic/partner violence
Studies conducted in India (Patel et al, 2002), Pakistan (Husain et al, 2006) and Nepal (Ho-Yen et al, 2007) have found domestic/partner violence to be statistically significantly associated with postnatal depression. This is not surprising when one considers the emotional trauma that domestic/partner violence has on the victims. In India, Patel et al (2002) also found the high risk of persistent depression in mothers who had experienced marital violence and this was greater if the new infant was a girl than when the infant was a boy.

2.7.8. Mother living with a male partner or husband
A study conducted in South Africa (Tomlinson et al, 2004) found a statistically significant association between postnatal depression and the mother cohabiting with a male partner compared to those not living with the partner. Similar findings were found in Uganda where depressive symptoms were less common among postnatal mothers who were not living with a male partner (Kakyo et al, 2011). However a study conducted in Brazil four years later (Tannous et al, 2008) found that women who did not live with their
husbands or partners had twice the risk of developing postnatal depression compared to women who lived with a spouse.

2.7.9. Marital status
A Ugandan study conducted by Nakku et al (2006) found being single to be associated with postnatal depression whilst a study conducted in the same country five years later found the opposite (Kakyo et al, 2011). These contradictory findings may suggest that it may not only be the singleness or being married that influences the potential for postnatal depression, but other factors including the quality of life and personal satisfaction of the mother may be playing a role.

2.7.10. Low socioeconomic status
Studies conducted in India (Chandran et al, 2002; Hegde et al, 2012) and in Brazil (Tannous et al, 2008) found low family income and poverty to be associated with postnatal depression. However, in Uganda (Nakku et al, 2006) found no significant association between low socioeconomic status and postnatal depression. Similarly in Pakistan low income (2500 Pakistan Rupees per month which is equivalent to about R248 per month in South African money) was not significantly associated with postnatal depression (Husain et al, 2006). Contrary, in India maternal employment was found to be a predictor of postnatal depression (Patel et al, 2002). This study found paternal employment to be a protective factor against postnatal depression (Patel et al, 2002).

2.7.11. Lack of support from the father of the baby
A study conducted in South Africa found a statistically significant association between postnatal depression and lack of financial support from the father of the baby (Tomlinson et al, 2004) whilst in Uganda similar findings were found where depressive symptoms were found to be less common among postnatal mothers who received support from husband during the postnatal period (Kakyo et al, 2011).
2.7.12. High parity

Various studies have studied the association of high parity (multiparity) and postnatal depression. These studies defined multiparity as having four or more children. In Nepal, Ho-Yen et al (2007) found that mothers who had four or more children were more likely to be depressed. Similar findings were found in India five years later where multiparity was found to be a very significant contributing factor for postnatal depression (Hegde et al, 2012) and in Uganda where depressive symptoms were found to be less common among postnatal mothers with low parity (Kakyo et al, 2011). This was not found by Husain et al (2006) in Pakistan where there was no significant association between postnatal depression and multiparity in their study findings.

2.7.13. Young maternal age

Young maternal age (19 years and below) has been associated with postnatal depression (Nakku et al, 2006). However a study conducted in Nepal (Ho-Yen et al, 2007) and the one conducted in Brazil (Tannous et al, 2008) did not find an association between age and postnatal depression symptoms.

2.7.14. Current physical illness in both mother and newborn

A study conducted by Nakku et al (2006) in Uganda found a significant association between postnatal depression at six weeks and current physical illness in the baby as well as physical illness in the mother.

2.7.15. Unwanted sex of the baby

Birth of a daughter when a son was desired has been found to be a risk factor for the onset of postnatal depression in India (Chandran et al, 2002). The same findings were again found in the same country ten years later where delivery of a female infant was found to be significantly associated with postnatal depression (Hegde et al, 2012).

Though having undesired sex of the baby has been found to be significantly associated with postnatal depression in Uganda, there was no statistically significant difference
between those who had male and those with female babies when those who reported to have a different sex of the baby to the one they would have preferred to have were compared in terms of the sex of their infants as it has been seen in India where women preferred a male child to a female child (Nakku et al, 2006).

Studies conducted in Pakistan (Husain et al, 2006) and in Nepal (Ho-Yen et al, 2007) did not find association between postnatal depression and the sex of the infant.

2.7.16. Whether the pregnancy was planned

Having an infant unintentionally has been associated with postnatal depression. A study conducted by Nakku et al (2006) in Uganda found a statistically significant association between an unplanned pregnancy and postnatal depression. This was also a finding in a study that was conducted in South Africa three years later (Tomlinson et al, 2009). Tomlinson et al (2009) also found having an unwanted baby to be associated with postnatal depression. This was not a finding in India, where Hegde et al (2012) did not find any significant association between postnatal depression and pregnancy planning.

2.8. Prevention and management of postnatal depression

Evidence shows that postnatal depression is a result of interaction of biological, psychological and social factors (O’hara and Swain, 1996; Hendrick et al, 1998; Ahokas et al, 2001; Bloch et al, 2003; Stewart et al, 2003; Maguire and Mody, 2008; Nemerof, 2008). Because there is no single causal pathway for postnatal depression, a multifactorial approach, which combines the contributions of the psychological, psychosocial, and biological factors, is likely to be most beneficial as it recognizes various etiological factors and different individual women circumstances (Stewart et al, 2003).

Though some scholars have proposed manipulation of risk factors for postnatal depression that have been identified through research to reduce likelihood of developing postpartum depression (Stewart et al, 2003), consensus has not been reached as some scholars have argued that this simple linear way of manipulating risk
factors does not take into consideration the complex interactions of biopsychosocial risk factors and the fact that individual circumstances that need to be considered when implementing interventions for prevention and management of postnatal depression are unique and vary (Dennis, 2005; Milgrom, 2005; Fitelson et al, 2011).


The National Institute for Care and Clinical Excellence (2007) stress the need for screening for risk factors for postnatal depression at first antenatal visit or postnatal visit and referral for those with risk factors for further assessment and management. These guidelines also stress the need for involvement of the partner and the family in the management of postnatal depression.

2.9. Conclusion

The above literature review shows that symptoms of postnatal depression have a negative impact on the health outcomes of both the mother and the baby whilst its prevalence and factors associated with it vary per country and even by area in the same country. It also show that what is a factor associated with postnatal depression at a certain point in time may be found to be no longer associated with postnatal depression by the future studies in the same area or country. Localized studies repeated after some
time may therefore tend to be beneficial as they will point to the factors associated with postnatal depression at that geographic area at a particular time and therefore properly inform planning. The literature review also shows that tools for detecting postnatal depression as well as empirically tested interventions for its prevention and management are available.
CHAPTER 3: METHODOLOGY

3.1. Introduction

This chapter will discuss the methodology that the study followed. It will describe the research design, setting and site selection, the study population, the sample size and sampling procedure. The data collection tool that was used to collect data, pre-testing and translation of the tool to ensure reliability and validity as well as data collection procedures that were followed will also be discussed. This chapter will also describe data analysis, ethical consideration as well as study reliability, validity and elimination of bias.

3.2. Research design

The study used quantitative, descriptive and cross-sectional design to enable the researcher to collect data from women who had delivered a live infant within a period of 12 weeks of data collection, to determine the prevalence of postnatal depression symptoms using a validated tool and to determine the associated social factors using close ended questions at a single point in time.

3.3. Study setting and site selection

The study was conducted in Atteridgeville Clinic, a primary health care clinic under the City of Tshwane Metropolitan Municipality. The clinic is situated at the central part of Atteridgeville township on the west of Pretoria and has a catchment population of 64 425 (Statistics South Africa, 2011). Atteridgeville clinic is a primary health care clinic rendering primary health care package services. No delivery of babies is done in the clinic but these are referred to the nearby Kalafong hospital, Pretoria West hospital and Laudium hospital. The package of services rendered in Atteridgeville clinic include child health and nutrition, maternal and women's health which include antenatal care, postnatal care and family planning, chronic diseases care, mental health, management of communicable diseases including tuberculosis, treatment of acute and minor
ailments, treatment of sexually transmitted infections and comprehensive HIV and AIDS care management and treatments. According to the clinic records, on average 337 people are seen at Atteridgeville Clinic per day.

3.4. Study population

The study population for this study was all women attending Atteridgeville Clinic during the study period and had delivered a live infant within 12 weeks of the time of the study. A 12-week cut off point was used because the onset of postnatal depression is within twelve weeks post-delivery (Stewart et al, 2003).

3.5. Sample and sampling technique

The study sample size was 211 participants. This was determined using EpilInfo and using the hypothesized prevalence of 16.4% that was found by Ramchandani et al (2008) in a study conducted in Soweto, South Africa. Two hundred and sixteen eligible women were recruited. Four refused to participate. One was excluded as she did not understand any of the local languages. Her English was also limited and only spoke Shona.

Simple random sampling technique using a hat method was used to select participants from women that met the criteria and consented to participate in the study to give all the women meeting the criteria an equal opportunity for inclusion in the study.

Women who attended Atteridgeville Clinic during the data collection period and had delivered a live infant within 12 weeks were approached whilst waiting at the clinic's waiting area for registration and withdrawal of files. The purpose of the study and procedure was explained to them using a study information brochure (see appendices A, B and C). Those who agreed to participate were invited into a consulting room that was allocated to the researcher for interviews.
In the interview room a woman would be asked to randomly pick one paper from the container that contained twenty five pieces of small folded papers twenty of which were marked and five not marked. All those who picked a paper that was marked were in interviewed by the researcher whilst those who picked a plain paper were not included. The researcher ensured that no woman was interviewed more than once by asking if they had previously been interviewed before being recruited and again before being interviewed.

3.6. Inclusion and exclusion criteria

Women attending Atteridgeville Clinic during the study period and had delivered a live infant within 12 weeks of the time of the study who consented to participate in the study were included in the study.

Women who did not understand English, Zulu or Tswana and those below 18 years and not accompanied by their parents or legal guardians were excluded from the study.

3.7. Data collection tools

Data was collected using the face-to-face interviewer administered structured questionnaire comprising of the Edinburgh Postnatal Depression Scale and questions developed by the researcher to determine the women’s demographic, economic and social factors; information on the baby; parity; and method of delivery (see appendices G, H and I).

Various tools have been used internationally for screening and diagnosing postnatal depression (Stewart et al, 2003; Zubaran et al, 2010). Among these tools the Edinburgh Postnatal Depression Scale (Cox et al, 1987), the Postpartum Depression Screening Scale (Beck and Gable, 2001) and the Bromley Postnatal Depression Scale (Stein and van den Akker, 1992) were specifically designed to screen for postnatal depression. The other tools were designed to screen for general symptoms of depression and associated distress.
Though the other screening and diagnostics tools that were designed for general depression have been used and can be used in the screening and diagnosis of postnatal depression, some scholars have recommended the use of tools that were specifically made for postnatal depression, arguing that tools that were specifically designed for postnatal depression have higher sensitivity than the general tools in the detection of postnatal depression symptoms (Stewart et al, 2003; Zubaran et al, 2010).

Among the three tools specifically made to screen for postnatal depression symptoms, only the Edinburgh Postnatal Depression Scale has been validated for use in a South African context among postnatal women (Lawrie et al, 1998; Stewart et al, 2003; Zubaran et al, 2010). The present study used the Edinburgh Postnatal Depression Scale to screen for postnatal depression symptoms.

### 3.7.1. The Edinburgh Postnatal Depression Scale

The Edinburgh Postnatal Depression Scale is a screening tool that was specifically designed to screen for postnatal depression in community samples (Cox et al, 1987). It is a ten-item self or interviewer administered tool. Each item is scored on a scale of 0 to 3 with a total score ranging from 0 to 30. The questions are on the feelings of the woman during the past 7 days. The tool deliberately does not contain items related to somatic symptoms associated with depression such as insomnia, appetite, weight changes and sex drive changes as these may occur naturally in postnatal women.

The psychometric properties of the Edinburgh Postnatal Depression Scale have been widely evaluated and found to have good sensitivity, specificity and predictive value (Stewart et al, 2003; Zubaran et al, 2010). It has been validated for use among postnatal women in the South African context and found to be a valid screening instrument for postnatal depression symptoms in this setting (Lawrie et al, 1998), can be completed in 5 minutes, and is available free of charge. It therefore meets the standards for screening tests namely; that screening tests should have good sensitivity, specificity, and predictive value; the screening procedure should be safe, convenient, and acceptable to the target population; screening tests should be cost-effective, easy to
interpret, and be accessible to the target population (Stewart et al, 2003; Zubaran et al, 2010).

The Edinburgh Postnatal Depression Scale was therefore selected for this study. The threshold used to determine postnatal depression symptoms was the score of 12 and above based on the findings of the validation study that was conducted in an urban setting in South Africa among women attending a postnatal clinic (Lawrie et al, 1998).

The questionnaire was translated into SeTswana and IsiZulu, as these are local languages in Atteridgeville.

3.7.2. Pilot study

The pilot study was conducted by the researcher over three days among the target population in Atteridgeville Clinic after the permission to access the site was granted. The aim of the pilot study was to test the procedure, method and the questionnaire that were going to be used in the study to identify and correct gaps and to gather information and lessons for the actual study.

During the pilot study data collection procedure and method, the data collection questionnaire and the recruitment of participants was pre-tested by the researcher among fifteen postnatal women in Atteridgeville Clinic.

The following modifications were made:

- Though the researcher had initially planned to recruit as the women waited to be consulted, it was discovered that this was not going to be possible because there were five consulting rooms in the maternal and child section of the clinic which made the consultation line to move faster with no time for recruitment. Some women who met the criteria had come for other consultations in consulting rooms that are on the other wings of the clinic. The feasible thing was to recruit as women waited for their files in the reception waiting area. Those who agreed to participate were then given the room number where the data collection would take place. The data collection
room number was written on the participant information brochure that those who had agreed to participate were allowed to keep and only hand back after the interview. Depending on how long their que was, some chose to come before consultation whilst some chose to come once they were done with consultation.

- Because the majority of the women that met the criteria were those that had come for consultations at the maternal and child health wing of the clinic, the clinic sister-in-charge offered the researcher an unused room on this wing of the clinic which was more convenient for the participants.
- Another thing that was discovered was that most women who met the criteria came very early in the morning between 07h30 and 09h00 and by 13h00 they will have left the clinic. This meant that the researcher had to be in the clinic early for data collection.
- Three words in the Zulu version of of the questionnaire and two words in the SeTswana version had to be changed and be replaced with what the majority of the women suggested. The questions were then modified.

3.8. Data collection

3.8.1. Logistical arrangements

The period of obtaining permission to access the site, recruitment and data collection lasted for six months and two weeks. The process of obtaining permission to access the site took three months and two weeks. The delay was mainly due to various factors including that Atteridgeville clinic is under the City of Tshwane Municipality and not under Gauteng Provincial Department of Health. This meant that preliminary permission had to be obtained from the City of Tshwane Municipality Director of Clinic Services first before Tshwane Research Ethics Committee could consider the request for permission to access the site.

Even though Medunsa Research Ethics Committee had given ethical clearance for the study, the Tshwane Research Ethics Committee required that their own appointed reviewer go through the research protocol and advice the committee before they make a decision. This also took some time. There were other challenges including the fact
that the chairperson of the committee went on leave without leaving the matter with somebody. Persistent personal and telephonic follow ups eventually yielded results and the permission was obtained after three months and two weeks (see appendices K and L). Pilot study then data collection commenced after permission to access the site was obtained.

3.8.2. Recruitment of participants

Recruitment of participants was done by the researcher at the reception waiting area as the women waited for registration and drawing of their files. The researcher started by introducing herself to the participant and asked the participant their preferred language of communication. An information brochure explaining the purpose of the study and the process of data collection written in languages that participants understood was then offered to the participants to read (see appendices A, B and C). The brochure was read by the researcher to the one participant that was illiterate in her language. After this the researcher asked a few questions to ascertain that the contents of the brochure were understood. Participants were then asked if they agreed to participate in the study. Those who agreed were directed to the data collection room and asked to go there for data collection after booking their place in the consultation line or after finishing with what they had come for.

Participants were interviewed in one of the consulting rooms situated at the maternal and child health section of the clinic. Most of those who had come for maternal and child health services were interviewed while waiting to be consulted. Those who had come for other health services including treatment of minor ailments, TB and HIV and AIDS clinic were interviewed after finishing consultation because these services are rendered at another wing of the clinic. Each interview lasted an average of 10-15 minutes.

In the interview room the researcher explained how the hat method works. After this the participant was requested to pick one paper from the container. The process of written consent and interview was then undertaken with those that picked a paper with a
number written on it whilst those that picked a paper without a number written on it were politely excused.

The researcher started by explaining to the participants that they are required to sign an informed consent form to show that they agree to partake in the study that had been explained in the brochure. A participant was then offered the relevant language consent form (see appendices D, E and F). The consent form was read aloud and slowly whilst the participant followed reading silently. The participant was offered an opportunity to ask questions or clarifications. A participant would then be reassured that the information that they were going to provide would be kept confidential. Data was only collected after obtaining an informed consent.

After the interview all the participants were provided with an educational brochure with information on postnatal depression to take home and read during their spare time. The brochure also includes information on where one can get help and treatment for postnatal depression. Women that showed signs of distress during interview and those who reported to be having suicide thoughts were referred to the mental health team there and then. Each participant was given a R10 airtime voucher and 250 milliliters fruit juice after interview.

Juice was provided because the women had to stay for 10-15 minutes longer for the interview which they had not planned for whilst most of them were breastfeeding.

The information, education and communication brochure on postnatal depression that was offered to women had contact details of organization from whom they could get help and more information on postnatal depression by phone should they need to. The researcher made provision for the R10 airtime so that those that need help and more information can be able to contact the organizations. The juice and airtime was only given after the interview and was not mentioned during recruitment.

Even though a provision had been made for someone to take care of the baby whilst the mother was being interviewed, mothers were reluctant to have somebody they did not
know care for the baby and preferred to hold the baby themselves whilst being interviewed.

3.9. Data analysis

Each questionnaire was checked thoroughly for completeness and correctness before the participant leaves. Scores from the Edinburgh Postnatal Depression Scale were used to classify women as having postnatal depression symptoms or not.

The participants' scores on the Edinburgh Postnatal Depression Scale were added up and interpreted as having postnatal depression symptoms (score of 12 and above) and not having postnatal depression symptoms (score below 12). The threshold to determine postnatal depression symptoms using a score of 12 and above is based on the findings of the validation study of the Edinburgh Postnatal Depression Scale that was conducted among women attending a postnatal clinic in Johannesburg (Lawrie et al, 1998).

Data from the questionnaires was then entered into an excel spread sheet. Data cleaning was done. Data was then coded, entered into another excel spreadsheet, cleaned and exported to STATA version 10 for analysis.

The prevalence of postnatal depression symptoms amongst women attending Atteridgeville Clinic was calculated from the Edinburgh Postnatal Depression Scale scores. Total number of cases, was divided by total number of participants to give the prevalence.

“Postnatal depression symptoms” was the main outcome (dependent variable). The factors predicted to be associated with postnatal depression symptoms were the independent variables for this study.
Descriptive statistics were used to analyse the socio-demographic characteristics of the study sample, information on the baby, parity, and method of delivery to determine frequencies, means and ranges.

Pearson’s Chi-Square was used to determine association between postnatal depression symptoms (defined as the Edinburgh Postnatal Depression Scale score of 12 and above) as an outcome variable and each of the independent variables.

Logistical regression was used to determine the statistical significance of the observed association in multivariate analysis.

3.10. Ethical considerations

Ethical clearance for the study was obtained from the School of Health Care Sciences Research Ethics Committee (SREC) and Medunsa Research and Ethics Committee (MREC), ethical clearance number MREC/H/24/2013: PG (see appendix J). Once the ethical clearance had been obtained, entry to the study setting was sought and obtained from the Tshwane Research Ethics Committee under Tshwane District Department of Health as well as from the management of the Atteridgeville Clinic (see appendices K, L and M).

Participation was voluntary. Anonymity of participants was maintained by not including their identification details in the questionnaires but instead making use of codes. Participants were informed that they had a right to withdraw from the study at any stage of the interview if they so desired and had a right not to answer questions that they did not feel comfortable answering without incurring any negative consequences (see informed consent forms, appendices D, E and F).

Process of obtaining informed consent and data collection took place in a private room at the research site. The Medunsa standard consent form was used and was modified and translated into IsiZulu and SeTswana to fit the population. Informed consent was
also obtained from the parents for those participants who were under the age of 18 years. Participants who chose not to respond to particular questions were not compelled to do so.

Participants who showed signs of distress and those reporting thoughts of suicide were referred for further assessment and treatment by the clinic mental health team comprising of a psychiatric nurse, a psychologist and a psychiatrist for further assessment and management. After the interviews, each participant was given an educational brochure with information on postnatal depression and where to get help if they experience the symptoms in their language.

3.11. Study reliability, validity and bias

The Edinburgh Postnatal Depression Scale that was used to screen for postnatal depression symptoms was validated against the Diagnostic and Statistical Manual (DSM-IV) criteria for depression among urban South Africa women and was found to be a valid screening instrument for postnatal depression in this setting (Lawrie et al., 1998).

The data collection questionnaire was pre-tested by the researcher among fifteen postnatal women in Atteridgeville clinic to identify gaps and and was modified appropriately according to the pre-test process results. Data was double entered by the researcher to reduce errors.

Simple random sampling technique that was used to select participants limited the bias as all women that met the criteria visiting the clinic during the study period had an equal chance of being selected for inclusion in the sample.

Volunteer bias was reduced by clearly explaining the study using participant brochures in languages that participants understood. Non-response bias was minimized for those who could not understand English by translating the questionnaire to the local languages, so that they could also be able to participate in the study.
CHAPTER 4: RESULTS

4.1. Introduction

This chapter presents the results of the quantitative study which focused on screening for postnatal depression for women who had given birth within a period of twelve weeks. The chapter has been divided into the following sections:

i. the socio-demographic characteristics of the participants;

ii. the prevalence of postnatal depression symptoms as determined using the Edinburgh Postnatal Depression Scale; and

iii. the factors associated with postnatal depression for those participants who screened positive for postnatal depression.

4.2. Results

4.2.1. Socio-demographic and obstetric characteristics of participants

A total of 211 respondents with ages ranging from 16 to 44 years, mean 26.6 years (SD 5.8) were interviewed for the study. The majority of the participants (94, 3%) resided at Atteridgeville with the remainder (5, 7%) coming from surrounding areas. Home languages of participants included SePedi (50, 71%), SeTswana (20, 85%), SeSotho (4.27%), TshiVen (2, 37%), English (0, 9) and the rest were Nguni languages (IsiZulu, SiSwati, IsiXhosa and IsiNdebele). Only one participant indicated that she never went to school, 78, 7% had attained secondary school level whilst 20, 4% had either a degree or a diploma. Most of the participants (63, 5%) were single, 35, 5% were either married or living with a partner with only 1% who reported to be widowed. Though the majority of the participants (61%) were unemployed, their financial socioeconomic status was average as about two thirds reported the estimated household monthly income of above R2000 with 33, 3% of these reporting a monthly household income of R8000 and above. Most of the women had delivered their babies in the previous six weeks and more, with an average age of the babies being 7,4 weeks; mean parity was 1.73 (SD 0,86) and most (71,6%) of the deliveries were normal vaginal.
Only three women did not agree to participate.

Tables 4.1 and 4.2 below summarize socio-demographic characteristics and obstetric and baby characteristics of participants.

**Table 4.1: Selected socio-demographic characteristics of participants (N=211)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
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<td></td>
</tr>
<tr>
<td>16-19</td>
<td>17</td>
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</tr>
<tr>
<td>20-35</td>
<td>177</td>
<td>83.88</td>
</tr>
<tr>
<td>36-44</td>
<td>17</td>
<td>8.06</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100.00</td>
</tr>
<tr>
<td><strong>Home language</strong></td>
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<td></td>
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</tr>
<tr>
<td>Venda</td>
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<td>2.37</td>
</tr>
<tr>
<td>Other</td>
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<td>4.27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>211</td>
<td>100.00</td>
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4.2.2. Prevalence of postnatal depression symptoms

Out of the 211 participants 104 obtained scores of 12 and above on the Edinburgh Postnatal Depression Scale and 107 obtained scores below 12.

Overall 49.3% women in this study reported symptoms of postnatal depression as determined by the Edinburgh Postnatal Depression Scale score of 12 and above.

Figure 4.1 depicts the distribution of the Edinburgh Postnatal Depression Scale Scores of the participants.

Figure 4.1: Distribution of the Edinburgh Postnatal Depression Scale Scores of the participants (n 211)

The maximum Edinburgh Postnatal Depression Scale score obtained was 27 and the minimum score was 0. The mean score was 11.31 (SD 6.39).
4.2.3 Social factors associated with postnatal depression

This section examines the relationship between postnatal depression symptoms (dependent variable) and the various social factors.

Table 4.3 below shows the comparison of participants with symptoms of postnatal depression and those without on each variable using Pearson Chi-Square to determine if the variables are significantly associated with postnatal depression symptoms.

**Table 4.3: Variable comparison: PNDS vs No PNDS**

**Pearson Chi-Square comparisons**

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<tr>
<th>Variable(n)</th>
<th>PNDS n (%)</th>
<th>No PNDS n (%)</th>
<th>Chi 2</th>
<th>P value</th>
</tr>
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The following variables were found to be significantly associated with postnatal depression symptoms: Education level of the mother; financial support by the baby’s father; baby’s health status; whether the baby was planned; partner/husband support; partner/husband having other sex partners; partner/husband violence; partner/husband alcohol use and having experienced life stress in the past six months. Though found to be significantly associated with postnatal depression symptoms, the effect size of association between postnatal depression symptoms and education level; baby health status; and partner alcohol use was small (p=0,039; p=0,027; p=0,030 respectively).

Variables that were not significantly associated with postnatal depression symptoms were age of the mother; marital status; staying alone; employment status; level of income; parity; age of baby; delivery method; gender of the baby; preferred gender of the baby; breastfeeding; and having a partner. Though found not to be significantly associated with postnatal depression symptoms, mother staying alone or with relatives approached significance (p= 0,091).

Logistic regression analysis was conducted for all the variables that were found through Pearson Chi-Square to be significantly associated with postnatal depression symptoms.
The association between postnatal depression symptoms and the level of education; father's financial support; planned baby; social support; partner/husband violence; partner/husband alcohol use; and partner/husband having other sex partners was no longer significant when controlling for other variables through logistic regression. Though no longer significantly associated with postnatal depression symptoms when controlling for other variables in logistic regression, partner/husband having other sexual partners approached significance (p=0.065) but the confidence ratio for this relationship at 95% was -0.533139 – 1.88.
Lack of support from partner was found to be strongly associated with postnatal depression symptoms \((p=0.002, 95\% \ CI = -4.092389 \text{ to } -0.891)\). Those participants who reported to be receiving support from their partners/husbands were found to be less likely to have postnatal depression symptoms \((\text{coef} = -2.491729)\).

Having experienced a severe life stress in the previous six months was also found to be significantly associated with postnatal depression symptoms \((p=0.005, 95\% \ CI = 0.3213331 \text{ to } 1.80)\). Those participants who reported that they had experienced severe life stress in the previous six months were found to be 1.065 more likely to develop postnatal depression symptoms.

In this study total of four women were referred to the mental health team for further assessment and management as they either broke down or showed signs of severe distress during interview.

**4.3. Conclusion**

The results indicate that 49.3\% of the participants had a score of 12 or more on Edinburgh Postnatal Depression Scale, which indicates that they are either experiencing postnatal depression or are at high risk for postnatal depression. Lack of partner support and having experienced a severe life stressor in the previous six months were found to be the strongest factors associated with postnatal depression symptoms. Level of education; father’s financial support; planned baby; baby health status; social support; partner/husband violence; partner/husband alcohol use; and partner/husband having other sex partners were also found to be significantly associated with symptoms of postnatal depression though this association was weak. The variables which had the least effect size of association with postnatal depression symptoms among these were education level; baby health status; and partner alcohol use \((p=0.039; p=0.027; p=0.030 \text{ respectively})\).
5.1. Introduction

This chapter discusses and summarizes the findings on the prevalence of postnatal depression symptoms and associated social factors. It is organized into sections according to the study objectives and research questions. Possible explanation about the findings and implications of the study are discussed, as well as the limitations, conclusions and recommendations that emanate from the results.

5.2. Discussion

5.2.1. Prevalence of postnatal depression symptoms

At a prevalence rate of 49.3% the results of the present study are aligned to findings of other studies from South Africa as well other low and middle income countries where a prevalence of 45.1% was found in a study conducted among HIV positive postnatal women in South Africa (Peltzer and Shikwane, 2011) and a prevalence of 43% was found in a study conducted by Kakyo et al (2011) among postnatal women in Uganda.

Even though previous studies conducted among postnatal women in general in South Africa yielded lower prevalence of 37.4% (Cooper et al, 1999) and 16.4% (Ramchandani et al, 2008) the findings by the present study are not surprising when one considers the high prevalence of HIV infection among women of child bearing age (Shisana et al, 2008) as well as the prevalence of major depression that has been found to be higher among females than males in this country (Tomlinson et al, 2009) and the relationship between HIV and AIDS as well the relationship between previous depression and postnatal depression.

The findings by the present study may be a reflection of an increase in the circumstances associated with postnatal depression symptoms including among others, high prevalence rates of HIV and AIDS infections and depression among women of
child bearing age. Another factor may be the high levels of unemployment among the youth which can render fathers to be unable to provide financial support. Lack of father’s financial support has been determined as one of the factors that are associated with postnatal depression symptoms.

The prevalence found by the present study contrasts with the 6.5% to 12.9% prevalence found by studies conducted in high income countries (Gavin et al, 2005), and this confirms the findings that postnatal depression is higher in low and middle income countries than in high income countries. The findings are also far above the estimated global postnatal depression rate of 10-15% (Halbreich and Kalkun, 2005) and also higher than the 6.1% to 43% prevalence found in other low and middle income countries (Chandran et al, 2002; Patel et al, 2002; Abiodun, 2006; Ho-Yen et al, 2006; Husain et al, 2006; Nakku et al, 2006; Tannous et al, 2008; Kaky et al, 2011). This may suggest that South Africa may be among the countries with highest prevalence of postnatal depression in the world.

It is however worth noting that the above-mentioned studies were conducted between 2 and 11 years ago. With constantly changing socio-economic circumstances and demographic transition, it is possible that the prevalence rates in these countries may also be higher now than what these studies found at the time they were conducted especially when one considers the fact that the prevalence findings of the latest study among these studies was 43% which is not further away from the present study.

The high prevalence of symptoms of postnatal depression found by the present study should be viewed with concern when one considers the huge impact postnatal depression has been found to have on the health and development outcomes of the offspring. Postnatal depression impacts the future of the offspring and future generations. What makes postnatal depression even more problematic is that it does not only affect the physical aspect of health of its sufferer and the baby but it also affects their mental and the social health aspects. For the mother, this can be cured as soon as it is detected, but for the baby the physical scars like the effects of malnutrition,
the psychological effects and the social effects usually remain and affect the future of the child throughout adulthood and can spill over to other generations.

The large number of women experiencing symptoms of postnatal depression as found by the present study, means a high number of children that are subjected to conditions that negatively affect their health and development status and challenge their future, thus a need to develop interventions for this group of women in this and similar settings.

Prevention, early detection and treatment of postnatal depression should be prioritized among the strategies to improve the health and development of children and therefore the future prosperity of the country. In South Africa treatment for depression is available at all levels of health care including at Primary Health Care Level in line with Standard Treatment Guidelines and Essential Medicine List (2008) whilst psychological services are available in most health facilities some on full time and some on part-time basis. Furthermore, simple screening tools to detect postnatal depression symptoms as well as the knowledge of factors associated with postnatal depression are available. Prevention, early detection and treatment of postnatal depression at primary health care are therefore feasible and achievable and should therefore be prioritized in health policies.

5.2.2. Social factors associated with postnatal depression symptoms

The present study found partner/husband support; and having experienced a severe life stressor in the previous six months to be the main factors associated with symptoms of postnatal depression independently when the other variables were controlled for in multivariate logistic regression analysis.

5.2.2.1. Lack of or inadequate partner/ husband support

Lack of or inadequate partner/husband support was found to be the strongest factor associated with symptoms of postnatal depression in multivariate analysis. Women that
reported to be having support from their partners were found to be less likely to experience symptoms of postnatal depression symptoms.

These findings are similar to those by previous studies that have been conducted on postnatal depression in South Africa (Cooper et al, 1999; Ramchandani et al, 2008) which also found lack of support from partner/spouse to be significantly associated with postnatal depression. These similarities suggest that the risk factors for postnatal depression in South Africa are similar in different geographic areas. Similar findings were also obtained in studies conducted in other countries of low, middle as well as high income (Beck, 2001; Stewart et al, 2003; Kakyo et al, 2011; Teo et al, 2013) suggesting that lack of support from the partner/husband is a risk factor for postnatal depression globally in high, middle and low income countries.

The similar findings from different contexts over time suggest that partner/husband support is a universal factor in postnatal depression and should therefore be targeted in risk profiling and interventions for postnatal depression.

It is important however to note that the symptoms of depression which among other things render a sufferer to have a negative view of life and relationships may be the cause for women reporting poor support from partners/husband of which it is possible that it is not entirely correct in most cases but is a result the symptoms of depression.

This area should therefore be prioritized in research as an area that needs further qualitative studies to get in-depth data that will determine for an example which came first between the symptoms of depression and the feeling of not being supported and also explore further what the women mean when they say they do not get support from their partners/husband and why they feel they are not being supported.

5.2.2.2. Having experienced a severe life stressor

Having experienced a severe life stressor in the previous six months was independently and significantly associated with postnatal depression symptoms even when other
associated variables were controlled through multivariate analysis, and was the second strongest predictor of postnatal depression symptoms after partner/husband support in the present study. Those participants who reported that they had experienced severe life stress in the previous six months were found to be more likely to develop postnatal depression symptoms.

Having experienced a severe life stressor was also found to be a strong predictor of postnatal depression symptoms in another study conducted in a different geographic location in South Africa (Ramchandani et al, 2008). Similar findings were obtained by studies conducted in other low and middle income countries as well as high income countries (Chandran et al, 2002; Husain et al, 2006; Nakku et al, 2006; Ho-Yen et al, 2007; Leigh and Milgrom, 2008; Hedge et al, 2012) and also globally (Beck, 2001; Stewart et al, 2003) suggesting that this is a universal risk factor for postnatal depression.

Similar to the findings by the other studies in South Africa (Ramchandani et al, 2008) and in Uganda (Nakku et al, 2006) the most reported stressors in the present study also included death of a close person (33, 3%), having been a victim of a life threatening crime, violence or accident (19, 8%), severe financial crisis (18, 5%) and serious illness of a close person (14, 8%).

These findings are not surprising when one considers the available evidence that has linked stress to depression (Bartolomucci and Leopardi, 2009). This relationship may even be more prominent around child birth which is a period that renders women more vulnerable due to hormonal changes and pressures of pregnancy and motherhood.

With the scourge of HIV and AIDS, many families have had to face illness and death of loved ones due to the pandemic. Of note is that in the present study death and serious illness of a close person are among the most frequently reported stressors. Can it be that this death and illness of a close person that was frequently reported in this study is exacerbated by the HIV and AIDS pandemic? Further studies are required to further
explore the link between postnatal depression and HIV and AIDS and possibly answer this question.

Evidence based techniques for managing stress that can be applied to women identified to be having high stress levels during pregnancy and early peperium are available (Varvogli and Darviri, 2011). Early identification and management of stress during pregnancy and early peperium should be prioritized as it can go a long way in reducing the prevalence of postnatal depression and thereby improve maternal and child health and development outcomes which on its own is a prerequisite for future prosperity of any country.

5.2.2.3. Association between postnatal depression symptoms and other socio-economic and demographic factors

The present study also found educational level; father’s financial support; baby planned; baby health status; social support; partner having other sex partners; intimate partner violence and partner alcohol use to be significantly associated with postnatal depression symptoms in bivariate analysis even though this association disappeared when other variables were controlled for in the multivariate analysis.

Though these variables were only associated with postnatal depression in the bivariate analysis and this association was not strong, it is still a cause for concern because it confirms what have been found by other studies conducted previously in South Africa (Cooper et al, 1999; Tomlinson et al, 2004; Ramchandani et al, 2008) and internationally (Chandran et al, 2002; Bove and Valegia, 2004; Robertson et al, 2004; Husain et al, 2006; Nakku et al, 2006; Ho Yen et al, 2007; Leigh et al, 2007; Kaky et al, 2011; Beydoun et al, 2012; Hedge et al, 2012; Teo et al, 2013).

The present study as well as these other studies points mainly to husband/partner related factors, social support as well as baby related factors as common predictors of postnatal depression symptoms suggesting that husband/partner, the baby and social support are the common source for postnatal depression symptoms and therefore
needs to be explored in postnatal depression symptoms risk factor profiling among women.

Partner/husband related factors that have been found by the present study as well as these other studies to be associated with postnatal depression symptoms include partner/husband violence, partner/husband having other sexual partners, polygamy; partner not supporting the woman including financial support, partner being insensitive towards the infant, partner alcohol use and partner alcoholism. In Nepal level of education of the partner was also found to be associated with postnatal depression (Ho-Yen et al, 2007). The findings by the present study which identified lack of support by the partner/husband to be a strongest predictor of postnatal depression also support the argument that partners/husbands are a frequent source for postnatal depression among women.

These findings should be viewed with concern in South Africa where levels of violence and especially domestic violence and alcohol abuse is high (Abrahams et al, 2004; Mayosi et al, 2009; Ramlagan et al, 2010; Peltzer and Pengpid, 2013) because in this context, these findings means a lot of women are at risk of developing postnatal depression as they are at risk of experiencing domestic violence and to have partners/husbands that abuse alcohol. The other side of the coin will be that dealing with domestic violence and alcohol abuse can secondarily reduce the prevalence of postnatal depression.

Similarly to the present study, Tomlinson et al (2004) also found having unplanned pregnancy and unwanted baby to be associated with postnatal depression symptoms in South Africa whilst similar findings were also found by Nakku et al (2006) who also found current physical illness in the baby to be also associated with postnatal depression symptoms in Uganda. These findings also supports the argument that baby related factors also feature prominently in postnatal depression. This can also be explained by the economic implications of an unplanned pregnancy on individuals who are already financially disadvantaged.
With regards to level of education, literature offers different views on the impact of the level of education on postnatal depression. Whilst the present study found level of education to be associated with postnatal depression symptoms on bivariate analysis, the association was lost in multivariate analysis, which indicates a somewhat weak association. Previous studies conducted in South Africa reported contradictory findings in this regard. Whilst Cooper et al (1999) and Peltzer and Shikwane (2011) did not find association between postnatal depression and level of education, Ramchandani et al (2008) found the contrary. Contradicting findings were also found in India where Patel et al (2002) found level of education to be associated with postnatal depression whilst Hedge et al (2012) found the contrary. In Brazil both Lovisi et al (2005) and Tannous et al (2008) found a significant association between postnatal depression and level of participants’ education.

However, studies on depression conducted in South Africa found that depression in the general population was significantly higher among those with low levels of education where people with grade 1-7 were found to be 2.11 times more likely to have experienced a lifetime major depressive episode and 3.70 times more likely to have experienced a 12-months major depressive episode than those with higher levels of education (Tomlinson et al, 2009). These findings concur with those studies that have associates postnatal depression with levels of education suggesting that low level of education should be included as risk factor in postnatal depression risk profiling in this country.

Evidence that associate level of education and other upstream determinants of mental health which includes poverty are a clear example of the fact that the health sector needs collaboration of other sectors including Basic Education, Social Development and Rural Development to name a few in order to improve health status of the people as these upstream determinants of health lie outside the mandate of the health sector.

Of note is that the present study found the following variables to be not associated with postnatal depression: parity; maternal age; marital status; employment status; monthly income; age of the baby; delivery method; baby gender; breastfeeding; preferred baby
gender and whether the women had a partner/husband. Similarly, studies conducted among postnatal and antenatal women in South Africa and other low and middle income countries also did not find association between postnatal depression and most demographic and socio-economic factors (Cooper et al., 1999; Husain et al., 2006; Ramchandani et al., 2008; Hartley et al., 2011; Peltzer and Shikwane, 2011).

However, in South Africa Hartley et al. (2011) found a strong association between household income and antenatal depression whilst in India and in Brazil low income was found to predict postnatal depression (Chandran et al., 2002; Tannous et al., 2008; Hedge et al., 2012). A weak association was also found by (Hartley et al., 2011) between antenatal depression and unemployment. The findings by the present study are contrary to what was expected given the relationship between low socioeconomic status and postnatal depression that have been found internationally (Gavin et al., 2005; Tannous et al., 2008; Hedge et al., 2012). However with regards to employment status, in the present study it should be noted that those who reported to be unemployed mostly came from families with middle to high household income and therefore though not employed most still fell in the bracket of high household income.

Similar to the findings of the present study, parity was not found to be associated with postnatal depression symptoms in studies conducted in South Africa and Pakistan (Cooper et al., 1999; Husain et al., 2006). Contrary, Ho-Yen et al (2007), Kakyo et al (2011) and Hedge et al (2012) in their studies conducted in Nepal, Uganda and India respectively found a significant association between multiparity and postnatal depression symptoms whilst Obiodun (2005) in a study conducted in Nigeria found association between postnatal depression and being a primipara. It is worth noting that average parity of participants in the present study was lower than that of participants in the Nepal, Uganda and India studies. In these studies the participants had more children. In the Ugandan study for example 8, 4% women had 5-6 children whilst in the present study only one participant had more than four children. This definitely had an effect on the findings regarding parity in the present study. In spite of this, the contrasting findings by various studies on this variable indicate that there is still no
agreement as to whether parity is associated with postnatal depression or not. This is an area that still needs more research with larger sample sizes.

The present study also found no association between postnatal depression and age (in weeks) of the baby as well as the mode of delivery. Similar findings were obtained by other studies conducted in South Africa (Peltzer and Shikwane, 2011) and in other countries of low, middle and high income (Forman et al, 2000; Johnstone et al, 2001; Patel et al, 2005; McCoy, 2006; Hedge et al, 2012; Goker et al, 2012). Of note is that earlier studies conducted in the early 1990s had found association between postnatal depression and caesarian section delivery (Hannah et al, 1992; Boyce et al, 1993) whilst the more recent studies found no association between the two variables. It is possible that with advancement in medical technology in the recent years, women could be more receptive of, and less anxious about having to deliver through caesarian section.

Whilst the present study found no association between postnatal depression symptoms and the gender of the baby, as well as whether the woman had a preferred gender of the baby, two studies conducted in India found the opposite (Chandran et al, 2002; Hedge et al, 2012) whilst the findings of another study conducted in Pakistan (Husain et al, 2006) support the findings of the present study. Contradictory findings on these variables were obtained in Uganda where, whilst Nakku et al (2006) had found a strong association between whether the woman got the preferred sex of the baby and postnatal depression, Kakyo et al (2011) in a study conducted five years later in the same country found no association. However even though in India postnatal depression symptoms were associated with having got a female baby when a male baby was wanted, in the Ugandan study there was no statistically significant difference in terms of baby gender when those women that reported that they got the sex of the baby they did not want were compared (Nakku et al, 2006) as was the case in India. This is not surprising when one considers that a male child is more valued in India compared to a female child (Chandran et al, 2002) whilst the aforementioned findings suggest that that may not be the case in Sub Saharan Africa.
5.3. Limitations

This following were limitations of the study:

- Since data were collected cross-sectionally this study cannot draw conclusions about causal pathways hence the findings are only limited to associations.

- Since the study setting is a clinic situated in a township, participants were entirely black with no other races involved. The findings therefore are not inclusive of the other races. More research is needed to determine the prevalence of postnatal depression and associated factors in settings that include all races and cultures.

- As this study used the Edinburgh Postnatal Depression Scale, which is a screening tool rather than a diagnostic instrument, it cannot make claims about the prevalence and associated factors for clinical postnatal depression but rather postnatal depression symptoms. However the Edinburgh Postnatal Depression Scale has been well validated in this country and many other countries and shown to effectively screen for clinical depression in similar settings.

5.4. Conclusion

The results of the present study indicate that, with 49.3% of the participants scoring 12 and higher in the Edinburg postnatal Depression Scale, the prevalence of symptoms of postnatal depression is high in this community. The findings raise a concern of possible lack of detection of postnatal depression for large numbers of women as this is neither screened nor picked up at primary health care facilities.

Lack of social support and experiencing a severe stressor are the main risk factors for postnatal depression. As socioeconomic status plays a role in predicting postnatal depression, the results of this study indicate a gap in the offering of mental health among women in general and women that have recently given birth. It also points to the important role that support from the partner/husband can play in the prevention of postnatal depression.
The similarities between the findings of the present study and the findings by other previous studies conducted in South Africa suggests that the risk profiling for postnatal depression in this country has remained the same over the years with partners/husband, life stressors, and the support system playing an important role. This illustrates an important role of involving fathers/partners and the family by working with them in order for them to be able to provide necessary support to the woman more especially around childbirth to reduce risk for postnatal depression as also proposed by the National Institute for Care and Clinical Excellence (2007).

5.5. Recommendations

Based on the findings of this study the following are the recommendations:

- In view of the high prevalence of postnatal depression found by the present and previous studies, and the negative impact postnatal depression has on the health outcomes of both current and future generations of babies and mothers, measures to screen for postnatal depression at primary health care facilities should be considered. This is feasible because simple, free and brief tools are available to screen for postnatal depression. This approach is supported by the primary health care principle of early identification and treatment for conditions that impact on maternal and child health.

- In view of the constantly changing socioeconomic status and demographic transition in countries, studies to determine the prevalence of postnatal depression should be conducted on a regular basis to correctly inform health and development policies.

- In view of the findings that show the important role partners/husbands play in the prevention of postnatal depression, programs to involve and encourage partners/husbands to actively participate with their partners in antenatal, postnatal and child health services should be encouraged and developed in order to empower and sensitize partners/husbands about the important role that their
involvement and support play in the prevention of postnatal depression, which impacts on the wellbeing of both the baby and the mother.

- More qualitative research is needed to explore and obtain in-depth data on the relationship of postnatal depression and partner/husband, social support and baby related factors.

- It is crucial that policy makers appreciate the link between depression and the main drivers of mortality and morbidity in this country namely HIV and AIDS, TB, injuries and violence and depression in order to deal with all these in a comprehensive manner. The exclusion of mental health aspect in the fight against these problems may be the missing link that is resulting in the current state of affairs where the country continues not to win the war against poor health outcomes. Mental health should therefore be an integral part of intervention to curb mortality and morbidity.

- With the high prevalence of symptoms of postnatal depression that have been found by the present and other studies, and the evidence linking postnatal depression to poor health and development outcomes for mothers and babies, measures to combat postnatal depression should be integrated into health services in South Africa.
References


Appendix A: English information brochure for participants

PREVALENCE OF POSTNATAL DEPRESSION SYMPTOMS AND ASSOCIATED SOCIAL FACTORS IN A PRIMARY HEALTH CARE CLINIC IN ATTERIDGEVILLE, PRETORIA

Introduction and background
My name is Dudu Shiba. I am from the School of Public Health at the University of Limpopo at MEDUNSA Campus in Pretoria where I am registered for Master of Public Health. I am conducting a study on the emotional health among women that have recently delivered a baby.

What we are requesting from you
We are requesting your participation in this study as you have recently delivered a baby. If you agree to take part in this study, I will ask you several questions that will give me information about the emotional health of women who have recently delivered a baby. This information will inform development of programs to improve the health of new mothers. Your responses to the questions cannot be wrong or right because they are about your experiences. You are therefore requested to provide me with as much information as you will be requested.
Appendix B: SeTswana information brochure for participants

PREVALENCE OF POSTNATAL DEPRESSION SYMPTOMS AND ASSOCIATED SOCIAL FACTORS IN A PRIMARY HEALTH CARE CLINIC IN ATTERIDGEVILLE, PRETORIA

PAMPIRI YA KITSO YA BA TSEYA KAROLO

Matseno le tshedimoso

Ke eng se re se kopang mo go wena
Re kopa tirisano mmogo ya gago mo patlisisong e jaana ka o fetsa go belega ngwana. Fa o dumela go tseya karolo, ke tlo go botsa dipotso tse di tlo mpha tshedimosetso ka boitikanelo maikutlo mogare ga bo mme ba fetsang go belega bana. Tshedimosetso e e tla berekisiwa go tsweletsa boitikanelo ba bo mme ba fetsang go belega. Karabo ya gago mo dipotsong tse e ka senne phoso kgotsa nnete ka gore e ka maitemogelo a gago. Ka mo ke kopa gore o fetole dipotso ka moo ke kopang ka teng.
Appendix C: IsiZulu information brochure for participants

IZINGA LEZIPAWU ZESIFO SE DEPRESSION EPHATHA OMAMA ABASANDA KUTHOLA ABANTWANA KANYE NEZIMO EZIHAMBISANA NOKUBAKHONA KWALEZIPAWU EKLINIKI YASE ATTERIDGEVILLE, EPITOLI.

ULWAZI OKUMELE BABE NA VFU ABAHLANGANYELA KULOLUCWANINGO

Isingeniso nencazelo
Igama lami nginguDudu waka Shiba. Ngiphuma eUniversity yaseLimpopo, ekhempasini yaseMEDUNSA khona la ePitoli laho ngenza khona izifundo zempilo yomphakathi (Public Health). Ngenza ucwaningoyakholana nokuphila emphefumulweni (emotional health) komama abasanda kuthola abantwana.

Esikucela kuwe
ENGLISH CONSENT FORM

Name of Study:

Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atteridgeville, Pretoria.

I have read/heard the information on the study on the emotional health among women that have recently delivered a baby. I have also read/heard the aims and objectives of the study. I was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way. I understand that participation in this study is completely voluntary and that I may withdraw from it at any time and without supplying reasons. This will have no influence on the regular treatment that holds for my condition neither will it influence the care that I receive.

I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this study.

............................................................ ....................................................
Name of participant Signature of participant.

........................................... ........................................... ...........................................
Place. Date. Witness

Statement by the Researcher

I provided verbal and written information regarding this Study

I agree to answer any future questions concerning the Study as best as I am able.

I will adhere to the approved protocol.

........................................... ........................................... ........................................... ...........................................
Name of Researcher Signature Date Place
Appendix E: SeTswana informed consent form

UNIVERSITY OF LIMPOPO (Medunsa Campus)

Leina la patlisiso:

Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atterdgeville, Pretoria

Ke badile ka ba ka utlwa ka maikemisetso a patlisiso ka boitikanelo ba maikutlo mo gare ga bo mmle ba ba fetsang gobelega bana. Ke ile ka bala/ ka utlwa gape le maikemisetso le diphithhello tsa patlisiso e. Ke ile ka fiwa monyetla wa go botsa dipotso ka ba ka fiwa le nako e e lekaneng go naganisisa ka nthla e. Ke thaloganya sentle maikemisetso le diphithhello tsa patlisiso e. Ga ke a gapeletsiwa ke ope ka mokgwa ope kgotsa ope gore ke tseye karolo.

Ke utlwisisa gore go tseya karolo mo patlisisong e ke ka go ithaopa ga me ebile nkatswa mo go yona nako engwe le ngwe ka nthle go le go fa lebaka. Se se ka sebe le kamano mo kalafong eo ke e fiwang. Ke itse thata gore dipholo tsa patlisiso di tla diri setswa mabaka a saentfiki e bile di ka nna tsa phasaladiwa. Ke dumelana le seno, fa fela go netefadiwa gore se e tla nna khupamarama.

Fano ke neela tumelelo yagotsaya karolo mo patlisisong e.

.............................................. ........................................................
Leina la motseya karolo .............................................. Tshaeno ya motseya karolo

.............................................. .............................................. ...........................................
Lefelo .............................................. Letlha .............................................. Paki

Seteitemente ka Mmatlisisi

Ke tlametse tshedimosetso ka molomo le/kgotsa e e kwadilweng malebana le Tekelelo / Patlisiso / Porojeke e.

Ke dumela go araba dipotso dingwe le dingwe mo nakong e e tlang tse di amanang le Tekelelo / Patlisiso / Porojeke e ka moo nka kgonang ka teng.

Ke tla tshegetsa porotokolo e e rebotsengw.

.............................................. .............................................. .............................................. ..............................................
Leina la Mmatlisisi .............................................. Tshaeno .............................................. Letlha .............................................. Lefelo
Appendix F: IsiZulu informed consent form

UNIVERSITY OF LIMPOPO (Medunsa Campus)

Igama locwaningo:

Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atteridgeville, Pretoria.


Ngiyazwisisa ukuthi ukuhlanganyela kulolucwaningo akuphoqelelwana kodwa kungokuzithandela ngokupelelele nokuthi nginga shintsha umqondo noma nini ngiyakwazi ngokudlulelo ukuthi ukuhlanganyela izithathu. Lokhu xwe ngithana omubi ekwelashweni nasekunakekelweni kwami noma osizweni okumele ngingathetha kulokkezala.

Nginolwazi olugcwele ukuthi imiphumela ya yolucwaningo izosebenziswe izinhloso zesayensi futhi ingashicilelela (phablishwa). Ngiyavuma loku uma nje ngingeke ngalulwe mina.

Lapha nginikeza imvume yokuhlanyelanye kulekliniki.

............................................................
............................................................

Igama lephathisiphenti Isignesha yephathisiphenti

........................................... ........................................... ...........................................

Indawo Usuku Ufakazi

Isitatimende soMcwaningi

Nginikezele ngolwazi ngomlomo kanye/nolubhaliwe maqondana nalolu Cwaningo.

Ngiyavuma ukuphendula nanoma yimiphile imibuzo yesikhathi esizayo maqondana naloluCwaningno kahle kakhulu kagangoba ngikwazi.

Ngizobambelela kusivumelwano senqubo esigunyaziwe

........................................... ........................................... ...........................................

Igama IoMcwaningi Isignesha Usuku Indawo

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Appendix G: English Questionnaire

SECTION 1: INTERVIEW DATE AND TIME

Date: 
Time: 
Code

SECTION 2: SOCIO-DEMOGRAPHIC INFORMATION

Thank you for agreeing to participate in this study. Please answer the following questions about yourself.

2.1. Participant’s age in years

How old are you? (Tick the correct box)

<18 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 >35

2.2. Participant’s residence

Where do you stay?

☐ Atteridgeville
☐ Saulsville
☐ Other (Please specify)
2.3. Participant’s home language
What is your home language?

- English
- IsiZulu
- SeTswana
- SePedi
- Other, please specify
- Decline to answer

2.4. Participant’s education
What is the highest level of education you have passed at school?

- Never went to school
- Grade 1 to 7
- Grade 8 to 11
- Grade 12
- Degree/diploma
- Decline to answer

2.5. Marital status
What is your marital status?

- Single
- Married
- Not married but living with partner
- Separated/divorced
- Widowed
- Decline to answer
2.5. Whom do you stay with at home?

☐ Alone
☐ Mother
☐ Father
☐ Both parents
☐ Husband/Partner
☐ Siblings

☐ Other, please specify)

☐ Decline to answer

2.6. Participant’s employment status

Are you employed?

☐ Yes
☐ No

☐ Decline to answer

2.7. Household monthly income

What is the total money earned by all income earning members of your family per month.

☐ 0-R499
☐ R500-R1000
☐ R1001- R2000
☐ R2001-R5000
☐ R5001-R8000
☐ R8000 and above

☐ Doesn’t know
2.8. Father’s financial support

Is the father of this baby supporting you financially?

☐ Yes
☐ No
☐ Decline to answer

SECTION 3: PARITY

3. How many babies have you given birth to in your life including this one?

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 and above (Please specify)
☐ Decline to answer

SECTION 4: THIS BABY

Please answer the following few questions about your baby

4.1. Age of the baby

How old is your baby?

☐ 0 to 6 days
☐ 1 to 6 weeks
☐ 7 to 10 weeks
☐ 11 to 12 weeks
☐ Decline to answer
4.2. Method of delivery

How did you deliver this baby?

☐ Normal vaginal delivery
☐ Caesarian section
☐ Forceps delivery/ vacuum extraction
☐ Decline to answer

4.3. Baby planned

Did you plan to have this baby?

☐ Yes
☐ No
☐ Decline to answer

4.4. Baby’s health status

How would you rate your baby’s health?

☐ Good
☐ Sometimes not well
☐ Mostly not well
☐ Always sick
☐ Decline to answer

4.5. Gender of the baby

4.5.1. What is the gender of your baby?

☐ Girl
☐ Boy
4.5.2. What gender of the baby would you have preferred to have?

☐ Girl
☐ Boy
☐ Any of the two
☐ I did not want a baby
☐ Decline to answer

4.6. Baby breast feeding

Are you breastfeeding your baby?

☐ Yes
☐ No
☐ Decline to answer

SECTION 5: EDINBURGH POSTNATAL DEPRESSION SCALE

Please put a mark next to the answer that comes closest to how you have been feeling in the past 7 days, not just how you feel today.

In the past 7 days:

5.1. I have been able to laugh and see the funny side of things.

☐ As much as I always could
☐ Not quite so much now
☐ Definitely not so much now
☐ Not at all
☐ Decline to answer
5.2. I have looked forward with enjoyment to things
☐ As much as I ever did
☐ Rather less than I used to
☐ Definitely less than I used to
☐ Hardly at all
☐ Decline to answer

5.3. I have blamed myself unnecessarily when things went wrong
☐ Yes, most of the time
☐ Yes, some of the time
☐ Not very often
☐ No, never
☐ Decline to answer

5.4. I have been anxious and worried for no good reason
☐ No, not at all
☐ Hardly ever
☐ Yes, sometimes
☐ Yes, very often
☐ Decline to answer

5.5. I have felt scared or panicky for no very good reason
☐ Yes, quite a lot
☐ Yes, sometimes
☐ No, not so much
☐ No, not at all
5.6. Things have been getting on top of me

☐ Yes, most of the time I have not been able to cope at all
☐ Yes, sometimes I have not been coping as well as usual
☐ No, most of the time I have coped quite well
☐ No, I have been coping as well as ever
☐ Decline to answer

5.7. I have been so unhappy that I have had difficulty sleeping

☐ Yes, most of the time
☐ Yes, sometimes
☐ Not very often
☐ No, not at all
☐ Decline to answer

5.8. I have felt sad or miserable

☐ Yes, most of the time
☐ Yes, quite often
☐ Not very often
☐ No, not at all
☐ Decline to answer

5.9. I have been so unhappy that I have been crying

☐ Yes, most of the time
☐ Yes, quite often
☐ Only occasionally
☐ No, never
5.10. The thought of harming myself has occurred to me

☐ Yes, quite often
☐ Sometimes
☐ Hardly ever
☐ Never

5.11. Edinburgh Postnatal Depression Scale Score


SECTION 6: RELATIONSHIP WITH HUSBAND/PARTNER

Prompt: The following questions are about the way you and your partner/husband relate to each other

6.1. Do you have a partner/husband currently?

☐ Yes
☐ No
☐ Decline to answer

6.2. Support from partner/husband

Does your partner/husband support you in times of difficulty?

☐ Yes
☐ No
☐ Decline to answer
6.3. Partner/husband having other sexual partners

In the past twelve months did your partner/husband have other sexual partner/s that you know of?

☐ Yes
☐ No
☐ Decline to answer

7. SOCIAL SUPPORT

7.1. Do you have a person in your life that supports you in times of difficulties?

☐ Yes
☐ No
☐ Decline to answer

7.2. Who is that person that supports you mostly in times of difficulties?

☐ Partner/husband
☐ Mother
☐ Father
☐ Sibling
☐ Friend
☐ Other please specify
☐ Decline to answer
SECTION 8: DOMESTIC VIOLENCE

8.1. In the past twelve months did your partner/husband threaten to hit you or actually hit you?

☐ Never
☐ Once
☐ Few times
☐ Many times
☐ No partner/husband
☐ Decline to answer

9. PARTNER/HUSBAND’S ALCOHOL USE

9.1. Does your partner/husband drink alcohol?

☐ Never
☐ Sometimes
☐ Every weekend
☐ Everyday
☐ Decline to answer
SECTION 10: LIFE STRESS

10.1. Have you in the past six months experienced a severe stressful event?

☐ No

☐ Yes, I have experienced severe financial crisis

☐ Yes, I have experienced death of a close person

☐ Yes, I have experienced serious illness of a close person

☐ Yes, I have been a victim of a life threatening crime, violence or accident

☐ Yes, I have moved to a new place

☐ Yes, I have changed jobs

☐ Yes, I have lost my job

☐ Yes, other

☐ Decline to answer

END

THANK YOU FOR YOUR TIME AND PARTICIPATION
POSTNATAL DEPRESSION STUDY QUESTIONNAIRE

SECTION 1: INTERVIEW DATE AND TIME
Date: 
Time: 
Code: 

SECTION 2: SOCIO-DEMOGRAPHIC INFORMATION
Prompt: Ke a leboga fa o dumetse go tsa karolo mo patlisisong e. Ka kopo araba dipotso tse di latelang ka ga wena

2.1. Participant’s age
O nale di ngwaga tse kae

<table>
<thead>
<tr>
<th>&lt;18</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
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<th>34</th>
<th>35</th>
<th>&gt;35</th>
</tr>
</thead>
</table>

2.2. Participant’s Residence
O nna kae?

☐ Atteridgeville
☐ Saulsville
☐ Kwa gongwe
☐ O gana go araba
2.3. Participant’s home language
Le bua pulelo efe ko gae?

☐ English
☐ IsiZulu
☐ SeTswana
☐ SePedi
☐ Engwe
☐ O gana go araba

2.4. Participant’s education
O falotse go fitlha kamophato o feng kosekolong?

☐ Ga ka ya sekolong
☐ Mophato wa 1 go fitlha go 7
☐ Mophato wa 8 go fitlha go 11
☐ Mophato wa 12
☐ Digrí/diploma
☐ O gana go araba

2.5. Marital status
Maemo a gago a lenyalo ke amafeng?

☐ Ga ke a nyalwa
☐ Ke nyetswe
☐ Ga ka nyalwa mmeke nna le molekane
☐ Re kgaogane
☐ Ke motlhologadi
☐ O gana go araba
2.5. Person staying with at home
Onna le mang ko gae?
- Ke le nosi
- Mme
- Rre
- Batsadi
- Molekane/Monna
- Bana ba ko gae
  - [ ] Ba bangwe
- O gana go araba

2.6. Participant’s employment status
Ao a bereka?
- Ee
- Nyaa
- O gana go araba

2.7. Household monthly income
Ke bo kae palo ya letseno lotlhe lekopane la maloko otlhe a karolo ya lelapa la gago a amogelwang ge kgwedi e fela?
- [ ] 0-R499
- [ ] R500-R1000
- [ ] R1001- R2000
- [ ] R2001-R5000
- [ ] R5001-R8000
- [ ] R8000 go feta
- [ ] Ga ke itse
- [ ] O gana go araba
2.8. Father’s financial support
A papa go ngwana yo o le tlhokomela ka madi?

☐ Ee
☐ Nyaa
☐ O gana go araba

SECTION 3: PARITY
3. O belegile bana ba ba kae mo botshelong ba gago re balela le o onaleng yena?

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 le go feta (Please specify)

SECTION 4: THIS BABY
Prompt: Kakopo araba dipotso tse latelang ka ngwana wa gago

4.1. Age of the baby
Ngwana wa gago o nale di beke tse kae abelegwe?

☐ Matsatsi a 0 go fitala go 6
☐ Beke e 1 go fitala go 6
☐ Dibeke tse 7 go fitala go 10
☐ Dibeke tse 11 go fitala go 12
☐ O gana go araba
4.2. Method of delivery
O belege jang ngwana o?

☐ O mo belegile sentle
☐ Kaoporeitshine
☐ Ka go gogwa ka ditshipi
☐ O gana go araba

4.3. Baby Planned
A o ne o rerile go nna le ngwana o?

☐ Ee
☐ Nyaa
☐ O gana go araba

4.4. Baby's health status
Bo bjang boitekanelo bangwana wa gago

☐ Bontle
☐ Dinakodingwe ga a etekanela
☐ Nako tsentsi ga a etekanela
☐ O lwala ka dinako tsotlhe
☐ O gana go araba

4.5. Gender of the baby
4.5.1. Ngwana wa gago ke moeng?

☐ Mosetsana
☐ Mosimane
☐ O gana go araba
4.5.2. O ne o ratile go nna le ngwana wa moeng?

☐ Mosetsana
☐ Mosimane
☐ E ngwe ya tse pedi tse
☐ Ke ne ke sa batle go nna lengwana
☐ O gana go araba

4.6. Baby breast feeding

A o anyisa ngwana letsele?

☐ Ee
☐ Nyaa
☐ O gana go araba

SECTION 5: EDINBURGH POSTNATAL DEPRESSION SCALE

Ka kopo dira letshwao mo karabong e e leng gaufi le maikutlo a gago mo matsatsing a 7 a fetileng, e seng maikutlo a gago a ka jeno

Mo matsatsing a 7 a fetileng:

5.1. Ke kgonne go tshega le go bona dikarolo tsa dilo dingwe tse di tshegisang

☐ Yang nka metlheng
☐ E seng thata jalo janong
☐ Ruri e seng thata jalo janong
☐ Ka gope
☐ O gana go araba
5.2. Ke bonetse ko pele ka boitumelo go dilo dingwe

☐ Ka mokgwa o ke neng kentse ke dira
☐ Ka fa tlase ga tlwaelo
☐ Ruri go fokotsegile go feta metlheng
☐ Ga go diragale
☐ O gana go araba

5.3. Ke ipone diphoso go sa tlhokagale fa dilo di ne di sa tsamae sentle

☐ Ee, ka nako tse dintsi
☐ Ee, ka dinako dingwe
☐ Eseng gantsi
☐ Nyaa, leseng
☐ O gana go araba

5.4. Ke ne ke sa nnisege mme ke tshwenyega go sena lebaka.

☐ Nyaa, leseng
☐ Gimmelwa
☐ Ee, ka dinako tse dingwe
☐ Ee, ka di nako tse dintsi
☐ O gana go araba

5.5. Ke ne ke tshoga kgotsa ke thatasela go sena lebaka lepe

☐ Ee, gantsi
☐ Ee, ka dinako tse dingwe
☐ Nyaa, e seng thata
☐ Nyaa, leseng
5.6. Dilo di ne di le mo godimo ga me

☐ Ee, ka dinako tse dintsi ke ne ke sa kgone ka gope
☐ Ee, ka dinako tse dingwe ke ne ke sa kgone ja ka metlha
☐ Nyaa, ka dinako tse dintsi ke kgonne sentle tota
☐ Nyaa, ke ne ke nntse ke kgona jaaka pele
☐ O gana go araba

5.7. Ke ntse ke sa itumela mo ebileng go ne go le boima gore ke tshware boroko

☐ Ee, ka di nako tse ntsi
☐ Ee, ka dinako dingwe
☐ Eseng ka dinako tse ntsi
☐ Nyaa, leseng
☐ O gana go araba

5.8. Ke ne ke sa itumele kgotsa ke tlhakatlhakane maikutlo

☐ Ee, ka di nako tsotlhe
☐ Ee, go le gontsinyana
☐ Eseng ka dinako tse ntsi
☐ Nyaa, leseng
☐ O gana go araba

5.9. Ke nnile le go se itumele moo ke bileng ke ne ke lla

☐ Ee, ka di nako tse ntsi
☐ Ee, go le go ntsinyana
☐ Ka di nako dingwe fela
☐ Nyaa, leseng
5.10. Tlhaloganyo ya go ikutlwisa botlhoko ene etla mo gonna

☐ Ee, ka dinako di le dintsi
☐ Ka di nako dingwe
☐ Ka dinako tse mmalwa
☐ Le eseng

5.11. Edinburgh Postnatal Depression Scale Score


SECTION 6: RELATIONSHIP WITH HUSBAND/PARTNER

Prompt: Dipotso tse di latelang ke ka mokgwa o wena le molekane/monna wagago le amanang ka teng

6.1. A o nale molekane/monna ka nako e?

☐ Ee
☐ Nyaa
☐ O gana go araba

6.2. Support from partner/husband

A molekane/monna wa gago o a go thekga modinakong tse boima?

☐ Ee
☐ Nyaa
☐ O gana go araba
6.3. Partner/husband having other sexual
Mo di kgweding tse di some le bobedi a molekane/monna wagago o nnile le balekane ba bangwe ba thobalano ba o ba itsing?

☐ Ee
☐ Nyaa
☐ O gana go araba

7. SOCIAL SUPPORT

7.1. A o nale motho mo botshelong ba gago yo a go supotang ka dinako tse di boima?

☐ Ee
☐ Nyaa
☐ O gana go araba

7.2. Ke mang motho yo a go supotang ka dinako tse boima?

☐ Molekane/Monna
☐ Mme
☐ Rre
☐ Bana ba ko gae
☐ Ditsala
☐ Dingwe
☐ O gana go araba
SECTION 8: DOMESTIC VIOLENCE

8.1. Mo dikgweding tse some pedi tse di fitileng a molekane kgotsa monna wa gago o sele a go tshosetsa ka go go betha kgotsa a o sele a go betha?

☐ Leseng
☐ Ga ngwe
☐ Makgetlhonyana
☐ Go le go ntsi
☐ Ga kena molekane kgotsa monna
☐ O gana go araba

9. PARTNER/HUSBAND’S ALCOHOLISM

9.1. A molekane/monna wa gago o nwa bojalwa?

☐ Leseng
☐ Ka dinako tse dingwe
☐ Mafelong abeke ngwe le engwe
☐ Letsatsi lengwe le lengwe
☐ O gana go araba
SECTION 10: LIFE STRESS

10.1. A o kile wa kopana le mathata a fapaneng a boima a bophelo mo dikgweding tse some le bobedi tse di fitileng?

☐ Nyaa

☐ Ee, ke kopane le mathata a mantsinyana a madi

☐ Ee, ke itemogetse leso lamongwe a leng gaufi le nna.

☐ Ee, ke itemogetse bolwetsi ba mongwe o gaufi le nna

☐ Ee, ke ile ka nna mo maemong a a tshosang a bogodu, ntwa kgotsha kotsi.

☐ Ee, ke fodugetse ko lefelong le lentsha

☐ Ee, ke fetotse mmereko

☐ Ee, ke lathegetswe ke mmereko

☐ Ee, dingwe

☐ O gana go araba

END

KE LEOGELA NAKO LE GO TSA KAROLO GA GAGO
Appendix I: IsiZulu Questionnaire

POSTNATAL DEPRESSION STUDY QUESTIONNAIRE

ISIZULU

SECTION 1: INTERVIEW DATE AND TIME

Date: ________________________________

Time: ________________________________

Code: ________________________________

SECTION 2: SOCIO-DEMOGRAPHIC INFORMATION

Prompt: Siyabonga ukuthi uvume ukuba ingxenye yalolucwaningo. Sicela uphendule lemibuzo elandelayo ephathelene nawe

……………………………………………………………………………………………………………………………………………………………………………………………………………………………..

2.1. Participant’s age

Uneminyaka emingaki?

<18  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  >35

2.2. Participant’s residence

Uhlala kuphi?

☐ Atteridgeville

☐ Saulsville

☐ Enye indawo

☐ Angivumi ukuphendula lombuzo
2.3. Participant’s home language

Nikhuluma luphi ulimi ekhaya?

- [ ] IsiNgisi
- [ ] IsiZulu
- [ ] SeTswana
- [ ] SePedi
- [ ] Okunye

………………………………………………………………………………………………………

2.4. Participant’s education

Ufundwa wagcina kuliphi ibanga esikoleni?

- [ ] Angizange ngiye esikoleni
- [ ] Ibanga lokuqala kuya kwelika 7 (First year kuya kustandadi 5)
- [ ] Ibanga lika 8 kuya kwelika 11
- [ ] Ibanga lika 12 (Matric)
- [ ] Idigri noma idiploma
- [ ] Angivumi ukuphendula lombuzo

……………………………………………………………………………………….

2.5. Marital status

Ngabe siyini isimo sakho ngakwezomshado

- [ ] Angishadile
- [ ] Ngishadile
- [ ] Angishadile kodwa ngihlala nomuntu engithandana naye
- [ ] Sahlukana
- [ ] Ngashonelwa umyeni
- [ ] Angivumi ukuphendula lombuzo

………………………………………………………………………………………. 

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2.5. Person staying with at home?
Ngabe uhlala nobani ekhaya?

☐ Ngedwa
☐ nomama
☐ nobaba
☐ Nabazali bami
☐ Nendoda yami/umlingani wami
☐ Nabantwana bakithi

☐ Abanye abantu, chaza

☐ Angivumi ukuphendula lombuzo

2.6. Participant’s employment status
Ngabe uyasebenza?

☐ Yebo
☐ Cha

☐ Angivumi ukuphendula lombuzo

2.7. Household monthly income
Iba imalini isiyonke imali etholwa abomndeni wakho ngenyanga uma isihlanganisiwe

☐ 0 kuya ku R499
☐ R500 kuya ku R1000
☐ R1001 kuya ku R2000
☐ R2001 kuya ku R5000
☐ R5001 kuya ku R8000
☐ R8000 nangaphezulu

☐ Angazi
2.8. Father’s financial support

Ngabe ubaba walontwana uyakusiza ngemali na?

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo

SECTION 3: PARITY

3. Zingaki izingane ozizele empilweni yakho uma ubala nalena esanda kuzalwa?

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 nangaphezulu, sicela usiphe inani
☐ Angivumi ukuphendula lombuzo

SECTION 4: THIS BABY

Prompt: Sicela uphendule lemibuzo elandelayo mayelana nalomntwana wakho osanda kumthola

4.1. Age of the baby

Unesikhathi esingakanani ezelwe lomntwanakho?

☐ 0 kuya ku 6 wezinsuku
☐ 1 kuya ku 6 wamasonto
☐ 7 kuya ku 10 wamasonto
☐ 11 kuya ku 12 wamasonto
☐ Angivumi ukuphendula lombuzo
4.2. Method of delivery
Umthole ngayiphi indlela lomntwana?

☐ Ngendlela ejwayelekile yokupepa
☐ Ngomthungo (operation)
☐ Wakhishwa ngezinsimbi
☐ Angivumi ukuphendula lombuzo

4.3. Baby Planned
Bewuplanile yini ukuba nalomntwana

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo

4.4. Baby’s health status
Injani impilo yalomntwana wakho

☐ Uphile kahle
☐ Kuyenzeka ngesinye isikhathi agule
☐ Ujwayele ukugula
☐ Uhlala njalo egula
☐ Angivumi ukuphendula lombuzo

4.5. Gender of the baby

4.5.1. Ngabe lomntwana wakho uyintombazane noma ungumfana?

☐ Intombazane
☐ Umfana
4.5.2. Wawufise ukuba nani phakathi komfana nentombazane

- Intombazane
- Umfana
- Ngangingakhethile, noma yini yayilungile
- Ngangingafuni ukuba nengane
- Angivumi ukuphendula lombuZo

4.6. Baby breast feeding

Ngabe uyamcelisa ibele lontwana wakho

- Yebo
- Cha
- Angivumi ukuphendula lombuZo

SECTION 5: EDINBURGH POSTNATAL DEPRESSION SCALE

Sicela uphendule lembuZo elandelayo emayelana nendlela obuzizwa ngayo kusukela ezinsukwini eziwu 7 ezidlule.

Ezinsukwini eziwu 7 ezidlule:

5.1. Bengikwazi ukuhleka nokubona izinto ezihleKisayo.

- Ngendlela engijwayele ngayo
- Hhayi kangako manje
- Ngokuqinisekileyo hhayi kangako manje
- Akunjalo
- Angivumi ukuphendula lombuZo
5.2. Ngiyalangazelela ngenjabulo izinto

☐ Njengoba bengihlala ngenza
☐ Ngaphansi kwaloku engikujwayele
☐ Ngaphansi kakhulu kwaloku engikujwayele
☐ Akwenzeki nhlobo
☐ Angivumi ukuphendula lombuzo

5.3. Ngizibeka icala kungenasidingo uma izinto zibheda

☐ Yebo, esikhathini esiningi
☐ Yebo, kwesinye isikhathi
☐ Hhayi njalo
☐ Cha akukaze kwenzeke
☐ Angivumi ukuphendula lombuzo

5.4. Bengingenakuthula emoyeni futhi ngikhathazekile kungenasizathu

☐ Cha, akunjalo
☐ Akukaze kwenzeke
☐ Yebo, kuyenze ka kwesinye isikhathi
☐ Yebo, kuhlala kwenzeke
☐ Angivumi ukuphendula lombuzo

5.5. Ngizizwe nginokwesaba noma ngithukile kungenasizathu

☐ Yebo kwenzeka kaningi
☐ Yebo, kuyenzeka ngesinye isikhathi
☐ Cha, akwenzeki kakhulu
☐ Cha, akwenzeki
5.6. Izimo bezingicindezela

☐ Yebo, esikhathini esiningi bengingakwazi nhlobo ukumelana nezimo
☐ Yebo kwesinye isikhathi bengingakwazi ukumelana nezimo njengenjwayelo
☐ Cha, esikhathini esiningi bengimelana kahle nezimo
☐ Cha, bengimelana kahle nezimo ngendlela engijwayele ukumelana nazo ngayo
☐ Angivumi ukuphendula lombuzo

5.7. Bengingajabulanga akhulu kangangokuthi bengingakwazi ngisho nokulala

☐ Yebo, esikhathini esiningi
☐ Yebo, kwesinye isikhathi
☐ Hhayi njalo
☐ Cha, akuzange kwenzeke nakanye
☐ Angivumi ukuphendula lombuzo

5.8. Bengidangele futhi ngizizwa ngixakekile emoyeni

☐ Yebo, esikhathini esiningi
☐ Yebo, ngezinye izikhathi
☐ Bekungangenzi kaningi
☐ Cha, akunjalo
☐ Angivumi ukuphendula lombuzo

5.9. Bengingajabulanga akhulu kangangokuthi bengikhala

☐ Yebo, esikhathini esiningi
☐ Yebo, bekuhlala kwenzeka
☐ Kwenzeke kancane nje
☐ Cha, akuzange kwenzeke nakanye
5.10. Umcabango wokuthi ngizilimaze uke wangifikela

☐ Yebo, kaningi
☐ Kwesinye isikhathi
☐ Kwenzeke kancane nje
☐ Akuzange kungifikele nakange

5.11. Edinburgh Postnatal Depression Scale Score


SECTION 6: RELATIONSHIP WITH HUSBAND/PARTNER

Lemibuzo elandelayo imayelana nendlela wena nomyeni wakho noma nomuntu othandana naye eniphilisana ngakhona

6.1. Ngabe unaye umyeni noma umuntu othandana naye njengamanje?

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo

6.2. Support from partner/husband

Ngabe umyeni wakho noma umuntu othandana naye uyakusaphotha ezikhathini ezinzima?

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo
6.3. Partner/husband having other sexual partners

Ngokwazi kwakho ngabe ezinyangeni eziwu 12 ezidlule umyeni wakho noma umuntu othandana naye uke waba nomunye umuntu aya naye emacansini

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo

7. SOCIAL SUPPORT

7.1. Ngabe unaye umuntu empilweni yakho okuuphothayo uma ubhekene nezimo ezinzima?

☐ Yebo
☐ Cha
☐ Angivumi ukuphendula lombuzo

7.2. Ngabe ubani lowo muntu okusuphothayo uma ubhekene nezimo ezinzima?

☐ Umuntu engithandana naye / umyeni wami
☐ Umama
☐ Ubaba
☐ Abantwana bakithi
☐ Umngani
☐ Abanye abantu
☐ Angivumi ukuphendula lombuzo
SECTION 8: DOMESTIC VIOLENCE

8.1. Ezinyangeni eziwu 12 ezidlule ngabe umuntu othandana naye noma umyeni wakho uke wafuna ukukushaya noma wakushaya?

☐ Cha, akukaze kwenzeke
☐ Yebo, Kuke kwenzeka kanye
☐ Yebo, kwenzekile kambalwala
☐ Kuhlale kwenzeka kaningi
☐ Anginaye umyeni nomu umuntu engithandana naye
☐ Angivumi ukuphendula lombuzo

9. PARTNER/HUSBAND’S ALCOHOLISM

9.1. Ngabe umyeni wakho noma umuntu othandana naye uyabuphuza utshwala

☐ Cha nakanye
☐ Kwesinye isikhathi
☐ Njalo ngezimpelasonto
☐ Zonke izinsuku
☐ Angivumi ukuphendula lombuzo
SECTION 10: LIFE STRESS

10. Ngabe uke wabhekana nesimo esinzima kakhulu ezinyangeni eziwu 6 ezidlule

☐ Cha
☐ Yebo, ngibe nenkinga yezezimali
☐ Yebo, ngishonelwe umuntu oseduze nami
☐ Yebo ngigulelwe kakhulu umuntu oseduze nami
☐ Yebo, ngike ngabhekana nesenzo sobugebengu ngacishe ngafa, ngike ngahlaselwa, noma ngike ngaba sengozini
☐ Yebo ngike ngathutha ngayohlala endaweni entsha
☐ Yebo ngike ngashintsha umsebenzi
☐ Yebo ngilahlekelwe umsebenzi
☐ Yebo, okunye
☐ Angivumi ukuphendula lombuzo

ISIPHETHO

SIBONGA KAKHULU NGESIKHATHI SAKHO NANGOKUHLANGANYELA KULOLUCWANINGO
Appendix J: MREC clearance certificate

UNIVERSITY OF LIMPOPO
Medunsa Campus

MEDUNSA RESEARCH & ETHICS COMMITTEE

CLEARANCE CERTIFICATE

MEETING: 02/2013
PROJECT NUMBER: MREC/H/24/2013: PG

PROJECT:
Title: Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atteridgeville, Pretoria

Researcher: Ms. A Shiba
Supervisor: Prof KE Mokwena
Department: Public Health
School: Health Care Sciences
Degree: MPH

DECISION OF THE COMMITTEE:
MREC approved the project.

DATE: 07 March 2013

PROF PGD RAUTENBACH
DEPUTY CHAIRPERSON MREC

The Medunsa Research Ethics Committee (MREC) for Health Research is registered with the US Department of Health and Human Services as an International Organisation (IDORG0004519), as an Institutional Review Board (IRB00005122), and functions under a Federal Wide Assurance (FWA00005419)
Expiry date: 11 October 2016

Note:

i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.

ii) The budget for the research will be considered separately from the protocol.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Finding Solutions for Africa
Appendix K: Approval by Tshwane Research Ethics Committee

TSHWANE RESEARCH COMMITTEE

CLEARANCE CERTIFICATE

Meeting: N/A

PROJECT NUMBER: 26/2013

Title: Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atteridgeville, Pretoria

Researcher: A Shibu
Co-Researcher:
Supervisor: Prof. K. Molweni
Department: Public Health

DECISION OF THE COMMITTEE

Approved

NB: THIS OFFICE REQUESTED A FULL REPORT ON THE OUTCOME OF THE RESEARCH DONE

Date: 10th July 2013

Dr. N.C. Seleke - Chair
Chairperson Tshwane Research Committee
Tshwane District

Mrs. M. Mofokeng
Acting Chief Director: Tshwane District Health Services
Tshwane District

NOTE: Resubmission of the protocol by researcher(s) is required if there is departure from the procedural procedures as approved by the committee.
Appendix L: Preliminary approval by Atteridgeville Clinic manager

Declaration of intent from the clinic manager or hospital CEO

I give preliminary permission to Ms Dudu Shiba (name of researcher) to do his or her research on Prevalence of post-traumatic stress disorder and anxiety in a clinic (research topic) in

Atteridgeville Clinic (name of clinic) or

N/A (name of CHC) or

N/A (name of hospital).

I know that the final approval will be from the Tshwane Research Committee and that this is only to indicate that the clinic/hospital is willing to assist.

Other comments or conditions prescribed by the clinic or CHC manager or hospital CEO:


Signature
Clinic Manager/CHC Manager/CEO

3/6/13
Date
Appendix M: Letter requesting permission to access the study site

Ms ML Morewane
Acting Chief Director: District services
Tshwane District Health Services
PRETORIA
0001

Dear Ms Morewane

REQUEST FOR PERMISSION TO CONDUCT RESEARCH ON THE PREVALENCE OF POSTNATAL DEPRESSION SYMPTOMS AND ASSOCIATED SOCIAL FACTORS IN ATTERIDGEVILLE PRIMARY HEALTH CARE CLINIC

I, Ms AD Shiba, currently a second year Master of Public Health student at the University of Limpopo, MEDUNSA Campus and an official at the National Department of Health, requests permission to access Atteridgeville Clinic and conduct a study titled “Prevalence of postnatal depression symptoms and associated social factors in a primary health care clinic in Atteridgeville, Pretoria” (Copy of the proposal is attached for reference).

The objectives of the study are:
(a) To determine the prevalence of postnatal depression symptoms among women attending a primary health care clinic at Atteridgeville in Pretoria
(b) To determine the association between symptoms of postnatal depression, demographic and economic factors in this sample.

Ethical clearance for the study has been granted by the MEDUNSA Research and Ethics Committee (a copy of the clearance certificate is attached).

The findings of the study will be valuable to public health as, among other things, they will inform interventions aimed at improving the health outcomes for mothers and children thereby assist the Department of Health in the efforts towards achievement of one of the targeted outputs of “Decreasing maternal and child mortality”.

Your support in this regard will be highly appreciated.

Regards

MS AD SHIBA
DATE: 23.04.2013
PO Box 13491
The Tramshed
0126
Cell: 0825556177
Email: dudush40@gmail.com / shibaa@health.gov.za