THE RELATIONSHIP BETWEEN LEVEL OF SOCIAL SUPPORT AND
THE DEVELOPMENT OF POSTPARTUM DEPRESSION AMONG WOMEN IN
PUMWANI MATERNITY HOSPITAL IN NAIROBI COUNTY

BY

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THESIS

Submitted in partial fulfillment of the requirements for the degree of Master of
Arts in Counseling Psychology in the Graduate College of the United States
International University Africa.

Summer 2017
DECLARATION

I declare that this research project is my original work and has not been submitted to any other college or university other than the United States International University Africa for academic credit.

Signed: ___________________________ Date: _________________

Yolanh M Knopp (ID 647231)

This research project has been presented for examination with my approval as the appointed supervisor.

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Amb. Prof. Ruthie Rono
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ABSTRACT

Studies around the world indicate that social support is one of the protective factors that guard against postpartum depression (PPD) yet little is known regarding women’s perceptions of sources or forms of support following childbirth in Nairobi County. The current study purposed to explore social support available for women and its function in preventing PPD. One hundred and twenty-three mothers were approached while waiting in line for postnatal clinic at Pumwani maternity hospital. Each participant completed an interview that included a socio-demographic section, social support section and finally a depression inventory section. The results indicate a weak relationship between social support and the presence of PPD. On examining partner support, which emerged as the highest-ranking source of support for the women, it was discovered that the relationship between social support and PPD when looking specifically at partner support was stronger than the combined social support. The findings also revealed that women living in Nairobi County receive more emotional support from all sources (partners, parents, parents-in-law, and relatives and friends) and less instrumental support. The preference of the women is to receive more instrumental help, which pertains to help with caring for the baby and managing the family. Further analysis demonstrated that the nature of the pregnancy could indeed impact that amount of support especially from partners. Women who recorded having planned pregnancies received more partner support than those who reported having unplanned pregnancies. This research suggests that social support is an important factor that can be utilized to guard against the development of PPD. These findings inform preventive programs and intervention programs in the physical as well as mental health sector.

Key words: Social support. Partner support. Postpartum depression.
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To my little girls Keanna and Kailani, thank you for being patient with mommy and keeping me on my toes whenever you asked, “Mommy are you done with chapter 5?” When I look at you I am reminded of God’s favor.
DEDICATION

Daddy, I know you would have been proud of me.

Bii...I miss you every day.

To the women who shared their precious experiences, I hope the findings of this study will be helpful to you and many others who are suffering in silence with this highly unrecognized and yet manageable mental disorder.
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LIST OF ACRONYMS

PPD: Postpartum Depression
WHO: World Health Organization
HIV: Human Immunodeficiency Virus
FAS: Fatigue Assessment Scale
DASS: Depression, Anxiety and Stress Scale
EPDS: Edinburgh Postnatal Depression Scale
IPV: Intimate Partner Violence
PDRS: Postpartum Depression Risk Scale
MPSE: Maternal Parental Self-Efficacy
LMIC: Low and Middle Income Countries
PMH: Pumwani Maternity Hospital
BDI-II: Beck Depression Inventory II
PSSQ: Postpartum Social Support Questionnaire
CHAPTER 1
INTRODUCTION

1.1 Background of Study

The prevalence of postpartum depression (PPD) during the crucial transition period following childbirth has become a focus of concern in our society today because of its adverse effects on the mother, infant and family. The World Health Organization (2010) regards it as a global public health concern with far reaching consequences. During this period, women face challenges adjusting or balancing the various competing demands such as assuming care of the newborn, negotiating changing roles, easing sibling transition, meeting social expectations of family and friends, and recovering physically from childbirth (Landy, Sword & Valaitis, 2009). Unfortunately this is also a crucial period that places women at risk of developing PPD.

Postpartum depression is acknowledged as a major depressive disorder with postpartum onset (American Psychiatric Association [APA, 2000). Symptoms reported by women experiencing PPD include feelings of sadness, hopelessness, irritability, insomnia, as well as periods of crying, anxiety, anger, confusion and suicidal ideation (Ho, Chang & Wan, 2013). It is the most common complication of childbirth (Place et al., 2015) with an estimated prevalence rate of around 13% in Western countries and 36% in South Asia (Jones & Coast, 2012). Schetter, Saxbe, Cheadle and Guardino (2016) estimate the prevalence in the US as ranging from 7% to 13%. Studies conducted in South America identify Guyana as having the highest rates of 50% and Barbados having the lowest rate of 16% (Parsons, Young, Rochat, Kringelbach & Stein, 2011).
In Cape Town, South Africa it is estimated at 34.7% (Davies, Schneider, Nyatsanza & Lund, 2016). Although literature regarding prevalence of PPD in sub-Saharan countries as well as East Africa is scanty, higher rates have been reported for low- and middle-income countries (Turan et al., 2014). Parsons et al., 2011) concur that majority of African countries have estimated prevalence rates that are higher than those of high-income countries. According to Parsons et al. (2011), Zimbabwe has the highest rate of 33% whereas Uganda has the lowest rate of 7.1%.

Although the etiology of PPD is still unclear, various studies have identified certain psychosocial factors that are either risk factors (Bener, Burgut, Ghuloum & Sheikh, 2012) or protective factors (Rode, 2016) in the development of PPD. Some of the identified psychosocial factors include marital disharmony, stressful life events, socioeconomic status, child gender and financial difficulties (Pocan, Aki, Parlakgumus, Gereklioglu & Dolgun, 2013). Social support has been identified as both as a risk and protective factor in the exacerbation of the symptoms of PPD (Rode, 2016). For instance, Rode (2016) in a study conducted in the United States, found support for the assertion that social support, which mainly encompassed emotional and tangible support provided by others served as a protective factor by buffering the negative effects of stressful life events.

According to Aktan (2010), social support encompasses six areas of relational provisions mainly social integration, opportunity for nurturance, attachment, reassurance of worth, obtaining of guidance and a sense of reliable alliance. Social support could also be perceived as involving material, emotional, affective, informational and positive social interaction (Faisal-Cury, Menezes, d’Oliveira, Schraiber & Lopes, 2013). Traditionally women would enjoy social support from the families in the postpartum period. Early ethnographic research found very low rates
of PPD in cultures that practised postpartum rituals for mothers after childbirth (Mamischvili et al., 2013). The rituals often involve a period of rest, seclusion and special diets while female relatives and in-laws help care for the baby, mother and other family members.

Women of Indian and Asian descent in South Africa have enjoyed a social support network during pregnancy and in the first 40 days after childbirth (Kathree & Petersen, 2012). An example of the traditional postpartum care and rituals associated with the Indian culture includes a herbal bath for the mother that is prepared for her by another woman, who is a close family member. Another is a method of bathing the baby while balancing it on the mother’s legs. Both rituals were perceived to be comforting and relaxing, very helpful with pain relief and promoting deep sleep for the mother and her infant (Kathree & Petersen, 2012). In the Mexican tradition, Latina women would take 40 days of convalescence, la cuarentena, where the woman takes a special diet and relies on the help of her family (Sheng, Le & Perry, 2010). In Taiwan, women are confined at home for a month observing the strict Chinese ritual of tso-yueh-tzu, which means doing the month (Chen, Kuo, Chou & Chen, 2007).

These rituals that were practised in the non-western cultures were perceived to be of great benefit to the women and considered to be protective against postpartum depression (Kathree & Petersen, 2012). Unfortunately there has been a notable decline of these traditional practices with Kathree and Petersen (2012) attributing the demise to acculturation, urbanization and migration. This has resulted in a lack of social support from sources including the woman’s mother, mother-in-law, or other female family members. Husbands and partners are now expected to fill at least some of these supportive roles and when this is not forthcoming, the relationship is marred by resentment and friction (Kathree & Petersen, 2012). A negative effect of a
patriarchic worldview has been found to influence gender roles today. Consequently, women report a lack of practical and emotional support from their partners who are generally unavailable or unwilling.

Recent literature suggests that new mothers can sometimes perceive traditional practices as a source of stress rather than support (Mamisachvili et al., 2013). This variability could be due to differences in cultural practices and values between generations as a result of globalization. With this knowledge, the quality of social support in our society today should be examined and the implications the difference has on the development of postpartum depression.

1.2 Problem statement

The consequences of postpartum depression can be devastating and far-reaching; affecting the mother and significant people in her life. In addition to affecting the mother’s quality of life, the marital relationship and mother-child interaction is also significantly impacted. For instance, a serious deterioration in marital or partner relationship after childbirth has been linked with postpartum depression among New Zealand mothers (Dennis & Ross, 2006). Evidence suggests that PPD causes emotional development delay, attachment insecurity, social interaction difficulties, delayed expressive language development as well as attention deficit (Dennis & Ross, 2006). As a result of globalization, studies have found that the nature and quality of social support provision for mothers in the postpartum period is fast changing. This study seeks to investigate the relationship between the level of social support and the development of postpartum depression particularly in our Kenyan society. Further, this study aims to highlight the need for treatment programs that have social support as the main pillar in the management and treatment of postpartum depression.
1.3 Research Objectives

The main objectives of this research study are to investigate the relationship between level of social support and the development of postpartum depression among women in Nairobi County as well as to explore the current forms of social support that are available for women living in Nairobi County. In order to achieve these main objectives, the following specific objectives will be explored:

1. To investigate the correlation between the levels of social support and the development of PPD.
2. To find out the various forms of social support that are available for women living in Nairobi County.
3. To find out the ranking of sources of social support according to mothers living in Nairobi County.

Research Questions

1. Is there a correlation between the levels of social support and the development of PPD in Nairobi County?
2. What are the various forms of social support that are available for women living in Nairobi County?
3. What is the ranking of sources of social support according to mothers living in Nairobi County?

1.4 Purpose of Study

The main concern of this research is to examine the significance of social support in guarding against postpartum depression. Hopefully the findings will inform current treatment modalities in including social support as a major component of interventions. The study also hopes to challenge the mental health sector on the need to create policies that address this prevalent problem that has also become a
global concern. With the findings, mental health services will also have useful information to utilize in psychoeducating the public, first about postpartum depression as a prevalent disorder that is treatable and second on the significance of social support during the postpartum period as a protective factor, thus helping families to understand the importance of their input in providing the needed social support.

Given the advantage that physicians and nurses have of being in contact with women during postnatal visits, hopefully the findings will challenge physical and mental health practitioners to work together in addressing this issue. One major way physicians could assist is by conducting routine screening during postnatal visits and making referrals to mental healthcare practitioners on identified cases.

1.5 Definition of terms

1.5.1 Postpartum Depression (PPD)

PPD is documented by the American Psychiatric Association (2000) as a major depressive disorder that develops in women during the period following childbirth.

1.5.2 Social Support

Social support refers to help that mothers receive in the postpartum period including material, affective, informational, emotional as well as positive social interaction (Faisal-Cury et al., 2013). In the current study the focus is on two kinds of social support, mainly instrumental and emotional support.

1.6 Chapter Summary

This chapter highlights the significance of social support in preventing the development of postpartum depression. Further, it highlights the importance of interventions for treating PPD to incorporate social support. Due to the limited studies that have been conducted on PPD in our society, this study hopes to provide
the much-needed psychoeducation for the public and challenge the mental health sector to formulate policies that will address this global concern. This chapter contains the following sections: the background of the study, problem statement, research questions and the purpose of the study.
CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

Postpartum depression has been widely studied in the Western countries. However most of the findings cannot be generalized to the rest of the world owing to the diversity of cultures. This review aims to highlight the findings of previous studies with regard to the prevalence rates of PPD, risk factors associated with its occurrence in various populations, the nature of social support in the different cultures as well as the interventions in place for the treatment of PPD.

2.2 The Postpartum Period and Occurrence of Postpartum Depression

The entry into motherhood has been studied as a change in social status (Dubus, 2014). Along with this comes a change in roles, affiliation as well as societal expectations. Changes are particularly noted in social relationships such as within the family, work setting and even in membership in institutions such as school, church, and so on. Much of the isolation that is experienced by new mothers is as a result of the physical demands of constantly caring for an infant (Dubus, 2014).

PPD is a significant problem that affects mothers worldwide in the first year following childbirth (Posmontier & Waite, 2011). The American Psychiatric Association (2013) lists symptoms of PPD as identical to major depression that is not postpartum related but in addition includes intense neuroendocrine changes, changes in psychosocial functioning, impact of breastfeeding on intervention decision and how it affects future family planning decisions. According to the American Psychiatric Association (2013), mood and anxiety symptoms that women often experience during pregnancy as well as baby blues, heighten the risk of development of PPD.
Peripartum-onset mood episodes can manifest with or without psychotic features. Infanticide is more often linked with psychotic episodes in the postpartum period that are characterized by command hallucinations to murder the baby or delusions that the baby is possessed. However, psychotic symptoms can occur in severe postpartum mood episodes as well exclusive of particular delusions and hallucinations. Mood episodes in the postpartum period accompanied by psychotic features seem to occur from 1 in 500 to 1 in 1000 deliveries. They might be prevalent in primiparous women. The risk of the occurrence of PPD with psychotic features is significantly increased for women who have experienced prior PPD. After experiencing a postpartum episode with psychotic features, the risk of PPD developing again with subsequent pregnancies ranges between 30% and 50% (American Psychiatric Association, 2013).

Kleiman and Raskin (2013) posit that PPD can strike without warning and could in fact develop in women who swore they would never experience it. This disorder can occur in women with or without any history of depression. It can also be experienced by women who are extremely successful in their careers or by those who are stay at home mothers; those in stable marriages or those in conflictual marriages. Interestingly, PPD has also been found to occur in women who love their babies more than anything (Kleiman & Raskin, 2013).

Using the theory of Social Energy Exchange for PPD, Posmontier and Waite (2011) investigated what occurs within the micro world of a woman suffering PPD. Women experiencing PPD quite often ruminate about their perceived expectations of motherhood. The norm in many societies is that all mothers should be ecstatic and celebrate their roles. When this pleasure is not forthcoming, the mother may become lonelier thus hindering the flow of social energy.
It’s only until recent years that PPD began to receive increasing attention. This is mainly because of the public health concerns that this disorder is perceived to represent (Conradt, Manian & Bornstein, 2012). The WHO (2008) ranks this disorder as the third leading cause of diseases in the world and the most common mental disorder that occurs in the puerperium, which is the period of about six weeks following childbirth. It is unfortunate that despite this knowledge, only a small number of women experiencing PPD actually seek treatment.

Even as more screening is advocated, some complications do arise in detecting and screening depression in the postpartum period (Conradt, et al., 2012). During this time, normal physiological changes that occur appear to be very similar to symptoms of depression. Examples include fatigue, sleep disturbance, appetite changes and even loss of sexual interest. This therefore contributes to the complication of misdiagnosing patients. Alternatively, women experiencing genuine postpartum depression symptoms may trivialize them assuming they are normal during that sensitive period following childbirth. Some women might deny admitting to experiencing such symptoms for fear of it reflecting negatively on their feelings about motherhood (Conradt, et al., 2012).

Maternal mental health is an issue that is largely unnoticed in the Indian population (Dubey, Gupta, Bhasin, Muthal & Arora, 2011). Symptoms of PPD are typically missed most of the time and mothers experiencing these symptoms who are less able to function properly during the sensitive peripartum period or care for their own needs (Dubey et al., 2011).

Ho et al. (2013) view the postnatal period as a critical one characterized by role conflicts. Specifically, it involves conflicts between the roles of wife, mother and worker. These conflicts have been found to interfere with the mother’s well being. In
a study conducted in Northern Taiwan, Ho et al. aimed to explore the relationships between adaptation and depression in the postpartum period among new mothers. A total of 186 new mothers were recruited in the postpartum range of 1 week to 2 months. From the results, 94 of the 186 participants (50.5%) experienced depressive symptoms above a score of 10. Seventy-three women needed to see the doctor because of score above 12. These women with high scores experienced worse postpartum adaptation.

2.3 Risk Factors Associated with PPD Occurrence

The etiology of PPD remains unknown. However, certain factors have been found to increase the risk of its occurrence. According to Kleiman (2000), these factors do not bring about depression but merely set the stage or create the opportunity for the occurrence of PPD. The various factors that will be discussed in this review include inadequate prenatal support, social and economic hardships, fatigue, lack of social support, anxiety, intimate partner violence, postpartum adaptation, emotional intelligence, a PPD episode after a pregnancy and unplanned pregnancies. Other factors that are culture related include poor relationships with mothers-in-law, birth of a female child, nuclear family structure, poor marital relationship, and HIV diagnosis during pregnancy. Risk factors are important to this study because it is believed that if these factors are addressed and incorporated in the interventions and provided by the different sources of support for women in the postpartum period, they will greatly contribute in the prevention of PPD.

Prenatal depression has been found to be a significant predictor of postnatal depression (Moshki & Cheravi, 2016). According to Moshki and Cheravi (2016) the lack of standardized practices and policies in the provision of healthcare raises challenges in follow-up for women with symptoms of depression. With no proper
intervention these women may remain in an untreated state of depression for years, thereby affecting their families. Moshki and Cheravi (2016) aimed to examining the link between social support health locus control and symptoms of depression among pregnant women in Iran. They posit that if mothers could receive appropriate prenatal care right from pregnancy stage, it could help tremendously with prevention of PPD. Appropriate prenatal care would involve providing women with opportunities to interact with professionals who can provide counseling on high-risk behaviors.

Moshki and Cheravi (2016) emphasize on social support not only following childbirth but during the period of pregnancy too. Various studies actually document an inverse relationship between social support and depression. Pregnant women who report less social support record more depressive symptoms (Moshki & Cheravi, 2016). The study reveals that the strongest source of support during pregnancy as perceived by the women, are the women’s families. Further, the study demonstrates that social support and health locus of control are strong predictors of depressive symptoms during pregnancy. Therefore by providing prenatal support, cases of depression in pregnant women could decrease, which could also subsequently prevent the development of PPD.

The experiences of socioeconomically disadvantaged women with PPD were examined by Landy et al. (2009) in an attempt to provide information that would be useful in developing health policies and services that will truly meet their needs. Landy et al. (2009) conducted an interview in Ontario Canada involving 24 women. The in-depth interviews were in the first 4 weeks after hospital discharge. From their findings, two intertwining themes emerged. One was the ongoing burden of the women’s day-to-day lives and the second theme was the ongoing struggle to adjust to changes. The changes which were mainly due to the baby’s arrival and subthemes
that included the women’s experiences of the first week being hard, feeling out of control, lack of help at home and a complex relationship with the baby’s father.

The results reveal that socioeconomically disadvantaged (SED) women suffering PPD face many similar hardships as other postpartum women generally including fatigue, feeling of loss of control, finding it difficult in the beginning and so on. However, in addition to these, the participants in this study reported a range of persistent social and economic hardships that they encountered in their daily lives. These problems hindered their ability to rest and recuperate from the childbirth and to integrate the newborn into the family (Landy et al., 2009). Time that could be spent doing this was taken was unfortunately consumed searching for basic necessities of life with consequently contributed to their stress (Landy et al., 2009). Lack of adequate social support was a major factor that contributed to the burden of their daily lives. Many of the women grew up with poor social support networks from childhood and in unstable relationships with partners (Landy et al., 2009). Some of the struggles experienced by the women, both older and teenagers included inner emotional struggle such as frustration, anger and heartbreak. These severely increase the stress during the sensitive period following childbirth, which in turn increases the risk of developing PPD (Landy et al., 2009).

Fatigue in the postpartum period has also been studied in relation to the development of PPD. Exhaustion and fatigue are common experiences for many mothers in the postpartum period (Giallo, Wade, Cooklin & Rose, 2011). It is a major health concern for mothers as it does impact their daily functioning as well as their experiences of parenting. Parenting and managing the family are daily tasks that are physically, mentally and emotionally taxing. These tasks have been found to place
parents at risk of fatigue. What is of particular interest to researchers and clinicians is the effect of fatigue on the development of PPD (Giallo et al., 2011).

Challenges have emerged regarding the best ways to assess and unmistakably discriminate between fatigue and depressive symptoms (Giallo et al., 2011). This issue has seriously plagued research in this area especially since the loss of energy is a crucial symptom in establishing a diagnosis for depression. Giallo et al. (2011) examined the discriminant validity between fatigue and depression. For the study, the authors utilized two self-report measures, mainly the Fatigue Assessment Scale (FAS) and the Depression Subscale, which is part of the Depression, Anxiety and Stress Scale (DASS). These were administered to a community sample of 228 mothers living in Australia.

The findings disclose that fatigue and depression are related but have unique constructs, measuring distinct features (Giallo et al., 2011). The self-report measures assess distinct features of fatigue and depression. FAS items measuring exhaustion and energy levels; and DASS items capturing mood and lack of positive affect (Giallo et al., 2011). These findings further support the practice of clinical assessment of fatigue and depression as separate psychological experiences. The authors suggest that screening and assessing fatigue in early postnatal period may help identify women who are fatigued, thereby moderately impairing their daily functioning and placing them at a great risk of developing PPD.

Psychosocial factors that have been identified by other studies as having a role in PPD occurrence include child gender, poor marital adjustment, lack of social support, socioeconomic status and previous psychiatric disorder (Dubey et al., 2011). In a research, they aimed to explore and ascertain the prevalence of women at risk of peripartum depression in New Delhi, India. They also purposed to investigate the
associated risk factors in the Indian population. The cross-sectional study consisted of 506 peripartum women interviewed using structured questionnaires. The results showed that 31 women out of the total 506 scored above 10 on the Edinburgh Postnatal Depression Scale (Dubey et al., 2011). This 6% prevalence was similar to other studies in their review.

The birth of a female child, nuclear family structure and poor marital relationship are identified as having strong correlation with peripartum depression (Dubey et al., 2011). Previous mental disorder was not found to be a major risk factor in their study and this was attributed to the lack of awareness among the women. The nuclear family system was a significant risk factor due to urbanization, which is fast becoming common in the Indian society. As a result, a break-up in the traditional joint family system denies the new mothers an opportunity to benefit from the large social network support. The study called for screening for peripartum depression to be a part of the routine antenatal and postnatal health care.

Scarce literature exists on South African women pertaining to risk factors that bring about PPD. The few studies that have focused on Black African women cannot be generalized to all populations in South Africa due to the difference in cultural contexts, socioeconomic status, specificity of races, housing and employment levels, age and even health status (Kathree & Petersen, 2012). Statistics show that unemployment in South African Indian population as 7.9% whereas for black Africans is 28.1% (Kathree & Petersen, 2012).

No studies have attempted to understand this issue concerning triggers of PPD among South African Indian women (Kathree & Petersen, 2012). It was for this reason that the authors purposed to carry out a study to ascertain whether this particular group maintains any traditional postnatal healing and care rituals as its
historically practised in non-western cultures. Traditionally in India, postpartum confinement and support were practiced to protect the women from PPD (Kathree & Petersen, 2012). This social support network in the first 40 days following childbirth was intended to provide comfort and practical help as well as promote physical and psychological well-being.

The dichotomous cultural identity of South African Indians is seen in their connection to India while concurrently embracing acculturation, urbanization and nuclear family structures (Kathree & Petersen, 2012). Currently statistics indicate that South African Indians approximately represent 3% of the total South African population (Kathree & Petersen, 2012). The authors aimed to explore and understand the experiences of South African Indian women who were screened for symptoms of PPD. Participants consisted of 10 low-income South African women of Indian descent from two locations in Kwa-zulu Natal. The findings reveal that interpersonal issues, economic hardships, abusive relationships and inadequate social support increased the risk of developing symptoms of PPD (Kathree & Petersen, 2012).

Pessimism or low self-esteem was a consequence by several factors including the women doubting their mothering abilities, social isolation (which is mainly enforced by the male partner as a means of power and control), limited abilities for economic advancement and power imbalances in the partnership which was normally in favor of the economically stronger male partner. While all of the participants received some support by the first week after child delivery, only one was able to have postpartum care for herself and her newborn for the traditional 40-day period. The mother, husband and her mother-in-law provided the support. As a result this one participant was able to recuperate in a nurturing environment without expectations of her doing household responsibilities.
Kathree and Petersen (2012) discovered the negative influence of a patriarchal worldview that impacted the gender roles of the participants. Common among the participants was the resentment they felt towards their partners, as the partners did not offer help with childcare and house chores. The partners were usually unavailable or unwilling to help. This lack of support from partners was considered a risk factor for PPD (Kathree & Petersen, 2012). Along with this, family relationship and a lack of family support structure also increased the risk of PPD. In the context of decline of traditional health-enhancing practices for mothers in postpartum period, the study highlighted a need for partners to be more supportive to their partners especially when the traditional supportive network is lacking.

Similar to Kathree and Petersen (2012), Mamisachvili et al. (2013) posit that postpartum mood problems (PPMP) rates are very low in cultures that observed family and community oriented rituals for women after childbirth. In line with this, recent reviews suggest that immigrant women experience higher levels of PPMP than Canadian born women. Potential reasons given include immigration and acculturation stress in addition to the challenges of transition to motherhood. As a result of immigration, many women experience a lack of support, isolation, unfamiliar healthcare systems and poverty (Mamisachvili et al., 2013). Using semi-structured interviews, the authors explored similarities between first and second-generation women residing in Toronto, Canada. Nine of the participants were first generation and eight were second-generation women. The findings reveal important similarities and differences in the experiences of both groups; with regard to conflict with parents and in-laws about childrearing practice, both group experiences were similar (Mamisachvili et al., 2013). Both groups also suffered the effects of mental health stigma.
Mamisachivili et al. (2013) discovered a difference in the expectations of women with regard to social support. Whereas the first generation lacked the support that would normally be available to them in their countries of origin, the second-generation participants were surprised that they needed support as they expected to cope on their own due to not being exposed to the traditional rituals in their countries of origin (Mamisachvili et al., 2013). The findings also show a sense of social devaluation in women in western societies evidenced by the lack of social as well as government support as seen in the lack of suitable and affordable childcare, maternity leave with less or no compensation and loss of employment. Further, the findings demonstrate that women may become more vulnerable to mental health problems because of experiencing several critical issues at the same time; such as unknown environments, unfamiliar societal norms, lack or vital social network and so on (Mamisachvili et al., 2013).

Intimate partner violence (IPV) is yet another risk factor that has been studied in relation to the development of PPD. Younger mothers and those experiencing partner-related stress or some sort of abuse have been found to be at a higher risk of developing symptoms of PPD (Faisal-Cury et al., 2013). IPV encompasses a wide range of abuses like psychological, sexual and physical violence. Studies around the world suggest that physical violence brought about by intimate male partners occurs at least once in a lifetime and this varies from 10% to 56% (Faisal-Cury et al., 2013).

Most of the studies done show a link between IPV in the postpartum period and PPD. However according to Faisal-Cury et al. (2013), little is known regarding the temporal effects of IPV on PPD. In particular, less is known about the effect of current or past IPV on postnatal depression. Faisal-Cury et al. (2013) carried out a research to examine whether a temporal association exists between IPV and PPD.
They also assessed the role that social support plays on this relationship. This cross-sectional study was conducted with 701 women from low-income bracket in the western part of Sao Paulo, Brazil.

The findings support the hypothesis for their study, which suggest that all forms of IPV are associated with PPD and that social support is very much a protective factor in guarding against PPD. This is in line with several other studies that suggest that women, who suffer IPV of any kind face higher chances of developing PPD regardless of where they come from geographically (Faisal-Cury et al., 2013). Also the multivariate analysis revealed that PPD had a strong relationship with current IPV compared to past IPV. This weak association between past IPV and PPD may be attributed to the women’s change of partners thereby ending IPV or managing to receive some kind of social support. The presence of social support was indeed found to be a protective factor in the prevention of PPD.

Few studies suggest that women who suffer PPD after one pregnancy have higher chances of developing PPD in subsequent pregnancies (Schetter et al., 2016). PPD occurrence after a pregnancy is therefore viewed as a risk factor for following pregnancies. Given the limited evidence on this issue and its significant implications for women, Schetter et al. (2016) endeavored to examine stability and change in symptoms of PPD over two consecutive pregnancies and test life stresses as a potential mechanism in women living in the United States. Using a relatively large sample that was ethnically diverse, the authors gathered data over a period of 2 years, that is, one month after a birth for 2 years. Measures of life stress included life events, perceived stress, chronic stress as well as interpersonal aggression. Depressive symptoms were assessed using Edinburgh Postnatal Depressive Scale (EPDS).
The authors hypothesized that PPD symptom after the birth of one child would be associated with more PPD symptoms following the birth of the next child. They also hypothesized that psychosocial stress in the period between the births, that is the first one with PPD symptoms and the subsequent pregnancy, would mediate links between depressive symptoms in the two postpartum periods. Schetter et al. (2016) found indications of stability from one postpartum period to the next. Most women showed only minimal changes in depressive symptoms. However, a variation existed regarding the increase or decrease of symptoms. The overall trend showed a slight decrease from one postpartum period to the next. Twenty-four percent of the total sample had symptoms above clinical cutoffs after at least one of the pregnancies. This indicates that one in four women would warrant follow-up in the subsequent pregnancy (Schetter et al., 2016).

The results also reveal that of those who had elevated symptoms after one birth, 28% had a recurrence of clinically significant symptoms in the next birth. Further, the findings reveal that women with more symptoms after the birth of one child are at risk of experiencing more stress thereafter like interpersonal difficulties, parenting and this in turn exacerbated the risk of develop PPD symptoms in consecutive pregnancies. Therefore each of the four life stressors significantly mediate the association between symptoms of PPD over two PPD periods (Schetter et al., 2016). Stress between pregnancies therefore appears to be an important risk factor increasing the risk factor increasing the risk of experiencing PPD (Schetter et al., 2016).

Previous studies on risk factors that bring about PPD identify fatigue as a major factor (Giallo, Seymour, Dunning, Cooklin, Loutzenhisier & McAuslan, 2015). Fatigue is described as a persistent sense of mental and physical exhaustion that is not
readily relieved by adequate rest. Characteristics include lack of energy, extreme
tiredness, weakness of muscles and inability to concentrate (Giallo et al., 2015).
Using multi-wave data across a four-month period after childbirth, the authors
purposed to investigate the course of maternal fatigue and identify a range of potential
factors associated with the course of fatigue. The sample consisted of 70 mothers
with infants within ages of 0 and 7 months. In order to measure the change over time
and the predictors of fatigue, the authors used latent growth curve analysis.

High levels of fatigue were associated with irritability, increased stress and
lowered sense of competence in the role of parenting, all of which have been
identified as risk factors for occurrence of PPD (Giallo et al., 2015). This is
understandable considering the intensive baby care demands; sleep disruption and the
physical recovery from the delivery of the baby. However, a gap exists on the nature
of the course and persistence of fatigue during this sensitive period. The findings
propose that fatigue has the potential to be a persistent health issue beyond the period
that mothers receive routine postpartum care, which is usually the first 3 months after
childbirth (Giallo et al., 2015). It therefore emphasizes the importance of supporting
women experiencing high levels of fatigue soonest in the postpartum period.

The findings indicate variability in fatigue severity among the participants at 3
months postpartum. To better understand this difference, the authors examined
individual and contextual factors related to fatigue. The initial increase in fatigue
severity was associated with socioeconomic disadvantage, younger maternal age, poor
sleep quality and low self-efficacy (Giallo et al., 2015). Over time, fatigue was found
to remain high in the first 7 months with older maternal age. The strongest predictor
of fatigue levels in the beginning was poor sleep quality. Although many mothers
anticipate disrupted sleep pattern following childbirth, many are unaware of the major
impact it can have on health and well-being. This study associated younger mother’s age with postpartum fatigue at baseline and older mother’s age with persistent fatigue over time (Giallo et al., 2015). Therefore older maternal age and poor sleep quality were associated with stability of fatigue over time. Further, the study found that socioeconomic disadvantage was associated with high levels of fatigue.

In a study investigating the association between adaptation and depression in the postpartum period, Ho et al. (2013) identified risk factors that included unplanned birth, part-time employment and low socioeconomic status as experienced by women living in Taiwan. Ho et al. (2013) discovered that the new mothers’ confidence in their ability to perform their roles as mothers, their partners’ support in childcare and their satisfaction with life circumstances were strong predictors of PPD. Items that assessed satisfaction of life were like income, financial burden and ability to hire a baby sitter (Ho et al., 2013). The study highlights the need for healthcare providers working with new mothers, to pay more attention to PPD as well as the risk factors. Further, they should work to promote confidence in the new mothers’ ability to cope with motherhood (Ho et al., 2013).

Another study focusing on new mothers was conducted by Pocan et al. (2013) in Turkey. The authors advocate for postpartum follow-up to address emotional and psychological and physical issues. Although new mothers are encouraged to attend postnatal visits for check-ups, these visits normally entail a focus on medical complications, sexuality, breastfeeding and contraception. In this study, the authors purposed to investigate the incidence of PPD and risk factors associated with it. Participants included a group of 187 new mothers undergoing routine follow-up at an urban maternity clinic. Pocan et al. (2013) administered a sociodemographic questionnaire and the EPDS. The results reveal incidents of PPD scores of 28.9% for
scores above 12. Risk factors that were strongly correlated with PPD were unplanned pregnancies, difficulties with the baby’s sleep pattern, lack of family support, dissatisfaction with the marital relationship, solely bottle feeding and family violence. These findings show that PPD occurs in approximately one-third of women and that risk factors were more of sociocultural ones.

Liabsuetrakul, Vittayanont and Pitanupong (2007) advocated for the development of screening tools that use significant predictors to identify women who are at risk before they actually exhibit symptoms of depression. In a study they conducted in Taiwan, they aimed to assess the clinical applications of social support, stressors, anxiety, self-esteem as well as the Postpartum Depression Risk Scale (PDRS) measured during pregnancy and postpartum for screening PPD. The authors hypothesized that in order to screen PPD, it would be easier to understand the predictive tool compared to the symptomatic tool.

The study was done in a public 750-bed university hospital providing antenatal care for pregnant women. 400 pregnant women between 36-40 weeks and postpartum women between 6-8 weeks were each given a questionnaire that comprised of items on social support, anxiety, stressors and self esteem. The results show that during pregnancy, social support and anxiety are important predictors of PPD. Results also show that the clinical benefit of PDRS as a measure is better at postpartum than during pregnancy. Overall the clinical application of a PDRS is beneficial during pregnancy and postpartum in screening for PPD in Taiwan women, which supported their hypothesis. They therefore view the PDRS as an alternative screening tool that can be used during pregnancy as well as postpartum to identify women at risk of developing PPD (Liabsuetrakul et al., 2007).
Research on PPD and risk factors in women in Arab countries have been found to be scarce (Bener et al., 2012). This disorder is said to occur three times more commonly in developing countries than in developed ones (Bener et al., 2012). Bener et al. (2012) therefore conducted a study to examine the prevalence and identify risk factors of PPD in Qatar. The cross-sectional study included a sample of 1379 mothers within a postpartum period of 6 months. The data was gathered through face-to-face interviews as the women attended primary healthcare visits in 12 different healthcare settings from both urban and semi-urban areas. The findings reveal a prevalence of 17.6% of PPD among the sample in the study. In line with other studies, this rate was found to be higher than in western countries that were estimated as ranging between 10-15%. The risk factors identified in the study are associated with sociodemographic factors of women including low education, advanced age, unemployment and low-monthly income. Other variables include the significantly poor marital relationship and also poor relationship with mothers-in-law and family support in general.

Rode (2016) was in agreement with Pocan et al. (2013) concerning the physical and emotional challenges that the postpartum stage brings. According to Rode, emotional intelligence can likely improve mothers’ interpretation and better manage their emotions and coping decisions, as this may be relevant to PPD. Emotional intelligence is defined as a person’s ability to understand and reason about emotions and also to use emotions to regulate thoughts (Rode, 2016). Rode was particularly interested in the ability-based emotional intelligence, which is considered as a set of skills lending opportunity for improvement unlike Trait-based emotional intelligence, which is seen as more of a constant personality characteristic.
Rode (2016) examined the direct and moderating effects of emotional intelligence on PPD while also considering social support and stressful life events. Participants included 165 women who were interviewed in their third trimester and then at 9 weeks postpartum. The results of the study confirm that emotional intelligence has relatively significant negative effects on symptoms of PPD. Emotional intelligence in postpartum mothers experiencing life changes and emotional experiences accompanying newborn care has been found to reduce symptoms of PPD (Rode, 2016). Emotional intelligence has also been found to moderate the link between stressful life challenges and symptoms of PPD. It therefore buffers the negative effects of stressors. From the findings, Rode (2016) posits that emotional intelligence could be used as a screening tool to identify mothers at risk of developing PPD.

The diagnosis of HIV is another factor that has been identified as heightening the risk of PPD occurrence particularly in developing countries. Parsons et al. (2011) suggest that most women learn of their diagnosis during pregnancy and this is strongly associated with the occurrence of PPD. The women experience distress as a result of being confronted with the prospect of a chronic and potentially fatal illness while preparing to have a baby. A study carried out in South Nyanza, Kenya by Turan et al. (2014) identified additional stressors experienced by women living with HIV such as financial hardships as well as the physical well-being of their children. Parsons et al. (2011) posit that the high levels of stigma linked with HIV quite often disrupt a woman’s social support. These added stressors have been found to increase the risk for PPD symptoms.

In Malawi, Stewart et al. (2010) reported that common mental disorders, (with PPD leading), was a major problem among women with infants in rural Malawi. Risk
factors identified included relationship difficulties, poverty, infant health problems as well as HIV infection. Peltzer and Shikwane (2011) found it surprising that despite the high prevalence of PPD in South Africa, there was lack of data capturing the prevalence of PPD specifically among HIV-infected women. In a cross-sectional study they conducted in Nkangala district, Peltzer and Shikwane discovered that PPD is common among HIV-positive postpartum women. These high rates were strongly linked with the lack of social support, stigma and discrimination (Peltzer & Shikwane, 2011).

### 2.3 Effects of Postpartum

PPD is a common disorder that has been found to have significant consequences not only for the women who experience it, but also for their families (Conradt et al., 2012). Pocan et al. (2013) posit that new mothers might be reluctant to report as a result of guilt, which may in turn result in irreversible consequences like harm to oneself or to the baby. Davies et al. (2016) posit that both antenatal and postnatal depression have negative effects on the child. The effects manifest in child health and growth outcomes. According to Davies et al. (2016), PPD is a predictor of poor mother-child relationships, child growth and temperament. It also affects the child’s cognitive as well as behavioral development. Because of the experiences of suffering from PPD, many mothers delay in caring for their children’s illnesses (Davies et al., 2016).

Posmontier and Waite (2011) postulate that another added negative effect of PPD is spousal depression and widespread family dysfunction. Schetter et al. (2016) discovered that in addition to the mentioned, the women also experience problems in breastfeeding. Dennis and Ross (2006) similarly suggest that PPD can have a negative impact on the maternal-infant interactions, emotional development delay in
children coupled with attachment insecurity. Further, the children are said to experience challenges with expressive language development, attention and cognitive skill.

2.4 Forms of Social Support

This review focused on various studies that explored different sources of support such as partner support, maternal support, support from healthcare professionals as well as peer support. Other aspects of social support that are of interest to this study that have been discussed include the nature of social support and how the women perceive the support that is available to them.

Social support is perceived as communication and behaviors by an individual who is considered close to the new mother (Dubus, 2014). The support is intended to be helpful through such things as conveying empathy and concern, offering advice and information as well as hands-on help with tasks (Dubus, 2014). Some studies have however found that in providing the social support, the quality of the provider-recipient relationship is crucial in determining helpfulness or non-effectiveness of the support (Dubus, 2014).

Paternal involvement in infant care has been found to serve as a buffer in preventing the development of symptoms of depression during postpartum (Sejourne, Vaslot, Beaume, Goutaudier & Chabrol, 2012). Sejourne et al. (2012) found support for this in a study they conducted in the south of France. Their purpose was to explore the impact of paternity involvement on the development of PPD. In particular, their aim was to examine paternity leave and participation in caring for the baby during the postpartum period. One hundred and nineteen mothers were given four questionnaires: the Edinburgh Postnatal Depression Scale (EPDS) for depression, Multidimensional Scale of Perceived Social Support (MSPSS), Maternal Attitude
Questionnaire (MAQ) and a fourth one that assessed paternal involvement. The fathers also completed the EPDS and the questionnaire assessing paternal involvement.

Interestingly, paternity leave was not highlighted as a significant factor that protects against PPD (Sejourne et al., 2012). The fact that fathers took leave post delivery did not have an impact on the mother’s well-being. The lack of paternity involvement in caring for the infant was however strongly associated with symptoms of depression (Sejourne et al., 2012). This was a confirmation of the protective role of paternal involvement. The findings of the study highlight the importance of the father’s involvement in caring for the baby in the first months following delivery. Encouraging paternal involvement in caring for baby as early as possible could be instrumental in maternal well-being and in extension, the family’s well-being. Ho et al. (2013) concur with this and challenged healthcare providers to suggest involving fathers more in the care of the baby in order to improve family support.

Social relationships have been studied widely with regard to their impact on the prevention or development of PPD. One such study was carried out be Jones and Coast (2012) in South Asia. Social relationships are viewed as a complex multidimensional concept. Literature focuses on social support being the exchange of social resources between persons. Social relationships may affect cognitions, behaviors, emotions and biological responses in a way that has positive or negative implications on health. Jones and Coast did a systematic review of studies that examined an association between social relationships and PPD. Nine mostly qualitative studies were used in the review.

From the results, Jones and Coast (2012) discovered a relationship between low support and poor relationships with husbands and parents-in-law with PPD. The
importance of relationships with extended families, specifically in-laws is highlighted in this study. These findings are similar to those from western contexts demonstrating a key role of social relationships in the development of PPD (Jones & Coast, 2012). Further, this review reinforces the hypothesis that social and cultural contexts have significant influences on the link between social relationships and PPD. Social and cultural norms were found to influence social relationships through their effect on what is preferred, expected and exchanged in the interpersonal interactions Jones & Coast, 2012).

PPD is a serious and debilitating mental disorder that has even more devastating effects on teenagers who may not be aware of the symptoms or articulate how they are feeling (Boath, Henshaw & Bradley, 2013). The true figure of teenagers who suffer PPD is estimated to be much higher than the given numbers because this population is said to suffer in silence. In the United Kingdom 38.3 per thousand births was to a young lady between age 15 and 17 years (Boath et al., 2013). These women have been shown to be three times more likely to develop PPD compared to mothers who deliver at a mature age. This issue is of major concern because the distress that teenage mothers experience is not time-limited to early parenting but continues to adversely affect their mental wellness beyond teenage years.

Boath et al. (2013) sought to explore the experiences of teenage mothers with PPD in a study conducted in the United Kingdom. In addition, they purposed to explore the support needs, both formal and informal. The participants of the study constituted fifteen first-time mothers aged between 16 and 19 years. Consistent with previous studies, the results highlight the stigma that is experienced by teenage mothers for having children young and for being diagnosed with PPD. In addition the findings indicate that indeed, teenagers who received support from their families and
partners moved into the maternal role more swiftly, thus underlining the need for emotional, social and practical support.

With regard to support and education delivered by health care workers, some of the young mothers emphasized the positive and trusting relationships that they had established with the professionals that enabled them to feel comfortable. As Boath et al. (2013) stipulate building a rapport is central to any therapeutic interaction. This study provides suitable information that could inform treatment programs that are tailored to suit the different needs of different populations/circumstances of women experiencing PPD.

According to Burke and Perndorfer (2016), few studies have examined support receipt during pregnancy. In a study conducted in the United States, they purposed to assess implications of support mothers received during pregnancy to ascertain whether negative responsiveness to the help was a predictor of PPD. The 3-wave study that was conducted at 26 weeks gestation, 34 weeks gestation and 4 weeks postpartum interviewed 31 pregnant women who were recruited from the community. The results revealed that women who responded negatively to motherhood-related support experienced higher PPD symptoms. This means that how women interpret and respond to support influences the occurrence of PPD. This study reveals that receiving help can heighten distress because it is perceived as undermining autonomy and efficacy (Burke & Perndorfer, 2016).

The variability that is demonstrated in responsiveness to motherhood-related support that predicted PPD raises curiosity as to what causes the variability. Burke and Perndorfer (2016) suggest one possibility being the receipt of poor quality support by those with greater distress. Another reason for the variability was that for some of the women, motherhood was fundamental to their self-definition than others.
Therefore, although all women held an important view of their roles as mothers, for some it may be the most important thing while for others it may be one of the several roles. The study helped elucidate some of the complexities with regard to social support. The findings challenge the specification of whom and under what conditions is increased support likely to be of benefit to in terms of interventions.

Pilkington, Whelan and Milne (2016) explored maternal crying as a sign of distress as well as a call for help during the postpartum period in a study conducted in Australia. According to the authors, the development of this illness may be prevented if spouses are able to identify their partners’ distress and offer appropriate support (Pilkington et al., 2016). In other words, the extent to which partners are emotionally helpful as a response to the tearfulness may actually moderate postnatal distress. The period following childbirth is commonly linked with emotional lability. Tearfulness during this time is considered a symptom of postpartum blues. Mothers report a higher frequency of crying one month after delivery, which may be attributed to hormonal changes in the prenatal period. Adding on to the tearfulness could be the psychosocial demands that come with the adjustment to new roles and responsibilities (Pilkington et al., 2016). Kleiman and Raskin (2013) reported that many husbands during this difficult time find themselves wondering why their wives cannot just snap out of it.

The authors hypothesized that women who had high levels of crying frequency as well as high levels of partner support would have lower levels of PPD. Indeed Pilkington et al. found support for this hypothesis. Partner support did moderate this link between the crying frequency in mothers and the development of PPD (Pilkington et al., 2016). These findings provide evidence that the relationship between the mother and the partner is central to maternal well-being. These findings
raise the importance of educating mother, their families and mental health professionals on the meaning of tearing behavior during the sensitive period following childbirth.

The issue of partner support and its influence on the occurrence of PPD was also of interest to Dennis and Ross (2006) who conducted their research in Canada. Specifically, their aim was to examine the influence of maternal perceptions of conflict and relationship, and postnatal support from their partners on the development of PPD symptoms. Although partner support has been associated with the risk of PPD, few studies have examined particular elements of partner support as determinants of mothers’ mental health (Dennis & Ross, 2006). They administered questionnaires as part of a longitudinal study in Vancouver, British Columbia, and Canada to participants aged between 18 to 43 years. The findings reveal that lack of partner support and the presence of conflict are linked with the development of symptoms of PPD. The women’s perceptions of partner support and conflict are significant risk factors in the occurrence of PPD (Dennis & Ross, 2006).

In addition, Dennis and Ross (2006) identify specific domains of partner support and conflict that are most influential. These include social integration, appraisal support and problem-focused informational support. Women with symptoms of PPD are less likely to perceive that the partners share the same interests, and were available for companionship while providing a feeling of inclusion and connection (Dennis & Ross, 2006). The findings also reveal that respondents experiencing PPD symptoms are more likely to have a partner who does not agree with how they care for the baby. The authors emphasize the need for appraisal and emotional support to be tapped into in fostering maternal feelings of acceptance, being cared for and understood.
Sheng et al. (2010) endeavored to examine the relationship between satisfaction with the nature of social support and the development of PPD. They found that most of previous research that viewed social support as a risk factor focused on Caucasian women which presented a challenge of generalizing findings to women of various cultures in the US. The 62 participants in the study were drawn from two longitudinal studies and were recruited while receiving perinatal care at an urban obstetrics clinic in a low-income public sector in northern California. The findings show that Latinas at high risk of depression are less satisfied with their global social support network (Sheng et al., 2010). They are especially less satisfied with the support they received from the baby’s father. This dissatisfaction with the support from the baby’s father during the postpartum period is associated with higher depressive symptoms (Sheng et al., 2010).

With the limited social network of Latina immigrants, Sheng et al. (2010) discovered that the baby’s father is viewed as a critical source of social support. Therefore, a perceived lack of support from the baby’s father may cause the mother to find motherhood stressful thereby increasing the risk for PPD (Sheng et al., 2010). Most importantly, the authors found that dissatisfaction with support from one’s family following childbirth increased a woman’s risk of developing PPD. The Latino culture places great importance to family as a source of identity as well as support (Sheng et al., 2010). Therefore limited support may negatively affect the mother during the postpartum period. Support from individuals other than family is also found to be important especially because of the mostly immigrant status of the participants and lacking family support (Sheng et al., 2010).

Social support could also be provided in the form of education and continued care with postnatal follow-up home visits by mental health professionals once the
women have been discharged (Shorey, Chan, Chong & He, 2015). Common practice has been focused on provision of support during pregnancy and childbirth leaving out the postnatal period. Whilst this is important, social support in the postpartum period plays an extremely crucial role in helping mothers to adapt to major life events like the transition to motherhood, as was found by other studies (Shorey et al., 2015). It also empowers new mothers to attain their maternal role. Lack of support from healthcare professionals and relevant people in the women’s lives during this period after delivery may complicate issues further. The effectiveness of a postnatal psychoeducation program in enhancing maternal parental self-efficacy (MPSE) and social support and reducing PPD became an area of great interest to Shorey et al (2015) that they conducted a study to examine it in depth.

The study was done in Singapore featuring 122 mothers. The findings demonstrate that indeed the psychoeducation programs in the postpartum period are effective in improving MPSE, social support as well as prevention of PPD. The efficiency and effectiveness of the postnatal psychoeducation program is seen in its briefness and its ability to be delivered by postnatal unit nurses and midwives with a little bit of training. This study also highlights the need for mothers MPSE, social support and PPD to be assessed while the mothers are still admitted in hospital. Further, the authors suggest that psychoeducation program be introduced as routine care with ongoing evaluation during postpartum.

A similar study was conducted by Leahy-Warren, McCarthy and Corcoran (2011) in the Republic of Ireland. They were also interested in investigating the link between social support, maternal parental self-efficacy and PPD. Parental self-efficacy is beliefs held by a parent regarding their abilities to organize and carry out tasks concerning child parenting. The authors defined social support as the
combination of social structures and social functions. Social structures demonstrate cohesiveness with a flow of emotional concern, instrumental help, information and appraisal between people. Symptoms of PPD have been known to compromise maternal functioning (Leahy-Warren et al., 2011). A factor that has been attributed to the high prevalence is the reluctance of new mothers to report the emerging symptoms to mental health professionals (Leahy-Warren et al., 2011). The length of the delay to early recognition and appropriate treatment contributes to the high incidence of this mental illness.

The sample used for the study constituted 410 first-time mothers at 6 weeks after delivery. The results reveal a significant association between informal social support, particularly from family and friends and maternal parental self-efficacy, 6 weeks after delivery. Interestingly, the women in the study identified their own mothers as the parental person (Leahy-Warren et al., 2011). The maternal mother was perceived by respondents as able to provide all four types of social support examined in the study, mainly emotional, informal, instrumental and appraisal. Leahy-Warren et al. (2011) suggest that support from one’s own mother may increase maternal parental self-efficacy in two ways. One may be through vicarious experience relating to infant care and the other through verbal encouragement; both of which are identified by Albert Bandura’s theory of self-efficacy (Leahy-Warren et al., 2011).

The results of their study support Bandura’s two principles; that social persuasion, which is the informal support offered positively impacts parenting self-efficacy and also that psychosocial variables like depression are inversely linked to self-efficacy (Leahy-Warren et al., 2011). This study found no evidence of associations between formal support and PPD. According to the authors, this was not surprising as the amount of time spent in hospital was limited to approximately three
days. They suggest that mothers at high risk of PPD would highly benefit from healthcare professional home visits and peer support (Leahy-Warren et al., 2011).

Aktan (2010) concurs with the findings of studies that examined social support as a factor among others that may facilitate or hinder recovery from childbirth. Functional status of a mother following delivery of a baby encompasses the mothers’ ability to assume baby care responsibilities and resume their own care as well as care of the household, social and community. Social support according to Aktan (2010) is viewed as relational provision incorporating six categories, mainly attachment, opportunity for nurturance, reassurance of worth, social integration, offering guidance, and a sense of reliable alliance. Social support has been strongly linked to functional status during the postpartum period by theorists.

In line with other studies that found social support to be a huge buffer for PPD, Negron, Martin, Almog, Balbierz and Howell (2013) went further to explore women’s perceptions on social support in the period after childbirth. According to the Negron et al. (2013), some PPD prevention efforts have been focused on social support. However, scanty literature exists regarding how mothers view and experience social support. This is particularly so in underserved communities where PPD is highly prevalent. Negron et al. (2013) conducted 4 focus groups that consisted of an ethnically diverse sample of 33 women in large hospital in New York.

Main themes that emerged in the discussions included the mothers’ major needs and challenges, social support expectations and providers, how support was mobilized as well as barriers to the women’s ability to mobilize support (Negron et al., 2013). From the results, Negron et al. (2013) discovered that mothers have similar support needs and challenges. They all reported finding it difficult to balance the various competing demands that accompanied the postpartum period. Partners
and family members were identified as the major source of social support. Additionally, the study reveal that mothers consider instrumental support as a vital component for emotional as well as physical well being. Partners’ instrumental support has been found to make a positive contribution on the mothers’ health. Further, closeness with the partner was found to have an inverse relationship to the risk of developing PPD. Therefore support from families and partners was expected and many even strongly felt that it should be provided without asking.

Negron et al. (2013) found that while some mothers were able to actively mobilize support, others encountered barriers that hindered them from receiving the needed help. According to the findings, ethnic differences exist in the way the different women mobilize support (Negron et al., 2013). This stems from differing perceptions on the kind of support expected from the participants social networks support availability and expectation was found to inhibit mobilization; that is the inability to know what is available or what source can provide support, may hinder the mothers from seeking help (Negron et al., 2013). This is especially so if they perceive asking for assistance as shameful and inappropriate. Unrealistic expectations were also found to inhibit mobilization of support. It may be difficult for the sources of support to discern exactly what the mothers need without the mothers voicing their needs (Negron et al., 2013). The study therefore suggests that helping women identify their needs and expectations with regard to support could empower them to mobilize social support.

From the findings, Negron et al. (2013) emphasize the significance of continued examination of social support during the postpartum period including similarities and differences that exist in ethnically diverse backgrounds. Barriers to support mobilization that were identified include attitudes like pride, embarrassment,
independence and stigma linked with suffering depression; all of which are considered barriers to seeking emotional support (Negron et al., 2013). The authors found that there were similarities between instrumental and emotional support. An individual’s ability to mobilize support may also be hindered by the existence of limited support networks available to them. Such women restrain from seeking help for fear of being a burden to those on whom they heavily depend (Negron et al., 2013).

Leger and Letourneau (2015) found that of the various interventions studied, social support delivered by peers stands out as promising. In examining the issue of lack of social support, various interventions have been investigated including support provided by professionals and paraprofessionals, individual and group support, as well as support given in the home, the community and by telephone. They carried out a systemic search and did a narrative review of previous studies done on peer support interventions for PPD. Social support interventions are typically along four dimensions, that is, informational, emotional, instrumental and affirmational support (Leger & Letourneau, 2015). In addition to these, peer support has been found to offer a fifth dimension of empathic support. Informational support provides advice that assists in making decisions, emotional support offers expressions of concern and compassion; affirmational support offers positive feedback about the individual’s decisions and behavior; instrumental support provides practical help and resources; and empathic support provides understanding from a perspective of personal experience (Leger & Letourneau, 2015).

From the study, Leger and Letourneau (2015) discovered that new mothers appear to be receptive of support that involved sharing of personal stories and establishing friendships. Matching of peer volunteers with the mothers they
supported seemed to be an important component of successful peer mentoring (Leger & Letourneau, 2015). Specifically, it was important that the support was meeting the needs of the mothers receiving it. For instance considering cultural and linguistic differences and mother’s circumstances. Leger and Letourneau (2015) emphasize that the volunteers also had to receive adequate training in order to run effective peer support programs. Mothers shared that sources of support from the peers had lessened their concerns which may have been the result of the peers’ efforts to normalize the difficulties the mothers were experiencing (Leger & Letourneau, 2015).

2.5 Interventions Used in PPD Treatment

In treating PPD, Davie et al. (2016) call attention to the need for interventions incorporate the lived experiences of women with PPD. This particular study also called attention to the need for interventions to be grounded in the broader contest of socioeconomic status. In this case they advocate for interventions to take into account the poor socioeconomic conditions and living environments in South Africa. In a study conducted in Khayelitsha, in the outskirts of Cape Town, the authors sought to acquire an in-depth understanding of the idioms of distress, symptoms as well as the causes of PPD in women. Using qualitative semi-structured interviews, Davies et al. (2016) gathered data from 12 depressed and 9 non-depressed pregnant women and mothers with babies; and 13 healthcare providers. They found that although local descriptions of depressive symptoms vary, they are generally similar symptoms to those in international criteria.

A major challenge that Davies et al. (2016) found was that many interventions that were developed in Western countries might not be necessarily culturally sensitive. They may not consider social determinants of mental health. In low and middle income countries (LMIC), the risk factors for PPD include poverty, financial
stress, social and economical inequalities, low levels of education, substance abuse and exposure to abuse and violence (Davies et al., 2016). Given the high prevalence of PPD and its high occurrence in LMICs, advocacy for more research and development of intervention strategies that are more effective was proposed. This would include providing context-specific efficient programs. Davies et al. (2016) posit that in order for this to happen, dialogue between communities, researchers and service providers needs to include the integration of local as well as global perspectives. For instance, local understanding and responses to mental illness that would be gathered through research, needs to be considered so as to encourage those suffering from mental disorders to seek help. The interventions generally have to resonate with the locals understanding, worldviews and needs. Interventions according to Davies et al. (2016) should be driven by local knowledge.

Dubus (2014) also highlights the need for an improvement in the training of service provider and the development of treatment programs for postpartum women. According to the authors, there is a profound difference in how new mothers experience motherhood compared to mothers of other times. According to Dubus (2014), women in the United States currently do not have their own mothers available to offer support, guidance and help in the crucial transition period to motherhood. In a qualitative study, Dubus (2014) examined postpartum women who were recipients of a home-visitation social support program. The women who had been identified by a mental health care professional as being at risk for developing PPD were provided with relation-based social support from volunteer paraprofessionals. This study sought to understand the new mother’s perceptions of this intervention, whether it was helpful.
The findings reveal that an element involved in the helping relationship was beneficial to the women receiving the help (Dubus, 2014). This element was identified as “permission to be authentic”. The various ways in which the volunteers expressed this element included self-disclosure by volunteers, normalization of feelings by validating their experiences and feelings and the non-judgmental responses (Dubus, 2014). Consequently, the women felt understood and less isolated in experiences. The women most importantly had high hopes that they would survive the difficult time. Therefore the idea of allowing them to be authentic was the helpers’ deliberate use of themselves as an intervention target to people who feel shame and isolation regarding their experiences (Dubus, 2014). This was also then found to contribute to the quality of the provider-recipient relationship.

Yawn et al. (2012) concur with studies that suggest PPD is a common but inadequately recognized and untreated illness. According to them, attempts have been made to raise awareness of PPD through ventures such as programs that conduct screening in primary care settings and hospitals. Although some recognition was achieved, the effectiveness of the outcomes had not been assessed (Yawn et al., 2012). The authors wanted to determine the effect of a practice-based training program that did screening, diagnosis and management of PPD. The study enrolled 2,343 women between 5 and 12 weeks after child delivery. 28 practices were randomized, so that 14 were categorized as usual care and the other 14 identified as the intervention category. The intervention category received education and tools for screening, diagnosis, beginning therapy as well as follow-up whereas the usual care sites a 30-minute presentation about PPD.

The results show that 654 women of the total number of participants recorded high scores for PPD. Among these, participants in the intervention sites had higher
chances of receiving a diagnosis followed by therapy (Yawn et al., 2012). They were also found to have lower levels of depressive symptom at twelve months postpartum. Yawn et al. (2012) discovered that diagnosis rates, starting treatment and referral for psychiatric evaluation were more in the intervention group. This points to the effectiveness of the program in raising awareness about PPD. Surprisingly, the authors found that many other studies reported no impact in maternal outcomes after intervention. A number of reasons were identified as potentially causing this. Women do not desire to leave their usual practice to seek mental health services outside the primary care practice (Yawn et al., 2012).

Retaining most PPD care within a primary care practice has been found to increase the work that is required of these practices. Few practices that did implement PPD care in their normal primary care practices reported that although they concurred on the importance of the support calls, they did not have adequate time to make additional follow-up calls (Yawn et al., 2012). Additionally, as more women returned to work after maternity leave, it was difficult to reach them during usual office hours (Yawn et al., 2012). Phone calls usually required three or more attempts and this was very challenging. These are just some of the barriers experienced in follow-up care. Yawn et al. (2012) called for health care reform that will assist in addressing these issues.

Despite the worldwide prevalence and high social cost of PPD, this common complication of childbirth continues to go unidentified and untreated in health care settings (Place et al., 2015). This is particularly so in low and middle-income countries. Studies done in the past show that health care providers’ encounters with PPD at the settings were characterized by feelings of incompetence and a lack of confidence (Place et al., 2015). It is important to understand how healthcare
providers conceptualize PPD as it underscores how the illness is detected, managed and treated. Place et al. (2015) did a study with the aim of providing an understanding of conceptualization of PPD among healthcare providers in Mexico and how they apply their understanding of social and behavioral antecedents in their conceptualizations of the illness. Although validated screening tools have been developed that detect PPD, among low and middle-income countries, the healthcare providers who use them sometimes fail to use these instruments (Place et al., 2015).

The 61 participants in the study included physicians, nurses, social workers and psychologists that were selected from five public health care settings. In the period following childbirth, women have increased interaction with health care providers, which presents an opportunity for early detection of PPD symptoms and treatment (Place et al., 2015). However, this study reveals that what constitutes PPD varies among health care providers. The findings shed light on components of knowledge frameworks that are used by providers to conceptualize PPD. The results align with two dominant models that posit that PPD is best understood as a biochemical problem or an adjustment problem or both (Place et al., 2015). The biochemical view was largely supported by physicians (both male and female) as well as some nurses whereby PPD was attributed to innate biochemical vulnerability (Place et al., 2015). This view was used as a way to minimize the stigma that accompanies PPD. According to the physicians and nurses, the physiological effects of childbirth were not the women’s fault (Place et al., 2015).

Psychologists and social workers largely supported the adjustment framework and these were mostly women. They viewed PPD as an adjustment reaction to the difficult reality of motherhood and the change in life circumstances (Place et al., 2015). Despite these two frameworks, what appeared to be central to healthcare
providers’ understanding of PPD were the social and behavioral antecedents that women constantly confront in low-income context such as single motherhood and socioeconomic stress (Place et al., 2015). Participants commented on the hardships encountered by women in their daily lives that contributed to PPD, which demonstrates how physicians and nurses are attuned to the social and behavioral antecedents that bring about PPD. They were therefore reluctant to label depressive symptoms as PPD as they believed that the symptoms had a psychosocial etiology, which did not warrant medicalized treatment like antidepressants (Place et al., 2015).

A few studies made suggestions concerning interventions for treatment and management of PPD. Leahy-Warren et al. (2011) posit that social support interventions need to be more specific to new mothers for instance by enhancing maternal parental self-efficacy in the first 6 weeks after delivery. This could go a long way in positively impacting the new mothers’ mental health as well as well being. Rode (2016) suggests that interventions focus on developing emotional intelligence abilities in mothers as it may subsequently reduce cases of PPD. Women could use their emotional intelligence skills to allay common postpartum stresses such as those involving childcare or other external stressor.

2.6 Chapter Summary

This chapter has reviewed literature on studies done concerning PPD. Aspects that were examined include challenges experienced by women in the postpartum period, risk factors that increase occurrence of PPD, the effects of PPD, social support as well as interventions used in treating and managing PPD. The next chapter expounds on the research methodology for this study.
CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter identifies the steps that the researcher followed in the data collection and data analysis. This section includes the research design, population and setting, sample size and sampling techniques, data collection methods, research procedures, data analysis, and the chapter summary.

3.2 Research Design

This section entails the general plan utilized in conducting the study. Gravetter and Forzano (2009) define the research design as the general plan for the implementation of the research strategy. The general approach to this study included both a quantitative and qualitative approach. The quantitative focused on measuring variables to obtain quantifiable data and the qualitative part involved more of a summary and interpretation of the analysis in a narrative report. This study utilized the correlational method to establish whether and to what degree a relationship exists between level of social support and the development of postpartum depression.

3.3 Population and Sampling Design

3.3.1 Population

Gravetter and Forzano (2009) define population as the entire set of individuals that are of interest to the researcher. In this study, the population encompassed all women in their postpartum period. Specifically, the researcher targeted women between the ages of 16 years to 40 years and above who have infants ranging from birth to a year and living in Nairobi County. Although the entire population did not participate in the study, it is the hope of the researcher that the findings will be generalized to the whole population. The target population as defined by Gravetter
and Forzano (2009) as the specific group that is distinctive of the researcher’s specific interests. In this case, the target population was women in their postpartum period attending postnatal clinic in the period between delivery and one year.

### 3.3.2 Sampling Design and Techniques

Sampling involves selecting the participants that the researcher intends on using in the study (Gravetter & Forzano, 2009). This process is done in a fashion that the participants selected will be representative of the entire population. The degree of representativeness refers to how closely the sample mirrors the population. Mugenda and Mugenda (2003) simply put it as the process of picking individuals in a way that the selected individuals represent the larger group from which they were selected.

Mugenda and Mugenda (2003) also describe sampling techniques as the methods used in selecting the individuals to be used in selecting the participants of the study. These methods are categorized under probability and non-probability sampling. Probability sampling is used when the researcher knows the whole population, therefore, the odds of selecting a particular individual are known and can be calculated. With regard to non-probability sampling, Mugenda and Mugenda (2003) assert that it is used when it is not in the interest of the researcher to use a sample that is representative of the entire population. Specifically this study utilized convenience sampling as a nonprobability sampling method. Gravetter and Forzano (2009) describe convenience sampling as the most commonly used method in behavioral science where participants are selected on the basis of availability. The researcher did find that Pumwani Maternity hospital was an appropriate place for obtaining the data.
3.3.2.1 Sample Frame

In order for the researcher to select a sample that will be representative, he or she needs to utilize a sample frame. This is the list that is inclusive of all the accessible population that the researcher intends on selecting (Mugenda & Mugenda, 2003). This will actually form the unit of observation in the study. Because of the importance of the degree of generalization, the accuracy of this sampling frame is utterly important. For this study, the researcher obtained the sampling frame from Pumwani Maternity Hospital (PMH). PMH is the largest maternity hospital in East Africa that caters for women from lower socio-economic status. In addition to serving women from informal settlements and low-income residence areas, this public hospital is a referral center for complicated obstetric cases (Beard et al., 2010).

3.3.2.2 Sample Size

Gravetter and Forzano (2009) assert that the bigger the sample size, the more the improvement in accuracy and the more representative it will be of the entire population. Pumwani Maternity hospital has an average of 40-60 deliveries per day (Beard et al., 2010). Mogire (2013) gives a figure of approximately 1,500 deliveries each month. Based on these numbers, the researcher selected 100 participants for this study.

3.3.2.3 Inclusion Criteria

An inclusion criterion was used in order to meet the specific interests of the researcher with regard to the aims of the study. The inclusion criteria included:

1. The women selected had no known complications.
2. Eligible women had to be at least 16 years to 40 years of age.
3. Participants were able to understand English or at least have a reading level of fifth to a sixth grade learners.
3.3.2.4 Exclusion Criteria

Women who were not eligible for the study included:

1. Women already exhibiting depressive symptoms. It is necessary to control for current depressive symptoms as this could influence maternal evaluations of the participants’ partners and potentially have an effect on the analysis.
2. Women below the age of 16 years.
3. Mothers with children beyond the age of 12 months.

3.4 Data Collection

According to Mugenda and Mugenda (2003), data that is collected for a study can either be primary or secondary. Primary data is information that is gathered and used for the original purpose it was gathered. Secondary data is information that is used for other purposes than that which it was collected (Gravetter & Forzano, 2009). The researcher sourced for primary data that was used specifically for this study.

3.4.1 Instruments

The researcher used a questionnaire with three sections. The first section consisted of socio-demographic items to collect data concerning the women’s age, babies’ gender, number of previous pregnancies, whether the pregnancy was planned or unplanned, and number of living children.

The second section consisted of the Beck Depression Inventory II (BDI-II), which is a 21 item self-report scale that was used to detect the symptoms of depression in individuals. Certain factors contributed to the choice of this screening tool. First, the BDI-II has been extensively used to assess depression in psychiatric patients and normal ones as well (Groth-Marnat, 2003). According to Groth-Marnat (2003), the BDI-II is able to detect depression as efficiently as longer structured interviews. The popularity of this instrument is evidenced by over one thousand
studies that have been conducted on its use. In addition to this, the BDI-II is time efficient, taking from 5 to 10 minutes to complete. The reading level required to understand the items is of fifth or sixth grade level.

With regard to its validity and reliability, the BDI-II has been subjected to a wide psychometric evaluation. Research has consistently found a high internal consistency even when used on a variety of populations. Evaluation of content, concurrent and discriminant validity have generally been favorable. Research also supports the BDI-II’s ability to discriminate between primarily anxiety as opposed to primarily depressive disorders. Groth-Marnat (2003) found that it was highly correlated with the Hamilton Psychiatric Rating scale for Depression at .71 compared to the Hamilton Rating scale for Anxiety at .47. Higher correlations were also found between the BDI-II and the Symptom Checklist-90-R Depression dimension at .89 than the Symptom Checklist-90-R Anxiety dimension at .71.

Scores that will be used to indicate the general level of depression include: 0 to 10 which would mean minimal or no depression, 11 to 19 indicating mild depression, 20 to 28 moderate, 29 to 63 which would indicate severe depression. The researcher is aware that a score below 4 could possibly indicate denial of depression or faking good.

The effectiveness of the BDI-II has been supported by Erford, Johnson and Bardoshi (2016) in a meta-analysis review of 144 studies. The findings provided robust estimates of internal consistency of .89 and test-retest reliability of .75. Convergent comparisons with 43 other depression instruments were significant. Conradt et al. (2012) also used the BDI-II in a study to identify items on the inventory that best discriminate between clinically depressed and women who are not depressed. From their results, they advised that although the BDI-II is a suitable
instrument for detecting symptoms of depression, it should be used with caution as
the cognitive/affective symptoms appear stronger to normative physical and
emotional changes that are experienced during the postpartum period (Conradt et al.,
2012).

The third section contained items on social support. The instrument chosen to
obtain data on social support was the Postpartum Social Support Questionnaire
(PSSQ). This instrument was developed to provide a comprehensive self-support
measure of social support in the crucial postpartum period (Hopkins & Campbell,
2008). It was particularly intended to assess certain aspects of social support specific
to the postpartum period. These include the emotional and instrumental domains, and
sources of social support. The PSSQ’s ability to assess sources of social support
significantly influenced its choice for this study.

To ensure consistency with other measures, the 50 items in PSSQ were
rationally generated from a review of other social support questionnaires (Hopkins &
Campbell, 2008). The items were specifically generated to include aspects of support
that specifically relate to postpartum depression. For instance, item 15 assesses
whether the participant feels that the partner or spouse has been supportive since birth
and item 13 assesses how often the partner or spouse soothes the baby. Each item
assesses the frequency of the support provided using a 7-point Likert scale where 1
would indicate ‘almost never’ and 7 meaning ‘very often’. The scale consists of four
subscales including: partner support which includes 15 items, parent support with 11
items, parent-in-law support with 9 items, extended family and friends support which
has 13 items and finally 2 items that evaluate general support (see Appendix A).
3.4.2 Research Procedures

This section defines the methodology that was used in data collection. Gravetter and Forzano (2009) particularly refer to the research procedures as the step-by-step depiction of the study. It involves giving details of precisely how the study will be done. The researcher randomly administered the questionnaires to women who were attending postnatal clinic. The researcher had three trainees who were trained on what they needed to know in order to effectively administer the test. The researcher and assistants explained to each of the women appropriate information about the study both verbally and in written form. The participants were then issued with consent forms to fill in and hand back to the researcher and assistants, after which they began the interviews.

3.5 Data Analysis

Mugenda and Mugenda (2003) refer to data analysis as cleaning up, coding and keypunching of the raw data into a computer for analysis. The researcher utilized the Statistical Package for Social Science (SPSS) software. To show the strength of the relationship between the two variables of interest, that is, social support and development of postpartum depression, the researcher used a correlation coefficient. The PSSQ scores of women who had symptoms of depression, as indicated by the BDI-II, and women who did not have any symptoms of depression were compared.

The following methods were employed in analyzing each specific research question.

For research question 1 “Is there a correlation between the levels of social support and the development of PPD?” the Pearson correlation coefficient was used to establish if a relationship existed between the two variables and whether one affected
the other. In other words the aim was to establish whether the presence or absence of social support brings about or prevents the development of PPD.

For research question 2 “What are the various forms of social support that are available for women living in Nairobi County?” the researcher employed descriptive analysis techniques on the data captured to identify the kind of support available for the women.

For research question 3 “What is the ranking of sources of social support according to the mothers living in Nairobi County?” descriptive analysis techniques were used to establish which of the four subscales (partner support, parent support, parent-in-law support and extended family and friends support) is the most preferred sources of social support according to women living in Nairobi County.

3.6 Ethical Issues

The researcher aimed at observing the basic categories of ethical responsibility. Specifically, the researcher aimed to ensure the welfare and dignity of the individuals participating in this study. The researcher also endeavored to ensure that the reports of this study are accurate and honest depictions of the procedures used and the results that were obtained in this study. As Gravetter and Forzano (2009) posit, the goal of the scientific method is to get answers with which the public can be confident, therefore the researcher acknowledges that any reporting decision that threatens this confidence would be an ethical issue.

The researcher obtained approval for the study from the Institutional Review Board of the United States International University – Africa before proceeding to seek approval from Pumwani Maternal Hospital, which was primarily the setting for this study.
Furthermore the researcher also obtained informed consent of the participants of this study using language that they understand (see Appendix B). Finally, the researcher provided the participants with appropriate information about the study both orally and on paper.

3.7 Limitations of Study

This encompasses aspects of the research study that are suspected to have a negative effect on the findings as well as the generalizability of the results (Mugenda & Mugenda, 2003). This is also mostly what the researcher may not have control over. The lack of literature documenting postpartum depression in the African continent has been a major limitation of this study. Many studies that have been conducted on postpartum depression have gathered their data in more than one period. Data in this study was also obtained at a single screening session and there was no second screening session to confirm diagnosis of depression. Future studies could conduct multiple assessments of the women at different times during the postpartum period, as this could provide insight into whether depression levels change as the women adapt during the postpartum period. Another major limitation in this study was the small sample size. This could perhaps explain the low significant relationship between social support and lack of depressive symptoms. Another limitation of this study is that the sample comprised of women from Nairobi County, which is an urban area. This can be viewed as restricting generalizability to the wider population of women in the postpartum period in Kenya.

3.8 Chapter Summary

This chapter has highlighted the steps taken by the researcher in the data collection process. It was the guide in helping the researcher to conduct the study in a manner that upholds the research ethics in the stage of data collection.
CHAPTER 4
RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the findings from the data that was gathered from the participants of this study. The data from a combined questionnaire for Socio-demographic characteristics, PSSQ and the BDI-II were entered and analyzed using the Statistical Package for Social Sciences (SPSS version 24). This chapter has been divided into subsections mainly: descriptive analysis of the participants’ background information, correlation of study variables, various forms of support available to the women, additional notable correlations and summary of the findings.

4.2 Socio-demographic Characteristics of Participants

In this subsection, averages, frequencies and percentages were used for descriptive analysis.

4.2.1 Age Group of Participants and Education Levels

A total of 123 participants were recruited and interviewed at the waiting area of Pumwani Maternity hospital. Out of the total number, 4% were in the category of 16-20 years of age. The majority of participants were in the 21-25 years bracket which represented 38% of the total number, 27% were in the 26-30 years category, 18% were in the 31-35 years bracket and 13% were 36 years and above (see Figure 4.1).

Secondary education was reported as the highest level of schooling by majority of the participants at 33%; 20% completed primary school; 10% had completed mid level college and only 1% had completed university education (see Figure 4.1).
4.2.2 Marital Status and Family Type

Out of the total number of participants, 81% of the respondents were married, 15% were single and 3% were not married, divorced or widow. Majority of the women also reported to live in nuclear families, that is, 92% while 7% reported to live in extended family type and the remaining 1% did not respond to this part of the questionnaire (see Figure 4.1).

![Figure 4.1](image)

4.2.3 Employment status and Monthly income per Household

Out of the 123 respondents, 49% were unemployed. Of those who were employed, 28% were self-employed, 14% were employed in the private sector, 2% were employed in the public sector, 6% were casual laborers and 1% students.
Participants who reported to have KSH10,000 or less monthly household income were 34%; those receiving a household income between KSH 10,000 and KSH 25,000 were 35%; women whose households received between 25,000 and 40,000 were 12%; and 10% reported to receive monthly household income above KSH 40,001 (see Figure 4.2).

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 or less</td>
<td>34%</td>
</tr>
<tr>
<td>10,001 – 25,000</td>
<td>35%</td>
</tr>
<tr>
<td>25,001 – 40,000</td>
<td>34%</td>
</tr>
<tr>
<td>40,001 – 55,000</td>
<td>5%</td>
</tr>
<tr>
<td>55,001 – 75,000</td>
<td>1%</td>
</tr>
<tr>
<td>75,001 – 100,000</td>
<td>1%</td>
</tr>
<tr>
<td>100,001 – 150,000</td>
<td>1%</td>
</tr>
<tr>
<td>150,001 – 200,000</td>
<td>2%</td>
</tr>
<tr>
<td>Has No income</td>
<td>1%</td>
</tr>
</tbody>
</table>

Figure 4.2. Respondents’ Employment status & Monthly Household Income

4.3 Correlation of Study Variables

Research question 1 aimed to examine whether a relationship exists between level of social support and the development of PPD. With regard to this question, the following was found.

4.3.1 BDI-II Scores

Table 4.1 shows percentages of the women’s scores in the BDI-II items. The scoring was achieved by adding up the scores for each of the questions in this section (21 questions). The women’s depression levels were then evaluated as follows:

Scores between 1 and 10 are considered ups and downs which are normal; scores
between 11 and 16 indicate mild mood disturbance; scores between 17 and 20 indicate borderline clinical depression; 21 to 30 scores reveal moderate depression; 31 to 40 implies severe depression; and scores above 40 indicate extreme depression.

**Table 4.1**

*Participants’ BDI-II Scores*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>100</td>
<td>81%</td>
</tr>
<tr>
<td>Mild mood disturbance</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>Borderline clinical depression</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Moderate depression</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Extremely depression</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>123</td>
<td>100%</td>
</tr>
</tbody>
</table>

From these findings, the women were placed in two groups namely the ‘Non depressed’ and the ‘Depressed’ group. The Non depressed group consisted of women who scored 10 and below on the BDI-II scale and the depressed group consisted of women who scored 11 and above. The non depressed group had 81% (n=100) while the depressed group comprised of 19% (n=23).

**4.3.2 Average Responses for Social Support (PSSQ)**

Table 4.2 shows the average responses of the PSSQ for all the participants. The participants were to respond to the questions in this section by indicating the frequency of occurrence of purposely socially supportive behavior from their partners, parents, parents-in-law, relatives and friends. A 7-point likert scale was used where 1 equaled “almost never”, 2 “once in a while”, 3 “more than once a while”, 4 “sometimes”, 5 “normally”, 6 “often” and 7 “very often”.
### Table 4.2

*Mean for social support items*

<table>
<thead>
<tr>
<th>Social Support Score - PRESENTLY</th>
<th>Total</th>
<th>Non depressed</th>
<th>Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often does your partner help to take care of the baby?</td>
<td>2.88</td>
<td>3.02</td>
<td>2.25</td>
</tr>
<tr>
<td>2. How often does he play with the baby?</td>
<td>4.18</td>
<td>4.29</td>
<td>3.65</td>
</tr>
<tr>
<td>3. How often does he soothe the baby when he/she is upset?</td>
<td>4.15</td>
<td>4.3</td>
<td>3.45</td>
</tr>
<tr>
<td>4. How often does he watch the baby so you can go out by yourself?</td>
<td>3.72</td>
<td>3.9</td>
<td>2.85</td>
</tr>
<tr>
<td>5. How often does he help out in other household chores?</td>
<td>2.78</td>
<td>2.89</td>
<td>2.25</td>
</tr>
<tr>
<td>6. How often does he help out with family meals?</td>
<td>2.81</td>
<td>2.91</td>
<td>2.35</td>
</tr>
<tr>
<td>7. How often does he help with grocery shopping?</td>
<td>4.09</td>
<td>4.16</td>
<td>3.75</td>
</tr>
<tr>
<td>8. How often does he disagree with you about how the baby should be handled?</td>
<td>5.88</td>
<td>5.89</td>
<td>5.8</td>
</tr>
<tr>
<td>9. How often does he indicate to you by words or behavior that he knows that it is hard work to take care of a baby?</td>
<td>4.3</td>
<td>4.32</td>
<td>4.2</td>
</tr>
<tr>
<td>10. How often does he indicate dissatisfaction with the change in routine since the baby’s birth?</td>
<td>1.85</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>11. How often does he indicate dissatisfaction with the amount of time you have to spend together since the baby’s birth?</td>
<td>6.3</td>
<td>6.25</td>
<td>6.55</td>
</tr>
<tr>
<td>12. How often do you talk about the baby with your partner?</td>
<td>4.96</td>
<td>5.14</td>
<td>4.1</td>
</tr>
<tr>
<td>13. How often do you confide in, share your problems with, or tell your troubles to your partner?</td>
<td>4.98</td>
<td>5.15</td>
<td>4.2</td>
</tr>
<tr>
<td>14. How often does your partner confide in, share his problems with, or tell you his troubles?</td>
<td>4.72</td>
<td>4.94</td>
<td>3.7</td>
</tr>
<tr>
<td>15. In general, do you feel your partner has been supportive since the baby’s birth?</td>
<td>2.68</td>
<td>2.53</td>
<td>3.4</td>
</tr>
<tr>
<td>16. How often do you have contact with your parent(s) in person?</td>
<td>3.39</td>
<td>3.26</td>
<td>4.2</td>
</tr>
<tr>
<td>17. How often do your parent(s) help with the baby?</td>
<td>2.5</td>
<td>2.42</td>
<td>3</td>
</tr>
<tr>
<td>18. How often do your parent(s) baby-sit?</td>
<td>2.22</td>
<td>2.1</td>
<td>2.93</td>
</tr>
<tr>
<td>19. Do you feel you can count on your parent(s) for financial help, if you should need it?</td>
<td>3.28</td>
<td>3.29</td>
<td>3.2</td>
</tr>
<tr>
<td>20. How often do your parent(s) help with other practical matters?</td>
<td>1.63</td>
<td>1.57</td>
<td>1.94</td>
</tr>
<tr>
<td>21. How often do you and the baby spend time with your parent(s)?</td>
<td>2.33</td>
<td>2.24</td>
<td>2.81</td>
</tr>
<tr>
<td>22. How often do you confide in, share your problems with, or tell your troubles to your parent(s)?</td>
<td>3.64</td>
<td>3.7</td>
<td>3.25</td>
</tr>
<tr>
<td>23. How often do your parent(s) confide in, share their problems with, or tell you their troubles?</td>
<td>3.01</td>
<td>3.01</td>
<td>3</td>
</tr>
<tr>
<td>24. How often do your parent(s) give you advice or guidance about the baby?</td>
<td>4.41</td>
<td>4.37</td>
<td>4.63</td>
</tr>
<tr>
<td>25. How often do you discuss your concerns about the baby with your parent(s)?</td>
<td>4.02</td>
<td>3.97</td>
<td>4.31</td>
</tr>
<tr>
<td>26. In general, do you feel that your parent(s) have been supportive since the baby’s birth?</td>
<td>4.42</td>
<td>4.46</td>
<td>4.19</td>
</tr>
<tr>
<td>27. How often do you have contact with your parent(s)-in-law in person?</td>
<td>3.08</td>
<td>3.2</td>
<td>2.44</td>
</tr>
<tr>
<td>28. How often do your parent(s)-in-law help with the baby? (Answer according to the parent-in-law who helps the most)</td>
<td>1.93</td>
<td>1.96</td>
<td>1.75</td>
</tr>
<tr>
<td>29. How often do your parent(s)-in-law baby-sit?</td>
<td>1.82</td>
<td>1.8</td>
<td>1.94</td>
</tr>
<tr>
<td>30. Do you feel you can count on your parent(s)-in-law for financial help, if you should need it?</td>
<td>2.37</td>
<td>2.49</td>
<td>1.75</td>
</tr>
<tr>
<td>31. How often do your parent(s)-in-law help out with other practical matters?</td>
<td>1.43</td>
<td>1.46</td>
<td>1.31</td>
</tr>
<tr>
<td>Question</td>
<td>Mean 1</td>
<td>Mean 2</td>
<td>Mean 3</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>32. How often do you and the baby spend time with your parent(s)-in-law?</td>
<td>1.76</td>
<td>1.81</td>
<td>1.5</td>
</tr>
<tr>
<td>33. How often do you confide in, share your problems with or tell your troubles to your parent(s)-in-law?</td>
<td>1.98</td>
<td>1.98</td>
<td>2</td>
</tr>
<tr>
<td>34. How often do your parent(s)-in-law confide in you?</td>
<td>1.81</td>
<td>1.84</td>
<td>1.63</td>
</tr>
<tr>
<td>35. How often do your parent(s)-in-law give you advice or guidance about the baby?</td>
<td>3.29</td>
<td>3.43</td>
<td>2.56</td>
</tr>
<tr>
<td>36. How often do you have contact with other relatives or friends in person?</td>
<td>4.01</td>
<td>4.06</td>
<td>3.78</td>
</tr>
<tr>
<td>37. How often do your other relatives or friends help out with the baby?</td>
<td>3.59</td>
<td>3.73</td>
<td>2.96</td>
</tr>
<tr>
<td>38. How often do your relatives or friends baby-sit for the baby?</td>
<td>3.31</td>
<td>3.43</td>
<td>2.78</td>
</tr>
<tr>
<td>39. Do you feel you can count on other relatives or friends for financial support if you should need it?</td>
<td>3.01</td>
<td>3.11</td>
<td>2.57</td>
</tr>
<tr>
<td>40. How often do other relatives or friends help out with other practical matters?</td>
<td>2.86</td>
<td>2.91</td>
<td>2.65</td>
</tr>
<tr>
<td>41. How often do you and the baby spend time with your other relatives or friends?</td>
<td>2.95</td>
<td>3</td>
<td>2.74</td>
</tr>
<tr>
<td>42. How often do you spend time alone (without the baby) with relatives or friends?</td>
<td>1.63</td>
<td>1.69</td>
<td>1.39</td>
</tr>
<tr>
<td>43. How often do you confide in, share your problems with, or tell your troubles to your relatives or friends?</td>
<td>2.93</td>
<td>2.95</td>
<td>2.87</td>
</tr>
<tr>
<td>44. How often do your relatives or friends confide in you?</td>
<td>3.16</td>
<td>3.25</td>
<td>2.78</td>
</tr>
<tr>
<td>45. How often do other relatives or friends provide advice or guidance about childcare?</td>
<td>4.01</td>
<td>3.99</td>
<td>4.09</td>
</tr>
<tr>
<td>46. How often do you discuss your concerns about the baby with other relatives or friends?</td>
<td>3.68</td>
<td>3.66</td>
<td>3.78</td>
</tr>
<tr>
<td>47. Do you feel that you have someone to whom you can turn for expert advice about the baby?</td>
<td>4</td>
<td>4.09</td>
<td>3.61</td>
</tr>
<tr>
<td>48. Do you feel you have someone (besides family or friends) available to baby-sit?</td>
<td>2.28</td>
<td>2.38</td>
<td>1.87</td>
</tr>
<tr>
<td>49. In general, do you feel your relatives have been supportive since the birth of the baby?</td>
<td>4.31</td>
<td>4.43</td>
<td>3.78</td>
</tr>
<tr>
<td>50. In general, do you feel your friends have been supportive since the birth of the baby?</td>
<td>4.11</td>
<td>4.26</td>
<td>3.48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.29</strong></td>
<td><strong>3.34</strong></td>
<td><strong>3.07</strong></td>
</tr>
</tbody>
</table>

The mean for all the participants on social support was found to be 3.29 meaning the average social support that the participants receive is more than once a while. Non depressed women reported a mean of 3.34 and this indicated that they also receive social support more than once a while. Women in the depressed group recorded a 3.07 mean. Although both the non depressed and depressed group are seen to receive social support ‘more than once a while,’ the depressed group receives slightly less than the non depressed group.
Table 4.3

Correlations between Social Support and PPD

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPD Overall PPD</td>
<td>Pearson</td>
<td>-1.70</td>
<td>-0.93</td>
<td>-0.063</td>
<td>-0.071</td>
</tr>
<tr>
<td>Correlation</td>
<td>Sig. (2-tailed)</td>
<td>0.071</td>
<td>0.342</td>
<td>0.533</td>
<td>0.432</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>113</td>
<td>107</td>
<td>99</td>
<td>123</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.05 level (2-tailed).

Table 4.3 presents correlations between the key variables. The Pearson correlation was used to measure and describe the strength and direction of linear relationship between the two variables in the study, that is social support and the lack of symptoms of PPD. A 95% (0.05) CI was also used. The Pearson correlation was $r = -0.061$ (p=0.506). This negative correlation indicates a low degree of correlation between the two variables. This means that there is a relationship between the presence of social support and the low symptoms of PPD. Though not of high degree, the negative coefficient shows that the more social support that women received, the less symptoms of PPD are reported.

4.4 Various Forms of Social Support Available to Women

Research question 2 sought to identify the various forms of social support that are available for women living in Nairobi County. The subscales for social support were categorized into instrumental and emotional support (Hopkins & Campbell, 2008). Specifically, items 1-7 equals instrumental support from partner and items 8-15 assess emotional support from partner. Other items that assess instrumental support include 16-21 (parents), 27-32 (parents-in-law) and 36-42, 47, 48 (relatives and friends). The remaining items assess emotional support. These include items 22-26 (parents), 33-35 (parents-in-law) and 43-46,49,50 (relatives and
friends). Table 4.4 shows the mean scores for instrumental and emotional support that the women were presently receiving.

**Table 4.4**

*Means for Present Instrumental and Emotional Support*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Non depressed</th>
<th>Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women’s’ Instrumental Support (Presently)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>3.52</td>
<td>3.64</td>
<td>2.94</td>
</tr>
<tr>
<td>Parents</td>
<td>2.56</td>
<td>2.48</td>
<td>3.01</td>
</tr>
<tr>
<td>Parents-in-law</td>
<td>2.07</td>
<td>2.12</td>
<td>1.78</td>
</tr>
<tr>
<td>Relatives &amp; Friends</td>
<td>3.07</td>
<td>3.16</td>
<td>2.71</td>
</tr>
<tr>
<td><strong>Women’s’ Emotional Support (Presently)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>5.1</td>
<td>5.16</td>
<td>4.79</td>
</tr>
<tr>
<td>Parents</td>
<td>3.9</td>
<td>3.9</td>
<td>3.88</td>
</tr>
<tr>
<td>Parents-in-law</td>
<td>2.36</td>
<td>2.42</td>
<td>2.06</td>
</tr>
<tr>
<td>Relatives &amp; Friends</td>
<td>3.7</td>
<td>3.76</td>
<td>3.46</td>
</tr>
</tbody>
</table>

The total number of women reported to receive a mean score of 3.52 for instrumental support and a mean of 5.1 for emotional support from their partners.

The mean score for instrumental support from relatives and friends was 3.07 and 3.70 for emotional support. Instrumental support from parents was 2.56 and a 3.9 mean for emotional support. Present instrumental support from parents-in-law was identified as 2.07 while emotional support had a 2.36 mean. The findings reveal that all the participants receive higher emotional support than instrumental support.

In addition to responding to questions concerning current frequency of occurrence of socially supportive behavior, the participants were asked to indicate their preference on how they would like it to be (see Table 4.5). The partner support mean for instrumental support for the whole group was found to be 4.99 and 4.86 for partner emotional support. The women are asking for more instrumental support than they are currently receiving.
Table 4.5

Mean for Preferred Instrumental and Emotional Support

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Non depressed</th>
<th>Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Instrumental Support (Preferred)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>4.99</td>
<td>4.96</td>
<td>5.11</td>
</tr>
<tr>
<td>Parents</td>
<td>3.91</td>
<td>3.86</td>
<td>4.18</td>
</tr>
<tr>
<td>Parents-in-law</td>
<td>3.35</td>
<td>3.52</td>
<td>2.48</td>
</tr>
<tr>
<td>Relatives &amp; Friends</td>
<td>4.02</td>
<td>4.02</td>
<td>3.94</td>
</tr>
<tr>
<td>Women’s Emotional Support (Preferred)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>4.86</td>
<td>4.83</td>
<td>5.01</td>
</tr>
<tr>
<td>Parents</td>
<td>4.88</td>
<td>4.86</td>
<td>4.99</td>
</tr>
<tr>
<td>Parents-in-law</td>
<td>3.3</td>
<td>3.43</td>
<td>2.63</td>
</tr>
<tr>
<td>Relatives &amp; Friends</td>
<td>4.35</td>
<td>4.38</td>
<td>4.21</td>
</tr>
</tbody>
</table>

Figure 4.3. Present Level of Instrumental Support

Figure 4.4. Preferred Level of Instrumental Support.
Figure 4.5. Summary of Means for Present and Preferred Instrumental Support.

Figure 4.6 demonstrates the mean for emotional support that the women presently received while Figure 4.7 displays the mean for emotional support the women prefer to receive.

Figure 4.6. Present Level of Emotional Support.
Figure 4.7. Preferred Level of Emotional Support.

Figure 4.8. Summary of Means for Present and Preferred Emotional Support.

4.5 Ranking of Sources of Social Support

Research question 3 aimed to rank the sources of support as reported by the women. Table 4.6 shows the summary of the mean scores for each of the subscales (partner, parents, parents-in-law, and relatives and friends).

Partner support with a mean of 4.02 was identified as the highest source of social support received. These findings are consistent with the findings of Negron et al. (2013). In their study, mothers identified partners as a major source of support. Relatives and friends support had the second highest mean score of 3.32 followed by
parents support (3.17) and finally parents-in-law with 2.16 mean score. Further comparison between the non-depressed and depressed groups revealed that the non-depressed group reported the highest source of support to be the partners whereas the depressed group reported the highest source of support to be their parents.

Table 4.6

Summary of Means for Social Support Subscales

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Non depressed</th>
<th>Depressed</th>
<th>Sig testing (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>4.02</td>
<td>4.11</td>
<td>3.61</td>
<td>0.050</td>
</tr>
<tr>
<td>Parents</td>
<td>3.17</td>
<td>3.13</td>
<td>3.41</td>
<td>0.588</td>
</tr>
<tr>
<td>Parents-in-law</td>
<td>2.16</td>
<td>2.22</td>
<td>1.88</td>
<td>0.289</td>
</tr>
<tr>
<td>Relatives &amp; Friends</td>
<td>3.32</td>
<td>3.40</td>
<td>3.01</td>
<td>0.214</td>
</tr>
</tbody>
</table>

Significance=very important

On comparing partner support (as the highest ranking source) to instrumental support, the researcher found that women in the non depressed group reported to receive more instrumental support (3.64) from their partners than women in the depressed group who reported a 2.94 mean score.

4.6 Other Notable Correlations

Participants were further categorized into two groups. One group had women who reported to have planned pregnancies and these were 78% (n=96). The other consisted of women who reported to have had unplanned pregnancies which consisted of 22% (n=27). This was done in order to determine whether the presence or absence of symptoms of depression was impacted by the nature of the pregnancy. Of the participants reporting unplanned pregnancies, 63% fell under the non depressed group while 37% fell under the depressed (see Table 4.7). The percentage for the depressed group who reported unplanned pregnancies was found to be higher than the 14% of the depressed group who reported planned pregnancies.
Table 4.7

*BDI II Scores for women with planned or unplanned pregnancies*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Planned</th>
<th>Unplanned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>123</td>
<td>96</td>
<td>27</td>
</tr>
<tr>
<td>Non depressed</td>
<td>86%</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td>14%</td>
<td>37%</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8

*Social support for women with planned or unplanned pregnancies*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Planned</th>
<th>Unplanned</th>
<th>Sig test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse</td>
<td>4.02</td>
<td>4.10</td>
<td>3.68</td>
<td>0.080</td>
</tr>
<tr>
<td>Parent</td>
<td>3.16</td>
<td>3.14</td>
<td>3.25</td>
<td>0.755</td>
</tr>
<tr>
<td>Parent-in-law</td>
<td>2.16</td>
<td>2.22</td>
<td>1.96</td>
<td>0.373</td>
</tr>
<tr>
<td>Relative &amp;</td>
<td>3.32</td>
<td>3.28</td>
<td>3.46</td>
<td>0.536</td>
</tr>
<tr>
<td>Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 4.9. Proportions of BDI-II Scores for Planned and Unplanned Groups*
On further comparing the two groups of planned and unplanned pregnancies, mean scores of social support were obtained. Table 4.8 shows the mean scores of the subscales and the p values. The planned pregnancy group scored a mean of 4.10 for partner support while the unplanned pregnancy group scored 3.68 that are lower than that of the planned group. This indicates that women who had unplanned pregnancies received less partner support than those who had planned pregnancies. From the findings, the women who had unplanned pregnancies receive more support from parents, relatives and friends that is more than what the women with planned pregnancies received.

**Table 4.9**

Correlation for Group with Planned Pregnancies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPD Overall PPD</td>
<td>Pearson Correlation</td>
<td>-.034</td>
<td>.144</td>
<td>.132</td>
<td>-.048</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.753</td>
<td>.190</td>
<td>.248</td>
<td>.644</td>
<td>.677</td>
</tr>
<tr>
<td>N</td>
<td>90</td>
<td>85</td>
<td>78</td>
<td>96</td>
<td>96</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.05 level (2-tailed).
Table 4.10

**Correlation for Group with Unplanned Pregnancies**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPD Overall</td>
<td>- .557**</td>
<td>-.068</td>
<td>-.593**</td>
<td>-.168</td>
<td>-.303</td>
</tr>
<tr>
<td>PPD Sig. (2-tailed)</td>
<td>.006</td>
<td>.765</td>
<td>.005</td>
<td>.402</td>
<td>.125</td>
</tr>
<tr>
<td>N</td>
<td>23</td>
<td>22</td>
<td>21</td>
<td>27</td>
<td>27</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.05 level (2-tailed)

Table 4.9 and 4.10 was used to determine whether the presence or lack of partner support was impacted by pregnancies that were planned or unplanned. The Pearson correlation was used to examine the existence of a relationship between partner support and planned pregnancies as well as partner support and unplanned pregnancies. The results revealed a moderate degree of correlation - .303 (p=.125). This indicates that the more the unplanned pregnancies, the less likely they are to receive social support from all sources. Interestingly, a higher correlation coefficient was found when examining partner support and unplanned pregnancies, that is - .557 (p=.006). This indicates a strong likelihood that if the pregnancy was unplanned, the women were less likely to receive support from their partners.

4.7 Chapter Summary

From the results, the Pearson coefficient for social support and symptoms of PPD was found to be - .06 (p=0.506). Though it is of a low degree, this correlation coefficient suggests that the presence of social support can prevent the development of PPD. The negative coefficient further reveals that the more the social support, the less the symptoms of PPD. Statistical analysis also reveals that women currently receive more emotional support than instrumental support. Partner support emerged
as the highest-ranking source of support with a 4.02 mean whereas parents-in-law was identified as the least source of support for all women with a 2.16 mean.

Further analysis showed that 27 out of the 123 total number of participants reported that the pregnancy was unplanned. Out of those 27 women, 37% belonged to the depressed group. With partner support as the highest source of support, additional analysis revealed that women in the unplanned pregnancy group received less partner support than women in the planned pregnancy group.
CHAPTER 5
DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter the researcher has outlined the conclusions and recommendations arrived at based on the findings of the study. The chapter is divided into subsections, mainly: summary of key findings, discussion, conclusions and recommendations.

5.2 Summary of Key Findings

This study examined the relationship between level of social support and the development of PPD. The following research questions guided the study: Is there a correlation between the presence of social support and absence of the development of PPD in Nairobi County? What are the various forms of social support that are available for women living in Nairobi County? What is the ranking of sources of social support according to mothers living in Nairobi County?

The sample of the study consisted of 123 mothers in Nairobi County attending postnatal clinic at Pumwani Maternity hospital. The data was collected using a structured questionnaire and analyzed using Statistical Package for Social Sciences (SPSS) software version 24. Descriptive statistics was used including frequencies, percentages and mean. Inferential statistics were utilized for correlation analysis and regression in order to enable easy data presentation. Presentation of data was done using figures and tables.

With regard to the first objective, the findings of this study did establish the existence of a relationship between the two variables, that is, level of social support and symptoms of PPD. Although the strength of the relationship was found to be of low degree, the negative correlation indicates that the presence of social support is
related to reduced symptoms of PPD or the absence of PPD. In this study, women who scored 11 and above on the BDI-II (who were grouped in the depressed category) reported lower levels of social support than women who scored 10 and below (the non depressed group).

The women reported receiving social support from various sources including partners, parents, parents-in-law, and relatives and friends. Two kinds of support were examined from each of the sources and the researchers discovered that emotional support was provided to the women more than instrumental support. Therefore instrumental support, which has more to do with demands of child-care, was found to be lacking for the women.

Partner support was identified as the highest ranking of all the sources of support while parents-in-law was the lowest ranking. On analyzing data concerning the women’s preferred kind of support, the women reported needing more instrumental support than they were receiving. Partners emerged as the preferred source of help for the mothers particularly for instrumental support.

Other notable analyses that were done revealed that the nature of the pregnancy (planned or unplanned) had an impact on the amount of social support given, especially by the partner. Women in the unplanned pregnancy group reported to receive lower partner support and had higher scores for depression than women in the planned pregnancy group.

5.3 Discussion

5.3.1 Relationship Between Social Support and PPD

The aim of this study was to investigate the relationship between level of social support and the development of PPD. The researcher analyzed women’s depression scores and grouped the women into two categories. One group consisted
of women who scored 10 and below and this was the non depressed group. The second group consisted of women who scored 11 and above and this was the depressed group. The non depressed group according to the BDI-II presented symptoms that were considered ups and downs, which are normal. The depressed group on the other hand combined participants with mild mood disturbances, borderline clinical depression, moderate depression, severe depression and extreme depression.

The overall mean for social support for the women was found to be low. This indicates that the women receive social support from partners, parents, parents-in-law, and relatives and friends only “more than once a while.” However, on comparing support for the depressed group and the non depressed group, it was discovered that the non depressed group had more support than women in the depressed group.

Consistent with our expectations, the results highlighted that the presence of social support was negatively correlated with the lack of PPD. Although the relationship is of a low degree, it indicates that the more social support the women received, the less the symptoms of depression they recorded. The results mirror other studies that view social support as a protective factor that prevents the development of PPD. Negron et al. (2013) found that support from partners and families was not only needed but expected by many women.

5.3.2 Various Forms of Support Available

The analysis of specific kinds of support further reveals to the researcher that the women receive more emotional support than instrumental support from all the sources. According to Hopkins and Campbell (2008), instrumental support is help that is related to the demands of childcare like feeding, diapering,
bathing, baby-sitting and so on. Their findings suggest that infant-related stressors are highly associated with PPD. The findings of the current study support this idea in that the women in the non-depressed group reported receiving more instrumental support from their partners than women in the depressed group.

Similarly, Negron et al. (2013) found that instrumental support plays a significant role in meeting women’s basic needs during the postpartum period. This is more to do with practical help such as having someone to babysit so that the mother can rest, assisting with the meals of the rest of the family or even helping with house chores so that the mother can be off her feet for the required amount of recuperating time. This kind of support can be vital in alleviating symptoms of depression like fatigue or loss of energy, sleep disturbance, irritable or sad mood, difficulty thinking or concentrating, just to mention a few.

Dubus (2014) also emphasizes that the postpartum period is marked with a lot of isolation by the mothers due to the physical demands of constantly caring for the baby. Enhancing social relationships for the women could be very instrumental in avoiding isolation. Empowering the women to learn skills of mobilizing sources around them for support can do this. Reasons for lacking the ability to ask for help have been linked to attitudes like embarrassment, pride or the stigma attached to having depressive symptoms (Negron et al., 2012). In the same way, psycheducation is needed in communities to create awareness for the need to provide the much-needed social support to mothers during this crucial period.

The results concerning the preferred frequency of occurrence of socially supportive behavior for the women further support the idea of providing more practical help to the women. The women would like their partners to assume a bigger participatory role. This demonstrates that the women prefer to have more
instrumental support than emotional support. In line with these findings, Sejourne et al. (2012) concur that low social support from partners in infant care particularly in the first months following childbirth can significantly be associated with PPD. In Vietnam, Dennis and Ross (2006) established that low postpartum mood among women in the postpartum period was associated with perceived need for increased instrumental help from their partners.

Giallo et al. (2011) equally found that exhaustion and fatigue are common experiences among women in the postpartum period. PPD develops as a result of this fatigue. Caring for a newborn coupled with managing the family are daily tasks that are taxing mentally, emotionally, as well as physically. The low levels of instrumental support for the women in this study could indeed expose them to fatigue, which could in turn bring about symptoms of depression.

It is important to note that these findings regarding instrumental support do not by any means negate the role that emotional support plays. Both instrumental and emotional support are inextricably interrelated and together they contribute to the understanding of this concept of social support (Hopkins & Campbell, 2008). Pilkington et al. (2016) also stated that emotional support from partners was negatively associated with PPD. They discovered that women who received more emotional support from their partners recorded less symptoms of depression. Our results are in line with these findings as we found that the women in the non-depressed group receive more emotional support than those in the depressed group. Items in the social support section that pertained to emotional support sought to establish whether the women had people in their lives who they could confide in, talk to about the baby, share with about their changing routine, appreciate the hard work involved in caring for a baby, and so on.
5.3.3 Ranking of Sources of Support According to the Women

Partner support was identified as the highest-ranking source of support according to the women. These findings replicate those of Negron et al. (2013) that identify partners as the main source of support for women for both instrumental and emotional support, and those of Sheng et al. (2010) who found an association between depressive symptoms and dissatisfaction with partner support. Comparison between the non depressed group and the depressed group shows that the non depressed group reported higher partner support than women in the depressed group. From the socio-demographic characteristics of the current study, it is evident that the majority of the women live in a nuclear type of family. This explains why the partner is a more critical source of support.

Consistent evidence indicates that partner support protects against PPD (Pilkington et al., 2016). Therefore it is important that healthcare providers for mothers during prenatal and postnatal periods involve partners as early as possible. Postpartum psychoeducation programs have indeed demonstrated to be effective in improving access to social support, improving maternal self-efficacy, as well as reducing PPD (Shorey et al., 2014). This will in turn help in improving the psychosocial well being of mothers, associated healthcare and social burdens. Women will also be empowered to know how to adapt better to major life events, one of them being transition to motherhood. Perhaps teaching women emotional intelligence could further empower women to handle these major life events. Emotional intelligence, which is one’s ability to understand and reason about emotions, has huge significance in reducing the symptoms of PPD (Rode, 2016).

This kind of psychoeducation can begin right from childbirth preparation classes by encouraging partners to attend. Partners could benefit from nurses and
doctors in their knowledge of caring for a baby. In addition, help seeking skills can be taught by nurses particularly given the close relationship they develop with women right from prenatal checkups, to delivery, to the postpartum period. It is also important that they assess the women’s social support while they are still in hospital following delivery.

5.3.4 Planned and Unplanned Pregnancies

Further analysis of other notable factors from the socio-demographic characteristics was carried out. The women were grouped into two other categories, mainly the group with the planned pregnancies and the other with those who reported to have had unplanned pregnancies. Findings reveal that the nature of the pregnancy can impact the levels of support, which in turn has an effect on the presence of depressive symptoms. Women in the unplanned pregnancy group reported less partner support than women in the planned pregnancy group. In addition, they had higher levels of symptoms of depression than women in the group of planned pregnancies. These results mirror those of Ho et al. (2013) that identify unplanned births as one of the risk factors for the development of PPD among women in Taiwan.

Equally, Pocan et al. (2013) identifies unplanned births and lack of social support as some of the factors that place women at high risk of developing PPD. In this study, the high levels of symptoms of depression in the group for unplanned pregnancies could be due to additional stressors. One of these could be the challenge of a major life change for which they may not have mentally prepared.

Interestingly, women in the group for unplanned pregnancies had higher levels of support from relatives and friends than women in the planned pregnancy group. This demonstrates that in cases where women lack social support from their
partners probably because of their disapproval, the women were able to receive support from other sources mainly their relatives and friends. These results inform primary health workers who see women from the prenatal period through postpartum to help women strengthen their ability to rally social support from other sources, like relatives and friends where partner support is not forthcoming.

5.4 Conclusion

The results of this study contribute to the growing body of research highlighting social support as a significant protective factor in preventing the development of PPD following childbirth. A relationship was established between social support and PPD, though of low significance. When looking at specific sources of support, partners were identified as being the top ranking. A moderate inverse degree of relationship was identified which means that the more social support women received from their partners, the less symptoms of depression they reported. The women reported to receive more emotional support than instrumental support and this was evident in each of the sources.

The findings regarding the women’s preferred kind of help emphasizes the need for support that meets the needs of the mothers. Mothers in this study reported needing more instrumental support than emotional support. The women are actually disclosing that caring for a baby and managing the family can be extremely taxing, and though they may appear together and able to handle it, they do need help. For some women, the inability to ask for help could be cultural where as for others it may be lacking the skills to seek help.

5.5 Recommendations

These findings provide insight for preventive measures by clinics (both prenatal and postnatal) as well primary health care providers. Inquiries should be
made regarding sources of support available for women during pregnancy and in the postpartum period. It should be routine for clinics to involve partners from the beginning, and where this kind of support is not available, alternative support should be encouraged. The researcher found that where partner support was not available, support from parents, relatives and friends was utilized. Therefore this should be part of the prenatal and postnatal clinics to help the women to rally whatever support is available to them.

This study provides important feedback that informs healthcare professionals to educate couples on appropriate ways to provide feedback and communicate expectations especially those pertaining to infant care. This could be done by training women on how to ask for help. Partners should also be educated on ways of actively participating in household tasks and infant care, as instrumental support could be helpful in this recovery period by reducing maternal burden which contributes to the development of PPD.

Prevention and treatment programs should target social support available to mothers. They should also help them develop skills for mobilizing support from different sources. The findings particularly suggest that interventions integrate a strong focus on partner and family support.

Finally, psychoeducation on the society in general as well as for women is needed because the researcher discovered that the majority of women did not know, neither had they heard of PPD before. Some participants disclosed that they had never been asked such questions before. Mental health practitioners are therefore challenged to create the much-needed awareness on mental health.

5.6 Chapter Summary

This chapter discussed the findings from the analysis of the raw data.
Objectives that were discussed include the low degree of relationship that exists between social support and PPD, which indicates that social support does play a role in preventing the development symptoms of PPD. Another objective reviewed was the forms of support available to the women where instrumental and emotional support were discussed. The partner as the highest-ranking source of support was also reviewed finding that this was the case particularly because majority of the women lived in nuclear type of families. Lastly the nature of the pregnancy was discussed as an important notable analysis. Recommendations were provided to various stakeholders following the study.
References


Appendix A
Study Questionnaire

Section 1

Personal Information

1. Age group
   a) 16 – 20 years (  )
   b) 21 – 25 years (  )
   c) 26 – 30 years (  )
   d) 31 – 35 years (  )
   e) 36 – 40 years (  )
   f) 40 and above (  )

2. Marital Status
   a) Single (  )
   b) Married (  )
   c) Separated (  )

3. Education
   a) Primary (  )
   b) Secondary (  )
   c) Certificate (  )
   d) Diploma (  )
   e) Undergraduate (  )
   f) Graduate (  )

4. Occupation ______________________________________________

5. Type of family
   a) Nuclear family
b) Extended family

6. Total number of pregnancies ________________________________

7. Did you have difficulty in delivering your baby?
   a) Yes (   )
   b) No (   )

8. Number of previous pregnancies ________________________________

9. Gender of baby
   a) Boy (   )
   b) Girl (   )

10. Age of baby ______________________________

11. Nature of pregnancy
    a) Planned (   )
    b) Unplanned (   )

Section 2

Postpartum Social Support Questionnaire

1. How often does your partner help to take care of the baby (feeding, diapering, bathing, etc.)?
2. How often does he play with the baby?
3. How often does he soothe the baby when he/she is upset?
4. How often does he watch the baby so you can go out by yourself?
5. How often does he help out in other household chores?
6. How often does he help out with family meals?
7. How often does he help with grocery shopping?
8. How often does he disagree with you about how the baby should be handled?
9. How often does he indicate to you by words or behavior that he knows that it is hard work to take care of a baby?

10. How often does he indicate dissatisfaction with the change in routine since the baby’s birth?

11. How often does he indicate dissatisfaction with the amount of time you have to spend together since the baby’s birth?

12. How often do you talk about the baby with your partner?

13. How often do you confide in, share your problems with, or tell your troubles to your partner?

14. How often does your partner confide in, share his problems with, or tell you his troubles?

15. In general, do you feel your partner has been supportive since the baby’s birth?

16. How often do you have contact with your parent(s) in person?

17. How often do your parent(s) help with the baby? (Answer according to the parent who helps the most.)

18. How often do your parent(s) baby-sit?

19. Do you feel you can count on your parent(s) for financial help, if you should need it?

20. How often do your parent(s) help with other practical matters (i.e., household chores, errands)?

21. How often do you and the baby spend time with your parent(s) (i.e., social activities, shopping, or visiting together)?

22. How often do you confide in, share your problems with, or tell your troubles to your parent(s)?
23. How often do your parent(s) confide in, share their problems with, or tell you their troubles?

24. How often do your parent(s) give you advice or guidance about the baby?

25. How often do you discuss your concerns about the baby with your parent(s)?

26. In general, do you feel that your parent(s) have been supportive since the baby’s birth?

27. How often do you have contact with your parent(s)-in-law in person?

28. How often do your parent(s)-in-law help with the baby? (Answer according to the parent-in-law who helps the most.)

29. How often do your parent(s)-in-law baby-sit?

30. Do you feel you can count on your parent(s)-in-law for financial help, if you should need it?

31. How often do your parent(s)-in-law help out with other practical matters?

32. How often do you and the baby spend time with your parent(s)-in-law (i.e., social activities, shopping, or visiting together)?

33. How often do you confide in, share your problems with or tell your troubles to your parents(s)-in-law?

34. How often do your parent(s)-in-law confide in you?

35. How often do your parent(s)-in-law give you advice or guidance about the baby?

36. How often do you have contact with other relatives or friends in person?

37. How often do your other relatives or friends help out with the baby?

38. How often do your relatives or friends baby-sit for the baby?

39. Do you feel you can count on other relatives or friends for financial support if you should need it?
40. How often do other relatives or friends help out with other practical matters (errands, household tasks)?

41. How often do you and the baby spend time with your other relatives or friends (i.e., social activities, shopping, or visiting together)?

42. How often do you spend time alone (without the baby) with relatives or friends?

43. How often do you confide in, share your problems with, or tell your troubles to your relatives or friends?

44. How often do your relatives or friends confide in you?

45. How often do other relatives or friends provide advice or guidance about child care?

46. How often do you discuss your concerns about the baby with other relatives or friends?

47. Do you feel that you have someone to whom you can turn for expert advice about the baby? (i.e., pediatrician, family doctor, public health nurse)?

48. Do you feel you have someone (besides family or friends) available to babysit?

49. In general, do you feel your relatives have been supportive since the birth of the baby?

50. In general, do you feel your friends have been supportive since the birth of the baby?
Section 3

Beck’s Depression Inventory II

1.  0  I do not feel sad.  
    1  I feel sad.  
    2  I am sad all the time and I can’t snap out of it.  
    3  I am so sad and unhappy that I can’t stand it.  
2.  0  I am not particularly discouraged about the future.  
    1  I feel discouraged about the future.  
    2  I feel I have nothing to look forward to.  
    3  I feel the future is hopeless and that things cannot improve.  
3.  0  I do not feel like a failure.  
    1  I feel I have failed more than the average person.  
    2  As I look back on my life, all I can see is a lot of failures.  
    3  I feel I am a completed failure as a person.  
4.  0  I get as much satisfaction out of things as I used to.  
    1  I don’t enjoy things the way I used to.  
    2  I don’t get real satisfaction out of anything anymore.  
    3  I am dissatisfied or bored with everything.  
5.  0  I don’t feel particularly guilty.  
    1  I feel guilty a good part of the time.  
    2  I feel quite guilty most of the time.  
    3  I feel guilty all of the time.  
6.  0  I don’t feel I am being punished.  
    1  I feel I may be punished.  
    2  I expect to be punished.  
    3  I feel I am being punished.  
7.  0  I don’t feel disappointed in myself.  
    1  I am disappointed in myself.  
    2  I am disgusted with myself.  
    3  I hate myself.  
8.  0  I don’t feel I am worse that anybody else.  
    1  I am critical of myself for my weaknesses or mistakes.  
    2  I blame myself all the time for my faults.  
    3  I blame myself for everything bad that happens.  
9.  0  I don’t have any thoughts of killing myself.  
    1  I have thoughts of killing myself, but I would not carry them out.  
    2  I would like to kill myself.  
    3  I would kill myself if I had the chance.
10. I don’t cry any more than usual.
   0 I cry more not than I used to.
   1 I cry all the time now.
   2 I used to be able to cry, but now I can’t cry even though I want to.

11. I am more irritated by things than I ever was.
   0 I am slightly more irritated now than usual.
   1 I am quite annoyed or irritated a good deal of the time.
   2 I feel irritated all the time.

12. I have not lost interest in other people.
   0 I am less interested in other people than I used to be.
   1 I have lost most of my interest in other people.
   2 I have lost all of my interest in other people.

13. I make decisions about as well as I ever could.
   0 I put off making decisions more than I used to.
   1 I have greater difficulty in making decisions more than I used to.
   2 I can’t make decisions at all anymore.

14. I don’t feel that I look any worse than I used to.
   0 I am worried that I am looking old or unattractive.
   1 I feel there are permanent changes in my appearance that make me look unattractive.
   2 I believe that I look ugly.

15. I can work about as well as before.
   0 It takes an extra effort to get started at doing something.
   1 I have to push myself very hard to do anything.
   2 I can’t do any work at all.

16. I can sleep as well as usual.
   0 I don’t sleep as well as I used to.
   1 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
   2 I wake up several hours earlier than I used to and cannot get back to sleep.

17. I don’t get more tired than usual.
   0 I get tired more easily than I used to.
   1 I get tired from doing almost anything.
   2 I am too tired to do anything.

18. My appetite is no worse than usual.
   0 My appetite is not as good as it used to be.
   1 My appetite is much worse now.
   2 I have no appetite at all anymore.

19. I haven’t lost much weight, if any, lately.
1  I have lost more than five pounds.
2  I have lost more than ten pounds.
3  I have lost more than fifteen pounds.

20.  
0  I am more worried about my health than usual.
1  I am worried about physical problems like aches, pains, upset stomach, or constipation.
2  I am very worried about physical problems and it’s hard to think of much else.
3  I am so worried about my physical problems that I cannot think of anything else.

21.  
0  I have not noticed any recent change in my interest in sex.
1  I am less interested in sex than I used to be.
2  I have almost no interest in sex.
3  I have lost interest in sex completely.
Appendix B

Study Consent Form

You are being requested to participate in a research study investigating the relationship between the level of social support and the development of postpartum depression.

The purpose of this study is to examine whether social support that is provided to women in the postpartum period contributes in keeping the women from developing postpartum depression. You must therefore have had a baby who is now between ages 0-12 months in order to take part in the study.

If you agree to participate in this study, we will provide you with a questionnaire, which we will need you to complete.

Your answers will be kept confidential. Only the researchers will have access to the records, which will be kept private. Should we make public our study, any information you provide us will not be included in a way that will make it possible to identify you.

Taking part in this study is completely voluntary. You may skip any questions that you are not comfortable answering. If you decide to take part, you are free to withdraw at any time.

You have the right to ask any questions regarding this study or your participation in it at any point before, during or after the study.

I have read the above information and have received answers to any questions I asked. I consent to take part in the study.

Your signature ___________________________ Date __________________________

Your name __________________________________________________________

Signature of researcher __________________ Date __________________________

Name of researcher __________________________________________________
Appendix C

IRB Research Approval Letter

10th April 2017,

Yolandah M Knopp,
A Graduate Student at USIU-Africa

Dear Yolandah,

**IRB-RESEARCH APPROVAL.**

The USIU-A IRB has reviewed and granted ethical approval for the research proposal titled "The Role of Social Support in the Prevention of the Development of Postpartum Depression among Women in Nairobi County". The approval is for **six months** from the date of IRB. Please submit a completed copy of the study to the IRB office, soft copy is acceptable.

You are advised to follow the approved methodology and report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

Should you or study participants have any queries regarding IRB’s consideration of this project, please contact irb@usiu.ac.ke.

Prof. Damary Sikalieh,
Chair | IRB | USIU-Africa,
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**CC:** Research Office