PREVALENCE OF POSTPARTUM DEPRESSION AMONG WOMEN DELIVERING AT KENYATTA NATIONAL HOSPITAL

DISSERTATION IN PARTIAL FULFILMENT FOR THE DEGREE OF MASTERS OF MEDICINE IN OBSTETRICS AND GYNECOLOGY, UNIVERSITY OF NAIROBI 2013

SUBMITTED BY

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DEDICATION

This book is dedicated to my children Mwende and Mwendwa whose love and patience has made my studies enjoyable.

ACKNOWLEDGEMENT

I wish to thank the almighty God for good health as I complete my Masters training in Obstetrics and Gynaecology.

I would also like to thank the Government of Kenya, through the Ministry of Medical services for financial assistance throughout the study period.

My heartfelt thanks and appreciations to my supervisors Professor Zahida Qureshi, Professor Koigi Kamau and Dr Pius Kigamwa for their kind advice and professional guidance till the completion of this dissertation writing

I sincerely want to thank all the Consultants, Lecturers and Senior registrars of the Department of Obstetrics and Gynaecology for dedicating their time to equip me with knowledge and skills during the training. Lots of gratitude to my fellow residents, whose commitment to work and encouragement kept us going.

To all and many others not mentioned here, I say many thanks and may God bless you all.

DECLARATION

I declare that this dissertation is my original work and has not been presented by any other student for a degree award in any other University.

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This is to certify that this dissertation is the original work of Dr Virginia Mwikali Musau, Mmed student registration number **H58/76545/2009** in the department of Obstetrics and Gynaecology, School of Medicine, College of Health Sciences, University of Nairobi. It has not been presented in any other university for award of a degree.

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LIST OF ABBREVIATION

DSM_IV____ Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition

ERC_____ Ethical and Research Committee

EPDS_____ Edinburgh Postnatal Depression Scale

ICD_10_____ International Classification of Disease -Tenth Edition

NICE_____ National Institute for Health and Clinical Excellence

PND_____ Postnatal depression

PPD_____ Postpartum depression

KNH_____ Kenyatta National Hospital

MMED_____ Masters of Medicine

SPSS _____Statistical Package for Social Science

UON _____University of Nairobi

WHO_____ World Health Organisation

ABSTRACT

Background

Postpartum depression is a common occurrence which is often undiagnosed when symptoms are not severe and may progress into severe or chronic state if unrecognized and untreated. Being the most frequent form of mental illness in the postpartum period, It can begin as early as two weeks after delivery and can persist indefinitely if untreated.

There is no routine screening of PPD at the postnatal clinic. Its effects are not only on the mother but also on the infant and the family at large. A depressed mother will have difficulties in taking and following postpartum advice from a health care provider such as: Recognizing postpartum danger signs, self care and care of infant, attending scheduled hospital visits and compliance to other medications. The impact of this would be increased maternal and perinatal morbidity and may be mortality from direct or indirect causes of PPD.

Study objective: To determine the prevalence of postpartum depression among women delivering at Kenyatta National Hospital six Weeks after delivery.

Study design: Descriptive cross-sectional study.

Setting: The postnatal clinic at Kenyatta National Hospital.

Study population: 183 consenting postnatal mothers at the postnatal clinic at KNH, six weeks after delivery during the study period.

Study period: September to November 2012.

Method: Participants were recruited from the postnatal clinic at KNH using set criteria. Eligible participants were approached and requested to consent voluntarily to participate into this study. Inclusion into the study was by consecutive sampling until the required sample size of 183 was attained. Data was collected using a structured, pre designed questionnaire and analyzed using SPSS software.

RESULTS

A total of 183 postnatal mothers were recruited into this study but 180 were analysed. This study found a prevalence of PPD six week after delivery at KNH at 10.6%. 23.3% were aged ≤24 years. 13.3 % were single, 11.7% had schooled up to primary level and 28.3% were not in any form of employment. Household income was ≤ ksh 40,000 in 37.2% and 42.2% had delivered once.

Recent pregnancy was reported as unwanted by 20% and partner's support was perceived as inadequate by 10% of the respondents. Caesarian section was the commonest mode of delivery at 76.7% and 13.3% were not satisfied with the sex of the infant. Almost all, 96.7 % exclusively breast fed their infants and minor illnesses had occurred to 3.3% of the infants. Symptoms of maternity blues were found in 12.6%.

Lack of employment ($p< 0.0001$), household income of ≤ksh40,000($p= 0.05$) were statistically significantly associated with PPD. No significant statistical association between the marital status ($p=0.739$), mode of delivery ($p=0.745$) religion ($p=0.487$), partners' support ($p=0.412$) and prior symptoms of maternity blues ($p=0.162$) and PPD was found.

Conclusion

The prevalence of PPD six weeks after delivery of 10.6% is high and necessitates routine screening of mothers at the postnatal clinics. Economic factors are highly associated with PPD. Mode of delivery, desired sex of infant and marital status did not appear to be significantly associated. The findings in this study compared well with findings of other similar studies

Recommendations

Introduction of routine screening for PPD especially in mothers of low socio economic status and Midwives/ Obstetrician to be retrained in this field. This will help to indentify affected mothers to avert the effects that may be associated with this condition. More studies to be done using different study design, different settings to asses other factors such as bad obstetric outcomes and maternal chronic illnesses.

1.0: BACKGROUND

1.1: Introduction

Depression is a debilitating disorder with symptoms such as depressed mood, tiredness, insomnia, lack of energy, low self esteem and lack of interest in ones environment. Postpartum depression also known as postnatal depression is a non psychotic depressive disorder of variable severity and it can begin as early as two weeks after delivery and can persist indefinitely if untreated. The illness can cause distress and impair a mother's ability to carry out her normal tasks, care for herself and care of her baby. (3, 17, 22)

Pregnancy and child birth can be a very rewarding and exciting time, but it can also be a period of severe emotional stress as seen in the estimated 10-25% of women suffering from postpartum depression. Much emphasis has been placed on the antenatal health than the postnatal health and more on the physical than the mental health of the mother in the developing countries. (1, 12)

Based on the onset and the severity of postpartum mood disorders, it has been divided into three categories: I. Postpartum blues also known as maternity blues which affects 40-80 % of postnatal mothers. It may start as early as two days and last for about two weeks. Symptoms include: Irritability, anxiety, confusion, mood lability, sleep disturbance and crying spells. These symptoms are usually mild and they resolve with supportive care. Persistence of the maternity blues for more than two weeks may predict PPD [9, 21.].II. Postpartum depression is a non psychotic depressive disorder that starts in or extends into postpartum period up to twelve months after delivery. It consists of any or a combination of the following symptoms: Sleeping and eating disturbance, mental confusion, loss of self esteem, anxiety, lack of interest in one's environment, insecurity and suicidal thoughts. [1, 4, 11, 24]. III. Postpartum psychosis is the severe form of the mood disorders. Mothers are severely impaired and suffer from hallucination, delusions and agitation. Generally it develops within the first four weeks after delivery. It is dangerous and often requires that the mother be hospitalized as there is increased risk of infanticide and or suicide [1, 11].

Multiple risk factors for postpartum depression have been suggested as no single cause has been identified. Personal vulnerability, personal traits and social factors such as unplanned pregnancy, occupational instability, single parenthood and marital discord have been cited. [15, 19, 26].Based on synthesis of findings from an updated Meta analysis,

the following is a profile of a woman most at risk of developing postpartum depression. i. She is single, or if married she is dissatisfied with her marital relationship; ii. She has low social economic status and low self esteem; iii. She has a history of depression or, over the past one year she has experienced a number of life stressors, with the addition now of child care stress. Iv. This pregnancy was neither planned nor wanted and during which she may have experienced anxiety and some antenatal depression. After delivery, she experienced maternity blues for the first two weeks postpartum. She describes her baby as being a difficult to console .v. lastly she does not feel that her partner, family and friends have provided her with adequate emotional or instrumental support [4, 9, 11, 16, and 26]

Screening for postpartum depression would improve the ability to recognize these disorders and hence necessitate enhanced care that ensures appropriate clinical outcomes. Thus this study is designed to evaluate the prevalence of PPD and it is expected to sensitize the health care professionals especially the Obstetrician/ Gynecologist and policy makers on the importance of maternal mental health and the need for routine screening for postpartum depression.

1.2.: Literature review

Maternal depression is a common and disabling complication of the postpartum period. It is thought to occur more commonly in the developing than the developed countries [15, 19]. Up to one quarter of women experience some depressive episode over their life time, with the peak incidence occurring during the reproductive years [1].

Prevalence rates of PPD vary widely from region to region, from race to race and among women of the same cultural backgrounds [2, 4, 19, and 29]. From a study done in Uganda in a peri urban primary care centre, the Prevalence of major depression at six weeks postpartum was 6.1% [23].A similar study done in Canada concluded a prevalence of 8.68 % for minor depression and 8.69% for major depression [22]. A study done in South Africa Cape Town to determine the prevalence and correlates of mood disorders in pregnancy, found that prevalence rate was 39%.The importance of this was that evaluation of antenatal depression was important as it is a predictor of PPD (25). An unpublished MMED thesis done at Aga Khan University Hospital; Prevalence of Postpartum Depression using the EPDS at Aga Khan University Hospital found a prevalence rate of PPD at 13.8 %. Though being a tertiary health care facility, this was significant and compared well with other studies done in developed countries (29).

Although PPD is the most common affective disorder in the postpartum period, there are several other disorders in this period such as maternity blues, anxiety disorders like panic disorder, obsessive-compulsive disorder. If the mother presents with escalating symptoms of these disorders, and if untreated, many of these mothers may develop PPD [3, 11, 21.].

The most severe postpartum mood disorder is the postpartum psychosis. It usually has an early onset and is more common in women with prior histories of bipolar disorder. If this is present, the mother may experience psychotic thoughts that may place her and the infant into imminent danger of suicide or infanticide. The mother will typically present with hallucination, delusion and agitation. A mother diagnosed with postpartum psychosis should immediately be referred for crises intervention due to devastating impact and potential for harm to self and others [9, 16,].

Postpartum depression is more likely if the mother experienced a prior episode of PPD with rates of recurrence as low as 25%, and going as high as 70-100% [1, 9]. In addition to personal history of depression, other significant risk factors for onset of PPD have been stated .These include; i. Having limited social support; ii. Having endured stressful life events such as divorce, job loss, death of a loved one, childhood abuse, single parenthood and marital conflict [19, 26]. A personal and family history of depression "are substantial biological risk factors" with small effects in the development of PPD. Other factors related to onset of PPD are: Low social economic status, Obstetric factors such as complication during pregnancy or labor [26].

Social demographic variables such as race have also been implicated. Howell and colleagues [2005] in their study Racial and Ethnic differences in factors associated with early postpartum depression symptoms found that Africa American and Hispanic mothers were more likely to endorse symptoms of PPD than the Caucasian mothers. They also reported that depression was greater in mothers of Africa American children, and among those of lower income families (19).

Changes in hormonal levels are informally believed to lead to PPD, but to date there has been no any conclusive research linking hormonal changes as causative factor in the onset of PPD. Since hormonal levels immediately changes following child birth, these changes may account for the immediate postpartum mood fluctuations [16, 26].

Lastly, child care related problems have also been shown to be associated with PPD. LaMonde and colleague in their study, "Feeling blue or something more?" A review of postpartum depression. Super twins, showed a significant higher rate of depression among mothers of multiples or even closely spaced siblings. 34% of twin mothers were clinically depressed up to five years postpartum. The highest rates of depression were among mothers who had lost one of the twins. According to this review, factors that may increase a mother of multiples risks of PPD included: Sleep deprivation, physical and

emotional demands of caring for the multiples, higher rates of preterm deliveries, and available social support being perceived as inadequate. [22, 28]

Early detection of these postpartum disorders is one of the major challenges in dealing with the problems and their complications. All mothers who present with potential risk factors should be screened for symptoms during pregnancy and throughout the postpartum period. [1, 7, 24].Clinicians need to remember that, risks factors indicates the likely hood that women who are exposed to certain factors (risk factors) will subsequently develop PPD. Some risk factors are inherited, while others are not, others are modifiable whereas others are not. Once the modifiable risks have been identified, clinicians can target interventions to help decrease a woman's risk of developing this mood disorder [9].

Following a mother's diagnosis of PPD, reproductive health providers face the difficulty task of determining, overseeing the course of treatment and coordinating a referral to the mental health professional. A woman presenting with symptoms of depression should also be evaluated for any other underlying medical condition such as thyroid disease which tend to increase during the postpartum period and perhaps HIV/AIDS (1, 8).

Postpartum depression responds well to treatment. The treatment is determined based on patient's history, medical condition, current symptoms and patients treatment preference. Mild to moderate depression can be treated with psychological counseling and social interventions. Severe depression would benefit from antidepressants. Best mode of treatment is multimodal approach where both psychotherapy and pharmacotherapy are used (9, 10, 13,)

Prevention of PPD is possible because: Onset is preceded by a clear marker (child birth); Has a defined period of highest risk for onset (first three months after delivery); High risk sample can be identified by screening and postpartum mothers have frequent postnatal conduct with the health professional which would enable detection of the risk factors and implementation of preventive measures (9) .Based on these, three levels of prevention have been identified. These are: I. Primary prevention which involves educating mothers on the nature and effects of child birth in relation to mental health problems and training health professionals especially midwives to be able to screen for risk factors. It helps in decreasing the incidence of the disorder.ii. Secondary prevention reduces the prevalence of this disorder by early identification and interventions that minimizes the frequency, duration and severity. It involves well timed screening and appropriate interventions.iii. Tertiary prevention involves early identification and treatment to limit disability. This is possible by regular follow ups, prophylactic medication and individual, couple or group therapy.

1.3: Justification.

Mood disturbance represents the most frequent form of maternal mental illness in the postpartum period. Pregnancy itself, the process of child birth and difficulties of child care are risks of developing PPD. Postpartum depression is recognised only when behaviral changes are grossly abnormal, while subclinical, mild and moderate are not recognised by the Reproductive health providers indicating a hiatus of knowledge and practice. When not recognised while the mother is in the hands of maternity staff, the magnitude of subsequent severe morbidity is never known by them as the opportunity to make the diagnosis is missed. Thus Obstetricians and Midwives need to be involved in the diagnosis of PPD as they are highly involved in management of pregnant and postnatal mothers.

The consequence of PPD affects not only the mother but also the infant and the family. In severe cases as seen in postpartum psychoses the consequences can be infanticide or suicide hence a perinatal or maternal mortality respectively. PPD can also be indirectly associated with maternal morbidity and mortality by delay in seeking medical attention or non adherence to prescribed medicine for other disorders.

Prevention of this disabling disorder is possible if primary prevention is made early. Secondary and tertiary prevention can also minimise the prevalence and disability if timely diagnosis, appropriate treatment and follow-ups are done.

Different studies across countries have reported prevalence ranges of postpartum depression as from 5%-36% which is a significant value. By determining the prevalence of this disorder in our set up, the Maternity health care worker would be sensitized by the new endemic and understand the symptoms and signs hence increase the diagnostic acumen. This may evolve into policies that would see enhanced interest in this area, incorporation of PPD in training hence improvement in recognition and management. Since few studies have looked into postpartum depression in Africa, and no such a study has been done at KNH, this study is expected to shed light in this field.

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1.4: CONCEPTIAL FRAMEWORK.

1.4.1: NARRATIVE.

World health organization defines health as a state of physical and mental well being but not just the absence of disease or disability. The role of child birth in relation to depression is deeply buried. Hippocrates in 460 BC wrote "Agitation, delirium and attacks of mania" are produced by suppressed lochia discharge that is transported to the brain.

The consequence of allowing maternal depression to go undiagnosed hence untreated are detrimental to the health of the mother, her infant and other family members. In severe cases such as seen in puerperal psychosis the effects may be infanticide or suicide hence mortality.

It is well known that the risks of developing depression peaks in the child bearing years, therefore it is vital for health care providers especially Obstetrician/Gynaecologists to understand the risk factors and recognize the symptoms associated with postpartum depression.

Despite the wide spread nature of this problem, the current process of diagnosis and treatment is not standardised, is often chaotic and may result into inappropriate care and treatment. Non psychiatric doctors often find themselves in a dilemma when it comes to this illness and there are persisted low levels of case recognition by the Obstetrician and Gynaecologist.

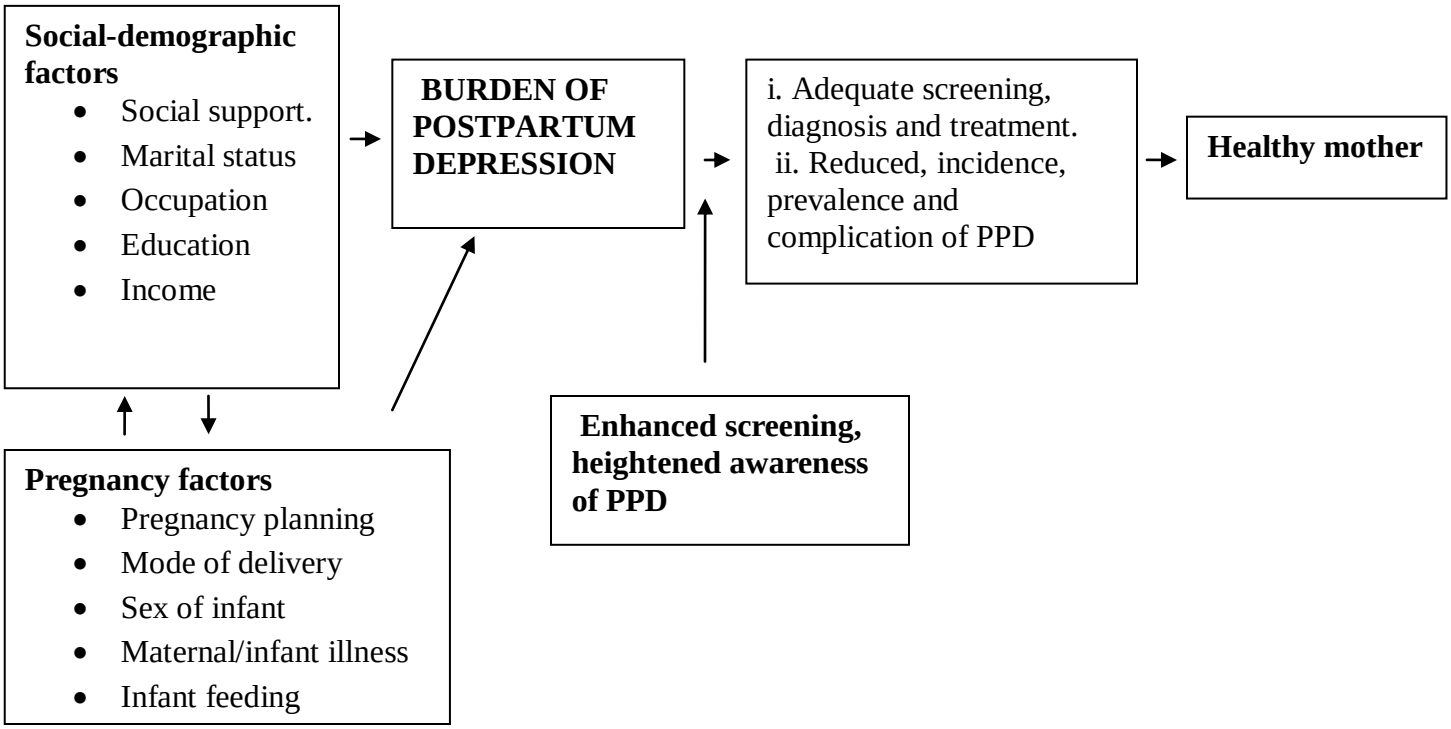
Multi factorial aetiology of PPD has been suggested as no single causative factor has emerged. Several factors have been attributed to the increased risk of developing postpartum depression. Pregnancy itself, the process of child birth and the required child care can trigger a mother to various types of postpartum depression. The risks have been thought to interact with one another accounting for the difference in prevalence across countries, across regions and among women of the same race/culture. Early identification of the risk factors is crucial for successful prevention, treatment and follow up of PPD.

Several barriers for both diagnosis and management of postpartum depression have been identified.i.Patients' barriers which include: mistrust, fear of judgment, social stigma, lack of knowledge about the impact of the disease and knowledge where, when and who to see in order to seek treatment; financial constrains, time constrains have also been implicated.ii.Severe shortage of mental health professionals continue to impede access to treatment and also discourage screening by the primary health care providers. Very few Obstetricians mainly due to limited approach routinely screen for maternal depression in the routine antenatal

or postnatal clinics. Reasons may be the kind of training that puts less emphasis on maternal mental health, difficulties to link the patient to a mental health professional upon diagnosis of postpartum depression. iii. Lack of guidelines in health care management system in general and per each institution in particular in regard to complete maternal care has also acted as barriers to the diagnosis and treatment of PPD.

In view of the above, this study will look into the prevalence of PPD and determine any relationship between the prevalence, the socio-demographic and reproductive characteristics of the respondents. The relationship can be exploited further by more studies to reduce the gaps between diagnosis, treatment and follow ups.The end result would be a healthy mother as defined by the WHO.

1.4.2: DIAGRAMATIC



1.5: Study questions

1. What is the prevalence of postpartum depression at KNH six weeks after delivery?
2. Is there a relationship between the prevalence, socio-demographic and reproductive characteristics?

1.6: Study objectives

1.6.1: Broad objective.

To determine the prevalence of postpartum depression among women delivering at KNH six weeks after delivery

1.6.2: Specific Objective

1. To determine the prevalence of PPD, six weeks after delivery at KNH
2. To relate the prevalence of PPD with socio-demographic and reproductive characteristics.

2.0: METHODS AND MATERIALS

2.1: Study Design

This was a descriptive cross sectional study in which 183 consenting postnatal mothers visiting the postnatal clinic at KNH six weeks after delivery were recruited. Direct interview for socio-demographic and reproductive characteristics was conducted by the Principle investigator or Research assistants. Evaluation for depression was through self rating for depression using the Edinburgh Postnatal Depression Scale (EPDS). This evaluated how the mother had been feeling for the past seven days. Different scores were awarded based on the best response given by the mother. A cutoff point/score of ≥ 13 was used to determine whether the mother had depression or not. For easy understanding of the EPDS, it was in both English and Kiswahili. Assistance was availed to those who had concerns of not understanding the scale well. Completion of the data collecting instrument was done at the same time of the interview.

2.2: Study Area

This study was carried out at Kenyatta National Hospital. The hospital was ideal because of high volume of deliveries hence many reviews at the postnatal clinic that allowed the desired sample size to be attained. The hospital caters for patients from all over the country with very varied socio-demographic and reproductive characteristics.

The hospital is situated within the capital city of Nairobi. It is the largest referral hospital in the Republic of Kenya with a bed capacity of 1400. It serves as the teaching hospital for the College of Health sciences, University of Nairobi and the Kenya Medical Training College. For purposes of efficient service delivery, it is divided into various departments. The department of Obstetrics and Gynecology is further sub divided into units/wards and specialized clinics. These includes: acute gynecology ward, labor ward, non emergency gynecological ward and the lying in wards. The clinics include: The Gynecological Outpatient Clinic (GOPC); Infertility Clinic; Antenatal Clinic (ANC); Postnatal Clinic (PNC) and High Risk Clinic (HRC).

The postnatal clinic is run on every Friday in the morning hours. Patients are booked into the clinic upon discharge from the maternity wards after delivery and here they are seen by the Senior House Officers and Consultants. On average, a total of fifty patients were seen on every visit. These included patients from at least two weeks to around six months after delivery.

2.3: Study population

The respondents comprised of 183 consenting postnatal mothers who came for review at the clinic six weeks since delivery. Selection into the study was done by set criteria as shown below.

2.3.1: Sample size determination

A minimum sample size of 174 respondents was required using the fisher's et al formula. The calculation was as shown below.

$$N = \frac{Z^2 \; p\{1-p\}}{D^2}$$

N=Sample size.

Z=Standard error from the mean corresponding to 95% confidence level=1.96

P=13% taken to be estimated prevalence of postpartum depression (29).

d=Precision/ reliability with which to determine p =5%

The sample size calculated using the above formula was 174

$$N=\frac{1.96x1.96x0.13\ (1-0.13)}{0.05x0.05}$$

$$=\frac{3.8416x0.13x0.87}{0.0025}$$

$$=\frac{3.8416x13x87}{25}$$

$$=\frac{4344.8496}{25}$$

$$= 173.793984$$

=174. Subjects

During this study a total of 183 participants consented and were included into the study.

2.3.2: Sampling method

Participants were recruited from the postnatal clinic at KNH using set criteria. Eligible participants were approached and were requested to consent voluntarily to participate into the study. Upon consenting, a study number with a code was assigned for identification. Inclusion into the study was done by consecutive sampling until the required sample size of 183 was achieved.

2.3.3: Inclusion criteria

1. At six weeks since delivery
2. Live baby at the time of study.
3. Ability and acceptance to consent to participate in the study.

2.3.4: Exclusion criteria

1. Known cases of mental illness/mental medications
2. Mothers of twins/triplets

2.3.5: Recruitment and consenting procedure.

All the mothers available at the postnatal clinic during the study period and satisfying the study criteria were approached .The purpose of the study and any ethical concerns were explained. A written consent was availed and they signed for accepting to participate. Thereafter, they were interviewed and the questionnaire was completed at the same time of the interview

2.4: Data collection Instrument

Data was collected by means of a structured questionnaire with both open and close ended questions. It was availed to the study population by the Principle investigator or the Research assistants and filled promptly at the same time of the interview.

It was composed of two sections:

2.4.1: Section A: Socio-demographic and reproductive profile

This was developed by the Researcher to capture personal information, past obstetric history, information on the recent delivery and health status of both the mother and the infant. It was administered and completed by the interviewer.

2.4.2: Section B: Edinburgh Postpartum Depression Scale (EPDS)

The Edinburgh Postnatal Depression scale is the most well known and evaluated instrument for postnatal depression. The development of the EPDS was described firstly by Cox, Holden and Sagovsky in 1987.The scale was developed first with 13 items, 6 of these being adapted from existing questionnaires. Later the scale was reduced to 10 items and validated in a sample of 84 postpartum mothers.

The scale asks the respondent about their feelings over the previous seven days. Possible responses are scored from 0-3, in growing order of severity, creating a maximum score of 30. In the initial studies, the sensitivity and specificity of the EPDS were 86% and 78 % respectively, with a positive predictive value of 73% using a cutoff point of 9/10. Some of the psychometric properties of EPDS, such as its specificity and sensitivity have been tested extensively among various cultures in different countries. The scale has been tested in countries as diverse as England, Australia, and Sweden among others.

The sensitivity observed in the validation studies preserved variations ranging from 65 %-100%, while the specificity presented variation from 49%-100%. The great variation of results among the different studies was due to variation in methodology used, cut off point, diagnostic criteria and the period between delivery and the moment of screening.

Studies done in UK have demonstrated that using a cutoff point of 12/13, in the sixth week postpartum period, the EPDS showed a sensitivity from 65-95 % and a specificity of 78-96 when compared to the diagnosis of major depression through psychiatry interview. The cutoff point of 9/10, used to increase the sensitivity of the instrument, demonstrated a sensitivity of 84-100% as well as a specificity of 82-88%.

A total score higher than 12 in the postnatal period indicate a larger probability of depressions but it does not supply for the measure of severity of the symptoms.

Matthey et al investigated the increasing use of the EPDS in literature of non-validated cut off scores, as well as different wording and formatting. In this study, it was advocated that that the scale should be worded and formatted as originally as described by its Authors, which includes the validated score of 13 or more when reporting a probable depressive disorder in English speaking women during postnatal periods, however different cutoff points may be warranted for different cultural group.

Boyce and colleagues (1993) found that the EPDS produced a sensitivity of 100% and specificity of 95.7% when using a cutoff point 12 or 13 for depression at three months post delivery. Gynes and colleagues' (2005) suggested that evidence supports a cutoff score of 13 or higher. In recent review of measure [Gjerdingen and Yawn 2007], the EPDS was the most extensively researched postpartum measure and was found to have "moderate psychometric soundness." The EPDS measures emotional symptoms of PPD and does not evaluate somatic symptoms.

It is important to note that the EPDS is a screening instrument and not a diagnostic one. Its application should not be a substituted for clinical psychiatric evaluation and a clinical interview is essential for diagnosis.

The scale was given to the patient after full explanation of what it entails for self rating and completion. Assistance by the Researcher or Research assistants was availed where literate level was low or if a respondent expressed any concern of not understanding the contents well. For purposes of minimizing changes of content during interpretation, the EPDS was translated into Kiswahili while maintaining the original meaning of its content. In average it took about 5-10 minutes to complete the questionnaire.

In this study a cutoff score of ≥ 13 was taken as a positive screen for postpartum depression based on the above discussion.

3.0: DATA COLLECTION PROCEDURE

On every Friday (clinic day) during the study period, the research team was available at the postnatal clinic for recruitment of participants. After identifying the mothers who met the criteria for selection, the following documents were completed.

i. Consent explanation and consent form.
ii. Socio-demographic and reproductive questions
iii. Edinburgh Postpartum Depression Scale [EPDS].

The study continued at the clinic till a sample size of 183 was attained for data analysis.

3.1.1: Training Procedures

Two research assistants (Nursing Officers) were explained what the study entails. They were explained different terminologies and trained on how to fill the questionnaire in a standardized and uniform manner.

3.1.2: Quality assurance measures

Pretesting of the questionnaire was done at the clinic by interviewing 17 (10%) mothers. This helped in estimating the total time taken to complete the questionnaire to about ten minutes and any ambiguity was noted and corrected. Care was taken to avoid the possibility of the participant discussing her answers with others. Most mothers completed the scale by themselves except a few (≈ 2 %) who had difficulties in reading hence assisted by the investigator. It was a must to have all the ten items on the EPDS completed to be scored.

3.2: Data management

At the end of each interview the filled questionnaire was cross checked for completeness and any missing entries corrected after which it was stored in a safe place. Data was entered into an analytical package (SPSS) for analysis. .

3.2.1: Data entry

The collected data was coded accordingly. Data entry templates were then developed for summarization of the raw data. Summarized data was entered into a Statistical Package for Social Science research (SPSS). Before analysis, it was checked and cleaned to ensure accuracy in data entry.

3.2.2: Data analysis

Analysis of the data was done using, percentage and frequency.

A descriptive analysis was done on the following:

i. The prevalence of PPD.
ii. The socio-demographic profiles of the mothers.
iii. The reproductive characteristics.
iv. Correlation between the above (i, ii & iii).

The prevalence was determined as a percentage of the participants who screened positive from the total analyzed sample. Frequencies were generated, variables were compared and tests of significance carried out using chi square for categorical variables. A bivariant analysis was done to find the association between PPD and the participants' characteristics.

A p-value of ≤ 0.05 was considered statistically significant.

4.0: ETHICAL CONSIDERATION

Clearance to conduct the study was obtained from the department of Obstetrics and Gynecology after the presentation of the study proposal. Subsequently, permission to carry out the study was sought from Kenyatta National Hospital/University of Nairobi Ethics and Research Committee. Written informed consents were obtained from all the participants after the purpose of the study was explained. Participation to this study was voluntary and there was no offering of incentives, gifts or refunds as the interview was conducted during normal clinic visits. Confidentiality was maintained for all obtained information and no names were written on the questionnaire.

There were no risks to the participants as there were no drugs given, no procedures performed and no specimens were taken. Respondents who wished to be given their feedback on the interview were requested to provide their mobile phone numbers. Three out of nineteen who screened positive had provided their mobile phone numbers. One could not be reached but two have been contacted and plans made on how they will be evaluated further at the psychiatric clinic in their next PNC visit. Declining to participate in the study did not affect services rendered by the health service providers and advice was given on importance of postpartum mental health in general. One participant had depression within and outside postpartum period and she was on medication. She was excluded from the study and counseled on mental danger signs and importance of adherence to treatment.

5.0: STUDY LIMITATIONS

Low literacy level in some of the respondents especially in the completion of the EPDS necessitated assistance. The EPDS had been translated into Kiswahili with every caution taken to maintain its original meaning. By being in the hospital/clinic may have been a source of stress. This was minimized by stating clearly that the feelings in question were not for one day but for the past seven days. After screening for depression, most respondents did not wish to be contacted for feedback. Those with previous mental illness or poor pregnancy outcome did not benefit from this evaluation yet they may have had a recurrence or aggravation of depressions. There was no psychiatric evaluation after screening positive for PPD to refute or confirm the same.

6.0: RESULTS.

A total of 183 mothers were interviewed, 180 were eligible for analysis. One was excluded because of age being below 18 years and two had incomplete data.

Results were presented in tables, percentages and graphs followed by narration as shown below.

Table 1: Socio-demographic characteristics of the participants

Characteristics	population	Frequency %
All women	**N =180**	
Age in years		
<19	2	1.1
20-24	40	22.2
25-29	61	33.9
30-34	55	30.6
≥35	22	12.2
Marital status		
Single	24	13.3
Married/cohabiting	156	86.7
Others	0	0
Education		
None	3	1.7
Primary	18	10
Secondary	75	41.7
Tertiary	84	46.6
Occupation		
Self employed	69	38.4
Employed	60	33.3
Not employed	51	28.3
Religion		
Christian	176	97.8
Muslim	4	2.2
Household income(ksh)		
≤20,000	25	13.9
20,001-40,000	42	23.4
40,001-60,000	51	28.3
≥60,001	62	34.4
Partners support		
Adequate	162	90
Inadequate	18	10

Table 1 above displays the socio-demographic characteristics of the study participants. 23.3% were aged ≤24 years, 13.3% were single, 11.7% had schooled up to primary level and 28.3% were not employed. Household income was ≤ksh 40,000 in 37.2%. This was computed from the assumption that house rent paid is about 10% of the total household income. Christians were the majority at 97.8% and partners' support was perceived inadequate by 10% of the participants.

Table 2: Reproductive and clinical characteristics.

Characteristics	**Population N=180**	**Frequency %**
Parity		
1	76	42.2
2-3	86	47.8
4-5	18	10.0
≥6	0	0
Pregnancy		
Wanted	144	80
Unwanted	36	20
Mode of delivery		
Vaginal	42	23.3
C/section	138	76.7
Sex of infant		
Male desired	29	16.1
Female desired	53	29.1
Undesired	24	13.3
Non specific	74	41.1
Maternal medication		
Yes	56	31.1
No	124	68.9
Mode of infant feeding		
Exclusive breast feeding	177	98.3
Others	3	1.7
Infant illness.		
Yes(Not admitted)	6	3.3
No	174	96.7
Symptoms of maternity blues		
Present	23	12.8
Absent	157	87.2

Table 2 above shows the reproductive and clinical status of the respondents at the time of study. Recent pregnancy was reported to have been unwanted by 20% ,76.7% being delivered by caesarian section and 42.2 % being their first delivery.13.3% were not satisfied with the sex of the infant and almost all 96.7% exclusively breast fed their infants. Reasons given for mixed feeding were: Not enough breast milk and going back to work. 3.3% of the infants had suffered minor illnesses and 31.1 % of the mothers were on some medicines such as antihypertensive and hematinics. Symptoms of maternity blues were reported by 12.8% of the participants.

Table 3: Bivariate analysis of above participants' characteristics and postpartum depression

Variable	Population n=180 (%)	No (%) Depressed 19 (10.6)	No (%) Not depressed 161 (89.4)	OR(95% CI)	P-Value
Age(years)					
18-24	42(23.3)	2(4.7)	40(95.3)	0.4 (0.1-1.7)	0.163
≥ 25	138 (76.7)	17 (12.3	121(87.7)		
Marital status					
Single	24(86.7)	3(12.5)	21(87.5)	1.3(0.4-5.1)	0.481
Married/cohabiting	156(13.3)	16(10.2)	140(89.8)		
Education					
None/Primary	21 (11.7)	3(14.2)	18(85.8)	1.5 (0.3-6.2)	0.469
Secondary +	159 (88.3)	16(10.1)	143(89.9		
Religion					
Christian	176 (98.8)	19(10.8)	157(89.2)	_____	0.487
Others	4 (2.2)	0	4(100)		
Occupation					
Not employed	51(28.3)	14(27.5)	37(72.5)	9.4(3.9-32.2)	<0.0001*
Employed	129(71.7)	5(3.9)	124(96.1)		
Household income(ksh)					
≤40,000	67 (37.2)	11(16.4)	56(83.6)	2.7 (0.9-7.5)	0.05*
>40.000	113 (62.8)	8(7.1)	105(92.9)		
Parity					
1	76 (42.2)	10(13.2)	66(86.8)	1.6(0.6-4.6)	0.331
2+	104 (57.8)	9(8.7)	95(91.3)		
Sex of infant					
Not desired	24(13.3)	5(20.8)	19(79.2)	2.7(0.7-9.1)	0.143
Desired	156(86.7)	14(9)	142(91)		
Pregnancy					
Not wanted	36(20)	6(16.7)	30(83.3)	1.9(0.8-4.3)	0.182
Wanted	144(80)	13(9)	131(91)		
Mode of delivery					
C/section	138 (76.7)	14(10.1)	124(89.9)	0.8 (0.4-2.5)	0.745
Vaginal	42 (23.3)	5(11.9)	37(88.1)		
Mode of infant feeding					
Others	3(0.17)	0	3(100)	_____	0.548
E/Breast feeding	177(98.3)	19(10.7)	158(89.3)		
Partner's support					
Not adequate	18 (10)	3(16.7)	15(83.3)	1.8(0.4-7.6)	0.412
Adequate	162(90)	16(9.9)	146(90.1)		

Maternal medication					
Yes	56 (31.1)	9(16.1)	47(83.9)	2.2 (0.8-6.3)	0.106
No	124 (68.9)	10(8.1)	114(91.9)		
Infant illness					
Yes	6 (3.3)	0	6(100)	_____	0.392
No	174 (96.7)	19 (10.9%)	155(89.1%)		
Maternity blues symptoms					
Present	23 (12.6)	5(21.7)	18(78.3)	2.8 (0.8-9.8)	0.074
Absent	157 (87.4)	14(8.9)	143(91.1)		

*Significant ($p \leq 0.05$)

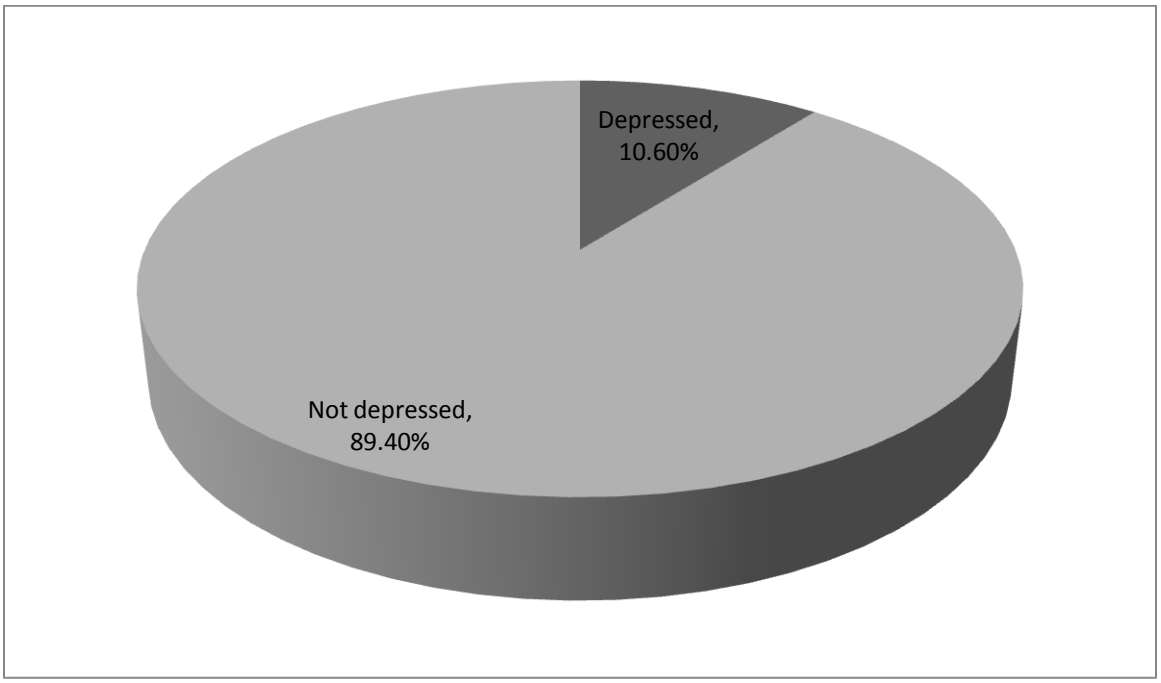
Prevalence of postpartum depression

Of the 180 mothers studied 19 (10.6%) were found to have postpartum depressive symptoms as measured by an EPDS score of ≥ 13.Pontential risk factors for PPD are shown in table 1 and 2. Table 3 shows the bivariate analysis of these factors

Being unemployment (p <0.0001; OR 9.4; 95% CI= 3.9-32.2) and a household income of ≤ ksh 40,000 (p=0.05; OR 2.6; 95% CI=0.9-7.5) were significantly associated with PPD. High Odds ratio of PPD were associated with ; previous symptoms of maternity blues 2.8, sex of infant not desired 2.7, being on medication 2.2, pregnancy not wanted 2.0, prim parity 1.6, and been single 1.4 .Factors such as age (<24 years p=0.163; OR= 0.4; 95% CI=0.1-1.7), C/section as mode of delivery (P=0.745; OR= 0.84, 95% CI=0.3-2.9) were insignificantly associated with PPD.

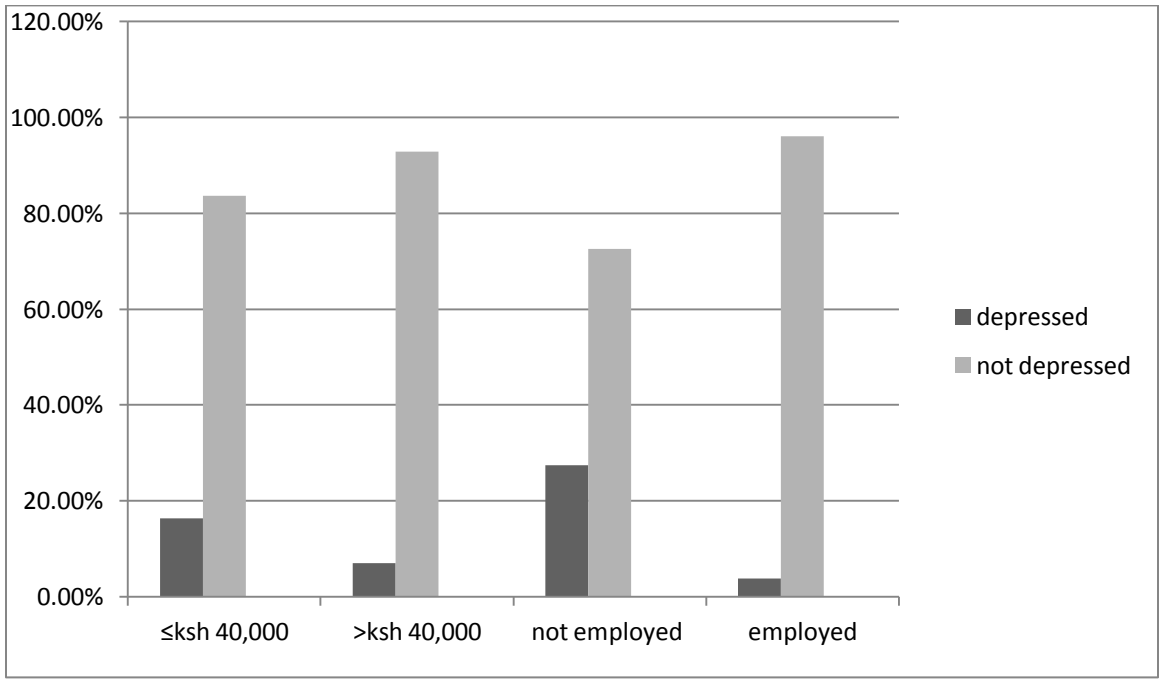
Below is depiction of the above results.

Figure 1: Prevalence of postpartum depression.



19 out of 180 study participants screened positive for postpartum depression as tabulated from a score ≥ 13 on the EPDS.

Figure 2: Depression by income and employment



Mothers whose household income was ≤ ksh 40,000 were 67 out of whom 14.6 % were depressed. There was statistically significant difference between these and those whose income was >ksh 40,000(p=0.05).Mothers not in any form of employment were 51 out of whom 27.5% were depressed. This was also statistically significant (p= <0.0001)

6.1.0: Discussion

6.1.1: Prevalence

This study found the prevalence of PPD to be 10.6% at six weeks postpartum at KNH. This figure is lower than 13.8 % found by a study done at AKUH (29). However, these results compares well with similar studies done in Africa which found the prevalence of PPD to range from 6.1 % - 28 % (8, 23). Findings as high as 34.7 % have been reported in South African peri urban population of postpartum mothers using the major depression section of the structured clinical interview (SCID) for DSM_IV (6).The reasons for these differences may be methodological differences such as: Different study design, different screening instrument and the timing at which the study was done as some studies include two weeks to three months after delivery (5,11 and12).The fact that the literature demonstrates a wide variations in what is considered as a significant score on the EPDS, may be the prevalence would have been higher had the significant score been lowered to 11 or 12 as described in the development of the EPDS (7,5,15and19)

Further the prevalence obtained in this study could be an underestimate since some mothers may not have attended PNC especially if they felt like they were physically well, if they are uneducated or of low socio economic status.

6.1.2: Associations of PPD

Socio-demographics and reproductive characteristics

In this study the strongest predictor of PPD was lack of employment and low household income. This is consistent with other studies from other countries (23, 8). A household income (≤ ksh 40,000) has also been associated with development of PPD here. Whether the pregnancy was wanted or not, the sex of the infant whether desired or not and young age had no statistical significance. Despite previous belief that C/section as mode of delivery, maternity blues and infant illness are associated with development PPD, in this study there were no significant associations (3, 11 and25).

6.1.2: Limitations

Clinic based population may have placed a highly selective group of respondents as seen in the high number of mothers delivered via C/section(76.7%) as compared to the overall rate of 35-40% in KNH. This could have been due to mothers delivered via C/section coming for

postnatal care at KNH and those delivered via vaginal seeking the same care at other hospitals. About a third of the mothers (31.1%) were on some medications. There was significant imbalance in the socio-demographic characteristics of the respondents. For example: More mothers (76.7%) were aged <24 years, more being employed (71.7%) and 62.8% had household income of more than ksh 40,000. It may be therefore difficulty to generalize the prevalence findings of PPD to the total number of mothers delivering at KNH

The cross sectional study design may have eliminated women who would otherwise be picked by a prospective study hence a different value of the prevalence. After screening for depression with the EPDS, there was no formal psychiatric evaluation to confirm PPD. This could have resulted to false positives been included in the analysis. Women with twins/triplets, poor pregnancy outcome were not included and they would have possibly had symptoms of PPD.

7.0: CONCLUSION

This study found a prevalence of PPD among women delivering at KNH, six week after delivery at 10.6% which is a significant high value and compared well with other studies. Lack of employment, low household income are statistically associated with PPD. Factors such as delivery by C/section, marital status, young age, maternity blues, pregnancy whether wanted or not did not appear to be significantly associated with PPD.

The findings in this study may form the bases for the need of routine screening of PPD in the PNC especially those mothers of low social economic status. This would help prevent PPD at all levels hence a healthy mother.

8.0: RECOMMENDATIONS

1. Routine screening of postnatal mothers especially those of low socio-economic status.
2. Midwives/Obstetricians to be retrained in this field to be able to timely recognize the symptoms of PPD.
3. Ministry of health to formulate policies integrating mental and reproductive health.
4. These findings to be availed to the maternity staff of KNH and other related facilities to create awareness of the magnitude of PPD in the mothers.
5. More research on PPD to be done using different study designs, different set ups to assess factors such as bad obstetric outcomes and maternal chronic illnesses.

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Appendix I

Questionnaire: Prevalence of postpartum depression among women delivering at KNH.

Date _____

Patients' study number _____

Date of delivery _____

SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. What is your age in completed years? ☐

2. What is your current marital status?

- ☐ Single.
- ☐ Married.
- ☐ Divorced/separated.
- ☐ Widowed.
- ☐ cohabiting

3. What is your highest level of education?

- ☐ None (no formal education).
- ☐ Primary.
- ☐ Secondary.
- ☐ College/University.

4. What is your current occupation?

- ☐ House wife.
- ☐ Student
- ☐ Self employed
- ☐ Formal employment
- ☐ Casual laborer .
- ☐ Unemployed.

5. What is your religion?

- ☐ Catholic.
- ☐ Protestant
- ☐ Muslim
- ☐ Others-specify e.g. Hindu.

6a.How many times have you been pregnant? ☐

6b.Of these pregnancies how many terminated before 7 months (28 weeks)? ☐

7. How many living children do you have? ☐

8. How much rent do you pay for the house you are currently living in? ☐

9. Are you on any medication since you delivered?

- ☐ Yes specify _____
- ☐ No.

10. Has any of your relative suffered from mental illness?

- ☐ Yes.
- ☐ No.

11. Do you feel that the father of your child is supporting both of you enough?

- ☐ Yes.
- ☐ No.

12. How did you feel after you discovered that you where pregnant for this baby?

- ☐ Nothing
- ☐ Worried
- ☐ Happy
- ☐ shocked

13. How did you deliver?

- ☐ Vaginally.
- ☐ C/Section.

14a.What was your desired sex for the new baby?

- ☐ Male.
- ☐ Female.
- ☐ None specific/any.

14b.What is the sex of your baby?

- ☐ Male.
- ☐ Female.

15a. Have you or your child been unwell since birth?

- ☐ Yes.
- ☐ No.

15b.If yes specify: Mother_____ Child _____

15c. How was the illness treated?

- ☐ None
- ☐ Outpatient
- ☐ Admitted

16. Did you experience any of the following feelings within the first two weeks after delivery?

FEELING	**YES**	**NO**
Crying episodes		
Sadness		
Irritability		
Confusion		
Anxiety		
Sleep disturbance		

17. How are you feeding your baby currently?

- ☐ Exclusive breast feeding
- ☐ Mixed feeding.
- ☐ Not breast feeding.

Section b

Edinburgh Postnatal Depression Scale (EPDS)

Study number_____ Nambari ya tafiti _____

Date of delivery_____ Tarehe ya kujifugua _____

Date of completion _____ Tarehe ya kujaza _____

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

Kwa vile umejifugua hivi karibuni, tungependa kujua namna unavyohisi.Tafadhali WEKA ALAMA YA MVIRINGO nambari ambayo iko umbavuni wa jibu ambalo linalokaribiana na vile ulivyokuwa ukijihisi SIKU SABA ZILZOPITA, na si vile tu unavyohisi leo.

	ENGLISH	SWAHILI
	Here is an example, already completed. I have felt happy: a. Yes, all the time. ◯ Yes, most of the time. c. No, not very often. d. No, not at all. This would mean that "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.	Huu ni mfano,tayari umeshajazwa. Nimehisi furaha: a. Ndio, wakati wote. ◯ Ndio, wakati mwingi. c. La, sio kila mara. d. La ,hata . Hii ingemaanisha "nimehisi furaha kwa wakati mwingi" katika juma iliyopita. Tafadhali kamilisha maswali haya mengine kwa utaratibu huohuo.

	IN THE PAST 7 DAYS:	**KATIKA SIKU SABA ZILIZOPITA:**
1.	I have been able to laugh and see the funny side of things. a. As much as I always could. b. Not quite so much now. c. Definitely not so much now. d. Not at all.	Nimekuwa na uwezo wa kucheka na kuona upande wa furaha wa vitu. a. Kama vile nilivyokuwa b. Sio vile sana kwa sasa. c. Kwa hakika sivyo vile kwa sasa. d. Hata kamwe.
2.	I have looked forward with enjoyment to things. a. As much as I ever did. b. Rather less than I used to do. c. Definitely less than I used to do. d. Hardly at all.	Nimetarajia kufurahia vitu. a. kama vile nilifanya daima. b. Afadhali kidogo kuliko nilivyokuwa. c. Kwa hakika kidogo kuliko nilivyokuwa. d. Hata kabisa.
*3	I have blamed myself unnecessary when things went wrong. a. Yes, most of the time. b. Yes, some of the time. c. Not very often. d. No, never.	Nimejilaumu mwenyewe pasipo sababu vitu vikivurugika. a. Ndio, wakati mwingi. b. Ndio, wakati mwingine. c. Sio mara nyingi. d. La, kamwe.
4.	I have been anxious or worried for no good reason. a. No, not at all. b. Hardly ever. c. Yes, sometimes. d. Yes, very often.	Nimekuwa na wasiwasi au sumbuko pasipo sababu nzuri. a. La, hata kamwe. b. Hata kabisa. c. Ndio,wakati mwingine, d. Ndio, mara nyingi.

*5.	I have felt scared or panicky for no good reason. a. Yes, quite a lot. b. Yes, sometimes. c. No, not much. d. No, not at all.	Nimeshikwa na hofu au kuangaika pasipo sababu nzuri. a. Ndio, hakika mara nyingi. b. Ndio,wakati mwingine. c. La, sio sana. d. La, kamwe.
*6.	Things have been getting on top of me. a. Yes, most of the time I haven't been able to cope at all. b. Yes, sometimes haven't been coping as well as usual. c. No, most of the time I have quite coped well. d. No, I have been coping as well as ever.	Vitu vimekuwa vikinilemea. a. Ndio ,wakati mwingi sijaweza kuvumilia kabisa. b. Ndio, wakati mwingine sijaweza kuvumilia kama kawaida. c. La, wakati mwingi nimevumilia hakika vizuri. d. La,Nimevumilia vizuri kama kila wakati.
*7.	I have been so unhappy that I have had difficulty sleeping. a. Yes, most of the time. b. Yes, sometimes c. Not very often. d. No, not at all.	Nimekuwa sina furaha hadi nimepata tatizo la kulala. a. Ndio,wakati mwingi. b. Ndio,wakati mwingine. c. Sio kla mara.. d. La, kamwe.
*9.	I have been unhappy that I have been crying. a. Yes, most of the time. b. Yes, quite often. c. Only occasionally. d. No, never.	Nimekuwa sina furaha hadi nimekuwa nikilia. a. Ndio,wakati mwingi. b. Ndio,mara kwa mara. c. Mara chache tu. d. La, hasha.

*10.	The thought of harming myself has occurred to me. a. Yes, quite often. b. Sometimes. c. Hardly ever. d. Never.	Wazo la kujidhuru mwenyewe limenijia. a. Ndio, mara kwa mara. b. Wakati mwingine. c. Kwa nadra daima. d. Hata.

SCORING

QUESTIONS 1, 2, 4 are scored 0, 1, 2 or 3 from the top box respectively.

QUESTIONS 3, 5-10 (marked with*) are reverse scored, i.e 3, 2, 1, 0 from the top.

Maximum score: 30

Possible depression: 13 or greater.

Always look at item 10 (suicidal thoughts)

TOTAL SCORE_____

THANK YOU SO MUCH FOR YOUR CO-PERATION AND TIME.

ASANTE SANA KWA KUSHIRIKI NA WAKATI WAKO

Appendix II

Consent form

How are you? My names are _____.Am working with Dr Virginia Musau, a postgraduate student from the University of Nairobi, Department of Obstetrics and Gynecology. She is conducting a study on mental illness in mothers who are at six weeks after delivery at the postnatal clinic here at KNH.

General information

I have come to ask for permission from you to participate in this study. Am asking you to read (or have it read to you) this consent form carefully. Participation into this study is voluntary and you are free to or not accept to participate. There will be no any form of payments or rewards to be given to the participants. Your services in the hospital will not be affected in any way by choosing to or not to participate. All the information you will give us will be treated with confidentiality and no names will be written on any form. If you wish to be provided with the results of your interview, you are requested to provide us with your mobile number on this form. You will also be asked to sign or thumb print in front of a witness to show that you have accepted by your own choice to take part in the study. This form may contain unfamiliar words, thus you may ask us to explain anything you cannot understand

How to do the study

The participants into this study are mothers from the postnatal clinic at KNH. They are supposed to have finished six weeks since they delivered. After consenting to be included into the study, Questions will be asked about yourself, your last pregnancy and how you and your baby are doing.

There will be another self report form (EPDS) which you will be required to complete on your own or with the assistance of the Principle investigator or the Researcher assistances .This will be asking you how you have been feeling for the past one week.

Risks and benefits

There are no expected risks in this study because there are no drugs to be given, no samples to be taken or procedure to be performed. There are no payments or any refund to be given

as the interview will be conducted during normal visits to the clinic. In cases where a respondent may screen positive for PPD and so wishes by providing her mobile number, you can benefit by been referred to a psychiatrist. The results of this study can be used by policy makers to improve on maternal mental health especially after delivery

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I, participant number _____having been informed about the study/having read all the above and understand all what it entails, do willfully without coercion consent to participate in the study.

_____ _____

Client signature/Thumb print Date

_____ _____

Investigator who informed/discussed with client Date

Mobile number (optional) _____

In case of any question(s) or further information the following can be contacted:

1) **Principal investigator-**Dr Virginia Musau
   Telephone: 0720827222/0733429285
2) **Supervisors:**
   1. Professor Zahida Qureshi
   Associate professor and chairperson
   Department of Obstetrics and Gynecology
   University of Nairobi
   Telephone: 020-2726360

   2. Professor Koigi Kamau
   Department of Obstetrics and Gynecology
   University of Nairobi
   Telephone: 020-2726360.

3. Dr Pius A Kigamwa
   Senior Lecturer and Consultant Psychiatrist
   Department of Psychiatry
   University of Nairobi
   Telephone: 27263300/20 ext 43562.

3) KNH/UON Ethics and Research Board
Kenyatta National Hospital
Telephone: 020-2726300 Ext 44102

FOMU YA IDHINI

Habari gani? Mimi naitwa_____. Nafanya kazi na Daktari Virginia Musau, mwanafunzi wa shahada ya uzamili ya udaktari katika Chuo Kikuu cha Nairobi, idara ya uzazi na magonjwa ya wanawake. Anafanya utafiti kuhusu maugonjwa ya akili kwa wamama baada ya kujifugua. Huu utafiti tunaufanyia hapa katika hii kliniki ya baaba ya kujifungua hapa Hospitali Kuu ya Kenyatta

Habari kwa jumla.

Nimekuja kukuomba ruhusa ndio ushiriki kwa huu utafiti.ninakuhimiza usome (au usomewe) hii fomu ya idhini kwa makini. Kushiriki katika huu utafiti ni kwa hiari na huko uhuru kukubali kushiriki au kutoshiriki. Hakutakuwa na malipo ya haina yoyote kwa washiriki. Huduma yako katika hospitali haitabadilika kwa chochote kile kama utashiriki ama hautashiriki. Habari zote utakazotupatia zitatuzwa kwa siri na hakuna majina yatakayoandikwa kwa fomu yoyote. Kama ungependa kujulishwa matokeo ya majibu yako, tungekuhimiza upeane nambari yako ya simu. Pia tutahitaji utie sahihi ama alama ya kidole ishara ya kuwa umekubali kushiriki kwa hiari yako. Uko uhuru kuuliza maneno yenye hauyafahamu vizuri.

Jinsi ya kufanya utafiti.

Washiriki katika huu utafiti ni wamama wako kwa kliniki ya baada ya kujifungua na ambao wamemaliza wiki sita tangu wanjifungue.Baada ya kupeana idhini, utaulizwa maswali kuhusu ubinafsi wako, vile umejifungua na vile unaendelea na mtoto wako. Baadaye kutakuwa na fomu nyingine (EPDS) utakalohimiziwa ujaze wewe mwenyewe, ama ukizaidiwa kulingana na vile ungependekeza. Hii fomu itakuchuguza vile umekuwa ukijihisi tangu muda ya wiki moja iliyopita.

Hatari na manufaa ya huu utafiti.

Hatutaranjii kuwa na hatari yoyote kwa washiriki kwa kuwa hakuna madawa utakayopewa, hakuna damu utakayotolewa wala utaratibu wowote utakayofanyiwa kuhusu huu utafiti.Pia hatutaranjii kukutuza ama kukurejeshea gharama yoyote sababu ushuguzu utafanyika wakati wa kawaida wa kliniki yako.

Ukipatikana na shida ya mafikira katika utafiti huu unaweza faidika kwa kutumwa kwa daktari wa maugojwa ya akili ukitushauri tufanye hivo kwa kutupatia numbari yako ya simu.Pia matokeo ya huu utafiti yanaweza kutumiwa na viogozi wakuu kuboresha avya ya akili ya wamama aswa baada ya kujifungua.

Mimi mshiriki nambari_____ nimepewa taarifa kamili kuhusu utafiti huu/nimesoma kwa makini maelezo yote kuhusu huu utafiti hapo juu, nimeelewa vizuri kinachonipasa na ninatoa idhini ya hiari kushiriki kwa huu utafiti.

_____ _____

Sahihi/dole gumba ya mshirika tarehe

_____ _____

Sahihi ya mtafiti aliyetoa maelezo kwa mshirika tarehe

Nambari ya simu (kwa hiari) _____

Kama una swali lolote la ziada kuhusu huu utafiti unaweza kuwasiliana na daktari Musau kwa nambari 0720827222/0733429285

Edinburgh Depression Scale

(or Edinburgh Postnatal Depression Scale)

DATE COMPLETED_____

As you have recently had a baby, we would like to know how you are feeling. Please CIRCLE the number next to the answer which comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:

0 Yes, all the time.
1 Yes, most of the time.
2 No, not very often.
3 No, not at all.

In the past 7 days:

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

0 As much as I always could.
1 Not quite so much now.
2 Definitely not so much now.
3 Not at all.

2. I have looked forward with enjoyment to things.

0 As much as I ever did.
1 Rather less than I used to.
2 Definitely less than I used to.
3 Hardly at all.

3. I have blamed myself unnecessarily when things went wrong.

3 Yes, most of the time.
2 Yes, some of the time.
1 Not very often.
0 No, never.

4. I have been anxious or worried for no good reason.

0 No not at all.
1 Hardly ever.
2 Yes, sometimes.
3 Yes, very often.

(OVER)

In the past 7 days:

5. I have felt scared or panicky for no very good reason.

    3 Yes, quite a lot.
    2 Yes, sometimes.
    1 No, Not much.
    0 No, not at all.

6. Things have been getting on top of me.

    3 Yes, most of the time I haven't been able to cope at all.
    2 Yes, sometimes I haven't been coping as well as usual.
    1 No, most of the time I have coped quite well.
    0 No, I have been coping as well as ever.

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

    3 Yes, most of the time.
    2 Yes, sometimes.
    1 Not very often.
    0 No, not at all.

8. I have felt sad or miserable.

    3 Yes, most of the time.
    2 Yes, quite often.
    1 Not very often.
    0 No, not at all.

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

    3 Yes, most of the time.
    2 Yes, quite often.
    1 Only occasionally.
    0 No, never.

10. The thought of harming myself has occurred to me.

    3 Yes, quite often.
    2 Sometimes.
    1 Hardly ever.
    0 Never.

Scoring and Other Information

Response categories are scored 0, 1, 2, and 3 according to increased severity of the symptom. Items 3, 5-10 are reverse scored (i.e., 3, 2, 1, and 0). The total score is calculated by adding together the scores for each of the ten items. Users may reproduce the scale without further permission providing they respect copyright (which remains with the *British Journal of Psychiatry*) quoting the names of the authors, the title and the source of the paper in all reproduced copies.

The Edinburgh Postnatal Depression Scale (EPDS) has been developed to assist primary care health professionals to detect mothers suffering from postnatal depression; a distressing disorder more prolonged than the "blues" (which occur in the first week after delivery) but less severe than puerperal psychosis.

Previous studies have shown that postnatal depression affects at least 10% of women and that many depressed mothers remain untreated. These mothers may cope with their baby and with household tasks, but their enjoyment of life is seriously affected and it is possible that there are longterm effects on the family.

The EPDS was developed at health centres in Livingston and Edinburgh. It consists of ten short statements. The mother underlines which of the four possible responses is closest to how she has been feeling during the past week. Most mothers complete the scale without difficulty in less than 5 minutes.

The validation study showed that mothers who scored above a threshold 12/13 were likely to be suffering from a depressive illness of varying severity. Nevertheless the EPDS score should not override clinical judgement. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt during the previous week, and in doubtful cases it may be usefully repeated after 2 weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

Instructions for users

1. The mother is asked to underline the response which comes closest to how she has been feeling in the previous 7 days.

2. All ten items must be completed.

3. Care should be taken to avoid the possibility of the mother discussing her answers with others.

4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

5. The EPDS may be used at 6-8 weeks to screen postnatal women. The child health clinic, postnatal check-up or a home visit may provide suitable opportunities for its completion.

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, *150,* 782-786.