THE PREVALENCE OF DEPRESSION AND INTIMATE PARTNER VIOLENCE AGAINST PREGNANT WOMEN ATTENDING ANTENATAL CLINIC AT KENYATTA NATIONAL HOSPITAL

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DECLARATION

I, hereby declare that this thesis dissertation is my own original work carried out in fulfillment of the requirement for the award of the degree of Masters of Science in Clinical Psychology at The University of Nairobi. I further declare that this thesis dissertation proposal has not been submitted for the award of any other degree or to any other university for research and evaluation.

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DEDICATION

To my dear friends, Faith K. and Susan G. who passed away due to maternal health-related challenges while I was working on my dissertation.

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ABBREVIATIONS AND ACRONYMS

ANC ……Ante-Natal Clinic

CINAHL …….. Cumulative Index to Nursing and Allied Health Literature

DALYS …… Disability Adjusted Life Years

DSM-IV-TR …… Diagnostic and Statistical Manual for Diagnosis of Mental Illnesses 4th Edition

EMBASE ……. Excerpta Medica Database

ERC …… Ethics Research Committee

FIDA (K) ….. Federation of Women Lawyers Kenya

GBV ……Gender Based Violence

GBVRC ……Gender Based Violence Recovery Centre

HealthSTAR …. Health Services, Technology, Administration and Research

IPV ……… Intimate Partner Violence

KDHS..... Kenya Demographic and Health Survey

KNBS ……. Kenya National Bureau of Statistics

KNH ……Kenyatta National Hospital

MDD ……. Major Depressive Disorder

MEDLINE ….. Medical Literature Analysis and Retrieval System Online

PHQ – 9 ….. Patient Health Questionnaire - 9

PTSD …….. Post-Traumatic Stress Disorder

SGBV …… Sexual Gender based Violence

SOA ……Sexual Offences Act

SPSS…… Statistical Package for the Social Sciences

UN ……United Nations

UoN ……The University of Nairobi

WHO …….. World Health Organization

DEFINITION OF TERMS

Intimate Partner Violence The actual or threatened physical or sexual violence or psychological/emotional abuse directed toward a spouse, ex-spouse, current or former boyfriend or girlfriend, or current or former dating partner.

Disorder A term used to denote the existence of a clinically recognizable set of symptoms or behavior associated in most cases with distress and with interference with personal functions.

Mood Disorder This is any of a group of psychiatric disorders, characterized by a pervasive disturbance of mood or affect, usually due to depression (with or without associated anxiety) or to elation. A mood disorder tends to be recurrent and the onset of individual episodes is often related to stressful events or situations. It is also called affective disorder.

Major Depressive Disorder This is a mood disorder characterized by persistent sadness accompanied by somatic symptoms. The symptoms must last for 2 weeks or longer for one to be diagnosed with a major depressive disorder. It is also called unipolar depression and commonly referred to as depression.

Anhedonia This is a psychological term that is defined as the inability to experience pleasure or interest from activities that were previously enjoyable. It may also involve lack of motivation or desire to engage in an activity.

Gestation This may be defined as the process of carrying a fetus in the uterus between conception and birth.

Antenatal Depression This is the onset of and/or diagnosis of a major depressive disorder occurring exclusively during pregnancy.

ABSTRACT

Background: The incidence of IPV is high in Africa while depression is a major concern in developing countries. Mental health and women's well-being are still a major challenge in Kenya.

Problem Statement: There is a paucity of published scientific literature on depression and IPV in pregnant women in Kenya.

Broad Objective: To determine the association of depression and IPV in pregnant women.

Specific Objectives: 1). to determine the prevalence of depression among pregnant women attending the ANC and 2). to determine the prevalence of IPV among pregnant women in the same study group

Methodology: A cross-sectional analytic quantitative design was used to recruit a sample size of 324 ANC patients at KNH, Nairobi. Systematic random sampling was used to select the respondents. The Sociodemographic, Depression and IPV Data collected through the use of a structured questionnaire, PHQ-9 and WHO IPV instrument. SPSS used for statistical analysis. Results presented in tables, charts and narratives.

Results: The prevalence of antenatal depression was (91) 29%; prevalence of IPV was (52) 16%. There was an association between antenatal depression and IPV ($p = 0.033$).

Discussion: This study's findings revealed that exposure to spousal violence during pregnancy is a risk factor for antenatal depression.

Conclusion: In Kenya, women are at risk of developing antenatal depression and experiencing IPV in pregnancy, both leading to detrimental health effects.

Recommendations: 1). Provision of GBV and SRH follow up care services at the ANC. 2). Free IPV services to be implemented to completion by KNH and Ministry of Health. 3). Involving mass media in disseminating GBVRC information. 4). Psychological interventions to be implemented such as marital therapy for couples and interpersonal therapy for unmarried women experiencing IPV. 5). Need to increase regular assessments of mental illnesses in Primary Health Care Setting.

1.0 CHAPTER ONE

1.1 INTRODUCTION

Kenya's population is about 40 million with women accounting for more than half of the population. Nearly 47% of the women living in heterosexual relationships in Kenya experience some form of violence from the partner (KNBS, 2010). From a recent study that was done in KNH (2012), the female gender was the most vulnerable gender accounting for 85% of the survivors of gender based violence out of the total new cases reported at the Gender Based Violence Recovery Center (GBVRC) in 2010. Intimate partner violence (IPV) is one component of gender based violence (GBV) and it includes physical, sexual or emotional trauma to partners in relationships (Bott et al, 2004, p. 8).

The term 'intimate partner violence' is synonymous with the older phrase domestic violence and is also known as spousal violence. IPV is the commonest adult form of spousal violence. IPV may be defined as: "actual or threatened physical or sexual violence or psychological and emotional abuse directed toward a spouse, ex-spouse, current or former boyfriend or girlfriend, or current or former dating partner" (Rumbold, 2008, p. 8).

In Kenya, IPV is usually described according to the varied ways of understanding attached to the forms of IPV. Most healthcare workers tend to put more focus on sexual violence when dealing with IPV cases while the victims of IPV put more emphasis on the three major forms of IPV; physical, sexual and psychological/emotional violence as well as economic hardship and discrimination by their partners when defining IPV (Undie et al, 2012). These findings backed up

the need for routine IPV screening in all major government hospitals as a positive move in healthcare management of IPV victims.

A major advancement was made in the area of IPV when KNH normalized one of the first IPV assessment instruments for use in developing countries. Routine assessment of IPV in primary health clinics was gradually accepted in Kenya by both the health care workers and patients with clinics such as the ANCs, GBVRCs and the HIV comprehensive care centers carrying out routine IPV screening. These clinics developed an effective way of attending to patients experiencing IPV through collaborative teamwork between non-psychiatric health care workers and GBV trauma counselors from GBVRCs (Undie et al, 2012).

In that same approach, this study sought to adopt a method of assessing for antenatal depression and IPV among pregnant women so as to obtain information that would be vital in the future management of depression and IPV via early detection at the ANCs.

1.2 BACKGROUND

In Kenya, the Sexual Offences Act, 2006 (Rev. 2007), was enacted to address sexual offences by protecting and providing justice for those who experienced GBV. The SOA defined all the various forms of sexual offences which ranged from sexual violence (forcible rape), sexual harassment to deliberate transmission of HIV (SOA, 2006). The SOA stated the jail sentences for various sexual offences relative to the ages of the victims of SGBV. Unfortunately, the same law did not provide legal address for women who experienced IPV. The law did not recognize marital rape with the reason being that a married woman did not have a legal claim to a court case over unconsented sexual activity (forcible rape) by the husband because she gave consent to taking part in the conjugal/matrimonial rights upon signing the marriage contract (Kameri-Mbote, 2004).

Consequently, the Kenyan law did not prosecute cases in some forms of IPV such as emotional and sexual abuse. The law recognized cases of physical forms of IPV only although information gathered from structured interviews among 182 women in Spain, provided sufficient evidence that emotional and sexual abuse by one's partner had deleterious effects upon the victim (Pico-Alfonso et al, 2006).

Additionally, there had been reports about victims of IPV being violated, mistreated and mocked by the Kenyan police officers who did not aid these women when they reported their IPV cases at the police stations. This had negative effects on the victims as they became reluctant to seek assistance in future if the perpetrator repeated the violent acts again. That under-reporting of IPV

cases hindered victims from getting judicial justice, thus encouraging the perpetrators to repeat their crimes as they were not prosecuted.

A report by the Federation of Women Lawyers (FIDA) Kenya with a national representative sample drawn from Nairobi, Coast, Nyanza and Western regions of the country, showed that under-reporting of IPV crimes to the police was ranked 2nd with a prevalence of 17.8%. The victims complained of police insensitivity when they reported their cases with one particular case where the police even asked the IPV victim to physically show him exactly how the IPV crime happened (Federation of Women Lawyers (Kenya), 2008). The victims ended up suffering in silence, which then put them in potential risk of developing mental illnesses related to their entire ordeal.

The Psychological effects of IPV

The commonest psychiatric disorder associated with GBV and consequently IPV is depression. In Kenya, many studies were conducted since the 90s with a focus on depression and its progression and treatment, however little was done on the psychiatric morbidity among women who experienced IPV.

Major Depressive Disorder (MDD) commonly referred to as depression is a mood disorder characterized by persistent sadness accompanied by somatic symptoms. The DSM-IV-TR criteria for diagnosis of MDD noted somatic symptoms such as pervasive depressed mood, pervasive anhedonia, significant change in weight, sleep disturbance, psychomotor agitation or retardation, pervasive fatigue or loss of energy, excessive guilt or feelings of worthlessness, difficulty concentrating (for instance, difficulty holding a conversation, paying attention or

making decisions that used to be made fairly easily) and recurrent thoughts of death or suicide. The individual diagnosed with MDD should be experiencing at least 5 of the somatic symptoms mentioned for the duration of 2 weeks. The symptoms should cause significant distress in the individual's social or occupational areas of functioning and must not be better accounted for by a general medical condition, medication, drugs or bereavement (American Psychiatric Association, 2000). The chronic stress faced by individuals who experienced IPV produced depressive symptoms such as irritability, hopelessness, despair, emptiness and chronic fatigue.

Depression is influenced by both genetic and environmental factors. First degree relatives of people with depression have a higher incidence of the illness, whether they are raised by that particular relative or not, supporting the influence of biological gene factors (Tsuang et al, 2004). Environmental factors are usually situational in nature and affect individuals differently.

Environmental factors can cause and exacerbate a depressive disorder in significant ways. For instance, experiencing a traumatic event may hasten one's vulnerability to developing depression if they have limited coping resources. Significant changes in a woman's life like the transitional role of mother through pregnancy may be stress-inducing if she does not have adequate coping mechanisms such as social support network and resources in terms of material, moral and financial support as well as accessibility to maternal health care services etc.

Additionally, people under constant and regular exposure to trauma are susceptible to depression. Post-traumatic stress disorder (PTSD) is an anxiety disorder that results from an individual experiencing constant exposure to trauma. The comorbidity of depression and PTSD is a major source of concern in mental health practice primarily due to the low rates of response to treatment for both mental illnesses. The comorbidity of depression and PTSD is common among

victims of IPV with prevalence rates as high as 75% for PTSD and 54% for depression; as was evidenced in a group of women who were undergoing intimate partner violence in Missouri, USA. Significant maladaptive cognitive styles of coping which had a depressive theme and the severity of the trauma due to IPV was a causative factor leading to comorbidity of depression and PTSD among these women (Nixon, Resick, & Nishith, 2004).

Therefore, women in abusive relationships are most likely to develop mental illnesses. The literature study patterns showed that depression was a major mental health consequence (Pico-Alfonso et al, 2006). Studies in Kenya also showed that depression is very prevalent. This study determined the association between depression and intimate partner violence using a sample drawn from Nairobi's KNH ante-natal clinic.

1.3 PROBLEM STATEMENT

There are high levels of intimate partner violence in Kenya with a recent prevalence rate of 47% as at 2009 (KNBS, 2010), which was a rise from the previously recorded 41.2% from the Kenya Demographic and Health Data in 2003 (UN, 2011). These statistical figures showed a 5.8% increment in intimate partner violence over time in Kenya. This increasing trend exposes victims of IPV to mental illnesses such as major depressive disorder therefore recognizing the need for action to be taken in screening, assessing and treating depression so as to reduce this ongoing problem.

A recent study that was done in KNH on the acceptability of assessing for IPV in health care settings showed that assessment was acceptable to health care providers and patients visiting certain clinics in the hospital (Undie et al, 2012). However, depression as a consequential risk factor of IPV was not examined in that study.

1.4 THEORETICAL FRAMEWORK

This study was guided by Beck's Cognitive Theory of Depression (Beck, Aaron T, 2008) which relates depression to ongoing stressful life experiences. The cognitive theory recognized traumatic life experiences and their resultant construction of faulty or maladaptive cognitive beliefs as predisposing events to developing stress and depression later on in life.

Beck described a cognitive triad that explains an individual's reaction to a stressor. The constant exposure to negative stimuli causes maladaptive thinking and emotional incongruence leading to a negative self-image of oneself. The triad explains how physical and emotional aspects of an individual are influenced by their maladaptive thinking patterns when they are experiencing stressful situations.

Beck's Cognitive Theory of Depression describes the role of stress as a key to activating previously dormant irrational cognitive schemas in an individual. Constant exposure to negative life experiences such as intimate partner violence result in a person reactivating dormant pre-existing irrational cognitions about the self i.e. a depressed individual will think negatively about themselves and their life experiences (Kendler, K S et al, 2000).

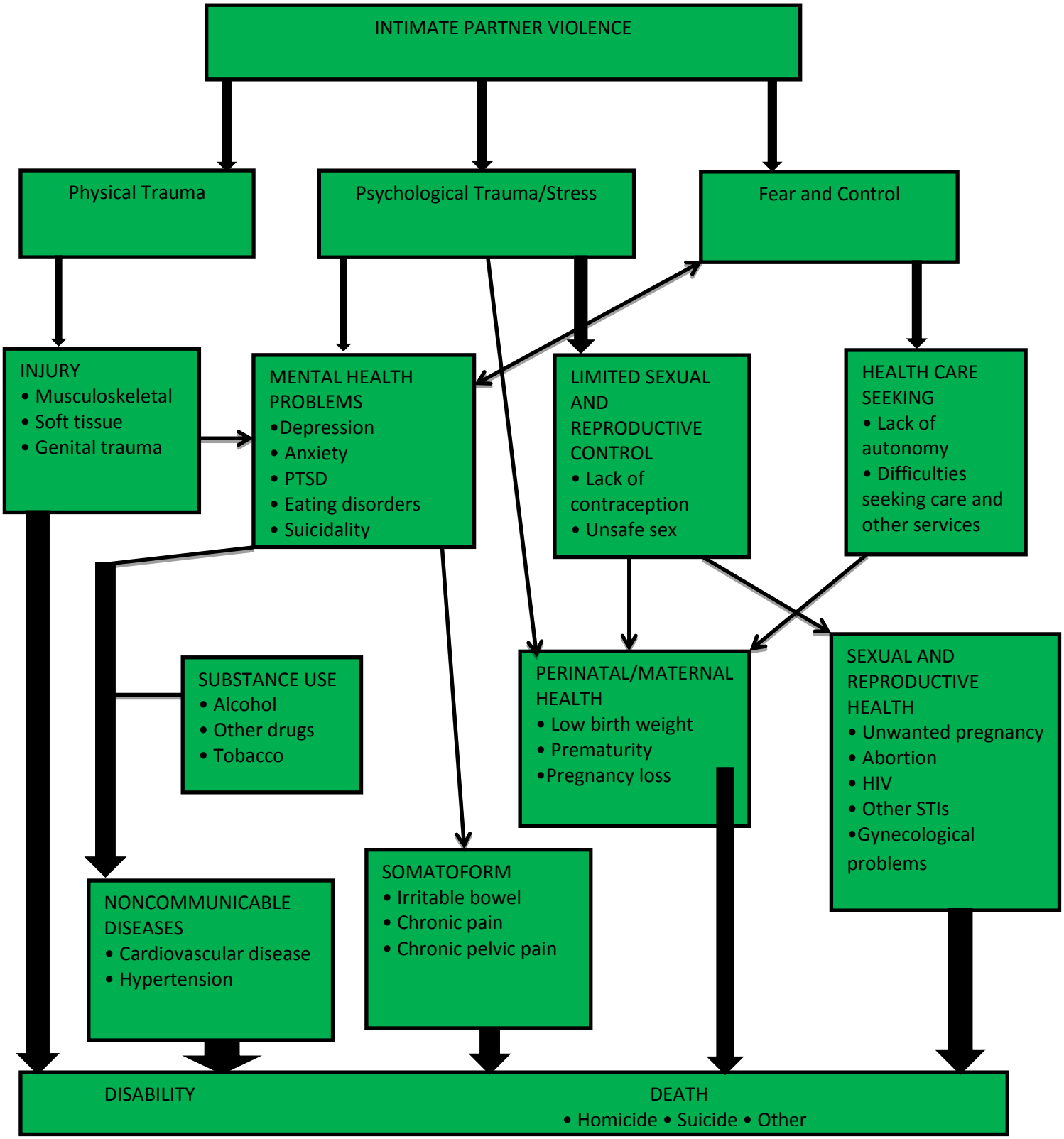
Information processing in depressed people is based on silent cognitive assumptions of how other significant people in their lives treat them. In the case of an abused spouse, the silent assumptions may be derived from the behavior of the abusive partner (in the form of physical actions or verbal messages - emotional, physical and sexual context of abuse) thus explaining the deleterious effects these actions have on the victim of intimate partner violence.

Depression from marital dissatisfaction develops over time with repetitive exposure to IPV that may be aggravated when the victim's dormant pre-existing irrational cognitions are re-awakened and the victim develops negative silent cognitive assumptions based on how they are constantly mistreated by their spouses. Consequently, there are various adverse health outcomes as a direct result of intimate partner violence.

The schematic illustration on p. 9 (Garcia-Moreno C. et al, 2013), describes the pathways of these adverse outcomes such as depression, injury, death, and maternal/perinatal health risks. Conclusively there is a relationship between the cognitive, biological, and experiential factors such as IPV in an individual that lead to the development of depression.

This study had different dimensions - it looked into IPV which is within the context of GBV, and depression within the context of pregnancy and finally the additional experience of IPV within the context of pregnancy. The chapter that follows is a review of literature with these categories in mind, given the paucity of available studies that relate directly to depression and IPV in pregnancy.

Figure 1: Schematic Illustration of the Health Outcomes of Intimate Partner Violence:



2.0 CHAPTER TWO: LITERATURE REVIEW

2.1 The Magnitude of IPV

The extent of IPV among women in ten countries worldwide – Japan, Serbia and Montenegro, Peru, Thailand, Samoa, Brazil, Bangladesh, Namibia, Ethiopia and Tanzania - in a qualitative research study, showed that physical and sexual forms of IPV were widespread thus concluding that IPV was a social vice that was inevitable and had to be addressed (Garcia-Moreno et al, 2006).

Due to the common nature of IPV in society, those who were victims of IPV are forced to find coping methods that accommodated this long-term violence. As was shown in a recent study done in rural Indonesia, based on the lived experiences and coping mechanisms of women experiencing IPV, female victims of IPV received very limited assistance from institutions. Their religious views that the husband is the head of his partner's life normalized IPV making those women reluctant to seek health care services. The coping resources of women experiencing IPV in the study were greatly influenced by two conflicting forces i.e. to escape violence versus to remain in an abusive relationship so as to maintain culturally-accepted gender norms. The conflict eventually developed into an unharmonious coping method in which the women would keenly oppose violence but still give in to the abusive living conditions. The study likened the conflict of those women's lives to an elastic band that is constantly being overextended (Hayati et al, 2013).

This showed that legal issues, social support network and socio-cultural beliefs contributed to how a victim of IPV responded to her situation. Although IPV continued to be a major societal problem in developing countries, there had been relatively few research studies that had provided

empirical data on the mental health consequences that the victims of IPV experienced over time as a result of the violence. Results from a qualitative study done in four developing countries; Chile, The Philippines, India and Egypt noted that women who experienced IPV were at a major risk for development of a mental disorder (Vizcarra et al, 2004).

A strong patriarchal Kenyan culture encourages IPV as a social norm agreeable and accepted by both men and women; with women being socialized to accept, persevere and justify intimate partner violence by keeping mum about their experiences of IPV (KNBS, 2010).

To assess the three forms of IPV, the KDHS questioned the participants of the survey on the frequency and severity of their lived experiences of IPV in the past 12 months prior to the survey being conducted. The physical and sexual violence was measured by asking a female participant, if her current or previous male partner had ever put her through such experiences: pushing, shaking or throwing something at her, slapping her, twisting her arm or pulling her hair, punching her with his fist or with something that could hurt her, kicking, dragging or beating her up, trying to choke or burn her on purpose, threatening or attacking her with a knife, gun or any other weapons and physically forcing her to have sexual intercourse even when she did not want to and forcing her to carry out any sexual acts that she did not want to perform.

Emotional/psychological violence was measured by asking a female participant if her current or previous male partner had ever put her through such experiences: saying or doing something to humiliate her in front of others, threatening to harm her or someone close to her and insulting her or making her feel bad about herself (KNBS, 2010).

2.2 Depression

Depression is a common psychological disorder. It affects approximately 121 million people globally. World Health Organization (WHO) states that one of the top twenty leading causes of disability and death in the world is unipolar depression. Currently, unipolar depression is ranked third globally since the year 2004 and ranked eighth in developing countries as a burden of disease (DALYs). According to a WHO report, unipolar depression affects about 65.5 million people of all ages in the world with 26.5 million of these people living in low-income countries such as Kenya (WHO, 2004). This emphasized the dire need for early detection and treatment measures to be established in the effective management of unipolar depression in the healthcare sector in Kenya.

In Kenya, although the prevalence of depression in the general population is unknown, some studies have looked at depression prevalence in different settings. One of these studies that was done at KNH showed that depression was one of the commonest mental disorders presenting in patients attending primary healthcare clinics. The non-psychiatric healthcare workers made very few referrals of these patients to mental healthcare workers due to the perceived stigma felt by these patients when they were diagnosed with depression (Othieno et al, 2001).

Aside from perceived stigma by patients upon diagnosis of depression, the poor clinician detection rate of depressive symptoms in patients attending primary health care clinics in Kenya was of major concern. In a study carried out to investigate the prevalence of mental disorders in 2,770 adult patients receiving inpatient and outpatient services from 10 medical facilities of different levels in Kenya, about 1,163 (42%) of the participants had mild to severe symptoms of depression. Only 114 of the 2,770 participants had a hospital record with a working diagnosis of

a mental illness meaning that majority of the patients with mental illnesses are undiagnosed (Ndetei et al, 2009).

2.3 Depression and Pregnancy

Major depressive disorder (MDD) has been recognized as a major disabling problem globally which leads to substantial impairment. MDD is more prevalent in women than men with a life-time prevalence rate of 16.2% and a 12 month prevalence rate of 6.6% (Kupfer, Frank, & Phillips, 2012).

No studies on maternal depression have as yet been conducted in Kenya; however, there had been a systematic review that was conducted by researchers in Canada on 714 articles in 2004. The systematic review's inclusion criterion was the numbers and/or percentages of patients diagnosed with antenatal depression at various stages of their gestation. These studies were largely observational surveys conducted in the years 1966-1982 by four biomedical literature resource databases namely: MEDLINE, EMBASE, CINAHL and HealthSTAR. Of the total 714 articles reviewed; 21 articles which collectively amounted to 19, 284 patients, recorded depression prevalence rates as significant as 7.4% in first trimester, 12.8% in second trimester and 12.0% in the third trimester during pregnancy (Bennet et al, 2004). These results showed a substantial need for assessment of depression during pregnancy to be addressed in planning health services.

Depression in pregnant women may go unnoticed if not assessed during the antenatal period as most health practitioners tend to assume that the woman is going through normal hormonal changes (Bowen & Muhajarine, 2006). The risk factors for developing MDD in pregnancy

include socio-demographic factors like low socioeconomic status, religion and age of the mother when pregnant as well as an abusive partner.

There were very few studies conducted on pregnancy and depression in Africa and the researcher was not able to find any done in the Kenyan setting. However, a recently conducted study on the prevalence of antenatal depression in South Africa indicated that there was a high chance of women developing depression during pregnancy with a prevalence rate of 47% (51 participants) in the study sample of 109 participants who were in their 3rd trimester of pregnancy (Rochat et al, 2011).

Women were a high risk group for development of depression if they were pregnant in a developing country where low socio-economic status posed a stressful financial challenge to many of those women who fall under the low-income level. Pregnancy among women in low socio-economic status has been associated with high chances of psychiatric comorbidities especially depression and anxiety disorders. A quantitative case control study of 94 pregnant women of low socio-economic status that was done at Conceição do Mato Dentro health clinic in Brazil showed a positive correlation between psychiatric illnesses and low socioeconomic status in pregnant women of different trimesters. With focus on depression, the study's case group presented with current MDD at 16% while the control group recorded 7.9% for current MDD on the MINI International Neuropsychiatric Interview (Dias et al, 2011).

Aside from problems of low socio-economic status, pregnant women may go through challenges in accessing antenatal healthcare which may lead to maternal deaths. Maternal deaths accounted for nearly 15% of all deaths among women in the crucial child-bearing age bracket of 15 - 49 years old (KNBS, 2010). Conclusively, the type of healthcare services a mother receives when

she is pregnant, during delivery and post-delivery is vital for the mother's welfare and her baby's survival. An environment that offers adequate maternal health care services, for instance, state-welfare hospitals or government subsidies on maternal healthcare services increases the number of women who can afford these health services.

2.4 Depression and IPV

The prevalence of depression among 142 women who had experienced IPV in a sample drawn from local shelters in Missouri, USA was found to be 54%. This study provided evidence of the causal relationship between depression and intimate partner violence (Nixon, Resick, & Nishith, 2004). The causal relationship between depression and IPV could work both ways; with an individual developing depression as a result of prolonged IPV and/or an individual suffering from depression or other mental health illnesses being vulnerable to IPV when their partners take advantage of their illness. A systematic review of 18 biomedical literature resource databases in USA with records on observational and/or intervention studies of prevalence and/or odds of being a victim of IPV among men and women of 16 years of age and older diagnosed with a mental illness, was used to generate the causal relationship between depression and IPV. The review's result of lifetime depression prevalence among women experiencing IPV was 45.8%. In the review, it was noted that the sustained or persistent exposure to traumatic events in a person's life such as IPV, may lead to onset, prolonged duration and recurrence of a mental illness. The study also noted that there were increased chances of a person suffering from mental illness becoming a victim of IPV in the population as compared to those without mental illness although the study did not show why that was the case (Trevillion et al, 2012).

2.5 Depression, IPV and Pregnancy

Based on the literature reviewed above, it could be assumed that the prevalence of depression among pregnant women experiencing IPV could be higher. However, the researcher was not able to access literature that addressed this problem from that perspective. The importance of psychological wellbeing in pregnancy cannot be under emphasized making this study an important contribution to the wellbeing of mothers and the positive outcome of pregnancy.

3.0 CHAPTER THREE

3.1 RATIONALE

Most of the recent literature in Africa was based on anecdotal reports with little of that work being published. The little literature on the association between IPV and depression was drawn from global research studies and in Kenya the extent to which the interplay of these factors had been studied was unknown. This study's innovation was drawn from the need to fill in the gap created by lack of empirical data in Kenya in the area of mental health research among pregnant women experiencing IPV so as to add knowledge on clinical depression in the antenatal and GBV areas of healthcare.

This study's findings on the prevalence measures of depression and IPV against pregnant women may be used to justify the need for assessment and early detection of depression and IPV in pregnant women during antenatal healthcare visits. The assessment, early treatment and management of depression could be a preventive measure in the reduction of disability related to depression, which also includes the health outcomes of the baby.

In Africa, there have been ongoing studies to provide scientific evidence for the need for awareness in the GBV area, highlighting the association between GBV and physical health of the GBV victims especially in terms of HIV transmission (Rumbold, 2008). In the same way, this study showed the association between IPV and depression thus providing empirical data that may be used in health care management and policy making in Kenya.

3.2 HYPOTHESIS AND STUDY QUESTION

This study worked on the hypothesis that pregnant women who experienced intimate partner violence were more likely to be depressed. The research study question was: Do pregnant women experiencing intimate partner violence suffer from depression?

3.3 OBJECTIVES

3.3.1 Broad Objective

The study's overall objective was to determine the association between IPV and depression in pregnant women.

3.3.2 Specific Objectives

i. To determine the prevalence of depression among pregnant women attending ANC at the study setting
ii. To determine the prevalence of IPV among pregnant women in the same study group

3.4 VARIABLES

i. Dependent variable - Current Major Depressive Disorder on the PHQ-9
ii. Independent variable - Experienced IPV over the past year or IPV that is occurring presently during pregnancy
iii. Other variables - Age of the woman at pregnancy, Religion, Marital Status, Level of Education, Occupation, Income Range per month and Gestation Period

4.0 CHAPTER FOUR: METHODOLOGY

4.1 Study Design

This study was a cross-sectional analytic quantitative survey.

4.2 Study Site Description

Kenyatta National Hospital (KNH) in Nairobi, Kenya is the largest and oldest referral hospital in East and Central Africa. This government hospital offers ante-natal healthcare services at its ante-natal clinic (ANC). The hospital caters for patients from lower middle class and low class socio-economic status; most people from the middle class and low class socio-economic status were likely to experience IPV. The ANC commonly referred to as Clinic 18 is adjacent to the main entrance of the hospital opposite Clinic 24 which partly hosts the Adult Psychiatric Clinic.

The ANC receives approximately 5,760 or more number of patients annually. The ANC at KNH takes in patient referral cases mostly from private clinics and government hospitals within the country. Most of the patients' reasons for referrals to the ANC include lack of theatre services and antenatal healthcare supplies, anemia and post-partum hemorrhage in premature labor and eclampsia (Njoroge, 2012).

4.3 Study Population

The study's population was Kenyan adult women of child-bearing age; who were pregnant, living in urban and semi-urban areas of Nairobi.

4.4 Inclusion Criteria; pregnant women who were of legal age (18 years old), could read and write, understood English and/or Kiswahili languages and had given consent to participate in the

study. Only the women who attended clinic sessions without their partners were included in the study.

4.5 Exclusion Criteria; women who could not read and write were excluded from the study as the PHQ-9 was self-administered and required an individual to be able to read and write, be it English or Kiswahili. Women accompanied by their husbands/ partners to the ANCs were also excluded from the study as the nature of the study would complicate their clinical visit as a couple. Women in life-threatening conditions and women who did not consent to take part in the study were excluded from the study.

4.6 Sample Size Determination

Formula used was $n = z^2pq/d^2$ (Cochran, 1977) (Habib, 2011), where; n = sample size, p = proportion of women experiencing IPV estimated at 47%, $q = 1 - p$, d = absolute precision (confidence level of 5%), $z = Z$ score of 95% confidence level.

The sample size determination was calculated using Epi Info Software. Given the prevalence of IPV was 47% in Kenya. The researcher used a significance level of $^{\alpha} = 0.05$, a percentage chance of detecting difference of $^{\beta} = 80$. Using Epi Info Software, a minimum sample size of *324* was yielded.

4.7 Sampling Method

This study used systematic random sampling to select all the participants who consented to take part in the study.

4.8 Recruitment

Each assessment procedure took approximately 30 minutes per respondent; 15 minutes for consent explanation and signed consent, with 15 minutes to complete the questionnaire and debrief of the respondent. The respondents selected were chosen after every odd number until the desired sample size was achieved.

4.9 Data Collection Instruments

The respondents completed their information in the questionnaire. The socio-demographic information included age of the respondent at time of pregnancy, respondents' marital status, religious information, education level, socio-economic status and their gestation.

4.9.1 WHO IPV Instrument

The respondents filled in their information regarding IPV, using the WHO IPV instrument (Undie et al, 2012). The IPV instrument assessed the 3 different forms of IPV: physical abuse, sexual abuse and emotional abuse.

4.9.2 Patient Health Questionnaire (PHQ-9)

The respondents filled in their information on depression using the PHQ-9 which is a standardized, self-administered assessment instrument that measures the symptoms of depression and the level of severity of depression yielding a close DSM-IV-TR diagnosis for depression (Monahan et al, 2009). The PHQ-9 was available in two languages, English and Kiswahili. The Kiswahili version of the PHQ-9 had been validated at KNH on the neck cancer patient population yielding a good test-retest reliability and construct validity (Omoro et al, 2006).

4.10 Statistical Analysis

Data was cleaned by reviewing the questionnaires at the end of the data collection period. Data entry was done using MS Excel and SPSS. Data analysis was done using SPSS version 21. For continuous data, the means and frequencies were determined while measures of association were used to determine significance in categorical data. Results were presented in tables, pie charts and narratives.

5.0 CHAPTER FIVE: RESULTS

5.1 Response Rate

Table 1: Response Rate of the Respondents

Data	**Those who responded**	**Those who did not respond (missing values)**
Age	(317), 98%	(7), 2%
Marital status	(317), 98%	(7), 2%
Religion	(319), 99%	(4), 1%
Level of education	(317), 98%	(7), 2%
Occupation	(317), 98%	(7), 2%
Level of Income	(315), 97%	(9), 3%
Gestation	(309), 95%	(15), 5%
IPV	(312), 96%	(12), 4%
Depression	(313), 97%	(11), 3%

The response rate was good with more than 90% of the 324 respondents recruited adequately answering all the questions in the questionnaire.

5.2 Sociodemographic Data

Table 2: Sociodemographic Data

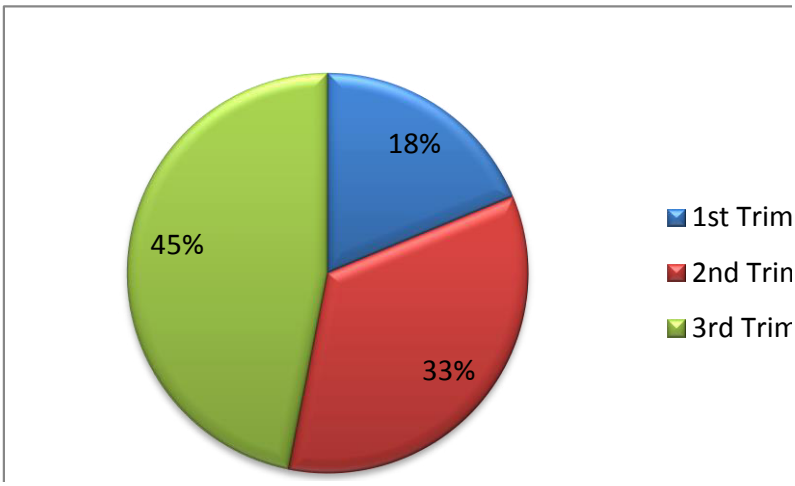
Variables		**Frequencies (n)**	**Percentages (%)**
Age	18-28 Years	159	50.2
	29-38 Years	142	44.8
	39 and above	16	5.0
	Total	**317**	**100.0**
Marital status	Single	60	18.5
	Married	257	79.3
	Total	**317**	**100.0**
Religion	Christian	315	98.7
	Muslim	4	1.3
	Total	**319**	**100.0**
Level of education	Primary Education level	14	4.4
	Secondary Education level	107	33.8
	College Education Level	196	61.8
	Total	**317**	**100.0**
Occupation of Respondents	Unemployed	91	28.7
	Employed	73	23.0
	Casual Employment	42	13.2
	Self Employed	111	35.0
	Total	**317**	**100.0**
Income Range per Month	Less than Kshs. 3,000	92	29.2
	Kshs. 4,000 to Kshs. 6,000	55	17.5
	Kshs. 7,000 to Kshs. 10,000	75	23.8
	Above Kshs. 10,000	93	29.5
	Total	**315**	**100.0**

A total of 317 of the 324 respondents reported their ages. The age range of the respondents was 18 – 42, with a mean age of 29 years, S.D 5.53. Of the respondents who reported their marital status, 60 (18.51%) reported as single and 257 (79.32%) reported as married. Of the participants who reported their religion, 315 (98.7%) were Christians and 4 (1.3%) were Muslims. Of the respondents reporting their education levels, a majority 196 (60.49%) had schooled up to college level, 107 (33.02%) up to secondary level and 14 (4.32%) up to primary level. Of the respondents who reported their occupation, a majority 111 (35%) were self-employed, 91 (28.7%) were unemployed, 73 (23%) were salaried employees, with 42 (13.2%) reporting as being casual workers. Majority 93 (29.5%) of the respondents' income was more than Kshs. 10,000 while 92 (29.2%) earned the minimal income of less than Kshs. 3,000.

5.3 Gestation Data

Of the respondents interviewed, 57 (18%) were in their 1st Trimester, 105 (33%) in their 2nd Trimester and 147 (45%) in their 3rd Trimester. See chart 1 below.

Chart 1: Gestation Data

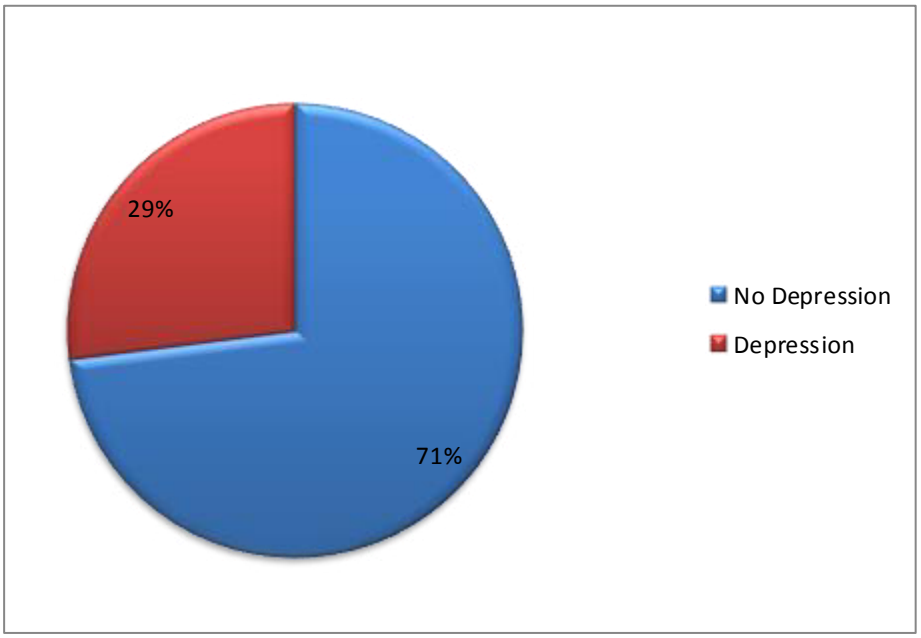


5.4 Prevalence of Depression

The overall prevalence of depression was (91) 29%. A cut off point of 10 was used to score depression on the PHQ-9 (Sidebottom, A C et al, 2012), (Manea L. et al, 2012).

The depression scores were further divided into three categories: no depression, moderate depression and severe depression. Of the respondents interviewed, 222 (71%) had no depression, 77 (25%) had moderate depression and 14 (4%) had severe depression.

Chart 2: Prevalence of Depression



5.5 Depression and Sociodemographic Correlates

Table 3: Depression and Sociodemographic correlates

		No Depression		Depression		Significance
Variables		n	%	n	%	
Age of the Respondents	18-28 Years	107	69.5	47	30.5	p = 0.056
	29-38 Years	98	71.5	39	28.5	p = 0.056
	39 and above	12	75.0	4	25.0	p = 0.056
	Total	**217**	**70.7**	**90**	**29.3**	
Marriage of Respondents	Single	35	60.3	23	39.7	p = 0.060
	Married	182	73.1	67	26.9	p = 0.060
	Total	**217**	**70.7**	**90**	**29.3**	
Education of Respondents	Primary Education Level	9	69.2	4	30.8	p = 0.055
	Secondary Education Level	79	76.7	24	23.3	p = 0.055
	Tertiary Education Level	129	67.5	62	32.5	p = 0.055
	Total	**217**	**70.7**	**90**	**29.3**	
Occupation of Respondents	Unemployed	55	62.5	33	37.5	p = 0.054
	Employed	56	78.9	15	21.1	p = 0.054
	Casual Employment	30	75.0	10	25.0	p = 0.054
	Self Employed	76	70.4	32	29.6	p = 0.482
	Total	**217**	**70.7**	**90**	**29.3**	
Income of Respondents	Less than Kshs. 3,000	56	62.9	33	37.1	p = 0.152
	Kshs. 3,000 – 6,000	36	66.7	18	33.3	p = 0.523
	Kshs. 7,000 – 10,000	51	69.9	22	30.1	p = 0.619
	Above Kshs. 10,000	72	80.9	17	19.1	p = 0.006
	Total	**215**	**70.5**	**90**	**29.5**	
Gestation	First Trimester	39	70.9	16	29.1	p = 0.055
	Second Trimester	73	72.3	28	27.7	p = 0.055
	Third Trimester	100	69.4	44	30.6	p = 0.055
	Total	212	70.7	88	29.3	

A statistical analysis of the correlation between overall antenatal depression and the Sociodemographic factors among the respondents was carried out and the findings showed that

there was no statistical significance between the variables. The tests were all done at 95% confidence intervals. However, further statistical analysis between moderate and severe depression types and Sociodemographic data showed that marriage was statistically significant with a p value = 0.031.

Of the single respondents interviewed, (n = 17) 29% experienced moderate depression and (n = 6) 10% experienced severe depression. Single status was significant with most of the single experiencing antenatal depression than the married. For the married, there was a weak negative relationship explained statistically by a tau B value of -0.11 which means that significance only applies to the single because the married ones experienced low levels of depression or no depression. Moderate and severe depression was statistically significant to the participant's income of above Kshs. 10,000 per month with a p value = 0.035. Of the respondents earning an income of above Kshs.10, 000 per month, (n = 15) 17% experienced moderate depression and (n = 2) 2% experienced severe depression.

There was no statistical significance between moderate and severe depression and the participants' age, education level, occupation and gestation. The tests were all done at 95% confidence intervals. The respondents age 18 – 28 years old (n = 37) 24% for moderate depression and (n = 10) 7% for severe depression experienced more antenatal depression. Majority of the respondents with college level of education experienced more antenatal depression, (n = 54) 28% moderate depression and (n = 8) 4% severe depression. Those who were self-employed, (n = 29) and unemployed (n = 27) had higher moderate depression. Those who earned less than Kshs. 3,000 per month (n = 27) had moderate depression. The respondents in their 3rd trimester of pregnancy experienced highest levels of moderate depression (n = 38).

Table 4: Moderate and Severe Depression and Sociodemographic correlates

		No Depression		Moderate Depression		Severe Depression		Significance
Variables		n	%	n	%	n	%	
Age of the Respondents	18-28 Years	107	69.5	37	24.0	10	6.5	p = 0.264
	29-38 Years	98	71.5	35	25.5	4	2.9	p = 0.665
	39 and above	12	75.0	4	25.0	0	0.0	p = 0.264
	Total	**217**	**70.7**	**76**	**24.8**	**14**	**4.6**	
Marriage of Respondents	Single	35	60.3	17	29.3	6	10.3	*p = 0.031
	Married	182	73.1	59	23.7	8	3.2	
	Total	**217**	**70.7**	**76**	**24.8**	**14**	**4.6**	
Education of Respondents	Primary Education Level	9	69.2	4	30.8	0	0.0	p = 0.997
	Secondary Education Level	79	76.7	18	17.5	6	5.8	p = 0.098
	Tertiary Education Level	129	67.5	54	28.3	8	4.2	p = 0.184
	Total	**217**	**70.7**	**76**	**24.8**	**14**	**4.6**	
Occupation of Respondents	Unemployed	55	62.5	27	30.7	6	6.8	p = 0.117
	Employed	56	78.9	12	16.9	3	4.2	p = 0.202
	Casual Employment	30	75.0	8	20.0	2	5.0	p = 0.755
	Self Employed	76	70.4	29	26.9	3	2.8	p = 0.482
	Total	**217**	**70.7**	**76**	**24.8**	**14**	**4.6**	
Income of Respondents	Less than Kshs. 3,000	56	62.9	27	30.3	6	6.7	p = 0.152
	Kshs. 3,000 – 6,000	36	66.7	14	25.9	4	7.4	p = 0.523
	Kshs. 7,000 – 10,000	51	69.9	20	27.4	2	2.7	p = 0.619
	Above Kshs. 10,000	72	80.9	15	16.9	2	2.2	*p = 0.035
	Total	**215**	**70.5**	**76**	**24.9**	**14**	**4.6**	
Gestation	First Trimester	39	70.9	12	21.8	4	7.3	p = 0.548
	Second Trimester	73	72.3	24	23.8	4	4.0	p = 0.874
	Third Trimester	100	69.4	38	26.4	6	4.2	p = 0.763
	Total	212	70.9	74	24	14	5.16	

5.6 Prevalence of Intimate Partner Violence

The overall prevalence of IPV was (52) 16%.

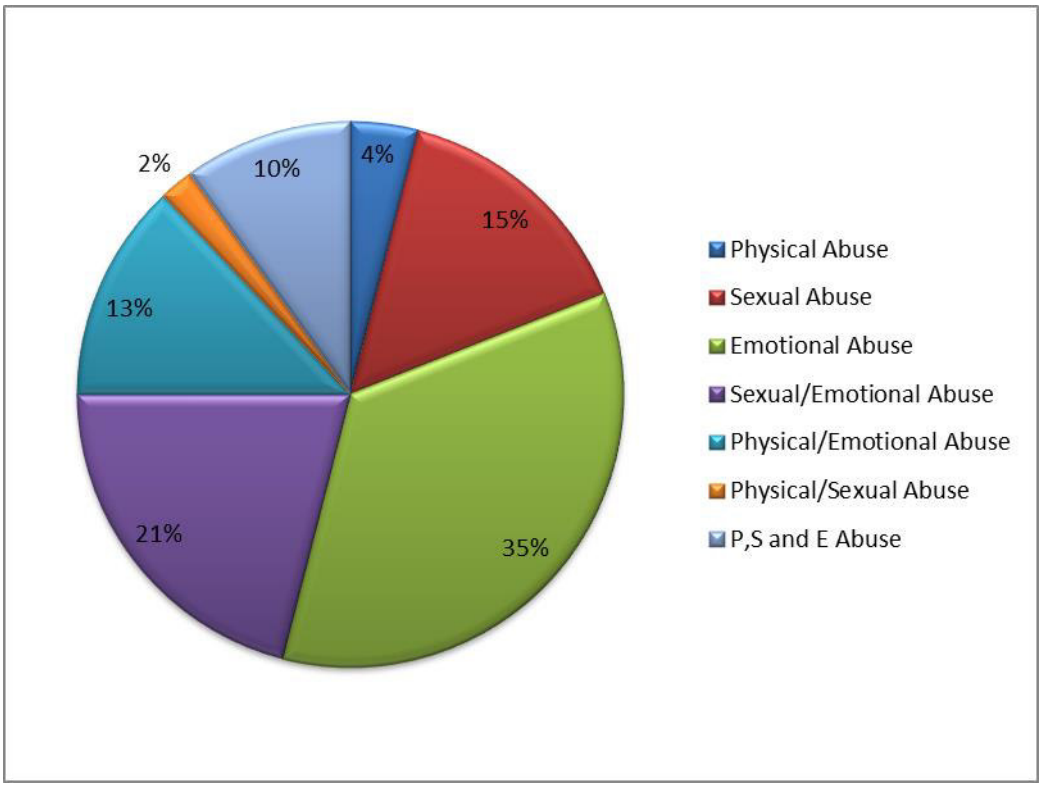
Of the 52 (16%) who experienced IPV, there were multiple forms of IPV:

i. 5 (10%) reported 3 forms of IPV - physical, sexual and emotional abuse

ii. 19 reported 2 forms of IPV: 11 (21%) sexual and emotional abuse, 7 (13%) physical and emotional abuse and 1 (2%) physical and sexual abuse

iii. 28 reported only 1 type of abuse: 2 (4%) physical, 8 (15%) sexual and 18 (35%) emotional abuse

Chart 3: Prevalence of multiple forms of Intimate Partner Violence (IPV)



5.7 Intimate Partner Violence and Sociodemographic Correlates

Table 5: Association between IPV and Sociodemographic Factors

		No IPV		IPV		Significance
Variables		n	%	n	%	
Age of the Respondents	18-28 Years	139	87.4	20	12.6	p = 0.118
	29-38 Years	117	82.4	25	17.6	p = 0.420
	39 and above	11	68.8	5	31.3	p = 0.081
	Total	**267**	**84.2**	**50**	**15.8**	
Marriage of Respondents	Single	56	93.3	4	6.7	p = 0.032
	Married	211	82.1	46	17.9	p = 0.032**
	Total	**267**	**87.7**	**50**	**15.8**	
Education of Respondents	Primary Education Level	11	78.6	3	21.4	p = 0.292
	Secondary Education Level	86	80.4	21	19.6	p = 0.292
	Tertiary Education Level	170	86.7	26	13.3	p = 0.292
	Total	**267**	**84.2**	**50**	**15.8**	
Occupation of Respondents	Unemployed	74	81.3	17	18.7	p = 0.367
	Employed	64	87.7	9	12.3	p = 0.357
	Casual Employment	33	78.6	9	21.4	p = 0.280
	Self Employed	96	86.5	15	13.5	p = 0.418
	Total	**267**	**84.2**	**50**	**15.8**	
Income of Respondents	Less than Kshs. 3,000	74	80.4	18	19.6	p = 0.207
	Kshs. 3,000 – 6,000	48	87.3	7	12.7	p = 0.524
	Kshs. 7,000 – 10,000	61	81.3	14	18.7	p = 0.394
	Above Kshs. 10,000	83	89.2	10	10.8	p = 0.128
	Total	**266**	**84.4**	**49**	**15.6**	
Gestation	First Trimester	47	82.5	10	17.5	p = 0.700
	Second Trimester	89	84.8	16	15.2	p = 0.831
	Third Trimester	124	84.4	23	15.6	p = 0.923
	Total	**260**	**84.1**	**49**	**15.9**	

There exists a statistically significant relationship between IPV and the participants' marriage with a p value = 0.032. Married status is significant with the married respondents experiencing more IPV than the single respondents. For the single respondents, there was a weak negative relationship explained statistically by a tau B value of -0.121 which meant that the statistical significance only applied to the married respondents because the single respondents experienced low levels of IPV or no IPV.

There was no statistically significant relationship between IPV and the participants' age, education level, occupation, income level and gestation. The tests were all done at 95% confidence intervals.

The respondents age 29 – 38 years old (n = 20), experienced more IPV than the other age brackets. Majority of the married respondents (n = 46) experienced more IPV than single respondents.

Those respondents with higher levels of education experienced more IPV: college education (n = 26), secondary school education at (n = 21), and primary school level at (n = 3).

Those who were unemployed experienced more IPV (n = 17), and n = 15 were self-employed respondents. Those who earned less than Kshs. 3,000 per month (n = 18), experienced more IPV with those who earned Kshs. 7,000 – 10,000 per month (n = 14) ranking 2nd highest. The respondents in their 3rd trimester of pregnancy experienced more IPV (n = 23), 2nd trimester (n = 16) and 10 respondents in their 1st trimester of pregnancy.

5.8 Correlation measure of the three forms of IPV and Sociodemographic Factors

Table 6: Association between 3 forms of IPV and Sociodemographic Factors

		No 3 forms of IPV		3 Forms of IPV		Significance
Variables		n	%	n	%	
Age of the Respondents	18-28 Years	19	95	1	5	p = 0.523
	29-38 Years	23	92	2	8	p = 1.000
	39 and above	4	80	1	20	p = 0.297
	Total	**46**	**92**	**4**	**8**	
Marriage of Respondents	Single	4	100	0	0	p = 0.539
	Married	42	91.3	4	8.7	p = 0.539
	Total	**46**	**92**	**4**	**8**	
Education of Respondents	Primary Education Level	2	66.7	1	33.3	p = 0.095
	Secondary Education Level	19	90.5	2	9.5	p = 0.735
	College Education Level	25	96.2	1	3.8	p = 0.260
	Total	**46**	**92**	**4**	**8**	
Occupation of Respondents	Unemployed	14	82.4	3	17.6	p = 0.071
	Employed	9	100	0	0	p = 0.329
	Casual Employment	9	100	0	0	p = 0.820
	Self Employed	14	93.3	1	6.7	p = 0.820
	Total	**46**	**92**	**4**	**8**	
Income of Respondents	Less than Kshs. 3,000	16	88.9	3	11.1	p = 0.267
	Kshs. 3,000 – 6,000	7	100	0	0	p = 0.466
	Kshs. 7,000 – 10,000	14	100	0	0	p = 0.258
	Above Kshs. 10,000	9	90	1	10	p = 0.566
	Total	**46**	**92**	**4**	**8**	
Gestation	First Trimester	9	90	1	10	p = 0.812
	Second Trimester	16	100	0	0	p = 0.146
	Third Trimester	20	87	3	13	p = 0.241
	Total	**45**	**92**	**4**	**8**	

There was no statistically significant relationship between the 3 forms of IPV and the respondents' age, marital status, education level, occupation, income level and gestation. The tests were all done at 95% confidence intervals.

One of the respondents who experienced all three forms of IPV did not respond to the Sociodemographic questionnaire so the total number of the cell size was 4 with may explain why there was no statistical significance for this category of IPV.

5.9 Correlation measure of the two forms of IPV and Sociodemographic Factors

Table 7: Association between 2 forms of IPV and Sociodemographic Factors

		No 2 forms of IPV		2 Forms of IPV		Significance
Variables		n	%	N	%	
Age of the Respondents	18-28 Years	10	50	10	50	p = 0.153
	29-38 Years	18	72	7	28	p = 0.145
	39 and above	3	60	2	40	p = 0.923
	Total	**31**	**62**	**19**	**38**	
Marriage of Respondents	Single	2	50	2	50	p = 0.606
	Married	29	63	17	37	p = 0.606
	Total	**31**	**62**	**19**	**38**	
Education of Respondents	Primary Education Level	3	100	0	0	p = 0.162
	Secondary Education Level	13	61.9	8	38.1	p = 0.991
	College Education Level	15	57.7	11	42.3	p = 0.514
	Total	**31**	**62**	**19**	**38**	
Occupation of Respondents	Unemployed	10	58.8	7	41.2	p = 0.740
	Employed	8	88.9	1	11.1	p = 0.066
	Casual Employment	3	33.3	6	66.7	p = 0.05**
	Self Employed	10	66.7	5	33.3	p = 0.656
	Total	**31**	**62**	**19**	**38**	
Income of Respondents	Less than Kshs. 3,000	9	50	9	50	p = 0.219
	Kshs. 3,000 – 6,000	4	57.1	3	42.9	p = 0.811
	Kshs. 7,000 – 10,000	7	50	7	50	p = 0.308
	Above Kshs. 10,000	10	100	0	0	p = 0.005
	Total	**30**	**61**	**19**	**39**	
Gestation	First Trimester	8	80	2	20	p = 0.219
	Second Trimester	8	50	8	50	p = 0.180
	Third Trimester	15	65.2	8	34.8	p = 0.790
	Total	**31**	**63**	**18**	**37**	

There was a statistically significant relationship between the forms of IPV and casual employment with p = 0.05. There was no statistically significant between the two forms of IPV and the respondents' age, marital status, education level, occupation, income level and gestation. The tests were all done at 95% confidence intervals. The income level p value was 0.005 but was not significant as the cell size was 0 and therefore did not fit into the cell size requirements of 5.

The younger respondents age 18-28 years old experienced more abuse with (n = 10) 50% experiencing two forms of IPV. 7 respondents age 29 – 38 and 2 of the respondents age 39 and above also experienced two forms of IPV. Majority of the married respondents 17 (37%) experienced two forms of IPV with 2 being single respondents.

Majority of the respondents who experienced two forms of IPV had been to college, n = 11(42%) with n = 8 (38%) having schooled to secondary level of education. There were no respondents from primary school level who had experienced two forms of IPV.

Majority of the unemployed respondents (n = 7) 41% and casually employed (n = 6) experienced two forms of IPV. Majority of those who earned less than Kshs. 3,000 per month (n = 9) and those who earned Kshs. 7,000 – 10,000 per month (n = 7) experienced two forms of IPV.

18 respondents experienced two forms of IPV with (n = 2) in their 1st trimester of pregnancy, (n = 8) in their 2nd trimester and (n = 8) in their 3rd trimester.

5.10 Correlation measure of the one form of IPV and Sociodemographic Factors

Table 8: Association between 1 form of IPV and Sociodemographic Factors

		No 1 form of IPV		1 Form of IPV		Significance
Variables		n	%	n	%	
Age of the Respondents	18-28 Years	11	55	9	45	p = 0.297
	29-38 Years	9	36	16	64	p = 0.156
	39 and above	3	60	2	40	p = 0.508
	Total	**23**	**46**	**27**	**54**	
Marriage of Respondents	Single	2	50	2	50	p = 0.867
	Married	21	45.7	25	54.3	p = 0.867
	Total	**23**	**46**	**27**	**54**	
Education of Respondents	Primary Education Level	1	33.3	2	66.7	p = 0.650
	Secondary Education Level	10	47.6	11	52.4	p = 0.845
	College Education Level	12	46.2	14	53.8	p = 0.982
	Total	**23**	**46**	**27**	**54**	
Occupation of Respondents	Unemployed	10	58.8	7	41.2	p = 0.192
	Employed	1	11.1	8	88.9	p = 0.020**
	Casual Employment	6	66.7	3	33.3	p = 0.170
	Self Employed	6	40	9	60	p = 0.577
	Total	**23**	**46**	**27**	**54**	
Income of Respondents	Less than Kshs. 3,000	11	61.1	7	38.9	p = 0.082
	Kshs. 3,000 – 6,000	3	42.9	4	57.1	p = 0.907
	Kshs. 7,000 – 10,000	7	50	7	50	p = 0.650
	Above Kshs. 10,000	1	10	9	90	p = 0.013**
	Total	**22**	**45**	**27**	**55**	
Gestation	First Trimester	3	30	7	70	p = 0.288
	Second Trimester	8	50	8	50	p = 0.617
	Third Trimester	11	47.8	12	52.2	p = 0.698
	Total	**22**	**45**	**27**	**55**	

There was a statistically significant relationship between 1 form of IPV and the respondents' occupation (formal employment) p = 0.020 and income level per month of above Kshs. 10,000 with p = 0.013. The tests were all done at 95% confidence intervals.

Majority of the respondents age 29 – 38 years old (n = 16) experienced one form of IPV with 9 respondents being age 18 – 28 years old and 2 being above 39 years old. Majority of the married respondents (n = 25) experienced one form of IPV with 2 respondents being single.

Majority of the respondents with one form of IPV had college level of education (n = 14), with 11 having reached secondary level of education and 2 primary school level. The self-employed respondents (n = 9) experienced one form of IPV more than the other categories for occupation, with (n = 8) being formally employed and (n = 7) being unemployed. Majority of those with an income level of above Kshs. 10,000 per month (n = 9) experienced one form of IPV more than the other income range categories, with (n = 7) being those who earned less than Kshs. 3,000 per month and (n = 7) being those who earned Kshs. 7,000 – 10,000 per month.

Majority of the respondents who experienced one form of IPV were in their 3rd trimester of pregnancy (n = 12), with 8 respondents being in their 2nd trimester and 7 respondents being in their 1st trimester.

5.11 Correlation measure of individual forms of IPV and Sociodemographic Factors

The individual forms of IPV could not be cross-tabulated into separate categories as the cell size numbers were too small. For physical abuse, n = 2 (4%), and therefore did not fit a cell size. Sexual abuse n = 8 (15%), p = 0.738 and emotional abuse n = 18 (35%), p = 0.390 had no statistical significance to Sociodemographic data.

5.12 Association between Depression and Intimate Partner Violence

There exists a statistically significant relationship (at 95% confidence intervals), between depression and intimate partner violence, $\chi^2 = 4.557$, (1), $p = 0.033$. n = 23 (44%) of the respondents experienced both antenatal depression and IPV.

Table 9: Association between Depression and Intimate Partner Violence

	No IPV	IPV	Total	Significance p = 0.033
No Depression	193 (74%)	29 (56%)	222 (71%)	
Depression	68 (26%)	**23 (44%)**	91 (29%)	
Total	261 (100%)	52 (100%)	313 (100%)	

5.13 Association between Depression and forms of Intimate Partner Violence

There was no statistically significant relationship (at 95% confidence intervals), between depression and the various forms of intimate partner violence with p = 0.686.

Table 10: Association between Depression and forms of Intimate Partner Violence

	1 Form of IPV	2 Forms of IPV	3 Forms of IPV	Total (n)
No Depression	16 (31%)	11 (21%)	2 (4%)	29
Depression	12 (23%)	8 (15%)	3 (6%)	23
Total	28 (54%)	19 (36%)	5 (10%)	52 (100%)

6.0 CHAPTER SIX: DISCUSSION

6.1 Prevalence of Antenatal Depression

According to these findings, the prevalence for moderate depression and severe depression among pregnant women was 25% and 4% respectively. A similar cross sectional study done on a sample size of 331 in Brazil showed that the prevalence of antenatal depression was 14.2% (Pereira PK et al, 2009).

This study's overall depression prevalence of 29% was lower than that of another study done in rural South Africa which recorded an overall prevalence rate of 47%. There may have been a higher prevalence due to the social and geographical differences in rural and urban settings. The pregnant women living in rural settings were more likely to experience higher depression levels because rural areas are often marginalized resulting in inadequate availability of social amenities (Rochat et al, 2011).

A similar study conducted in the urban township of Navi Mumbai, India found antenatal depression prevalence to be 25% (Shaunak Ajinkya et al, 2013). This prevalence is lower than that of this study but with relatively same sample characteristics in both studies.

A cut off point of 10 was used in a validated analysis of depression scores, in order to eliminate some items in the PHQ-9 that were most answered by majority of the pregnant respondents (Manea L. et al, 2012). These items were; loss of pleasure in doing things, changes in sleep pattern, feeling tired or having little energy, changes in appetite and trouble with concentrating while performing duties. These items are common factors that pregnant women experience with

frequent variation over a 2-week period due to their hormonal changes and not necessarily because they are depressed.

The cutoff point of 10 for this study was advised by yet another study that was looking to validate the PHQ-9 for screening of depression risk amongst pregnant women. Although, the PHQ-9 cutoff point of 10 produced a sensitivity rate of 85% and a specificity rate of 84% for the diagnosis of depression, the PHQ-9's validity was shown to be low in terms of its prevalence measure which was 3.6% in a sample size of 745. Yet within a reasonable level, the PHQ-9 proved to be an effective assessment tool when cross-tabulated with another diagnostic instrument; the Structured Clinical Interview for DSM-IV (SCID) which was used in the same sample of pregnant women on a later time period within their gestation (Sidebottom, A C et al, 2012).

The PHQ-9 failed to take into account these pregnancy characteristics. On the other hand, The Edinburgh Postpartum Depression Scale (EPDS) eliminates factors such as feeling tired or having little energy, changes in appetite and trouble with concentrating while performing duties. The question on changes in sleep pattern in the EPDS is addressed differently to suggest unhappiness as opposed to exhaustion or changes in sleep pattern due to bodily changes that naturally occur during pregnancy.

6.2 Prevalence of Intimate Partner Violence

The prevalence of IPV in this study was 16%. This prevalence is lower than the National Kenyan prevalence of IPV against adult women which was 47% as at the years 2008 - 2009 (KNBS, 2010 p. 253). The KDHS focused on all Kenyan women of child bearing age as young as 15 years old living in both rural and urban areas of the whole country whereas this study focused only on pregnant women of legal age living in an urban area in only 1 region of the country.

This study's prevalence is slightly higher than the findings of a secondary analysis of DHS data in 19 countries in which IPV prevalence in pregnant women in Tanzania was 12.3%, 9.4% in the DRC and in Uganda 13.5%; with Uganda's National Prevalence of IPV being 39.5% which is still lower than Kenya's National Prevalence of IPV (Karen Devries et al, 2010).

6.3 Association of Antenatal Depression and Intimate Partner Violence

This study's findings revealed an association between antenatal depression and IPV; with a p value of 0.033 and a prevalence of (23) 44%.

This was consistent with a similar study's review of findings of 17 papers done in Europe and Latin America focusing on spousal violence against pregnant women, which showed that 41% of the women who experienced IPV were at risk of developing both antenatal and postpartum depression (Fonseca-Machado, M. O. et al, 2014).

Another study (with a sample size of 358 pregnant women), focusing on the association between antenatal depression and IPV against pregnant women in Brazil showed that exposure to IPV during pregnancy increases the risks of experiencing antenatal depressive symptoms (Fonseca-Machado, M. O. et al, 2015).

6.4 Association between Depression and Sociodemographic factors

Of the single respondents interviewed, (n = 17), 29.3% experienced moderate depression and (n = 6), 10.3% experienced severe depression. The results were consistent with those of a similar study conducted in Singapore. The study focused on pregnant women who were unmarried and lived in urban areas, and the prevalence rate of antenatal depression was 12.5% (Keleher V. et al, 2012). Consequently, antenatal depression is significantly associated with one being a single, divorced, or a separated pregnant woman.

Of the respondents interviewed, who earned an income of above Kshs.10, 000 per month, (n = 15), 16.9% experienced moderate depression and (n = 2), 2.2% experienced severe depression. In a study done in Cape Town, South Africa, the prevalence of antenatal depression among women earning an income of R. 2,000 (estimated at Kshs. 16,294) was 39% (Hartley M. et al, 2011). Therefore, being a single expectant woman in the middle income earning level is a risk factor for experiencing antenatal depression attributed to lack of spousal social support.

6.5 Association between Intimate Partner Violence and Sociodemographic factors

The experience of IPV against pregnant women had a strong association with respondents being married (Marriage p = 0.032), having either formal employment (p value = 0.02) or casual employment (p value = 0.05) and earning a higher income of above Kshs. 10,000 per month (p = 0.013).

These results were consistent with those of the KDHS under degree of marital control exercised by husbands. 37% of the KDHS respondents reported that their husbands did not trust them with money. These women had been employed for cash and were living in urban areas. In the KDHS, Nairobi was ranked 3rd highest for IPV due to this form of marital control directly related to married women being financially stable (KNBS, 2010 p. 252).

It is important to note that contrary to this study's findings, a World Health Organization violence prevention report showed that lack of employment and low levels of income among pregnant women was a global risk factor for experiencing IPV during pregnancy (WHO, 2002). In further agreement, a qualitative study done in Eastern Uganda showed that the focus groups of

pregnant women reported poverty as a major cause of IPV because the husband could not provide for the family and this led to spousal violence (Karamagi et al, 2006).

However, a CDC report indicated that employment could be a protective factor as it provides financial support and increases a woman's self-esteem, thus providing her with psychological resilience to cope with or eventually successfully end an abusive relationship (Renzetti C.M., 2009).

6.6 Study Limitations

1) This study did not consider other factors such as burden of care imposed on the mothers due to number of children the pregnant women in the sample had as not every woman could have been at the clinic for their 1st pregnancy therefore antenatal depression may be as a result of these other factors such as multi-parity.
2) The frequent hospital strikes by staff members made the data collection time period longer as each strike meant the clinic would be closed.
3) Participants were not given cash incentives; recruiting them for participation willingly was challenging. They claimed that they usually get paid to take part in other research studies in the same clinic and/or other clinics/hospitals. These women were excluded from the study.

6.7 Conclusion

The prevalence of depression and IPV in pregnant women attending antenatal clinic in Kenya was comparable to the median prevalence rates calculated and documented in various studies in the world. In Kenya, women are at risk of developing depression and experiencing IPV in pregnancy, both leading to detrimental health effects. Interventions to stop IPV during pregnancy ought to focus on married women so as reduce maternal mortality/morbidity and improve maternal health. Interventions to reduce antenatal depression ought to focus on unmarried women by offering psychosocial support at the antenatal clinic.

6.8 Recommendations

1. Follow up care for Antenatal Clinic patients ought to include other counseling services for Family Planning, Sexual Reproductive Health (SRH) and GBV counseling. Such topic areas ideally should be covered by the counseling center at the ANC. The researcher had to debrief respondents after data collection on SRH issues and refer them back to the ANC. In future, an emergency contact number should be provided to patients at the ANC for patients to seek help on SRH counseling.
2. IPV services are not entirely free for victims of IPV with charges on the case summary (a requirement for police work in handling a GBV case in order to prosecute the perpetrator in a repeat assault) is paid for by the victim although the GBVRC claims that the service is free. This shows failure to implement services to completion by KNH and the Ministry of Health.
3. IPV to be given importance as a social problem and involving mass media in disseminating information on GBV health services available in Kenya.

4. Psychological interventions such as marital therapy (for couples) or interpersonal therapy (for unmarried women) experiencing IPV and depression during pregnancy.
5. These results provide vital information in raising awareness for regular assessments of mental illnesses in Primary Health Care Setting.

6.9 Further Research

A national representative survey of pregnant women ought to be carried out to define the determinants of spousal violence, its causes, and detrimental consequences.

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APPENDIX I: CONSENT FORM

THE UNIVERSITY OF NAIROBI

DEPARTMENT OF PSYCHIATRY

CONSENT FORM

THE PREVALENCE OF DEPRESSION AND INTIMATE PARTNER VIOLENCE AGAINST PREGNANT WOMEN ATTENDING ANTENATAL CLINIC AT KENYATTA NATIONAL HOSPITAL

Investigator:	**Institution: Department of Psychiatry, The University of Nairobi (UON)**
Caroline W. Mwakio	
KNH/UoN-ERC	**P.O. Box 20723 – 00202**
Contact Information:	**Tel: 726300-9**
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	Email:uonknh_erc@uonbi.ac.ke

In emergency please call name of investigator listed above.

Investigator's Statement

I, Caroline Mwakio, a clinical psychology student at The University of Nairobi, Department of Psychiatry wish to do a study entitled **the prevalence of depression and intimate partner violence against pregnant women attending antenatal clinic at KNH.** This research study is part of the requirement for completion of my postgraduate degree course under the supervision of Dr. Mathai and Dr. Khasakhala who are lecturers at the University of Nairobi and Dr. Makanyengo who is the head of the GBV clinic at Kenyatta National Hospital.

Background Information

I am conducting a study that asks women about various health issues and life experiences. This information will help the institutions (UON and KNH) and the ministry of health to plan health services. Participation in the survey may take 30 to 45 minutes to complete.

Purpose

This study will be exploring the occurrence of depression; an emotional and psychological state characterized by sadness and violence within the relationship among pregnant women attending antenatal clinic (ANC) at KNH.

Number of people who will take part in the study

The investigator will recruit a minimum of 324 pregnant women attending the antenatal clinic at KNH to participate in the study.

Procedures of the study

I will explain the content of the consent form to you and if you agree to participate then I will ask you to sign the consent form showing that you have agreed to take part in the study.

The study will involve asking you questions concerning your relationship with your spouse, a few general questions such as your age, religion etc. and questions which will be used to assess for depression. These questions will be in form of 2 questionnaires; the PHQ-9 and the socio-demographic questionnaire. I will explain the contents of each questionnaire before you answer its questions. I will be available to answer any questions you might have after the interview.

Visits

This is the only visit that you will take part in during this study with an exception on follow up sessions.

Follow up schedules will be done after the research is completed and presented to the Department of Psychiatry for approval. All the participants who will take part in the study will be contacted via phone calls or during their subsequent visits to the ANC and given appropriate feedback on what the study results produce in relation to their experiences.

Study Length

This study will take a total of 8 months to carry out, that is, from November 2014 to June 2015.

Risk, Stress or Discomfort

Given the sensitive nature of the study area, some of the questions may distress you by re-traumatizing you while you recall the events but I will be aware of any signs of distress you may be going through during the interview and will manage them appropriately.

Benefits

If you express the need for immediate counseling services and/or future follow-up psychological care and psycho-education, I will make relevant and practical recommendations such as referring you to the KNH GBVRC clinic for counseling and notifying the institution concerned. This is a way of reducing stigma and disseminating information of this study area (IPV) in terms of how participants' lives can improve.

It is hoped that the information gained from the study will be of benefit leading to future implementation of better medical and mental healthcare interventions for women of child bearing age in Kenya thus improving the quality of life among these women.

Voluntarism

Participation in this study is **voluntary**, and you will not be victimized or coerced into taking part in the study if you do not want to. There is no right or wrong answer. Some of the topics may be difficult to discuss, but many women have found it useful to have the opportunity to talk about such issues.

If we should come to any question you do not want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, I hope that you will participate in this study since your views are important.

Confidentiality

I would like to inform you that all information you give here is **private and confidential** and will not be shared with other people except the supervisors who are part of the research team. If we feel that you need further counseling, this will be discussed with you first and you will only be referred for counseling after you consent to it.

INVESTIGATOR'S SIGNATURE

_____ Date: _____

IN CASE YOU HAVE ANY QUESTION OR PROBLEMS DURING OR AFTER THE STUDY, PLEASE CALL THE INVESTIGATOR OR THE STUDY SUPERVISOR FOR CLARIFICATION.

PARTICIPANT'S STATEMENT AND SIGNATURE

The study described above has been explained to me. I consent to take part in this activity. I have had the chance to ask questions. If I have questions in the future about the research I know I can ask the researcher and /or supervisor listed above.

I will receive a copy of this form.

_____

Signature **Date**

_____

Participant's Name

SWAHILI:

CHUO KIKUU CHA NAIROBI

FOMU RIDHAA

MAAMBUKIZI YA UNYOGOVU NA UGOMVI/VURUGU WA UHUSIANO WA NDANI KWA WANAWAKE WENYE MIMBA

Mtafiti:	**Shule: Chuo Kikuu cha Nairobi**
Caroline W. Mwakio	
KNH/UoN-ERC:	**Sanduku la Posta 20723 – 00202 Nairobi. Simu:726300-9, Faksi: 725272, Barua Pepe: uonknh_erc@uonbi.ac.ke**

Kukiwa jambo la dharura, tafadhali mpigie simu mtafiti aliyetajwa hapa juu.

Matamshi ya Mtafiti

Mimi, Caroline Mwakio, mwanafunzi wa Kliniki Saikolojia katika Chuo Kikuu cha Nairobi, Idara ya Psychiatry ningependa kufanya utafiti lenye jina **maambukizi ya unyogovu na ugomvi/vurugu wa uhusiano wa ndani kwa wanawake wenye mimba.** Kufanya utafiti huu unahitajika ili nimalize masomo yangu na wasimamizi wangu wa uatifiti huu ni Dr. Mathai na Dr. Khasakhala ambao ni walimu katika chuo kikuu cha Nairobi na Dr. Makanyengo ambaye ni mkuu wa kliniki ya GBV hospitali ya Kenyatta.

Mambo ya Kinaga Ubaga

Ninafanya utafiti unaouliza wanawake maswali kadhaa yanao gusia hali yao ya afya na uzoefu wa mambo ya afya maishani mwao. Matokeo ya utafiti huu yatasaidia vyuo (UON & KNH) na Wizara ya Afya kupanga huduma za kiafya. Kupata idhini yako na kukuuliza maswali kadhaa unaweza kuchukua yamkini muda wa dakika 30 hadi 45 kumaliza.

Kusudi

Utafiti huu utachunguza matukio ya unyogovu; hali ya hisia na mafikira ya huzuni mwingi unaotokana na ugomvi/vurugu wa uhusiano wa ndani kati ya wanawake wenye mimba wanaopata huduma ya kiafya katika zahanati la wanawake waja wazito hapa hospitali ya Kenyatta.

Idadi ya watu watakao husika katika utafiti huu

Mtafiti atachukua wamama mia tatu ishirini na nne waja wazito watakao husika na utafiti huu katika kliniki ya waja wazito, hospitali ya Kenyatta.

Taratibu ya utafiti huu

Nitakuelezea yaliyomo katika fomu ridhaa kisha ukikubali kushiriki, nitakuitisha sahihi yako ili kuonyesha ya kwamba umekubali kushiriki katika utafiti huu. Nitakuuliza maswali kuhusu uhusiano wako na bwanako na maswali mengine yatakayo gusia mambo kama miaka yako, dini yako na kadhilika na maswali mengine yatakayo pima unyogovu. Maswali haya yatakuwa kwenye vidodosi viwili; kidodosi cha kupima unyogovu na kidodosi cha kupima maswala ya kijamii. Nitakuelezea yaliyomo katika vidodosi hivi kabla ujibu maswali hayo mwenyewe. Nitajibu maswali yoyote utakayoniuliza baada ya mahojiano yetu.

Ziara

Hii ndio ziara pekee utakayo hitajika kushiriki wakati utafiti huu unapofanyika isipokuwa wakati wa kupeana majibu ya matokeo ya utafiti. Wakati wa kupeana matokeo ya utafiti huu utafanyika baada ya utafiti kumalizika; baada ya kuwasilishwa na kuidhinishwa na Idara ya Psychiatry. Wanawake wote watakaoshiriki watapewa majibu ya utafiti huu kupitia aidha kupigiwa simu au watakapo kuja kwa huduma ya afya katika zahanati hili la waja wazito.

Urefu wa muda utafiti huu utachukua

Kufanya na kumaliza utafiti huu utachukua muda wa miezi nane, yaani, kuanzia Novemba 2014 hadi Juni 2015.

Hali ya kufadhaishwa roho

Kulingana na unyeti wa utafiti huu, kuna uwezekano ya kwamba unaweza kujihisi kufadhahishwa na mambo tutakayoongea katika kikao chetu. Nitakusaidia na huduma ya afya kulingana na mahitaji yako.

Faida

Kama utahitaji matibabu ya ushauri, nitakuelekeza kwa washauri wa hospitali ya Kenyatta walionaujuzi wa matibabu ya kiushauri na/au huduma ya baadaye ya kiafya ya elimu ya mambo ya ki saikolojia. Nitakupatia idhini ya rufaa katika kliniki ya GBV, KNH kwa lengo la kupata ushauri nitakapoona unahitaji matibabu ya ushauri. Hii ni mojawapo ya mbinu za kueneza habari ya kuimarisha au kuboresha hali ya afya katika maisha ya watu. Natumai ya kwamba habari yoyote tutakayo pata kutokana na utafiti huu utatumiwa kwa huduma ya afya kwa wamama walioko katika umri wa kujifungua mimba ili kuiboresha hali ya afya ya wamama nchini Kenya.

Kushiriki kwa hiari yako

Kushiriki kwako kwa utafiti huu ni kwa **hiari** yako, na hauta lazimishwa na mtu yeyote kushiriki kwa utafiti huu kama hautaki. Hamna jibu sawa au jibu lisilo sawa. Maswala mengine yanaeza kuwa magumu kujadili, lakini wanawake wengi huwa wanafurahia kupata muda wa kuongea kuhusu mambo haya. Kama tutafikia swali lolote lenye pengine hutataka kujibu, tafadhali nijulishe ili niweze kuliruka nikuulize swali lingine; ama unaweza simamisha mahojiano wakati wowote ule. Ingawa, matumaini yangu ni kwamba utashiriki kwa utafiti huu kwa sababu maoni yako ni muhimu sana.

Jinsi ya usiri katika utafiti huu

Ningependelea kukueleza ya kwamba jambo lolote utakalo niambia hapa kwenye kikao chetu, litakuwa ni **jambo la faragha au usiri** na sitaambia mtu yeyote isipokuwa wasimamizi wangu

ambao pia wananisaidia kutekeleza utafiti huu. Tutakapoona unahitaji ushauri zaidi, tukakueleza kwanza na utapewa ushauri huo utakapotoa idhini yako. Utafiti huu utakuwa na **usiri** hadi mwisho.

SAHIHI YA MTAFITI

_____ Tarehe: _____

KAMA UNA MASWALI AU SHIDA ZOZOTE BAADA YA KUSHIRIKI KATIKA UTAFITI HUU, TAFADHALI MPIGIE SIMU MTAFITI; CAROLINE MWAKIO AU MSIMAMIZI WA UTAFITI HUU ILI UPATE USAIDIZI.

TAARIFA NA SAHIHI/SAINI YA MSHIRIKI

Nimeelezwa kuhusu utafiti huu uliyochapishwa hapo awali. Utafiti huu umedhahirishwa kwangu kikamilifu na nimejisajilisha kushiriki kwenye utafiti huu. Nimepata muda wa kuuliza maswali na nikauliza maswali yangu. Pia nikiwa na maswali kuhusu utafiti huu baadaye, najua naweza kupigia mtafiti aliyetajwa hapo awali.

Nitapewa nakala ya fomu ridhaa hii.

_____

Sahihi/Saini **Tarehe**

_____

Majina ya Mshiriki

APPENDIX II: PHQ-9

FRONT PAGE **Code: 01**

INSTRUCTIONS FOR ANSWERING THE QUESTIONNAIRE

1. Please use one tick (✔) in each response that is applicable to you to indicate your answer.
2. Please answer all the questions in this questionnaire.
3. Where you're not sure of how to answer a question, please ask the investigator to clarify the information before you answer the question.
4. You will be provided with stationery (pen, pencil, eraser etc.) to fill in the information in the questionnaire.

Over the last 2 weeks, how often have you been bothered by any of the following problems?	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things				
2. Feeling down, depressed, or hopeless				
3. Trouble falling or staying asleep, or sleeping too much				
4. Feeling tired or having little energy				
5. Poor appetite or overeating				
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading the newspaper, listening to the radio or watching TV				
8. Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual				
9. Thoughts that you would be better off dead or of hurting yourself				
10. If you checked off any problems above (1-9), how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	**Not difficult at all ……**	**Somewhat difficult …….**	**Very difficult ……**	**Extremely difficult ……**

UKURASA WA JUU **Code: 01**

MAELEKEZO JINSI YA KUJIBU MASWALI YA KIDODOSI HILI

1. Tafadhali weka alama (✔) kwa kila jibu linalo kuhusu ili kuashiria jibu lako.
2. Tafadhali jaza majibu ya maswali yote yaliyomo kwenye kidodosi hili.
3. Palipo swali lenye hautaelewa jinsi ya kulijibu, tafadhali uliza mtafiti ili aweze kukuelezea vyema kabla ujaze jibu hilo.
4. Utapewa vyombo vya kujibia maswali ya kidodosi hili kama kalamu ya wino, kalamu ya risasi na kifutio.

Katika kipindi cha wiki mbili zilizopita ni mara ngapi umesumbuliwa na matatizo haya yafuatayo?	**Haijatokezea Kabisa**	**Siku kadhaa**	**Zaidi ya nusu ya siku hizo**	**Takriban kila siku**
1. Kutokuwa na hamu au raha ya kufanya kitu				
2. Kujisikia tabu sana au kukata tama				
3. Matatizo ya kupata usingizi au kuweza kulala au kulala sana				
4. Kujisikia kuchoka au kutokuwa na nguvu				
5. Kutokuwa na hamu ya kula au kula sana				
6. Kujisikia vibaya-au kujiona kuwa umeshindwa kabisa au umejiangusha au kuikatisha tama familia yako				
7. Matatizo ya kuwa makini kwa mfano unaposoma gazeti, kuskiza redio au kuangalia runinga				
8. Kutembea au kuongea taratibu sana mpaka watu wakawa wameona tofauti? Au kinyume chake, kwamba hutulizani na unahangaika sana kuliko ilivyo kawaida				
9. Mawazo kuwa ni afadhali zaidi ufe au ujidhuru kwa namna Fulani				
10. Kama ulitia alama matatizo yoyote, je yamefanya vigumu kivipi kwako kufanya kazi, kushughulikia vitu nyumbani, au kutangamana na watu wengine?	**Sio ngumu hata kidogo ……**	**Ngumu kiasi …….**	**Ngumu sana …….**	**Ngumu zaidi …….**

APPENDIX III: IPV AND SOCIO-DEMOGRAPHIC QUESTIONNAIRE

FRONT PAGE **Code:**

INSTRUCTIONS FOR ANSWERING THE QUESTIONNAIRE

1. Please fill in the answers in the blank spaces provided.
2. For the questions in tables, please use a tick (✔) in the response that is applicable to you to indicate your answer.
3. Please answer all the questions in this questionnaire.
4. Where you're not sure of how to answer a question, please ask the investigator to clarify the information before you answer the question.
5. You will be provided with stationery (pen, pencil, eraser etc.) to fill in the information in the questionnaire.

PART I: INTIMATE PARTNER VIOLENCE (IPV) INSTRUMENT

a) In the past 12 months or since you became pregnant, does your husband/ partner:

	Please tick in the appropriate box (Yes or No)	**Yes**	**No**
1.	Push you, shake you, or throw something at you?		
2.	Slap you?		
3.	Twist your arm or pull your hair?		
4.	Punch you with his fist or with something that could hurt you?		
5.	Kick you or drag you or beat you up?		
6.	Try to choke you or burn you on purpose?		
7.	Threaten or attack you with a knife, gun, or any other weapon?		
8.	Physically force you to have sexual intercourse even when you did not want to?		
9.	Force you to perform any sexual acts you did not want to?		
10.	Say or do something to humiliate you in front of others?		
11.	Threaten to hurt or harm you or someone close to you?		
12.	Insult you or make you feel bad about yourself?		

PART II: SOCIO-DEMOGRAPHIC INFORMATION

a) Age

In what year were you born? Year ……..

b) Marriage

Please tick the option that is applicable to you	
Single	
Married	
Separated	
Divorced	

c) Religion

Christian …… Muslim …… Other (specify) ……

d) Level of Education

Please tick the option that is applicable to you	
No formal education	
Primary school education	
Secondary school education	
College education	

For completion of college education:

Please indicate (tick) which level is applicable to you	
Certificate	
Diploma	
University	

e) Socioeconomic Status

1. Occupation:

Please indicate (tick) the option that is applicable to you	
Employed	
Casual employment	
Self-employed	
Unemployed	

2. Income Range per Month:

Please indicate (tick) the option that is applicable to you	
Less than Kshs. 3000	
Kshs. 3000 to Kshs. 6000	
Kshs. 6,000 to Kshs. 10,000	
Above Kshs. 10,000	

f) Gestation Period

When is your pregnancy due (EDD)? ……

APPENDIX III: KISWAHILI TRANSLATION OF IPV AND SOCIO-DEMOGRAPHIC QUESTIONNAIRE

UKURASA WA JUU Code:

MAELEKEZO JINSI YA KUJIBU MASWALI YA KIDODOSI HILI

1. Tafadhali jaza majibu kwenye nafasi iliyowekwa kando ya kila swali.
2. Katikaa maswali yaliyomo kwenye michoro ya meza ya kueleza majibu yako, tafadhali weka alama (✔) kwa kila jibu linalo kuhusu ili kuashiria jibu lako.
3. Tafadhali jaza majibu ya maswali yote yaliyomo kwenye kidodosi hili.
4. Palipo swali lenye hautaelewa jinsi ya kulijibu, tafadhali uliza mtafiti ili aweze kukuelezea vyema kabla ujaze jibu hilo.
5. Utapewa vyombo vya kujibia maswali ya kidodosi hili kama kalamu ya wino, kalamu ya risasi na kifutio.

SEHEMU YA KWANZA: KIDODOSI CHA KUPIMA UGOMVI/VURUGU WA UHUSIANO WA NDANI

a) Katika miezi 12 iliyopita – au tangu ushike mimba – je, bwana/mume/mpenzi wako:

	Tafadhali chora alama/ishara kulingana na jibu lako (Ndio au La)	**Ndio**	**La**
1.	Hukuskumisha, kukutingisha mwili au kukutupitia vitu?		
2.	Hukupiga makofi?		
3.	Hukunja mkono wako au kuvuta nywele yako?		
4.	Hukupiga mangumi au hukupiga kwa kutumia chombo kinachoweza kukuumiza		
5.	Hukupiga mateke au kukuvuta au kukupiga?		
6.	Hujaribu kukunyonga au kukuchoma ki makusudi?		
7.	Hukutishia maisha yako au kukushambulia kwa kutumia kisu, bunduki au silaha yoyote ile??		
8.	Hukulazimisha kufanya ngono hata kama hutaki kufanya hivyo?		
9.	Hukulazimisha kufanya vitendo vya ki mapenzi hata kama hutaki kufanya vitendo hivyo?		
10.	Husema au kufanya mambo yanayokufadhaisha roho au kuaibisha mbele ya watu wengine?		
11.	Hukutishia usalama wako au wa wapendwa wenzako?		
12.	Hukutusi au kukufanya ujihisi kufadhaika roho?		

SEHEMU YA PILI: MASWALA NA MAMBO YA KIJAMII YA WATU

a) Miaka: Ulizaliwa mwaka gani? Mwaka ……

b) Ndoa

Tafadhali chora alama kwa aina ya ndoa yako	
Bila mume	
Umeolewa	
Umeachana na mume wako	
Umepewa talaka na mumeo	

c) Dini

Mkristo …… Muislamu …… Ingine (Fafanua) ……

d) Masomo

Tafadhali chora alama katika aina ya masomo yako	
Hakusoma	
Shule ya Msingi	
Shule ya Upili	
Masomo ya Vyuo	

Kwa walio maliza masomo ya vyuo:

Tafadhali chora alama katika aina ya masomo yako	
Cheti	
Stashahada	
Chuo Kikuu	

e) Maswala ya ki Fedha

1. Kazi:

Tafadhali chora alama kwa aina ya kazi yako	
Umeandikwa kazi	
Unashikia wengine kazi kwa muda mfupi	
Unajifanyia kazi mwenyewe	
Hauna kazi	

2. Mapato kwa Mwezi:

Tafadhali chora alama kwa aina ya mapato/mshahara yako	
Chini ya Kshs. 3000	
Kshs. 3000 hadi Kshs. 6000	
Kshs. 6,000 hadi Kshs. 10,000	
Zaidi ya Kshs. 10,000	

f) Mimba

Je, unatarajia kujifungua uzazi lini?

……..

APPENDIX IV: TIMELINE AND BUDGET

TIMELINE

Activities	Begin Date	Completion
Research Proposal Preparation	14th February 2013	8th March 2013
Presentation/Approval of Proposal	11th March 2013	5th April 2013
Submission of Proposal to KNH/UON/ERC	13th April 2013	10th October 2013
Data Collection	11th November 2013	29th October 2014
Data Entry	2nd November 2014	16th November 2014
Data Analysis	25th March 2015	15th May 2015
Research Final Write-up	16th June 2015	27th June 2015
Thesis Defense and Complete Research Document	26th June 2015	3rd July 2015

BUDGET

	CATEGORY/ITEM	TOTAL COST FOR ITEMS (Kshs.)
1	Charges for the KNH/UoN-ERC Proposal Review	3,000
2	For data collection purposes; stationery to input data in the questionnaires i.e. Pencils, Pens, Pencil sharpener, Erasers, Stapler, Storage boxes etc.	5,000
3	Operating expenses that may be incurred by the researcher: a) Report writing, feedback and health intervention follow up for respondents	15,000
4	For hard copies of the Data Collection Tools for the participants	6,000
5	For hard copies of the Consent Form for the 324 participants	6,000
6	Document binding of the final research dissertation	5,000
7	Data analysis	30,000
8	Contingency amount	10,000
	Grand Total	**80,000**