

**PREVALENCE AND FACTORS ASSOCIATED  
WITH INTIMATE PARTNER VIOLENCE IN  
PREGNANCY AT THE KENYATTA NATIONAL  
HOSPITAL: A COMPARATIVE CROSS-  
SECTIONAL STUDY**

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*A dissertation submitted in partial fulfillment for degree of master of medicine in*

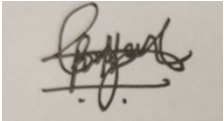
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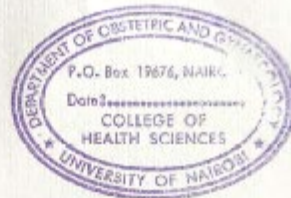
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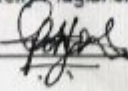
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# PREVALENCE AND FACTORS ASSOCIATED WITH INTIMATE PARTNER VIOLENCE IN PREGNANCY AT THE KENYATTA NATIONAL HOSPITAL: A COMPARATIVE CROSS-SECTIONAL STUDY

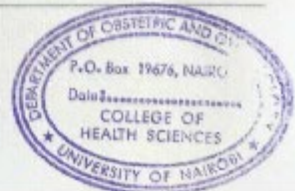
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## **DEDICATION**

I would like to dedicate this study to all the survivors of IPV during pregnancy who summoned the courage to speak up and participate in this research, with the hope that the findings of this research will highlight the challenges of a majority of pregnant women at the hands of their partners and hopefully help in rolling back the scourge of Intimate Partner Violence (IPV)

## ACKNOWLEDGEMENT

I thank God for his grace through my studies and enabling me to carry out this research to fruition.

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## LIST OF ABBREVIATIONS

ACOG	American College of Obstetricians and Gynecologists
FGD	Focused Group Discussion
GBVC	Gender-Based Violence Centre
HIV	Human Immunodeficiency Virus
IPV	Intimate Partner Violence
KDHS	Kenya Health and Demographic Survey
KNH	Kenyatta National Hospital
PTSD	Post-Traumatic Stress Disorder
UoN	University of Nairobi
WHO	World Health Organization
IUGR	Intrauterine Growth Restriction
IUFD	Intrauterine Fetal Demise
LBW	Low Birth Weight

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## DEFINITION OF TERMS

**Intimate Partner:** Is a person with whom one has a close personal relationship that may be characterized by emotional connectedness, regular contact, identity as a couple, familiarity and knowledge about each other's lives or on-going physical contact and/or sexual behaviour.

**Intimate Partner Violence:** Is physical violence, sexual violence, stalking and psychological aggression by a current or former intimate partner.

**Physical Violence:** Includes a range of behaviours from slapping, pushing or shoving to severe acts that include being hit with a fist or something hard, kicked, hurt by pulling hair, slammed against something, hurt by choking or suffocating, beaten, burned on purpose or using a knife or gun.

**Psychological Aggression:** Includes expressive aggression (such as name calling, insulting or humiliating an intimate partner) and coercive control which includes behaviours that are intended to monitor and control or threaten an intimate partner.

**Sexual Violence:** Includes rape, being made to penetrate someone else, sexual coercion (non-physically pressured sex), unwanted sexual contact (such as groping) and non-contact unwanted sexual experiences (such as verbal harassment). Contact sexual violence is a combined measure that includes rape, being made to penetrate someone else, sexual coercion and/or unwanted sexual contact.

**Stalking:** Involves a pattern of harassing or threatening tactics used by a perpetrator that is both unwanted and causes fear or safety concerns in the victim.

## ABSTRACT

**Introduction:** Intimate Partner Violence (IPV) is defined as physical violence, sexual violence, stalking and psychological aggression by a current or former intimate partner. It can be divided into physical, sexual, and emotional violence and controlling behaviours. It is a grave but avoidable public health concern with deleterious health and human rights implications. In pregnancy it not only jeopardises the life and health of the mother but also the survival and wellbeing of the unborn baby. Intimate Partner Violence is on the rise globally, though there is not enough local data to inform current prevalence and trends with reported prevalence of 15.23% in Africa. This study assessed the prevalence, socio-demographic, relationship and medical characteristics associated with Intimate Partner Violence among pregnant ladies receiving services at the Kenyatta National Hospital (KNH). The obtained information will add to the insufficient information on the burden of IPV during pregnancy in Kenya and show trends on associated factors that should help in developing screening protocols and policy formulation.

**Broad Objective:** The objective of this study is to determine the prevalence and factors associated with Intimate Partner Violence among pregnant women receiving services at the Kenyatta National Hospital.

**Methodology:** This study is a facility based, comparative cross-sectional study to determine the prevalence and factors associated with Intimate Partner Violence among pregnant women receiving services at the Kenyatta National Hospital. 599 (186 exposed to IPV and 413 not exposed to IPV) pregnant women receiving care at KNH were recruited into the study and data collected using a structured survey questionnaire. The questionnaire had socio-demographic variables, both for the patient and the partner and the patient's medical and obstetric information. Data was collected by the researcher with the aid of trained research assistants and be entered in an excel sheet before transcription to the Statistical Package for Social Sciences (SPSS) version 21.0 software for cleaning and analysis. Permission was sought from the Department of Obstetrics and Gynaecology (University of Nairobi) and KNH/UON Ethics Research Committee.

**Results:** The prevalence of IPV among pregnant women receiving care at KNH was 31.1%. Of the women reporting IPV in the current pregnancy 36% experienced psychological violence, 15% physical violence and 12% sexual violence. 8% experienced all forms of violence, 18% experiencing both physical and psychological violence while 11% experienced both sexual and psychological violence. Witnessing violence during childhood, partner's

history of alcohol use, partner's income and partner's level of education were found to be significantly associated with IPV.

**Conclusions:** IPV affects a significant number of patients under the care of the obstetrician and there is need for regular screening and appropriate linkage of identified victims.

**Key words:** Intimate Partner Violence, Antenatal clinic, Physical Violence,

## CHAPTER ONE: INTRODUCTION

### 1.1 Background

Intimate Partner Violence (IPV) is defined as physical violence, sexual violence, stalking and psychological aggression by a current or former intimate partner. Intimate partners can be defined as people who share a close personal relationship that is associated with emotional involvement, frequent contact, and awareness about each other's whereabouts and daily occurrence or on-going physical contact and/or sexual behaviour.(1) The incidence of IPV is noted to be on the rise globally affecting both developing and developed countries, irrespective of social, economic, religious and cultural grouping. It is a grave but avoidable public health concern with deleterious health and human rights implications (2)(3).

Women in between 15 – 49 years are at the most risk to violence by an intimate partner than by someone else (2). IPV in pregnancy needs specialized attention as it not only jeopardises the life and health of the mother but also the survival and wellbeing of the unborn baby (3). Forms of IPV can be broadly classified into physical, sexual, psychological and controlling behaviour where;

- i) Physical violence being acts of physical aggression such as slapping, hitting, kicking, pushing, throwing objects, strangling, beating, threatening with any form of weapon or using a weapon
- ii) Sexual violence entails forced intercourse and other forms of sexual coercion
- iii) Psychological abuse erodes a woman's sense of self-worth and includes acts of verbal abuse, humiliation, belittling and intimidation
- iv) Controlling behaviours involve isolation of one from family and friends, monitoring movements and restricting access to information or assistance

These types of violence can occur in isolation or in combination (2). Health consequences of IPV during pregnancy can be broadly be classified into; Physical Health Consequences, Mental Health Consequences, Gynaecological Consequences, and Obstetric Consequences. Obstetric consequences can further be sub divided into Maternal Consequences and Foetal Consequences.

Physical health consequences may involve the head, neck, chest, abdomen, genitalia and other body parts. They may present as soft tissue injuries or fractures. IPV can cause severe physical injuries that can be fatal leading to death.

Mental health consequences include anxiety disorders, depression, PTSD, anorexia nervosa, bulimia, drug abuse, and suicide. They may present with nonspecific symptoms such as chronic headache, palpitations, sleep and appetite disturbances, irritable bowel syndrome and abdominal symptoms.

Gynaecologic health consequences of IPV include chronic pelvic pain, sexually transmitted infections STI's and HIV, vaginal bleeding, urinary symptoms, genital injury, sexual dysfunction, lack of control on the use of contraception and unplanned pregnancies.

Obstetric health consequences of IPV during pregnancy can be divided into maternal and foetal consequences. Maternal consequences include no control over access to healthcare providers, miscarriage, preterm labour, placenta abruption, postpartum depression, low breastfeeding rates, lack of care and attachment to infant and maternal mortality. Foetal consequences include foetal injury, small for gestational age, still birth and intra-uterine foetal demise (IUFD).

WHO surveyed 24000 women from ten different nationalities in 2005 and established that prevalence rate for physical or sexual IPV ranged between 15% -71% with majority of the centres reporting a prevalence of between 29% - 62%. (4) In the same study physical violence during pregnancy ranged between 1% in Japan City and 28% in Peru Province with most centres reporting a prevalence of between 4% - 12%. These findings mirrored a review of demographic and health surveys and international violence against women survey that showed that prevalence of IPV among pregnant women ranged between 2% in Australia, Denmark, Cambodia, and The Philippines and 13.5% in Uganda with most sites being between 4% and 9% (5).

A systematic review of studies from Africa looking at prevalence of IPV during pregnancy reported a prevalence between 2% and 57%, with the overall prevalence rate being 15.23% (6). In the Kenya Health and Demographic survey, 2014, 39 % of married women had

undergone IPV (7). A study done in Kisumu found that 37% of pregnant women attending antenatal clinic at the Kisumu District Hospital had experienced IPV during pregnancy; a study done in West Pokot found an even higher prevalence rate of IPV during pregnancy of 66.9% (8)(9).

A study done at the Kenyatta National Hospital looking at Prevalence of depression among pregnant women who had undergone IPV while pregnant reported that 16% of pregnant women at the Kenyatta National hospital had experienced IPV during the pregnancy (10).

IPV is worsened by low resources setting prevailing in many African settings due to lack of gender equality, cultural and economic barriers that restrict women from becoming economically self-sufficient, forcing women to accept or condone violence by a husband or partner. This is worsened by the inability of healthcare services to identify and care for women undergoing abuse. Other characteristics associated with IPV during pregnancy include age, marital status, level of education, alcohol and drug abuse and witnessing violence as a child.

In recognition of rising prevalence of IPV globally and its impact on maternal and foetal wellbeing, WHO in its recommendation on antenatal care for positive pregnancy experience of 2016 now recommends clinical inquiry into the possibility of IPV during antenatal care visits as part of the foeto-maternal assessment.(11)

This study aims to evaluate the prevalence and factors associated with IPV during pregnancy among pregnant women receiving services at the Kenyatta National Hospital (KNH), the information obtained will add to the insufficient information on the scourge of IPV among pregnant women in Kenya and show trends on associated factors that should help in developing screening protocols and policy formulation.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

Globally, prevalence of IPV varies due to differences in definition, variables measured, research designs and populations studied. WHO estimates that about 35% of women in past or present intimate relationships have undergone some form of violence by their partner in their lifetime (12).

WHO surveyed 24000 women from ten different nationalities in 2005 and established that prevalence rate for physical or sexual IPV ranged between 15% -71% with majority of the Centres being between 29% - 62% (4). This was comparable to a review of Demographic and Health Survey data from ten nations, which reported that the prevalence of physical and/or sexual ever reported by currently married women ranged between 17% and 75% (13).

Healthcare providers have the potential to screen for victims of IPV and help stop the scourge in the society. They can do this by maintaining a high index of suspicion, being empathetic and offering appropriate support and linkage to relevant services. There is need for adequate sensitization and training of medical staff to empower them to be champions in the fight to roll back the incidence of IPV within the community they serve.

Obstetricians should take the lead in assisting women who are experiencing IPV as its been shown that prevalence of IPV is highest amongst women in their reproductive age and these are the women obstetricians will interact with frequently during pregnancy, family planning, preconception and postpartum period.(3). For most women in low resource setting the antenatal period may be the only opportunity of contact with a medical staff (14). Many women won't disclose about violence the first time they are asked, only doing so in subsequent visits. For this reason healthcare providers ought to ask about violence regularly. American College of Obstetricians and Gynecologists recommend that screening for IPV during pregnancy ought to be done at the first antenatal clinic visit, then at least once per trimester and during the post-partum check-up(3).



In studies done in Kisumu and West Pokot County, Kenya they both recommend integration of screening for IPV during pregnancy into maternal and child health care services. They advise that health care providers should always be on the lookout for signs of IPV among pregnant women who may present with established risk factors.

## **2.2 Prevalence of intimate partner violence during pregnancy**

Studies have found that being pregnant does not stop IPV but there are mixed findings regarding if IPV prevalence goes up or down during pregnancy. (5). In the WHO multi-country study the majority of victims of physical violence during pregnancy had had other episodes of violence prior to the pregnancy, however almost half of the women from three study centres reported a first incidence of violence during pregnancy (4). An analysis of prevalence data from 19 countries, reported that in almost all the countries IPV occurred at levels lower than lifetime rates during pregnancy except in Denmark where IPV was more common among pregnant women than prevalence of IPV during the past year. (14).

In the WHO the prevalence of IPV among pregnant women ranged between 1% in Japan City and 28% in Peru Province; with majority of the study centres ranging between 4% and 12%. These findings are mirrored an analysis of Demographic and Health Survey and the international violence against women survey which reported that physical IPV during pregnancy ranged between 2% in Australia, Denmark, Cambodia and Philippines and 13.5% in Uganda with most sites ranging between 4% and 9% (13).

A study measuring prevalence rates of IPV during pregnancy among Appalachian women in the USA found that 26% had undergone psychological violence, 2% physical violence and 1% sexual violence (15). The trend was similar in study done in Southeast Brazil where the overall prevalence of IPV during pregnancy was 15.5% with 14.7% experiencing psychological violence, while 5.2% experienced physical violence and 0.4% experienced sexual violence (16).

A systematic review of 19 peer reviewed journal articles from African studies on IPV during pregnancy published between 2000 and 2010, established a prevalence range of 2.3% - 57.1%. A meta-analysis of the studies gave an overall prevalence of 15.23% (95% CI: 14.38 –

16.08%) with majority being between 27.7% and 51.1% (6). The review found that the prevalence of IPV among pregnant women was 2.7% -26.5% for Sexual Violence; 22.5% - 40% for physical violence and 24.5% - 49% for emotional violence (6).

In the review conducted by WHO, the prevalence of IPV among African countries was 8.8% in Rwanda, 3.8% in Malawi, 9.0% in Zambia, 5.6% in Zimbabwe, 5.6% , 9.4% in Democratic Republic of Congo, and 13.5% in Uganda (4)(14). Within the Eastern African Region the WHO study reported a prevalence of 8% in Ethiopia and 12% in Tanzania; (4) this was much lower than the findings of a prospective cohort study of pregnant women attending antenatal clinic at Moshi municipality (Northern Tanzania) and were followed-up till delivery reported a prevalence of 30.2% of IPV during pregnancy (17). Similarly the WHO findings in Ethiopia were much lower than findings of a facility based cross-sectional study among women who had recently delivered in public health facilities at Hossana town, Southern Ethiopia, reported a prevalence of 23% for IPV during pregnancy. (18).

The few studies done in Kenya have shown differing results; a facility based-study done in Kisumu at the Kisumu District Hospital yielded an overall prevalence rate of 37% with psychological violence being the most prevalent at 29% next in prevalence was sexual violence at 12% with physical violence contributing 10% (8). A different study done in West-Pokot County among antenatal clinic attendees across 11 health facilities within the county yielded an overall prevalence rate of 66.9%; with the prevalence of psychological violence being 55.8%; sexual violence 39.2% and physical violence contributing 29.9% (9).

A study done at the KNH looking at prevalence of depression among pregnant mothers exposed to IPV during pregnancy and attending antenatal clinic at the hospital reported an overall prevalence rate of 16% with psychological violence being the most prevalent at 35% next in prevalence was sexual violence at 14% and physical violence at 4%. 29% of pregnant women who had experienced IPV were diagnosed to be also suffering from depression (10).

The Kenya Health and Demographic Survey, 2014 restricted its survey to only physical violence during pregnancy and found that 9% of ever pregnant women had experienced physical violence while they were pregnant (7).

### **2.3 Factors associated with intimate partner violence in pregnancy**

A population-based study done in Rwanda found that all types of violence except physical violence went up during pregnancy but the only statistically significant raise was psychological abuse (19). Having an unplanned pregnancy has shown significant association with IPV; this is supported by several population-based studies in Bangladesh, Bolivia, the Dominican Republic, Kenya, Malawi, Moldova, New Zealand, Rwanda and Zimbabwe (5). A population-based survey in the United States of America (USA) reported that an unwanted pregnancy led to higher levels of abuse during pregnancy (15%) when compared to those who had a planned pregnancy (5%) (5).

This association was also found in a study done in Sweden which found that an unplanned pregnancy was 2.8 times more likely to lead to violence ( $p = 0.040$ ) (20). Similarly a study done among Appalachian women in the USA established that a woman with an unplanned pregnancy had a 73% greater likelihood of experiencing any type of IPV (15).

Low education status among pregnant women led to increased risk of IPV; this finding was reported in KDHS 2014 which found that women who had not completed their primary education were at an increased risk of experiencing IPV during pregnancy. In the systematic review of African studies, Fawole et al., Haque et al. and Umeora et al. reported a statistically significant relationship between a woman's low level of education and risk of experiencing IPV (6).

A study done in Southern Ethiopia on recently delivered women found that male partners with no formal education were 10.8 times more likely to abuse their female partners when compared to those whose partners had attained tertiary education (AOR = 10.8(1.06, 108.5) (18) This was supported by the study done in Kisumu that found that a male partner with tertiary education was less likely to be perpetrators of violence against their female partners (AOR 0.37, 95% CI = 0.16 -0.83) (8).

Review of African studies found five studies that showed a significant association between alcohol use by pregnant women and/or partner and IPV during pregnancy (6). In Southern Ethiopia, pregnant women with partners who drank alcohol were 22 times more likely to experience IPV than women whose partners did not drink alcohol (18). Similar findings were recorded in the Kisumu and West Pokot county studies. In West Pokot, the study included a

focused group discussion (FGD) where a majority of the women cited alcohol intake by their partners to be the main source of violence through the life cycle of their relationship (8)(9).

Although older women would potentially have a longer period of time be exposed to violence, an analysis of data from nineteen nations found that in almost all the centres the prevalence was highest among women in the younger age groups (age 15 -35) (14). When compared to a review of African studies these findings were slightly mixed with only five studies reporting on the relationship of age and experience of abuse among pregnant women, of these two studies found no association, and in three there was a significant association (6). In Rwanda women in the young age group of between 15 and 35 years had significant exposure to sexual violence OR 1.84 (95% CI 1.01 to 3.35) and controlling behaviours 2.17 (95% CI 1.35 to 3.47).

In several studies across different socioeconomic backgrounds history of violence has been a statistically significant risk factor for IPV during violence. In Sweden history of witnessing violence was found to be the most statistically significant risk factor whereas in a review of African studies, seven studies found that history of abuse was positively associated with IPV among pregnant women (6)(20). In Kisumu, Kenya, the study found that history of witnessing their mother getting abused when young was associated with significant risk of IPV during their first pregnancy. (8).

In Sweden pregnant women who are single or separated were 17.9 times more likely to experience violence (20). While in Kisumu, Kenya, pregnant women in polygamous relationships had double the risk of IPV when compared to pregnant women who are in monogamous relationships (8). These findings were echoed in the review of other African studies: Ntaganira et al. (Rwanda) and karamagi et al (Uganda) found that having transactional sex, having several sexual partners and infidelity all had positive associations with experiencing IPV during pregnancy(6). In Kenya, the KDHS 2014 reported that a formally married woman (divorced, separated or widowed) were more likely than other women in similar categories to experience violence during pregnancy (7).

Low socio economic status has also been shown to be associated with increased exposure to violence during pregnancy. It's postulated that this could be because pregnancy increases demands on the little available resources leading to more strain on relationships and conflict.

In Rwanda women classified to be from low socioeconomic status (classified by assets in the house) had increased risk of experiencing physical violence and psychological violence (19). Similar findings were reported by Hoque et al. and Kaye et al. who found that having low household decision making power was a risk factor for IPV during pregnancy.

Several studies have been done to demonstrate the association between rural or urban setup and the prevalence of IPV. A study done in the US among Appalachian women looking specifically at prevalence of IPV during pregnancy among rural and urban populations failed to confirm varying prevalence of IPV experience between the two settings (15). In a study done in Rwanda, women living in urban areas were at an increased risk for husband or partner controlling behaviour during pregnancy (19). This finding was replicated in Kenya by the KDHS report in 2014 reported that physical violence during pregnancy was highest among women residing in the capital city, Nairobi (18%) (7).

In Tanzania a study looking at social support among pregnant women reported that those who talked to a member of their family of origin and or family of their partner at least once a month and those who reported they could count on support from their family of origin or their partners family had a decreased odds of experiencing IPV during pregnancy,(17). In Rwanda women with poor social support had an increased risk of sexual violence during pregnancy (19).

In the Kisumu study having given birth twice or more times was noted to be a vulnerability factor (8). KDHS 2014 reports that pregnant women with 3 or more children are at increased risk of experiencing IPV. In a review of African studies five of the studies showed a statistically significant relationship between HIV and IPV during pregnancy. They reported that being diagnosed with HIV put pregnant women at an increased risk of being abused by a Partner.(6). The study in Kisumu didn't show any relationship between HIV status and risk of IPV (8).

#### **2.4 Gaps in Literature Review**

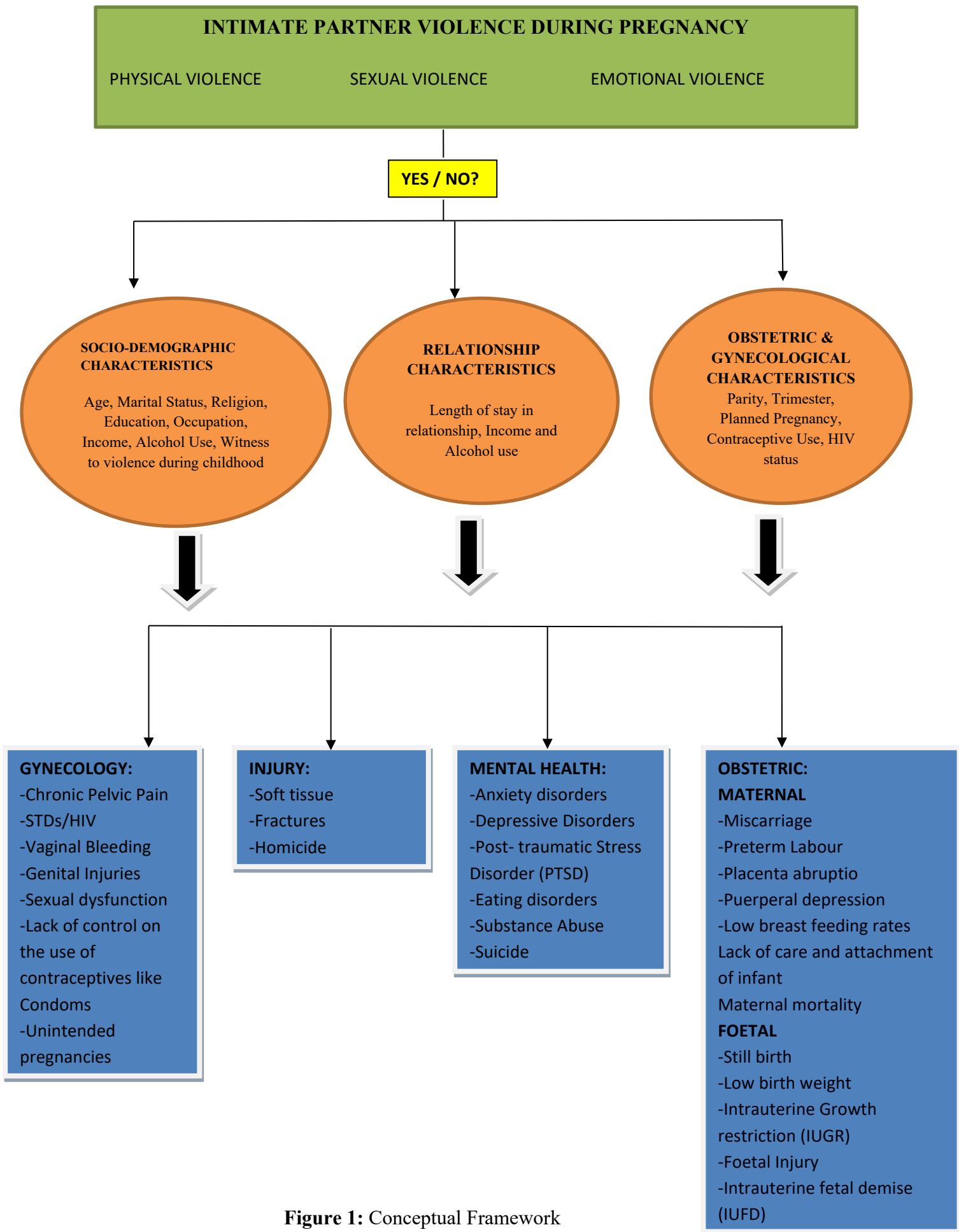
Literature review of studies carried out Kenya and the region found that based on the study designs used, drawing conclusions on factors associated with intimate partner violence during pregnancy, with authoritative statistical power were lacking. We didn't come across studies comparing characteristics among pregnant women exposed to IPV and those not exposed to IPV. Most studies used retrospective and/or prospective cross-sectional study designs, in this

study we used a Comparative Cross-sectional study design where compared the characteristics of women exposed to IPV and those not exposed to IPV. In the studies done in Kenya a study done in Kisumu was a cross-sectional study with a sample size of 300 participants, another done in West pokot was also a cross-sectional study interviewing 238 participants yet another done at the Kenyatta National Hospital also a cross-sectional study interviewed 324 participants. In this study we interviewed 599 women (413 who had not been exposed to IPV and 186 who had been exposed to IPV). This study had a higher sample size than others done in the country. The targeted comparison of characteristics associated with IPV will add to the wealth of knowledge regarding IPV during pregnancy. The Kenyan studies and many others done in the region limited themselves to interviewing only women who attended Antenatal Clinics, this was a limitation as many IPV perpetrators have controlling behaviours and might not allow their partners to come for antenatal clinic allowing them only to come to hospital for delivery or for admission if they fall ill, in this study we increased the study sites with aim of having access to all pregnant women receiving care at KNH. The study sites included ANC clinic, antenatal ward and labour ward. Women who are admitted didn't have their partners with them hence allowing a more free interaction and response.

In literature review we did not come across a study that compared IPV occurrence between pregnancies in the same individual, in this study we compared occurrence of IPV in current pregnancies compared to past pregnancies. This will help add to knowledge and will enable healthcare providers be aware of differences of Intimate Partner Violence, if any, between index and subsequent pregnancies.

### **CHAPTER 3: CONCEPTUAL FRAMEWORK**

This Study is guided by the knowledge that various factors contribute to intimate partner violence cumulatively or individually. These factors have been broadly classified into three main sub groups i.e. Socio-demographic factors, Relationship factors and Obstetric/Gynaecological factors. The study will aim to identify which specific factors contribute to IPV during pregnancy. The framework shared below gives a visual interpretation on how this study has been designed.



**Figure 1: Conceptual Framework**

## CHAPTER 4:

### 4.1: STUDY JUSTIFICATION

The prevalence of IPV during pregnancy is highest amongst African countries, and its trend is thought to be on the rise globally.(6) There is lack of sufficient data in Kenya to compare with other countries and assess the trends. It is necessary to analyse data on characteristics that are associated with pregnant women who have undergone violence in order to help in detection and management of these women, in order to curb the adverse events associated with IPV in pregnancy. Establishing the magnitude of the problem will assist in designing appropriate medical interventions that will contribute to a safe pregnancy and healthy babies (6). This will also help increase index of suspicion among health care workers as they interact with their clients. The need to screen for IPV is supported by a study done in KNH in 2011 looking at *Routine screening for IPV in Public Health Care settings in Kenya: An assessment of acceptability*, which found that screening for IPV, was generally acceptable among both health care providers and clients. All clients interviewed perceived routine screening for IPV to be an important and useful exercise, Majority felt that they are more likely to open up to a health care provider rather than to a relative about IPV because of assurance of confidentiality and possible assistance. The clients however, indicated that most would not open up voluntarily doing so only on being asked specifically about violence. The study also found that routine screening will help create awareness, by asking about violence both victims and women who have not experienced IPV will help create awareness and help them understand that IPV is of public health concern and no one should suffer in silence. They will also know available options for assistance and referral for them and/or people close to them who may be undergoing IPV (21). WHO in its recommendation on antenatal care for positive pregnancy experience of 2016 now recommends a clinical inquiry into the possibility of IPV during antenatal care visits as part of the fetomaternal assessment. (11)

Pregnant women are more likely to be in an intimate union than the non-pregnant population hence they are at an increased risk of IPV. These women belong to reproductive age (15 – 49 years) which has been shown to be at the highest risk for IPV. IPV during pregnancy is more prevalent than some obstetric complications that are screened for more regularly during the antenatal period for example preeclampsia complicates approximately 2 – 8% of pregnancies while gestational diabetes complicates 1 – 5% of pregnancies globally. There is evidence that



IPV in pregnancy leads to poor feto-maternal outcomes and that timely identification and management can significantly improve the feto-maternal and child health indicators.

Obstetricians can take the lead in assisting women who are experiencing IPV as it has been shown that prevalence of IPV is highest amongst women in their reproductive age and these are the women obstetricians will interact with frequently during pregnancy, family planning, preconception and postpartum period(3). Pregnancy-related services provided during the antenatal period presents a window of opportunity to assess for any signs of IPV among pregnant women and offer appropriate management and support.

Very few studies internationally have been done with significant statistical power specifically trying to establish associations between characteristics among pregnant women exposed to IPV and those not exposed to IPV, this study aims to fill this gap and results from this study should aid in establishing practical guidelines and protocols in screening for IPV during pregnancy at both facility and national levels.

This Study gave a chance to victims of intimate partner violence who may have been suffering in silence and may not have had the opportunity to open up about the violence they may be undergoing to anyone. Victims who were willing were linked to gender based violence centre where they received appropriate support and care. Some victims of violence may not admit to being victims on a single inquiry but its hope that an inquiry on IPV will help create awareness for them that IPV is a public health problem affecting several members of the society and that there is help available. For the women who were interviewed and the study created awareness among them and they are now more aware about the problem especially in their social networks where they may have a family member, friend or neighbour who may be undergoing IPV in silence, from the interaction during the research they are now better placed to offer support and guidance on where to seek for help.

The WHO in its recommendations for positive pregnancy experience recommend inquiry into the possibility of IPV during antenatal visits, however this is not being done by healthcare providers we hope this research will create awareness among health care providers on need to screen all women for possibility of violence as per the recommendation and appropriate support provided for victims .The research quantified the magnitude of the problem of IPV in society and this will further improve the index of suspicion among health care providers

among the clients they handle. By identifying factors that are associated with intimate partner violence, it is now possible to domesticate screening protocols relevant to our society. At a policy level the research hopes to provide data that can contribute to policy formulation on how as a society we intend to handle the problem of Intimate Partner Violence during the antenatal period.

#### **4.2: RESEARCH QUESTION**

What is the prevalence and factors associated with Intimate Partner Violence among pregnant women receiving care at the Kenyatta National Hospital between January 2019 and June 2019?

#### **4.3: BROAD OBJECTIVE**

To determine the prevalence and factors associated with Intimate Partner Violence among pregnant women receiving care at the Kenyatta National Hospital between January 2019 and June 2019.

##### **4.3.1 Specific Objectives**

- i. To determine the prevalence of Intimate Partner Violence among pregnant women attending receiving care at the Kenyatta National Hospital.
- ii. To determine the association between socio-demographic characteristics among pregnant women receiving care at the Kenyatta National Hospital and intimate partner violence.
- iii. To determine the association between relationship characteristics among pregnant women receiving care at the Kenyatta National Hospital and intimate partner violence.
- iv. To determine the association between obstetric and gynaecological characteristics among pregnant women receiving care at the Kenyatta National Hospital and intimate partner violence.

#### **4.4: HYPOTHESIS**

There is no association between pregnant woman characteristics (socio-demographic, relationship and gynaecological) and intimate partner violence.

## **CHAPTER 5: METHODOLOGY**

### **5.1: Study Design**

This is a facility based comparative cross-sectional study to determine the prevalence and factors associated with IPV among pregnant women receiving care at the Kenyatta National Hospital between January 2019 and June 2019.

### **5.2: Study Area**

The study was conducted in Kenya at the Kenyatta National Hospital, (KNH) which is situated in Nairobi, the capital city of Kenya. KNH is the largest and oldest hospital in Kenya, founded in 1901. It serves as a national referral and teaching hospital. It has an average bed capacity of 1800. The hospital serves middle and lower class populations from across Kenya and the East and Central African region. The study was carried out at the hospital's antenatal clinic, antenatal wards, and labour ward.

### **5.3: Study Population**

The study population are women, who were pregnant and sought medical services from the Kenyatta National Hospital between January, 2019 and June, 2019.

### **5.4: Eligibility criteria**

#### **5.4.1 Inclusion criteria**

- Pregnant women who are attending or receiving care at the KNH antenatal Clinic, antenatal wards and labour ward.
- Women who will have given consent to voluntarily participate in this study.
- Women who are in an intimate relationship.

#### **5.4.2 Exclusion criteria**

- Women accompanied by their husband or partner to the clinic.

### **5.5: Sample Size Determination**

Sample size will be calculated using the difference in proportions - Fleiss JL formula (Openepi Version 3, Calculator) as outlined below. Data used in the calculation of sample sizes is from the Kenya Demographic and Health Survey (KDHS) 2014, section on domestic violence (7) as shown below:

VARIABLE	WITH IPV (%)	WITHOUT IPV (%)
Age (20 – 29 years)	45.8	19
Alcohol use	14.2	31.6
Separated/Divorced	64.3	3.7
Not Employed	33.6	14.3
Partner Alcohol Use	78.1	29.6
Partner No formal education	40.7	2.9

**Table 1: Prevalence of IPV per variable**

$$n = \left(\frac{r+1}{r}\right) \frac{(\bar{p})(1-\bar{p})(Z_{\beta} + Z_{\alpha/2})^2}{(p_1 - p_2)^2}$$

N1 = Size in the exposed group

N2 = Size in the unexposed group

r = ratio of controls to cases, 1:1 in this case

P<sub>1</sub> = proportion of women exposed to IPV

P<sub>2</sub> = proportion of women not exposed to IPV

P̄ = measure of variability

Z<sub>β</sub> = Value corresponding to the power of the study, in this case, 80% = 0.84

Z<sub>α</sub> = Value corresponding to the normal standard deviate at 95% C.I, in this case, = 1.96, with 0.05 level of significance

P<sub>1</sub>- P<sub>2</sub> = effect size (difference in proportions)

Minimum Odds ratio to be detected, 0.5

Applying this in the Openepi Version 3 Calculator software gives the sample size as follows:

### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	14.2
	Hypothetical proportion of cases with exposure:	31.6
	Least extreme Odds Ratio to be detected:	2.79

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	92	91	102
Sample Size - Controls	92	91	102
Total sample size:	184	182	204

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

CC = continuity correction  
 Results are rounded up to the nearest integer.  
 Print from the browser menu or select, copy, and paste to other programs.

Results from OpenEpi, Version 3, open source calculator--SSCC  
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 or select text to copy and paste to other programs.

### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	33.6
	Hypothetical proportion of cases with exposure:	20.19
	Least extreme Odds Ratio to be detected:	0.50

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	172	171	186
Sample Size - Controls	172	171	186
Total sample size:	344	342	372

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

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### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	64.3
	Hypothetical proportion of cases with exposure:	47.38
	Least extreme Odds Ratio to be detected:	0.50

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	136	135	146
Sample Size - Controls	136	135	146
Total sample size:	272	270	292

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

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### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	45.8
	Hypothetical proportion of cases with exposure:	75.67
	Least extreme Odds Ratio to be detected:	3.68

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	42	41	48
Sample Size - Controls	42	41	48
Total sample size:	84	82	96

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

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 Results are rounded up to the nearest integer.  
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### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	40.7
	Hypothetical proportion of cases with exposure:	25.55
	Least extreme Odds Ratio to be detected:	0.50

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	152	151	164
Sample Size - Controls	152	151	164
Total sample size:	304	302	328

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

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 Results are rounded up to the nearest integer.  
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Results from OpenEpi, Version 3, open source calculator--SSCC  
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 or select text to copy and paste to other programs.

### Sample Size for Unmatched Case-Control Study

For:	Two-sided confidence level(1-alpha)	95
	Power(% chance of detecting)	80
	Ratio of Controls to Cases	1
	Hypothetical proportion of controls with exposure	78.1
	Hypothetical proportion of cases with exposure:	64.07
	Least extreme Odds Ratio to be detected:	0.50

	Kelsey	Fleiss	Fleiss with CC
Sample Size - Cases	164	163	177
Sample Size - Controls	164	163	177
Total sample size:	328	326	354

**References**  
 Kelsey et al., Methods in Observational Epidemiology 2nd Edition, Table 12-15  
 Fleiss, Statistical Methods for Rates and Proportions, formulas 3.18 & 3.19

CC = continuity correction  
 Results are rounded up to the nearest integer.  
 Print from the browser menu or select, copy, and paste to other programs.

Results from OpenEpi, Version 3, open source calculator--SSCC  
 Print from the browser with ctrl-P  
 or select text to copy and paste to other programs.

Figure 2: Sample size calculation

**Sample Size as a function of the probability of exposure to various exposure variables.**

<b>VARIABLE</b>	<b>WITH IPV (%)</b>	<b>WITHOUT IPV (%)</b>	<b>Minimum Odds ratio to be Detected</b>	<b>Sample Size with IPV</b>	<b>Sample Size without IPV</b>	<b>Total Sample Size</b>
Age (20 – 29 years)	45.8	19	3.63	48	48	96
Alcohol use	14.2	31.6	2.79	102	102	204
Separated/Divorced	64.3	3.7	0.5	146	146	292
<b>Not Employed</b>	<b>33.6</b>	<b>14.3</b>	<b>0.5</b>	<b>186</b>	<b>186</b>	<b>372</b>
Partner Alcohol Use	78.1	29.6	0.5	177	177	354
Partner No formal education	40.7	2.9	0.5	164	164	328

**Table 2: Sample Size per variable**

**Sample Size = 372**

Exposed to IPV = 186

Not Exposed to IPV = 186

**5.6: Sampling procedure**

This study used random sampling, using random sample tables, to identify pregnant women are receiving care at the KNH and have intimate partners. 186 pregnant mothers exposed to IPV and 413 pregnant mothers not exposed to IPV where included in the study.

**Stage 1**

The purposive selection of the study sites to cater for the heterogeneous population accessing services at the KNH.

**Stage 2**

Randomly selecting patients for administration of the questionnaire: in three months, and administration of the questionnaire during weekdays, a total of  $5 \times 4 \times 2 = 40$  days was used for

data collection. This translates into (599/40) approximately 15 patients were enrolled per day.

### **Stage 3**

Consent was sought and study questionnaire administered to women who met the inclusion criteria by the principal investigator or the research assistant.

#### **5.7: Sources and methods of recruitment**

The research team comprised of three people, the principal investigator and two research assistants consisting of one clinical officer and one nurse, with background training in data collection and entry. The principal investigator trained the research assistants on proper study procedures, and supervised data collection at the end of every day to check for completeness and to correct any data discrepancies.

Pregnant women enrolled at the Antenatal Clinic or admitted in the labor or antenatal wards, where selected through simple random sampling they were approached by a member of the research team for formal consenting. The research team used the antenatal clinic register and the antenatal/labor ward admission register to ensure that potential respondents have been enrolled to receive services at the respective departments. A name was picked randomly entirely by chance and without any formula. The picked name was called and lead into a consultation room for privacy where they were provided with all the necessary information regarding the study in English or Kiswahili, and they were given a chance to make comments or ask questions. A translator was allowed in cases where the participant did not understand English/Kiswahili.

Having fully understood the reason this study is being conducted those willing to participate in the study were assessed for eligibility, and only those who met the inclusion criteria were enrolled. Point of enrollment was confirmed once the participant signed or placed the left thumb print, and dated the consent form. The principal investigator/research assistant then signed and dated the consent form, and made a copy which was left with the participant. After consent was received the research questionnaire was administered to completion. The research team maintained empathy and were non-judgmental throughout the interview. Victims of IPV during pregnancy were availed with a brochure with more information on IPV, and hotlines to call to seek help and those willing were linked to the Gender-based Violence Center (GBVC) at KNH.

### **5.8: Data Variables**

The socio-demographic variables included age, religion, marital status, length of relationship, occupation, average monthly income, academic qualifications, and alcohol use. Factors related to the partner include age, level of education, occupation, history of polygamy and history of alcohol abuse. The obstetric factors included gestational age, parity, and history of pregnancy-related complications. Medical history included HIV status. Factors related to IPV during pregnancy included: Life time and during previous pregnancies and current pregnancy prevalence of IPV and variables of IPV will be on physical violence, emotional/psychological violence and sexual violence.

### **5.9: Data Collection Procedure**

The data for this research was collected using a survey questionnaire (adapted and modified from the WHO study on women's health and domestic violence) and a checklist to track the progress of the number of questionnaires filled for those exposed to IPV and those not exposed to IPV. Before the actual administration of the questionnaire, a pilot was conducted to a selected number of patients (20) at the KNH ANC clinic. This assessed the length of time that the questionnaire will, on average take to fill. In addition, this helped identify any questions that may be troublesome to respond to during the actual data collection process.

The survey questionnaires were be administered in a consultation room for privacy. The respondents selected were in an intimate relationship and had consented for the research before administration of the questionnaire by the researcher and research assistants. The check list was used to note the number of respondents per day to keep tract of progress and any challenges. This also ensured that the sample size target for the research was achieved.

### **5.10: Data Quality Assurance and Analysis**

Quality assurance was enhanced continuously throughout the study period to maximize the validity and reliability of the findings. The questionnaires were checked for completeness at the end of each day by the by the principal investigator during data collection period to ensure completeness and accuracy of data collected. Pre-testing of study questionnaire was carried out to assess for bias, misinterpretation of the questions and ambiguity. The validity of the study was also be ascertained by ensuring that the data collection instruments reflected the objectives of the study. The research instruments were validated by the University of Nairobi supervisors.



Data was received as paper form and, as the questionnaires were assigned unique identifiers. Hard copies of the filled in questionnaires were stored in a lockable cabinet only accessible to the data manager and the principle investigator. Data verification was done by the principal investigator on a daily basis. The verified data was then be entered into a password protected excel software by two data clerks through the double data entry technique. This information was stored in a password encrypted external hard drive as back up by the data manager.

This was then imported to SPSS version 21 for data cleaning, categorization of variables and subsequent analysis. This was to check on duplicity, missing data, inaccuracies, and corrections. The final master copy of received data was archived and backed up for future reference. A copy of this was used for analysis.

Data analysis was done using SPSS version 21. Descriptive data for the patients' bio-data was analyzed and presented inform of graphs, charts, and tables. Measures of dispersion such as the mean, median and mode were used to describe continuous data variables such as age, gestation age, and years in marriage.

The risk factors associated with IPV such as age, level of education, occupation, history of polygamy and history of alcohol abuse were further analyzed and associations of variance determined using multivariate analysis models. Odds ratio were used to quantify any association and a p-value of  $<0.05$  taken as significant.

### **5.12: Ethical Consideration**

Permission to conduct the research was sought from the KNH/UON Ethics and Research Committee. Participants were provided with adequate information about the research and any concerns answered. Informed consent was obtained from the study participants before recruitment. Participants had the right to withdraw from the study without punitive measures.

The interviews were done in a private room and the research team stopped the interview in-case of any interruptions. Only the respondents were allowed in the room. Due to the sensitive nature of the topic the research team was trained to be empathetic, non-judgmental, and handle any concerns arose from the interview. A brochure with more information and help lines on IPV was availed at the end of the interview. Victims were linked with the GBVC at KNH for follow-up and further management.

No monetary incentives/ compensation were offered to the participants. There were no identifiers on the questionnaire and codes were used to refer to participants to ensure their privacy. The research data was kept under key and lock to ensure its confidentiality and used only for research purposes. The study caused no harm to the participants. Participants at the antenatal clinic were allowed to move ahead in the queue as a way of appreciation for their time. This was only be communicated once the interview was over.

### **5.13: Study limitations**

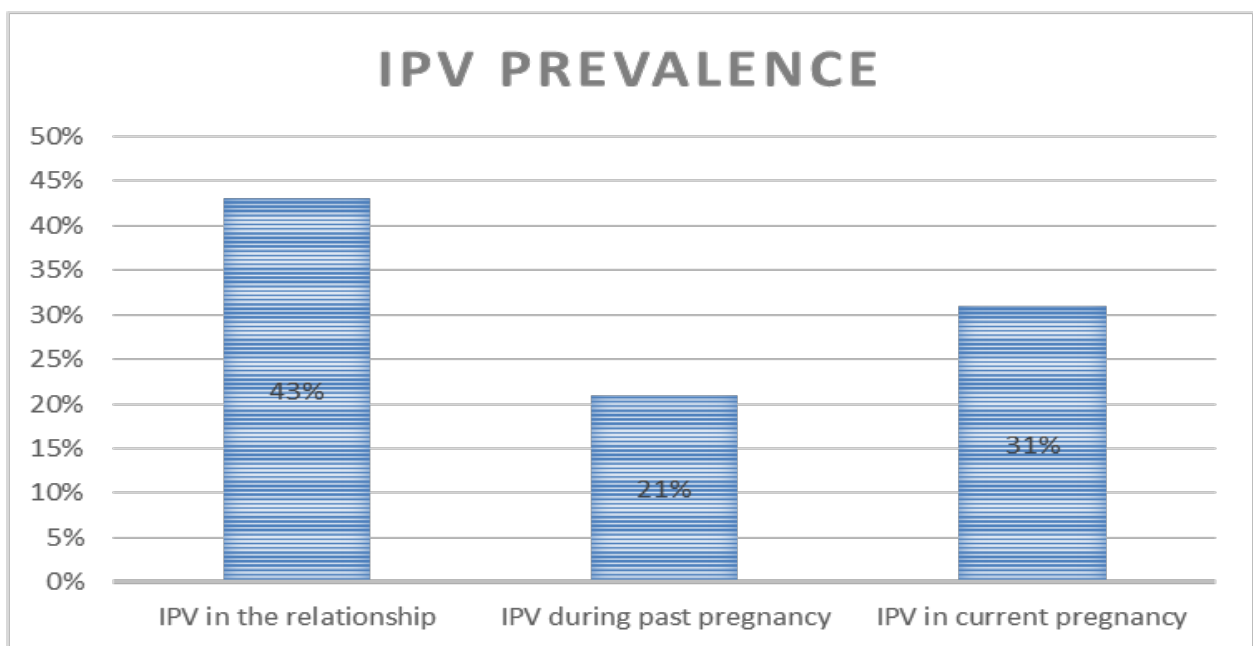
The study is a facility based study hence findings cannot be generalized to the general population because women who seek care in a hospital may have varying experience with Intimate Partner Violence than those who do not seek medical care. It is however assumed that since the KNH represents a heterogeneous population across the country, this will be, to some extent a reflection of the population living around KNH.

Interviewing only women who come unaccompanied to the antenatal clinic might bias the results as research has shown that perpetrators of IPV tend to have controlling behaviours and may not allow the partner to go to hospital alone. This has been addressed by having the sites of study in inpatient departments (Labour and antenatal wards), where controlling partners won't be around during the interview. Anticipated limitations included incompletely filled questionnaires due to the sensitive nature of the topic. This will be circumvented by corroborating the information from the hospital records and the patients during the data collection process. The partners are not interviewed hence the respondent will be answering questions on behalf of the partner which may lead to some bias. The study will require that the respondents will rely on their memory to recall incidents a possible cause for recall bias, hence necessitating that the interviews be carried out in a quiet room without distractions where the respondents can concentrate and the interviewers be patient in order to maximally get the information.

## CHAPTER SIX: RESULTS

### 6.1: Prevalence of Intimate Partner Violence among Pregnant Women Seeking Care at the Kenyatta National Hospital

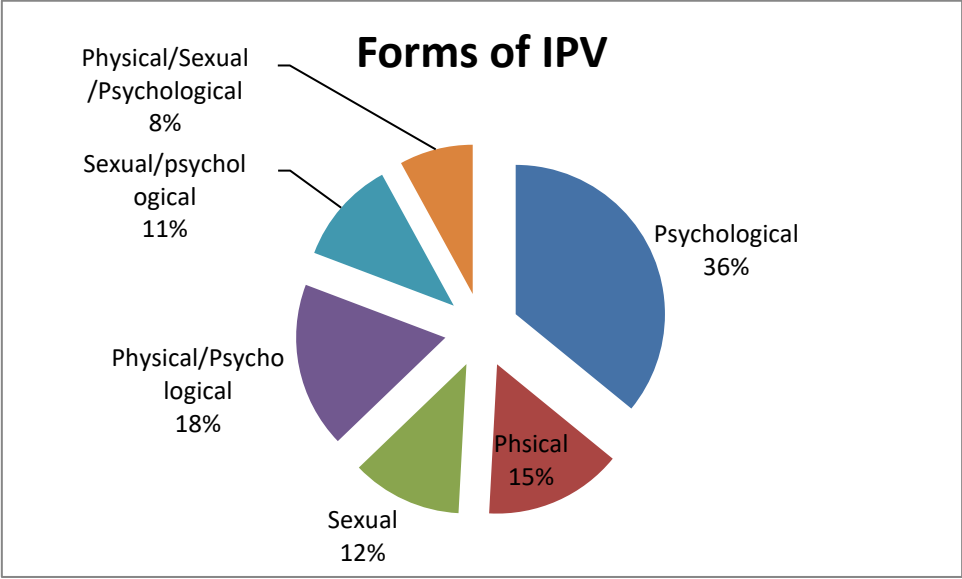
Five-hundred and ninety-nine (599) pregnant women seeking treatment at the Kenyatta National Hospital were interviewed. This was higher than the calculated sample size of 372 as questionnaires were continually administered until a sample size of 186 pregnant women who had experienced IPV in the current pregnancy was achieved. The prevalence of IPV during the current pregnancy, past pregnancy and in past relationships was determined following an assessment using a set 12 of items. As shown in figure 1, notably, the cumulative occurrence of IPV in a relationship is 43%, followed by IPV in the current pregnancies at 31%.



**Figure 3: Prevalence of Intimate Partner Violence among Pregnant Women Seeking Care at the Kenyatta National Hospital**

Among the 186 women (31.1%) who had experienced IPV in the current pregnancy, the most common form of IPV was psychological IPV at 36%. Physical IPV and Sexual IPV affected

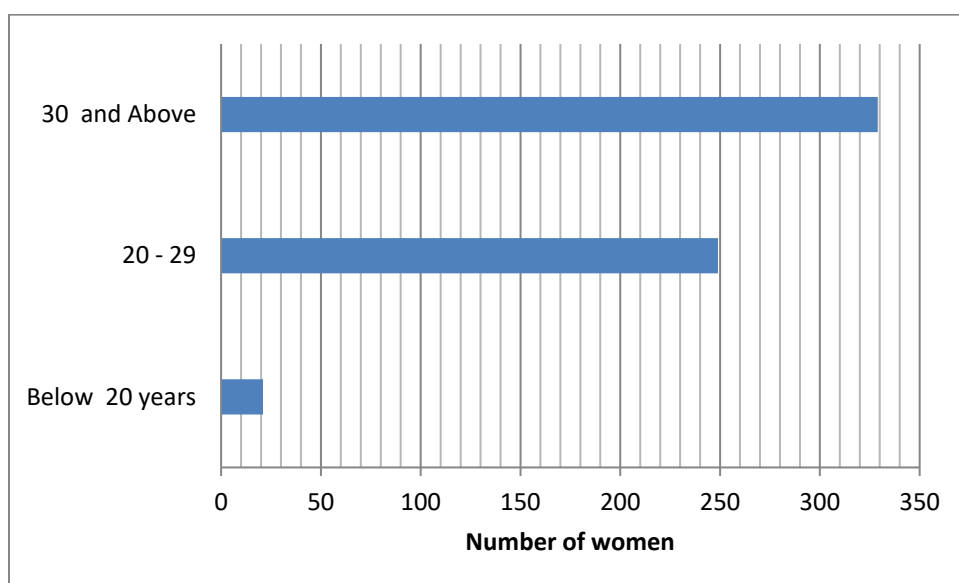
15% and 12 % of the women respectively with 8% of the women reporting experiencing all forms of IPV, 11% reported experiencing sexual and psychological IPV while 18% of the women reported experiencing physical and psychological IPV.



**Chart 1: Prevalence of types of Intimate Partner Violence in the Current Pregnancy, n=186**

**6.2: Sociodemographic Characteristics of Pregnant Women Seeking Care at the Kenyatta National Hospital**

The study participants were aged between 17 and 42 years, with a mean (SD) of 30.3 years, (SD=5.5 years). Figure 3 shows the distribution of the women’ age in years.



**Chart 2: Age Distribution of the Women**

**Table 3: Sociodemographic Characteristics of the Women in the Study**

Characteristic	Without IPV; N=413 n (%)	With IPV; N= 186 n (%)	Chi-sq	P-value
<b>Age Group</b>				
< 20 years	13 (3.1)	8 (4.3)	1.44	0.488
20 – 29 years	167 (40.4)	82 (44.1)		
30 – 39 years	233 (56.4)	96 (51.6)		
<b>Religion</b>				
Christian	387 (93.7)	169 (90.9)	1.557	0.212
Muslim	26 (6.3)	17 (9.1)		
<b>Marital Status</b>				

Single	44 (10.7)	17 (9.1)	0.321	0.571
Married	369 (89.3)	169 (90.9)		
<b>Level of Education</b>				
No formal education	1 (0.2)	2 (1.1)	34.188	<b>&lt;0.001</b>
Primary & below	29 (7.0)	29 (15.6)		
Secondary	117 (28.3)	81 (43.5)		
Tertiary	266 (64.4)	74 (39.8)		
<b>Occupation</b>				
Casual	39 (9.4)	17 (9.1)	0.932	0.818
Employed	111 (26.9)	33 (17.7)		
Self-employed	168 (40.7)	83 (44.6)		
Unemployed	95 (23.0)	53 (28.5)		
<b>Income (Ksh)</b>				
<5,000	30 (7.3)	10 (5.4)	5.24	0.387
5000-10000	48 (11.6)	20 (10.8)		
10001-15000	93 (22.5)	33 (17.7)		
>15000	152 (36.8)	70 (37.6)		
<b>Alcohol Use</b>				
No	405 (98.1)	176 (94.6)	5.205	<b>0.023</b>
Yes	8 (1.9)	10 (5.4)		

<b>Witness to Violence During Childhood</b>				
No	349 (84.5)	129 (69.4)	18.257	<b>&lt;0.001</b>
Yes	64 (15.5)	57 (30.6)		

Table 3 shows the sociodemographic characteristics distribution of the women by IPV exposure in the current pregnancy. At least half of the respondents in each IPV group were aged 30 years and above; about 90.0% percent of the women in each group were married. While two-thirds (64.4%) of the women that had never experienced IPV had attained tertiary level education, only about a third (39.8%) of women with previous history of IPV had attained tertiary level education.

In both groups, self-employed women constituted the majority (40.7% among women without IPV and 44.6% among those with history of IPV). About 60% of the women who earned an income, in both groups reported earning at least 10,000 shillings per month. Alcohol use was uncommon in both groups (1.9 % among women without IPV and 5.4 % among women with IPV). A woman's education level ( $p<0.001$ ), history of alcohol use ( $p=0.023$ ), and having witnessed violence during childhood ( $p<0.001$ ) were found to be significantly associated with a woman's history of IPV during the current pregnancy.

### **6.3: Relationship Characteristics of Pregnant Women Seeking Care at the Kenyatta National Hospital**

Table 4 shows the relationship characteristics of the women by IPV history. Less than half of the respondents had been living with the partner for more than 5 years (46% among women without IPV and 40.3% among women with IPV). Most were in monogamous relationships (96.1% among women without IPV and 96.2% among women with IPV). About two-thirds of the respondents' partners in each group (60% without IPV and 58.6%, with IPV) were less than 35 years of age.

More than three-quarters (77.2%) of women without IPV history and about two-thirds (61.3%) of women with IPV history have partners who've attained tertiary level education. Women whose husbands have attained tertiary level of education is 60% less likely to have IPV in pregnancy ( $p, <0.001$ ). The distribution of partner's occupation was similar between

the women with and those without IPV history, with majority reporting that partners were either self-employed, in casual jobs or unemployed (56.4%, without IPV and 56.5%, with IPV). Whereas two-thirds of the women without IPV history, had partners earning more than ksh 15,000 per month (67.6%), three-quarters of the women with IPV history had partners earning more than ksh 15,000 per month (78%). This difference was significant statistically with those earning more than ksh 15,000 about 50% unlikely to have IPV in pregnancy (p, 0.010).

The proportion of women without IPV history having partners that don't take alcohol (72.4%) was significantly higher compared to the proportion (53.2%) reported for women with IPV history whose husbands don't take alcohol (p, <0.001). Not using alcohol was 2.3 more likely that the woman will not have IPV during the pregnancy.



**Table 4: Partners' Sociodemographic and Relationship Characteristics in Relation to Intimate Partner Violence in the Current Pregnancy at the Kenyatta National Hospital**

Characteristic	Without IPV; N=413  N (%)	With IPV; N=186  N (%)	Odds Ratio  (CI)	P-value
<b>Duration with Partner</b>				
1-5 years	223 (54.0)	111 (59.7)	0.793	0.195
6-10 years	190 (46.0)	75 (40.3)	(0.59-1.13)	
<b>In a Polygamous Relationship?</b>				
No	397 (96.1)	179 (96.2)	0.97	0.948
Yes	16 (3.9)	7 (7.0)	(0.39-2.40)	
<b>Partner's Age</b>				
Less than 35years	248 (60.0)	109 (58.6)	1.06	0.739
More than 35years	165 (40.0)	77 (41.4)	(0.75-1.51)	
<b>Partner Education</b>				
Primary/Secondary	94 (22.8)	72 (38.7)	0.467	<b>&lt;0.001</b>
Tertiary	319 (77.2)	114 (61.3)	(0.32-0.68)	
<b>Partner's Occupation</b>				
Stable job	180 (43.6)	81 (43.5)	1.00	0.994
Unstable job	233 (56.4)	105 (56.5)	(0.71-1.42)	
<b>Partner's Income (Ksh)</b>				
Less than 15000	279 (67.6)	145 (78.0)	0.589	<b>0.010</b>
More than 15000	134 (32.4)	41 (22.0)	(0.39-0.88)	

<b>Partner Alcohol Use</b>				
No	299 (72.4)	99 (53.2)	2.305	<b>&lt;0.001</b>
Yes	114 (27.6)	87 (46.8)	(1.61-3.30)	
<b>Difference in Age</b>				
Less than 5 years	279 (70.8)	118 (67.8)	1.15	0.473
More than 5 years	115 (29.2)	56 (32.2)	(0.78-1.69)	

#### **6.4: Obstetric Characteristics of Pregnant Women Seeking Care at the Kenyatta National Hospital**

Table 5 presents the obstetric characteristics of the women by IPV history. History of contraceptive use was comparable between the two groups, with about three quarters (73.1%, without IPV and 76.3% with IPV) reporting to have used hormonal contraceptives. While about two thirds (67.3%) of the women without IPV history were in their third trimester at the time of the survey, more than three quarters (76.3%) of the women with IPV history were in the third trimester.

This difference was significant statistically, with IPV more likely happening in the third trimester (p, 0.025). In both groups, majority of the women had planned for the current pregnancy (83.3% and 78% among those without and with history of IPV respectively). There were few HIV positive cases reported in each group (7.7%, without IPV and 10.2%, with IPV).

**Table 5: Obstetric Characteristics for Women attending Ante Natal Clinic at the Kenyatta National Hospital**

Characteristic	Without IPV N=413  n (%)	With IPV N=186  n (%)	Odds Ratio  (CI)	P-value
<b>History of Contraceptive Use</b>				

No history	111 (26.9)	44 (23.7)	1.19	0.405
Positive history	302 (73.1)	142 (76.3)	(0.79-1.77)	
<b>Gestation</b>				
First/Second	135 (32.7)	44 (23.7)	1.57	<b>0.025</b>
Third	278 (67.3)	142 (76.3)	(1.06-2.33)	
<b>Planned Pregnancy</b>				
No	70 (16.9)	41 (22.0)	0.72	0.14
Yes	343 (83.3)	145 (78.0)	(0.47-1.11)	
<b>HIV Status</b>				
Negative	391 (92.3)	167 (89.8)	1.355	0.317
Positive	32 (7.7)	19 (10.2)	(0.75-2.46)	

### **6.5: Logistic Regression for the Association of Socio – Obstetric Characteristics and Intimate Partner Violence among Women Pregnant Women at the Kenyatta National Hospital**

A multiple logistic regression was fit (Table 6) to evaluate the relationship between the respondents' socio-demographic, partner relationship and obstetric characteristics and IPV history was done. Only factors whose crude associations yielded a  $p$ -value $<0.05$  were considered in the regression model. From the regression model, the woman's gestation, having witnessed violence during childhood, partner's history of alcohol use, partner's income and partner's level of education were found to be significantly associated with IPV history.

Controlling for the rest of the factors in the logistic analysis, the partner's alcohol use, the partner's income and the partner's level of education were significant statistically as factors that were associated with IPV in pregnancy. Women whose partners did not use alcohol were less likely to have IPV in their marriage ( $p,<0.001$ ), women whose partners earned more than ksh 15000 were less likely to witness IPV in pregnancy ( $p,0.015$ ) and women whose partners

level of education was at the tertiary level were also less likely to witness IPV in pregnancy (p,<0.001).

**Table 6: Logistic Regression analysis evaluating the Relationship between Respondent Characteristics and Odds of Experiencing Intimate Partner Violence in Pregnancy**

Characteristic	Adjusted Odds Ratio (C I)	P value
<b>Gestation</b>		
First/Second		
Third	0.68 (0.44-1.02)	0.065
<b>Partner' Alcohol Use</b>		
No		
Yes	0.45 (0.31-0.65)	<0.001
<b>Partner's Income</b>		
Less than 15000		
More than 15000	1.73 (1.11-2.68)	0.015
<b>Partner's education level</b>		
Primary/Secondary		
Tertiary	4.71 (1.99-11.17)	<0.001

## CHAPTER SEVEN: DISCUSSION

### 7.1: Prevalence of IPV during pregnancy among women receiving care at the KNH

The overall prevalence of IPV among the women who responded to the questionnaire at any point in the relationship was found to be 43%, whereas the prevalence in a past pregnancy was found to be 21%. The prevalence of IPV in the current pregnancy among pregnant women receiving care at the KNH was found to be 31% in this study. From this findings we can conclude that the period of pregnancy may offer a few of the victims of IPV reprieve from the violence as some of these women reported IPV during the relationship but no IPV during current or past pregnancy. However this is only true for a few of the women with a majority of the IPV victims reporting IPV before and after pregnancy, some even reporting an escalation in the forms of IPV during pregnancy.

The primary focus of this research was the findings in the current pregnancy. As such the finding of a prevalence of 31% was almost double of the finding of a research done at the KNH in 2015 using the same questionnaire. (10) The difference however is that in the 2015 study the study site was in the ANC clinic while in this research the study sites were expanded to include the Labour ward, Antenatal Wards and the ANC clinic. This could partly explain the difference in prevalence as several women especially those with partners with controlling behaviours would not attend ANC clinic only coming to the hospital at the point of delivery. In both studies women who were accompanied by their partners were excluded from the study, thus opening up study sites to include women admitted at the hospital and away from their partners made it possible to interview women who would have otherwise been left out and possibly be victims of IPV during pregnancy. It is possible that there are other social, economic and environmental factors that could have contributed to the doubling of prevalence rates over a period of four years but that is beyond the scope of this research and as such we cannot draw conclusions with statistical confidence on reasons for this escalation in IPV during pregnancy.

The findings were comparable to a facility based study done in Kisumu District Hospital (KDH) which found a prevalence of IPV during pregnancy of 37% among the ANC attendants. (8) This was also comparable to a study done in Moshi, Tanzania which found a prevalence of 30.2% among pregnant women attending ANC clinics at majengo and pasua health centers both in Moshi municipality, Kilimajaro region in Tanzania. (17) Our findings were also within the range found in the review of African studies which found that the

prevalence of IPV during pregnancy among the studies reviewed ranged from between 2% to 57%. (6)

Psychological violence was the most common form of IPV during pregnancy at 36%, this finding was similar to a majority of the other studies on IPV such as in Rwanda where it was at 17%, 22.8% in Tanzania, 20% in Ethiopia, in Kisumu it was 29%, and in Westpokot 55.8%. In all these studies psychological IPV was the most common form of IPV.

(19)(17)(18)(9) Interestingly also in this study we found that where more than one form of IPV existed psychological IPV was always present, with those reporting both physical and psychological IPV being 18%, sexual and psychological 11% and 8% reporting all the three forms of IPV. In the KNH study of 2015 this finding was similar except for 2% of the women experiencing only physical and sexual violence. (10) The finding that psychological IPV was the most common could be as a result of the fact that most perpetrators would threaten their victims severally before perpetrating either physical or sexual IPV.

For those who reported only one form of IPV psychological IPV was the most common followed by physical IPV and sexual IPV being the least common, this was similar to findings in the studies done in Rwanda and Ethiopia. (19) (18) The studies done in KNH in 2015 and in Kisumu had Psychological IPV followed by Sexual IPV and Physical IPV as the least common. (8) That said the prevalence of Sexual IPV was 12% in this study same for the studies in Kisumu and Ethiopia, the study done in KNH in 2015 yielded a sexual IPV prevalence of 15% which is a slight reduction from our finding of 12%. This study found that 15% of the women experienced physical IPV which was similar to the findings in the study done in Ethiopia; however it is a significant increase from the 2015 KNH study which reported 4% of the women experiencing physical IPV. This change in trends of forms of IPV need to be further interrogated. A plausible explanation could be that there have been concerted efforts targeting specifically rolling back sexual violence and not paying emphasis on the other forms of IPV. (10)

## **7.2: Association between sociodemographic characteristics of pregnant women seeking care at KNH and IPV**

The study participants were aged between 17 and 42 years with a mean of 30.3 years. The prevalence of IPV during pregnancy among all the age groups in this study was similar which is differs from a number of studies that found that IPV prevalence was higher among young women such as in the review of the African studies and the study in Rwanda. (19)(6) This

shows that the trends maybe changing with women of all ages at risk of IPV. This change of trend is also seen.

A majority of the women interviewed (approximately 90%) were married. The prevalence of IPV among single women and married women was similar. Of the women interviewed those reporting IPV 9.1% were single and 90.9% were married; whereas of those who did not experience IPV 10.7% were single and 89.3% were married. This finding was different from the findings of KDHS 2014 which found that IPV was more common among formerly married women. (7)

This study found that pregnant women who had attained tertiary education had less risk of being victims of IPV. Women with Primary level education and below the risk of IPV doubled. ( $P < 0.001$ ) These findings were similar to findings in the KDHS 2014 study and in the study done in Ethiopia. (7)(18) It is postulated that education enlightens the pregnant women on acceptable social norms and available options when they feel that their wellbeing is at risk.

History of being witness to violence during childhood to a parent or a close relative doubled the risk of undergoing IPV in adulthood. ( $P < 0.001$ ) Of the women who reported witnessing violence during childhood 15.5% did not experience IPV whilst 30.6% experienced IPV. This finding was similar to the studies done in Kisumu and West pokot. (8)(9)

Few women reported taking alcohol, of this women there was a significant association between alcohol intake and IPV ( $P = 0.023$ ). There was an almost tripling of risk of IPV with alcohol ingestion. Alcohol is known to cause inhibition and might lead to aggravation of conflicts that could otherwise be solved rationally and amicably.

Interesting a woman's income did not change the risk of exposure to IPV, with similar risk among women within the same income bracket. This finding differed with the study done in Rwanda and some of the studies in the review of African studies which reported that low socioeconomic status among women increased the risk of IPV. (19)(6)

### **7.3: Association between relationship characteristics of pregnant women seeking care at KNH and IPV**

The duration of a relationship ( $P = 0.195$ ), age of the partner ( $P = 0.739$ ) and the age difference between partners ( $P = 0.473$ ) did not show any statistically significant association with IPV. Prevalence of IPV was slightly more among pregnant women who were in unions that had lasted less than five years but this finding did not show any statistical difference. There was no much difference in age of male partners who perpetrated IPV and those who did not. Of the male partners who perpetrated IPV 41.1% were above 35 years, similarly of the male partners who did not perpetrate IPV 40% of them were above 35 years. This finding was different from the West pokot study that found that IPV perpetrators were men in the older age group. Being in a polygamous union showed a slight increase in risk of IPV but this did not hold statistical significance. ( $P = 0.948$ ) Of the women who had not experienced IPV 3.9% of them were in polygamous unions while of the women who reported IPV 7% were in polygamous unions. These findings were similar to findings in the Kisumu study that found the being in a polygamous union increased the risk of IPV. (aOR 2.48 95% CI = 1.06 -5.8). (8)

Level of partner education was statistically significantly associated with IPV during pregnancy, with a partner who had attained tertiary education being less likely to be a perpetrator of IPV ( $P < 0.001$ ). This finding was similar to findings in studies done in Kisumu and West pokot which both determined that IPV was protective against IPV. (8)(9)

A statistically significant association was found between risk of IPV during pregnancy and partner alcohol intake. ( $P < 0.001$ ) Partner alcohol intake doubled the risk of IPV during pregnancy. This association was in agreement with studies done in Kisumu, West pokot, Ethiopia and a systematic review of African studies. Alcohol as a risk factor for IPV is multipronged; partners who are alcohol dependent may dedicate significant resources to the vice and may strain the family's economic status. Alcohol causes inhibition giving false courage to potential perpetrators to execute IPV; it also causes inhibition as regards behaviour, speech and conflict resolution, escalating even the mildest of misunderstanding to full-blown disagreements. (8)(9)(6)

A partner's income is significantly associated with IPV during pregnancy ( $P = 0.010$ ) with partners earning more than KES 15,000 less likely to perpetrate IPV. This finding echoes findings in Rwanda that established that low socioeconomic status was associated with increased risk of IPV during pregnancy. (19)



#### **7.4: Association between obstetric characteristics of pregnant women seeking care at KNH and IPV**

IPV during pregnancy was found to be more common during the third trimester ( $P = 0.025$ ) a finding that was similar to the KNH study of 2015. This could be because by the third trimester challenges of pregnancy physically, emotionally and financially could have strained the relationship creating grounds for potential disharmony that could lead to IPV. Unlike in the study in Ethiopia, this study did not establish any association between IPV during pregnancy and planning of a pregnancy or history of contraceptive use. In Ethiopia an unplanned pregnancy increased the risk of IPV during pregnancy. (10)(18)

In the analysis of 19 African Studies five studies reported positive association between IPV during pregnancy and HIV (OR 1.48 – 3.10). In this study there were 51 HIV positive mothers who were interviewed but no association between HIV and IPV during pregnancy was established ( $P = 0.317$ ). This finding was similar to the study done in Kisumu which also found no association between IPV during pregnancy and HIV. This finding could be due to de-stigmatization of the HIV pandemic, available management options and improved understanding on HIV among the general public. (8)

#### **7.5: Conclusion**

The prevalence of IPV among pregnant women receiving care at the KNH is on the rise, doubling over the past 4 years and currently affecting one in three women under the care of the obstetrician. There is need for regular screening for IPV among all pregnant women not only at the antenatal clinic but at all units offering service to the pregnant woman. This will not only create awareness on the scourge of IPV among the general public and healthcare providers but it will also give victims an opportunity to speak up and receive appropriate linkage to Gender Based Violence Recovery Centre, where they will receive treatment, counselling and more information on IPV and options available to them. There is need for concerted efforts to prevent IPV and from the findings in this study, male partner involvement will be crucial in rolling back the prevalence of IPV.

#### **7.6: Recommendations**

1. All pregnant women should be screened for IPV during pregnancy at all units offering care to pregnant women including antenatal clinic, labour ward and antenatal/postnatal wards. Besides direct inquiry into the possibility of IPV during pregnancy, factors that have been identified as risk factors for IPV during pregnancy should be captured in the

antenatal card and this will aid the health worker identify women at risk of IPV at a glance of the antenatal card.

2. There is need to incorporate GBVRC services to antenatal care of pregnant women receiving care. This will aid in ease in linkage of identified victims/survivors of IPV and further inculcate the culture of the multidisciplinary care for the pregnant woman.
3. The results from this study should be disseminated in Continuous Medical Education (CME's), Conferences like the Kenya Obstetric and gynaecological society (KOGS) and within the mass media. This will help create awareness among health workers, law enforcement agencies and the general public.
4. Concerted efforts towards prevention of IPV should target the male partner as most of the risk factors identified in this research as most contributing to IPV during pregnancy involve the male partner.
5. The findings of this research should contribute part of the background information that will be used to inform review and update of policy touching on antenatal service provision in Kenya and beyond.

#### **7.7: Further research**

We recommend further research on:

1. The consequences of IPV during pregnancy on obstetric (feto-maternal), mental health, gynaecological and physical outcomes.
2. Male perspective on IPV – most researches done have relied on the women responding on behalf of the man, it would be interesting to get the male perspective.
3. Inclusion of Focused Group Discussions (FDG's) in future research will yield more information on IPV from the victim. FDG's will also serve as a platform for group therapy.

**Chart 3: STUDY TIMELINES**

	2018		2019					
ACTIVITIES	July Aug	Sept Dec	Jan – March	April- June	July - October	Nov	Dec	Dec
<b>Proposal stage</b>								
<b>Presentation &amp; Corrections</b>								
<b>Ethics</b>								
<b>Data Collection</b>								
<b>Data Analysis</b>								
<b>Results Presentation</b>								
<b>Finalizing dissertation</b>								
<b>Submission for marking</b>								

**Table 7: BUDGET**

CATEGORY/ITEM	COST IN KSH
Charges for KNH/UoN ERC proposal review	2,000
RESEARCH ASSISTANTS	100,000
STATISTICIAN	60,000
STATIONARY	5,000
PHOTOCOPYING/PRINTING AND PUBLISHING	25,000
MISCELLANEOUS	10,000
<b>TOTAL</b>	<b>202,000</b>

## REFERENCES

1. Wright RA. Women as “Victims” and as “Resisters”: Depictions of the Oppression of Women in Criminology Textbooks. *Teach Sociol* [Internet]. 1995;23(2):111. Available from: <http://www.jstor.org/stable/1319341?origin=crossref>
2. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R. *World report on violence and health*, Geneva. 2002; Available from: [http://apps.who.int/iris/bitstream/handle/10665/42495/9241545615\\_eng.pdf;jsessionid=139F0626529093D922EF75A1F764D375?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf;jsessionid=139F0626529093D922EF75A1F764D375?sequence=1)
3. Violence IP. Committee opinion. *Obstet Gynecol* [Internet]. 2012;119(518):412–7. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/22270317>
4. Garcia-Moreno C, Jansen H a FM, Ellsberg M, Heise L, Watts CH. WHO Multi-Country Study on Women’s Health and Domestic Violence Against Women: Initial Results on Prevalence, Health Outcomes and Women’s Responses. *Genetics* [Internet]. 2005;151(1):277–83. Available from: <http://www.cabdirect.org/abstracts/20063002089.html>
5. Information sheet Intimate partner violence during pregnancy. 2011; Available from: [http://www.who.int/reproductivehealth/publications/violence/rhr\\_11\\_35/en/](http://www.who.int/reproductivehealth/publications/violence/rhr_11_35/en/)
6. Shamu S, Abrahams N, Temmerman M, Musekiwa A, Zarowsky C. A Systematic Review of African Studies on Intimate Partner Violence against Pregnant Women : Prevalence and Risk Factors. *PLoS One* [Internet]. 2011;6(4):1–9. Available from: <https://doi.org/10.1371/journal.pone.0017591>
7. Survey KDH. Kenya Demographic and Health Survey, 2014; Available from: <https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf>
8. Omolo J, Kamweya AM. Prevalence and Associated Factors of Intimate Partner Violence Among Pregnant Women Attending Kisumu District Hospital, Kenya. *Matern Child Heal J* [Internet]. 17(3):441–7. Available from: <https://link.springer.com/article/10.1007/s10995-012-1015-x>
9. Aka OW, Ogweni I. Intimate partner violence in pregnancy among antenatal attendees at health facilities in west pokot county, kenya. *Pan Afr Med J* [Internet]. 2017;15(Nov):28:229. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29629015>
10. Mwakio CW. The prevalence of depression and intimate partner violence against pregnant women attending antenatal clinic at Kenyatta National Hospital; Thesis Dissertation for Master of Science; Clinical Psychology; University of Nairobi

- Repository. 2015; Available from: <http://erepository.uonbi.ac.ke/handle/11295/94884>
11. Organization world health. WHO Recommendation on Antenatal care for positive pregnancy experience. WHO Recomm Antenatal care Posit pregnancy Exp [Internet]. 2016;152. Available from: <http://apps.who.int/iris/bitstream/10665/250796/1/9789241549912-eng.pdf>
  12. World Health Organization. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. 2013 [Internet]. 2013;57. Available from: <http://www.who.int/reproductivehealth/publications/violence/9789241564625/en/>
  13. Hindin MJ, Kishor S, Ansara DL. Intimate partner violence among couples in 10 DHS countries: Predictors and health outcomes [Internet]. DHS Analytical Studies No 18. 2008. 97 p. Available from: <https://dhsprogram.com/pubs/pdf/AS18/AS18.pdf>
  14. Devries KM, Kishor S, Johnson H, Stöckl H, Loraine J, Garcia-moreno C, et al. Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. *Reprod Heal Matters*, [Internet]. 2010;18:36(January 2018):158–70. Available from: [https://doi.org/10.1016/S0968-8080\(10\)36533-5](https://doi.org/10.1016/S0968-8080(10)36533-5)
  15. Fletcher T. Prevalence , Types , Risk Factors , and Course of Intimate Partner Violence in Appalachian Pregnant Women; Electronic Theses and Dissertations. 2014;Paper 2371. Available from: <http://dc.etsu.edu/etd2371>
  16. Rodrigues DP, Gomes-sponholz FA, Stefanelo J, Márcia A. Intimate partner violence against pregnant women : study about the repercussions on the obstetric and neonatal results \*. *Rev ESC Enferm USP* [Internet]. 2014;48(2):206–12. Available from: [www.ee.usp.br/reeusp](http://www.ee.usp.br/reeusp)
  17. Nimrod G, Wolf D, Jane J. Social support and intimate partner violence during pregnancy among women attending antenatal care in Moshi Municipality , Northern Tanzania. *B M C Public Heal* [Internet]. *BMC Public Health*; 2017;17(240). Available from: <https://bmcpublikealth.biomedcentral.com/articles/10.1186/s12889-017-4157-3>
  18. Laelago T, Belachew T, Tamrat M. Prevalence and Associated Factors of Intimate Partner Violence during Pregnancy among Recently Delivered Women in Public Health Facilities of Hossana Town , Hadiya. *Open Access Libr J* [Internet]. 2014;1:1–9. Available from: <https://www.scirp.org/journal/PaperInformation.aspx?PaperID=64626>
  19. Rurangirwa AA, Mogren I, Ntaganira J, Krantz G. Intimate partner violence among pregnant women in Rwanda , its associated risk factors and relationship to ANC

- services attendance : a population-based study. *BMJ Open* [Internet]. 2017;7(e013155). Available from: <https://bmjopen.bmj.com/content/7/2/e013155>
20. Finnbogadóttir H, Dykes A, Wann-hansson C. Prevalence and incidence of domestic violence during pregnancy and associated risk factors : a longitudinal cohort study in the south of Sweden. *BMC Pregnancy Childbirth* [Internet]. *BMC Pregnancy and Childbirth*; 2016;1–10. Available from: <http://dx.doi.org/10.1186/s12884-016-1017-6>
21. Undie C-C, Maternowska MC, Mak’anyengo M, Askew I. Is routine screening for intimate partner violence feasible in public health care settings in Kenya? *J Interpers Violence* [Internet]. 2014;Epublished 06 November 2014. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25381272>

**ANNEXES**

**Annex 1: Questionnaire**

**IPV AND SOCIO-DEMOGRAPHIC QUESTIONNAIRE**

<b>CODE:</b>	
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**INSTRUCTIONS**

1. Please fill in the answers in the blank spaces provided.
2. Please answer all the questions in this questionnaire.
3. You will be provided with stationary (Pen, Pencil, and eraser) to fill in the information in the questionnaire.
4. For the questions in tables, please place a mark, **(X)** or **(✓)** beside the response applicable to you to indicate your answer.
5. Where you are not sure of how to answer a question please, ask the investigator to clarify the information before you answer the question.

**PART 1: SOCIO-DEMOGRAPHIC INFORMATION**

**I. Residence .....**

**II. Age**

In what year were you born? Year .....

**III. Marital Status**

<b>Please tick the option that is applies to you</b>	
Single	
Married	
Separated	
Divorced	
Widowed	

**IV. Religion**

<b>Please tick the option that is applies to you</b>	
Christian	
Muslim	
Hindu	
Other (Specify)	

**V. Level of education**

<b>Please tick the option that is applies to you</b>	
No formal education	
Primary school education	
Secondary school education	
College/University education	

For completion of college education:

<b>Please tick the option that is applies to you</b>	
Certificate	
Diploma	
University	

**VI. Occupation**

<b>Please tick the option that is applies to you</b>	
Unemployed	
Self-employed	
Casual	
Employed	

Income range per month

<b>Please tick the option that is applies to you</b>	
Less than KES 5000	
KES 5001 – 10,000	
KES 10,001 – 15,000	
Above KES 15,001	

**VII. Have you ever used any form contraceptive?**

<b>YES</b>	
<b>NO</b>	



If “YES” which contraceptive did you use last before getting pregnant?

<b>Please tick the option that is applies to you</b>	
Barrier	
Pills	
Injectable	
Implant	
Intra-uterine Device	
Natural	

**VIII. About the pregnancy**

When is your pregnancy due (EDD) .....

<b>Please fill in which trimester you are in currently</b>	
<b>First</b>	
<b>Second</b>	
<b>Third</b>	

Was this pregnancy planned?

<b>YES</b>	
<b>NO</b>	

**IX. Do you drink alcohol?**

<b>YES</b>	
<b>NO</b>	

**X. When you were young (*Below 15 years*) did you witness violence between your parents/guardians?**

<b>YES</b>	
<b>NO</b>	

**XI.** What is your HIV status?

<b>Negative</b>	
<b>Positive</b>	

**XII.** How long have you been with your current partner? .....

**XIII.** Are you in a polygamous relationship?

<b>YES</b>	
<b>NO</b>	

**PART II: INFORMATION ON YOUR PARTNER**

**I.** How old is your husband/partner? .....

**II.** Your husband/partners' level of education?

<b>Please tick the option that applies to your partner</b>	
No formal education	
Primary school education	
Secondary school education	
College/University education	

For completion of college education:

<b>Please tick the option that applies to your partner</b>	
Certificate	
Diploma	
University	

**III. Husband/Partners Occupation?**

<b>Please tick the option that applies to your partner</b>	
Unemployed	<input type="checkbox"/>
Self-employed	<input type="checkbox"/>
Casual	<input type="checkbox"/>
Employed	<input type="checkbox"/>

Income range per month

<b>Please tick the option that applies to your partner</b>	
Less than KES 5000	<input type="checkbox"/>
KES 5001 – 10,000	<input type="checkbox"/>
KES 10,001 – 15,000	<input type="checkbox"/>
Above KES 15,001	<input type="checkbox"/>

**IV. Does your partner drink alcohol?**

<b>YES</b>	<input type="checkbox"/>
<b>NO</b>	<input type="checkbox"/>

**PART III: INTIMATE PARTNER VIOLENCE TOOL**

Has your Husband/Partner ever done any of the things below:		Any time during your relationship		During Any past pregnancy		During this pregnancy	
		Yes	No	Yes	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 you or harm you or someone close to you?						
12.	Insult you or make you feel bad about yourself?						

**Annex 2: Dodoso (Swahili questionnaire)**

**KISWAHILI TRANSLATION OF IPV AND SOCIO-DEMOGRAPHIC QUESTIONNAIRE**

<b>CODE:</b>	
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**MAELEKEZO JINSI YA KUJIBU MASWALI YA KIDODOSI HILI**

1. Tafadhali jaza majibu kwenye nafasi iliyowekwa kando ya kila swali.
2. Tafadhali jaza majibu ya maswali yote yaliyomo kwenye kidodosi hili.
3. Utapewe vyombo vya kujibu mawsali ya kidodosi hili kama kalamu ya wino, kalamu ya risasi na kifutio.
4. Katikaa maswali yaliyomo kwenye michoro ya meza ya kuelezea majibu yako, tafadhali weka alama **(X)** ama **(✓)** kwa kila jibu linalo kuhusu ili kuashiria jibu lako.
5. Palipo swali lenye haujalewa jinsi ya kulijibu, tafadhali uliza mtafiti ili aweze kukueleza vyema kabla ujaze jibu hilo.

**SEHEME YA KWANZA: MASWALA NA MAMBO YA KIJAMII**

**I. Pahala Unapoishi .....**

**II. Miaka:**

Ulizaliwa mwaka gani? Mwaka .....

**III. Ndoa**

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Bila mume	
Umeolewa	
Umeachana na mume wako	
Umepewa talaka na mumeo	
Umefiwa na mume wako	

**IV. Dini**

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Mkristo	
Muislamu	
Mhindi	

Ingingine (fafanua)	
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## V. Masomo

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Haujasoma	
Shule ya msingi	
Shule ya upili	
Chuo kikuu	

Kwa wale walio maliza masomo ya vyuo:

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Cheti	
Shahada	
Chuo kikuu	

## VI. Kazi

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Hauna Kazi	
Unajifanyia kazi mwenyewe	
Unashikilia wengine kazi kwa muda mfupi	
Umeandikwa kazi	

Mapato kwa mwezi

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Chini ya KES 5000	
KES 5001 – 10,000	
KES 10,001 – 15,000	
Zaidi ya KES 15,001	

**VII. Je umewahi tumia njia yoyote ya kupanga uzazi?**

<b>NDIO</b>	
<b>LA</b>	

Kama jibu lako ni “NDIO” ni njia gani ya kupanga uzazi uliyotumia mwisho kabla ya kupata mimba?

<b>Tafadhali chagua jibu linalo ambatana na wewe</b>	
Mpira za kupanga uzazi	
Dawa za kumeza za kupanga uzazi	
Dawa za kudungwa za kupanga uzazi	
Nimeweka kidude cha kupanga uzazi kwenya mkono	
IUCD (Coil)	
Nahesabu siku za mwezi kupanga uzazi	

**VIII. Mimba**

Je, unatarajia kujifungua lini? .....

<b>Tafadhali jaza muda wa mimba ulipo wakati huu</b>	
<b>Kwanza</b>	
<b>Pili</b>	
<b>Tatu</b>	

Mimba huu ulikuwa umepangwa?

<b>NDIO</b>	
<b>LA</b>	

**IX. Unakunywa Pombe?**

<b>NDIO</b>	
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<b>LA</b>	
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- X. Ulipokuwa mchanga (*chini ya miaka 15*) uliona ugomvi/vurugu baina ya wazazi wako/waliokuwa wakikulea?

<b>NDIO</b>	
<b>LA</b>	

- XI. Matokea ya kipimo cha ukimwi?

<b>Hasi (-)</b>	
<b>Chanya (+)</b>	

- XII. Mumekuwa na mchumba wako kwa muda gani? .....

- XIII. Uko kwenya uchumba ulio na bibi/wanawake zaidi ya moja?

<b>NDIO</b>	
<b>LA</b>	

**SEHEMU YA PILI: MASWALA KUHUSU MUME/MCHUMBA/MPENZI WAKO**

- V. Umri wa mume/mchumba/mpenzi wako? .....

- VI. Masoma ya mume/mchumba/mpenzi wako?

<b>Tafadhali chagua jibu linalo ambatana na mume/mchumba/mpenzi wako</b>	
Haujasoma	
Shule ya msingi	
Shule ya upili	
Chuo kikuu	

Kwa wale walio maliza masomo ya vyuo:



<b>Tafadhali chagua jibu linalo ambatana na mume/mchumba/mpenzi wako</b>	
Cheti	
Shahada	
Chuo kikuu	

**VII.** Hali ya kazi ya mchumba wako?

<b>Tafadhali chagua jibu linalo ambatana na mume/mchumba/mpenzi wako</b>	
Hana Kazi	
Anajifanyia kazi mwenyewe	
Anashikia wengine kazi kwa muda mfupi	
Ameandikwa kazi	

Mapato kwa mwezi

<b>Tafadhali chagua jibu linalo ambatana na mume/mchumba/mpenzi wako</b>	
Chini ya KES 5000	
KES 5001 – 10,000	
KES 10,001 – 15,000	
Zaidi ya KES 15,001	

**VIII.** Mchumba wako anakunywa pombe?

<b>NDIO</b>	
<b>LA</b>	

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

	<b>Mume/Mchumba au Mpenzi wako amewahi kufanyia vitendo vifwatayo?</b>	<b>Wakati wowote wa uhusiano/uchumba wenu?</b>		<b>Katika mimba nyingine?</b>		<b>Katika mimba hii?</b>	
		<b>Ndio</b>	<b>La</b>	<b>Ndio</b>	<b>La</b>	<b>Ndio</b>	<b>La</b>
1.	Hukuskumisha, kukutingisha mwili au kukutupia vitu?						
2.	Hukupiga makofi?						
3.	Hukukunja 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 maksudi?						
7.	Hukutishia maisha yako au kukushambulia kwa kutumia kisu, bunduki au sihala yoyote ile?						
8.	Hukulazimisha kufanya ngono hata kama hutaki kufanya hivyo?						
9.	Hukulazimisha kufanya vitendo vya ki mapenzi hata kata 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?						

### **Annex 3: Consent Form**

#### **UNIVERSITY OF NAIROBI**

#### **DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY**

PREVALENCE AND FACTORS ASSOCIATED WITH INTIMATE PARTNER VIOLENCE (IPV) DURING PREGNANCY AT KENYATTA NATIONAL HOSPITAL

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**PRINCIPAL INVESTIGATOR:** Dr. Teko Hoseah Poriot

#### **INVESTIGATOR'S STATEMENT**

I, Dr. Hoseah Poriot, am a post graduate student at University of Nairobi, department of Obstetrics and Gynaecology. I am currently carrying out a study on *Prevalence and Factors associated with intimate partner violence during pregnancy at the Kenyatta National Hospital*. This study is part of the requirement for completion of my post-graduate studies at the University of Nairobi. I invite you to participate in this study, take time to read through the information provided below and seek any clarifications from the principal investigator or his research assistant before consenting to participate in the study.

#### **PURPOSE OF THE STUDY**

This study aims at finding out how common intimate partner violence during pregnancy is among women receiving care at the Kenyatta National Hospital. The study also aims to identify factors that are commonly associated with intimate partner violence during pregnancy. This information will help healthcare providers be able to screen and have a high index of suspicion for women at risk of intimate partner violence during pregnancy and appropriately intervene.

#### **PROCEDURES**

The principal investigator or his research assistant will explain to you more about the research we are conducting on the prevalence and factors associated with intimate partner violence during pregnancy at the Kenyatta National Hospital. We will explain to you the benefits of the study to you and to the society and will explain any potential risks of the study. We will take you through the consent form and if you agree to participate in the study you will be asked to sign the consent form. Please note that refusal to participate in this study will in no way disrupt access to services at the Kenyatta National Hospital. The research will be conducted in a room for privacy, you will be provided with a questionnaire and some writing material and you will be asked to fill in the questionnaire. We will offer any clarifications on any question and at any point if you don't feel comfortable or if any question causes you distress we will stop the interview and we will offer you counseling on the spot. Where required we will link you to

the gender-based violence center for further support and care. Please note that the questionnaire will not bare you name or any other detail that can identify you. After answering the questionnaires will be stored under lock and key and can only be accessed by the principal investigator, research assistants and statistician for purposes of analysis.

## **VISITS**

This will be the only time that you will take part in this study.

## **POTENTIAL RISK**

Given the nature of the study area some of the questions may be sensitive and may rekindle unpleasant memories. We will look out for any signs of distress you may be going through during the interview and we will offer appropriate support.

## **POTENTIAL BENEFIT**

The information collected in this study will help create awareness among healthcare providers on magnitude of intimate partner violence during pregnancy. The study will provide parameters that healthcare providers can use to screen and pick out women who may be undergoing intimate partner violence during pregnancy and are suffering in silence. In the course of this study any woman who may desire the need for counseling and further follow-up will be linked with the appropriate departments such as high-risk antenatal clinic and GBVRC.

## **CONFIDENTIALITY**

The information collected in this study will be confidential. No name will be used and instead each participant will be assigned an identification number. Only the research team will have access to the information provided, which will be kept under lock and key. Upon completion of the study results will be shared only with relevant parties.

## **RIGHT TO REFUSE/WITHDRAW**

Participation in the study is voluntary therefore you do not have to take part if you do not desire to. You may decide to withdraw from the study at any point you wish. Declining to participate or withdrawing from the study will not in any ways influence your current and future treatments/interventions at the Kenyatta National Hospital and your rights will be respected.

**CONTACT**

**In case of any question, clarification or feedbacks about the study kindly contact the principal investigator on:**

Dr. Teko Hoseah Poriot

0722968158

[hkporiot@gmail.com](mailto:hkporiot@gmail.com)

P. O. Box 1172-00618

Nairobi, Kenya.

**PARTICIPANTS STATEMENT**

I have read and understood the information provided above. The study has been explained to me and I have had the opportunity to ask questions which have been answered to my satisfaction. I agree to participate in this study, voluntarily, and I have not been coerced, manipulated or bribed in any way.

Participants Signature: .....

Participants Name: .....

Date: .....

**RESEARCHERS STATEMENT**

I have explained to the participant about the study. I have given the participant an opportunity to ask questions relevant to the study and I have answered correctly to the best of my abilities. I confirm that the participant has given consent voluntarily.

Researchers Signature: .....

Researchers Name: .....

Date: .....

## **Annex 4: Fomu Ridhaa (SWAHILI TRANSLATION FOR THE CONSENT FORM)**

### **CHUO KIKUU CHA NAIROBI**

### **IDARA YA UZAZI NA AFYA YA KINA MAMA**

KIWANGO NA MAASALA YANAYO HUSIANA NA UGOMVI/VURUGU WA USIANO WA KINDANI KWA WANAWAKE WAJAWAZITO WANAOPATA HUDUMA KATIKA HOSPITALI YA KENYATTA

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**MTAFITI:** Dr. Teko Hoseah Poriot

#### **MATAMSHI YA MTAFFITI**

Mimi, Dr. Hoseah Poriot, ni mwanafunzi katika chuo kikuu cha Nairobi, idara ya uzazi na afya ya kina mama. Ningependa kufanya utafiti lenya jina ***Kiwango na masala yanayo husiana na ugomvi/vurugu wa usiano wa kindani kwa wanawake wajawazito wanaopata huduma katika hospitali ya Kenyatta.*** Kufanya utafiti huu ni mojawapo wa mahitaji hili ni malize masomo yangu katika chuo kikuu cha Nairobi. Nakukaribisha ushiriki na utafiti huu, tafadhali soma taharifa uliyopewa kuhusiana na utafiti huu na unaweza uliza maswala ibuka kwa mtafiti mkuu ama msaidizi wake kabla kukubali kushiriki katika utafiti.

#### **SABABU YA UTAFITI HUU**

Huu utafiti unanua kujua ni wanawake wangapi walio wajawazito na wanapata huduma katika hospitali ya Kenyatta wamewahi ama hata sasa hivi wako na ugomvi/vurugu na mtu aliye na huhusiano wa kindani. Pia utafiti huu unajaribu kujua ni maswala gani ya kibinafsi na kijamii yanayo husiana na ugomvi/vurugu baina ya watu walio na huhusiano wa kindani. Matokeo ya utafiti huu yatumika na wahudumu wa afya kuwasaidia kujua ni wanawake wagani waliochini ya huduma yao walio na uwezekano wa kuwa katika uhusiano wa karibu ulio na ugomvi ama vurugu, hivyo sasa kuwapa wanawake hao huduma wanayo hitaji.

#### **TARATIBU YA UTAFITI HUU**

Mtafiti mkuu na wasaidizi wake watakueleza kuhusu utafiti huu amabao unachunguza ***Kiwango na maasala yanayo husiana na ugomvi/vurugu wa usiano wa kindani kwa wanawake wajawazito wanaopata huduma katika hospitali ya Kenyatta.*** Tukueleza faida ya utafiti huu kwako na kwa jamii. Pia tutakueleza kama kuna uwezekano wa kufadhaisha roho. Tutapitia fomu ya ridhaa pamoja na wewe na kama utakubali tutakuuliza uweke saina kwenya

fomu hii. Kukataa kwako kijihusisha na utafiti huu hautadhuru huduma ama jinsi utakavyo pokea huduma katika hospital ya Kenyatta. Utapelekwa katika chumba ambapo utakuwa peke yako na dodoso ulio na maswali kadhaa. Ukihitaji maelezo zaidi kuhusu jambo lolote katika dodoso tutakupa maelezo zaidi. Kukuwa na jambo la kufadhaisha roho tutasimamisha mahojiano na tutakupa ushara kwenye chumba. Baada ya hapo tutakuelekeza katika kituo cha vurugu ya kijinsia ambapo utapata usaidizi na ushara zaidi. Dodoso halitakuwa na jina lako ama kitu chocho kinachoweza kutumiwa kujua ni wewe uliyejibu. Pia baada ya kujibu dodoso zote zitafungiwa na kufuli, na mtafiti na wasaidizi wake peke yake ndio wataokuwa na uwezo wa kuzipekuwa kwa ajili ya kujumulisha majibu.

### **ZIARA**

Hii ndio ziara ya kipekee ambapo utashiriki katika utafiti huu.

### **HALI YA KUFADHAISHA ROHO**

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

### **FAIDA**

Taarifa tutakayo pata kutoka utafiti huu hutasaidia wahudumu afya kujua kiwango cha shida ya ugomvi/vurugu baina ya wanawake wajawazito walio ndani ya uhusiano wa kindani. Utafiti huu utasaidia kueneza habari ya kuimarisha au kuboresha hali ya afya ya wamama wajawazito nchini Kenya. Kama unahitaji matibabu ya ushara nitakuelekeza kwa washara wa hospitali ya Kenyatta walionaujuzi wa matibabu ya kishara na/au huduma ya baadaye ya kiafya ya elimu ya mambo ya kisaikolojia. Nitakupea idhini ya rufaa katika kliniki ya GBVRC (KNH) kwa lengo la kupata matibabu na ushaurizaidi.

### **JINSI YA USIRI KATIKA UTAFITI HUU**

Ningependa kukueleza ya kwamba jambo lolote utakalo niambia kwenye kikao chetu, litakuwa ni jambo la faragha au usiri na sitaambia mtu yeyote isipokuwa wasimamizi wangu ambao pia wanaisaidia kutekeleza utafiti huu. Hatutumia jina lako pahala popote bali kali mtu ambaye atajishirikisha katika utafiti huu atapewa nambari ya nambari ya utambulishi.

### **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. Uko na haki ya kusimamisha mahojiano wakati wowote unapohisi kwamba hautaki kujiusisha na utafiti huu tena. Kukataa kujihusisha na utafiti huu hautadhuru huduma au jinsi utakavyo pokea huduma katika Hospitali ya Kenyatta.

### **JINSI YA KUWASILIANA NA MTAFITI MKUU**

**Ikiwa uko na swali yoyote au ungependa kuwasiliana na matifiti mkuu, unaweza kutumia njia zifwatazo:**

Dr. Teko Hoseah Poriot

0722968158

[hkporiot@gmail.com](mailto:hkporiot@gmail.com)

P. O. Box 1172-00618

Nairobi, Kenya.

### **TAARIFA YA MSHIRIKI**

Nimeelezwa na nimeelewa kuhusu utafiti uliyochapishwa hapo awali. Utafiti umedharirishwa kwangu kikamilifu na nimejisajilisha kushiriki kwenye utafiti huu. Nimepata muda wa kuuliza maswali na nikauliza maswali yangu na nimeridhika na majibu. Nimekubali kushiriki katika utafiti huu, wala sijalazimishwa.

Saini ya Mshiriki: .....

Majina ya Mshiriki: .....

Tarehe: .....

### **TAARIFA YA MTAFITI**

Nimeeleza mshiriki kuhusu utafiti huu na nimemupea nafasi ya kuuliza maswali kuhusu utafiti huu na nimejibu maswali hayo vilivyo. Nadhibitisha kwamba mshiriki amekubali kushiriki katika utafiti huu kwa hiari yake.

Saini ya Mtafiti: .....

Jina ya mtafiti: .....

Tarehe: .....