FGM/C and Empowerment as Predictors of Intimate Partner Violence among Women in Kenya

Molly Ramage

Master of Philosophy in Global Development Theory and Practice

Specialization in Gender and Global Development

Department of Health Promotion and Development

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Abstract

The objective of this study is to determine if female genital mutilation and cutting (FGM/C) is associated with intimate partner violence (IPV) (of all subtypes: emotional, physical and sexual). This study used secondary data from the Kenyan Demographic Health Survey (KDHS) of 2014. A total of 5,672 participants who responded to both the domestic violence questionnaire within the 2014 KDHS (women and girls aged 15-49) were included in this study. A binary logistic regression was used to measure variance of IPV status among the study sample. The outcome of interest was IPV, with FGM/C women at slightly higher odds of IPV recording an odds ratio of 1.27. Of the socio-demographic predictors, having the highest education level were found protective against IPV, reducing IPV odds by .54, compared to wealth which was not significant in the final model. Women who made decisions about their own health care and household purchases dully with her husband/partners were .66 and .79 times (respectfully) less likely to experience IPV than those who do not. Empowerment variables were the most protective against IPV, and therefore programs that are already linked to the elimination of FGM/C could dually target IPV in the effort to improve women's health and status across Kenya.

1. Introduction

1.1 *Statement of Problem*

Intimate partner violence (IPV) is the most prevalent form of violence against women worldwide. Referring to physical, sexual or psychological harm within an intimate relationship (WHO, 2010), rates of IPV are highest in sub-Saharan Africa, affecting one of every two women (Salihu et al., 2012). IPV is further defined as acts of physical violence, sexual violence, emotional abuse and controlling behaviors, (see appendix 1). Where physical violence is prevalent; it is often accompanied by sexual and psychological abuse. IPV also includes an element of nonconsent (WHO, 2010).

IPV occurs among all socioeconomic contexts including religious, income and cultural groups (Undie et al., 2014). Same-sex partners as well as women can be perpetrators of violent relationships (WHO, 2010). Although boys and men can experience victimization (Garcia-Moreno et al., 2013), evidence suggests that the most common occurrence of IPV is perpetrated by a man towards a woman. As women bear a statistically disproportionate burden of IPV worldwide, it is regarded as women's health issue (Heise 1996; Garcia-Moreno et al., 2013). Instances of physical harm more severe for women compared to men (WHO 2010).

Another form of ongoing violence against women other than IPV is female genital mutilation/cutting (FGM/C). The practice of FGM/C (also referred to as female circumcision) is defined by the World Health Organization (WHO) as, "All procedures that involve partial or total removal of the external female genitalia, or other injury to the female genital organs for non-medical reasons" (2014) and can be distinguished into four categories (see appendix 2). FGM/C is most often carried out by women (circumcisers) on young girls before the age of 15 (WHO, 2008).

Like IPV, a high-prevalence of FGM/C is present in sub-Saharan Africa. Global statistics report an increase of FGM/C, approximately 200 million women/girls had underwent FGM/C by 2016, compared to 125 million in 2013 (UNICEF 2016; UNICEF 2013) affecting women and girls across 30 high-prevalence countries (WHO, 2008). Due to the hidden nature of FGM/C, exact numbers are difficult to estimate. Various forms of FGM/C range from moderate to severe (see appendix 2) and continue to be seen in parts of Africa, Asia and the Middle East. Among the 30 different African countries where FGM/C is concentrated, highest rates are seen in Nigeria, Sudan, Egypt and Somalia (WHO, 2010). FGM/C is a practice whose origins are found in the sixteenth century, are not limited to Kenya or other countries of Africa and the Middle East (Onsongo, 2017). While today, it is practiced in the United States, Europe Canada etc. by migrants, it was practiced by physicians in the West in an effort to treat various conditions (Onsongo, 2017). Thus, the practice was once and remains widespread.

This study will examine whether FGM/C women are at heightened odds of experiencing IPV than non FGM/C women. This study seeks to determine whether women who have had FGM/C result in being empowered or disempowered in relation to their husband/partner in the household (see appendix 3). This will speak to whether or not individuals, communities and societies supporting FGM/C endorse low status of women. And finally, this study will reveal whether empowerment status (including decision making ability and whether or not they believe that wife beating is justified) is an indicator for FGM/C.

1.2   *Study Purpose*

Despite the increasingly well-documented literature on the prevalence of IPV and its impact on physical, mental and sexual health, little research has focused on its association with

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FGM/C. A possible link between IPV and FGM/C can be found in research on child abuse and violence. For example, studies indicate that women with previous exposure to violence (i.e. physical and sexual) during childhood are 2-5 times more likely to experience violence later in life (Salihu et al., 2012). As FGM/C occurs during childhood, this could result in FGM/C women becoming more vulnerable to IPV, or becoming re-victimized during adulthood (Salihu et al., 2012).

If this study reveals FGM/C to be a marker for IPV, future efforts targeting women and girls could pair anti- IPV programs into existing interventions which aim to end FGM/C. This could better improve the health and wellbeing of women within socio-demographic contexts where FGM/C is a major human rights and public health issue. Although legal measures have been taken in Kenya, legislative measures have not been met with universal public support among groups and individuals practicing FGM/C. If FGM/C women are found to be more susceptible to IPV, results of this study can be identified and disseminated for the purpose of eradicating the social norm of violence against women, and to promote the status of women in Kenya.

1.3 *Objectives and Research Questions*

This quantitative research determined the indicators of intimate violence in Kenya, with focus on FGM/C, empowerment variables, and background characteristics (on the individual, community and society level). The units of analysis were from a secondary database, of women who were selected for the domestic violence module as part of the Demographic Health Survey of 2014.

The following research questions will be explored:

R1: What is the prevalence and socio-demographic association of FGM/C in Kenya? (i.e. ethnic group, religion).

R2: What socio-demographic factors influence the prevalence of IPV in Kenya? (i.e. education level, wealth, ethnic group).

R3: What is the association between FGM/C status and odds of IPV?

R4: Is empowerment status (including decision making ability and attitudes) an indicator for IPV? (See appendix 3).

2. Background and Significance

2.1 *Literature Review*

2.1.1 *Intimate Partner Violence (IPV)*

Intimate partner violence (IPV) is a human rights violation which affects over one third of women worldwide (Undie et al., 2014). IPV affects individuals across racial, cultural, religious lines and socio-economic statuses, (Mugoya et al., 2014). While perpetrators of IPV can be of any gender, with abuse involving current or former partners among a variety of relationships (i.e. homosexual, heterosexual), husband to wife IPV remains the highest across the world (Undie et al., 2014). A WHO multi-country study on women's health and domestic violence against women collected data. Of the 24,000 women over 10 countries who participated across an array of geographical and cultural settings, 13-61% reported ever having experienced physical violence by a partner (WHO, 2005). The study found that prevalence of IPV perpetrated by a male partner ranged from 13% in Japan to 61% in Peru (WHO, 2005). In Kenya, the prevalence of physical violence by an intimate partner ranges between 45% and 68% (WHO, 2005). In addition to physical violence, data on emotional violence 2003 Kenya Demographic Health Survey (KDHS) reported rates of emotional violence (28%) and sexual (14%) (Mugoya et al, 2014).

2.1.2 *Socio-cultural Acceptance of IPV*

Socio-cultural acceptance of spousal violence (husband-to-wife) has an immense impact on women's attitudes and beliefs towards IPV (Mugoya et al., 2014). Scholars (structural

theorists) argue that a fundamental cause of IPV are societal norms which promote the subordination of women (Mugoya et al., 2014). General findings from diverse counties including Cambodia, India, Mexico, and Tanzania suggest that "wife-beating" is viewed by individuals as a husband's right in marriage (WHO, 2005).

While IPV occurs across all socio-cultural contexts, IPV remains the highest form of violence across Africa. In cases such as Kenya, high prevalence can be attributed to the socio-cultural landscape of the country. Kenya is an East African country with multiple ethnic groups (about 42), each with a unique dialect and diverse traditions and practices. Marital customs such as brideprice or bridewealth as dowry (a customs which are common among many African ethnic groups) is viewed as a key pillar to uniting a man and a woman (Mugoya et al., 2014). It is here where marital vows are viewed among some Kenyan ethnic and kinship groups as securing a man's rights over a woman, such as a husband's unconditional sexual access (Mugoya et al., 2014). Some individuals view the payment of dowry as earning the husband's right to control or "own" his wife, fostering intimate partner violence. Cultural practices such as dowry is one of many deep-rooted cultural practices perpetuating social inequality and IPV in Kenya.

2.1.3 *IPV and Health Consequences*

IPV has been linked with fatal outcomes and adverse health effects. This includes suicide rates, maternal mortality and homicide (Garcia-Moreno & Riecher-Rössler, 2013). Research suggests that 30% of murdered women are killed by an intimate partner (compared to 5.5% of men). Numbers are expected to be even higher in developing countries where data on such factors of female homicide are sparse (García-Moreno & Stockl, 2013). Concerning the association between IPV and suicide, a WHO Multi-Country study (2005) found that one of the

most consistent risk factors related to suicide attempts were found among victims of IPV, childhood sexual abuse or having a mother who had experienced IPV. Regarding maternal mortality, a cross-sectional study of pregnant women conducted at Kisumu District Hospital, Kenya found that out of 300 participants, 37 % experienced at least one form of IPV during pregnancy (Makayoto et al., 2012). Analyses of demographic health surveys showed an increased infant mortality among mothers who have experienced a form of IPV (WHO, 2010). Thus, suggesting that IPV can be an indicator for homicide during pregnancy.

IPV can further compromise women's sexual and reproductive health. This can occur directly, through forced or coerced sex, or indirectly through a woman's inability to negotiate condom use or other forms of contraception (García-Moreno & Stockl, 2013). This affects reproductive and sexual health, in cases where women are not allowed to seek healthcare for themselves, without a partner's permission. In addition, women who experience IPV are at higher risk for sexually transmitted diseases/infections, HIV, sexual dysfunction and poor reproductive outcomes (WHO, 2010). A cohort study with HIV-positive female sex workers in Mombasa, Kenya found that recent IPV was associated with higher risk of unprotected sex (Wilson et al., 2016). A study of etiology of sexually transmitted infections (STI) in Nairobi, Kenya found that women with more risky sexual behavior (i.e. early sexual debut, number of sex partners, STI) experienced high rates of IPV (Fonck et al., 2006). The same study found that among the 520 women presented in the study, 74 percent reported having experienced IPV (Fonck et al., 2006).

Apart from reproductive and sexual health, IPV poses high risk for mental health problems. Examples include depression and anxiety (García-Moreno & Stockl, 2013). (Makayoto et al. 2012) argue that due to the gravity of fatal and adverse health outcomes, a need

for IPV screenings by healthcare professionals is necessary, especially among women with husbands with a low education status, who drink alcohol, or whom are multiparous, polygamous.

2.2 Female Genital Mutilation and Cutting (FGM/C)

2.2.1. *Reasons and Rationales for FGM/C*

While a range of reasons and rationales foster FGM/C, the practice persists across diverse countries and cultures. One of the most common is for the purpose of marriageability (Finke, 2006). It is here FGM/C is often seen as a rite of passage to womanhood. Thus, the purpose is to ensure that women have good marriage prospects. This occurs often where men have preference for a woman who has been circumcised. (Abusharaf, 2007) argues that other motivations for the practice include protecting female family members from premarital sex, and sexual assault, and to control women's sexuality (notably in cases of infibulation; see appendix 1). The belief to be protecting female family members from premarital sex where they could potentially bring shame and stigma to the family is a common rationale (Bede, 2016). Avoiding the shame and stigmatization is therefore perceived as helping their children (Bede, 2016). Thus, it is often practiced to ensure purity before marriage. Another themes include: to raise the status of the woman/wife, (Finke, 2006), adhering to culture in order to be accepted by the community and for the purpose of marriageability (Bede, 2016).

Although cutting presents traumatic, and often health consequences the practice persists (Finke, 2006). The circumcised body is viewed as adhering to the socio-cultural norm: as in some cases where FGM/C is practiced, the female genitalia are thought to be unclean or a health risk (Finke, 2006). Other studies indicate that dangers of "maleness" can be found as the clitoris

is commonly understood as a male trait (Abusharaf, 2007). Other key themes include, preserving cultural identity, defining female gender identity, reducing sexual desire thereby controlling female sexuality (Abusharaf, 2007). It is important to note that FGM/C is a deep-rooted tradition, thus reasons for the practice differ among diverse communities, societies, practices and beliefs.

2.2.2 *Health Consequences of FGM/C*

According to the WHO, there are no health benefits of FGM/C. Conversely, it can lead to severe health consequences. (2005). Health risks increase depending on the type and severity of the practice. They may be short or long term, including shock, hemorrhage, difficulties in childbirth and death (WHO, 2008). Due to the gravity of these consequences, FGM/C is recognized as an infringement to gender equality (WHO, 2008). It is regarded as a violation of human rights by the international community and a major public health issue.

Studies suggest that statistically higher health risks exist for those who have endured FGM/C than those who have not (Berg et al., 2016). In a study conducted across African countries, Banks and colleagues illustrate that women with any type of FGM/C have greatly increased obstetrical risks, than those who have not been cut, (especially those with the most invasive types of FGM/C, i.e. Type III, compared with Types I and II) (Banks et al., 2006). Results of a meta-analysis conducted by Berg and Underland (2013) show that obstetric lacerations, prolonged labor, instrumental delivery, obstetric hemorrhage, and difficult delivery are associated with FGM/C, indicating that FGM/C is a factor which significantly increases the risk of delivery complications. Most obstetric harm is attributed inelastic scar tissue which occurs as a result of circumcision (WHO, 2008). All forms of FGM/C are irreversible.

2.2.3 *Critiques of and Controversy over FGM/C*

Female Genital Mutilation and Cutting is a centuries old practice. Whether it will be eradicated in the near future is highly contested. Western media, NGOs etc. try to end the centuries-old tradition, as FGM/C is commonly regarded by the West as "cruel" or "barbaric" (Onsongo, 2017). Thus, the practice deems the question of whether or not the same cultural tradition can be preserved in a non-harmful way which would still be enriching, and hold the same symbolism to preserve cultural heritage (Onsongo, 2017).

Other perspectives of female genital mutilation/cutting object to the practice. FGM/C is internationally recognized as a violation of human rights (WHO, 2005). Critics regard the practice as a deeply embedded gender inequality and a method of discrimination against women and girls (WHO, 2005). Many NGOs, and foreign governments have been and continue to end the practice. The focus of the international community is geared towards very young girls who are not yet old enough to decide if they wish to have the procedure themselves.

2.2.4 *FGM/C in Kenya*

While FGM/C is not as prevalent among the general population of Kenya as in other countries, the practice remains high. The 2014 Kenya Demographic Health Survey (KDHS) estimates nearly 21% of women and girls between the ages of 15-48 have been subjected to FGM/C to date. The 2014 KDHS displays a decline in the national prevalence of the procedure, from 38% in 1998, 32% in 2003 and 27% in 2008/9. As in all countries where FGM/C is practiced, prevalence of FGM/C varies across Kenya. High rates exist and remain among some ethnic groups (i.e. Somali 94%), Samburu (87%), Kisii (85%), and Maasai (78%).

In 2011, the Prohibition of Female Genital Mutilation Act was expanded in Kenya as a legal restriction against FGM/C (Shell-Duncan, 2009). This was in response to a human rights movement which focused on children's rights. An increased effort to prevent early child marriage prompted the growing consensus to end FGM/C, as circumcision is often prerequisite to, and is soon followed by marriage (Shell-Duncan, 2009).

2.2.5 IPV and FGM/C

A possible association between IPV and FGM/C as well as IPV victim's attitudes towards personal experiences remain under-examined. Most literature on FGM/C is both qualitative and ethnographic, generally focused on knowledge and local perceptions of the practice. Many interventions have been implemented to end FGM/C with little attempt to evaluate its association with IPV or gender-based violence (Abusharaf, 2007). A 2012 cross-sectional study in the Ivory Coast found that women reporting FGM/C were two times more likely than non FGM/C women to experience sexually-based IPV (Peltzer & Pengpid, 2014). The same study found that other subtypes of IPV (emotional and physical) although higher, were not significant whereas respondents who reported being Muslim garnered protective from emotional and sexual IPV subtypes (Peltzer & Pengpid, 2014). A 2006 study in Mali drawing upon demographic health survey data found that women with FGM/C were at heightened odds of IPV (Salihu et al., 2012). Women with a severe type of FGM/C were nearly 9 times more likely to experience more than one form of IPV.

3. Theory

This chapter will discuss the theoretical framework for this study. For the purpose of garnering a better understanding of IPV and a possible link of FGM/C and IPV, two major

theories were used, the gender theory of Empowerment and the Theory of Ecological Violence, which is often used in the study of health promotion.

This study will not deploy gender theories surrounding patriarchy (such as the strongest alternative theory, which ascribes FGM/C to patriarchy) (Mackie, 1996). This is because patriarchy does not explain why the practice does not occur universally, or within other or all patriarchal societies.

3.1 *Empowerment Theory*

Empowerment in gender theory is regarded as the process by and which the powerless or less powerful members of a society gain greater access to and control over material and knowledge resources (Batliwala, 2007). Empowerment theory aims to challenge the ideologies of discrimination and subordination (Cornwall and Rivas, 2014). This is achieved by transforming the institutions and structures through which unequal access and control over resources are sustained and perpetuated (Batliwala, 2007).

Empowerment is about the fundamental change in structural power relations (Cornwall, 2014). It surrounds relations of power. Cornwall and Rivas (2014) argue that external actors (i.e. NGOs) can clear obstacles from the path of women but cannot empower them themselves. Rather, Mosedale (2005) discusses how empowerment can be assessed through identifying constraints to action, identifying how agency has developed, or by identifying how agency has changed constraints to action. If these occurrences have happened, then empowerment has taken place (Mosedale, 2005).

Theories regarding empowerment found in FGM/C literature offer a positive correlation between participation in development projects and the abandonment of the practice (especially

among younger generations). This suggests that programs focused on health and empowerment have accelerating effects on the elimination of FGM/C (Abusharaf, 2007). Women's empowerment enables women to articulate their critique of female genital cutting while persuading village leaders to use their influence to abolish the practice (Abusharaf, 2007). Thus, empowerment as an attitudinal shift has prompted an increase of an abandonment of FGM/C (Abusharaf, 2007). Empowerment is supported globally, and in Kenya. Within the 2014 KDHS, empowerment is measured by the number of decisions in which women take part, as well as whether or not they believe wife beating is justified (see appendix 3).

3.2 *Ecological Model of Violence against Women*

In order to conceptualize the manifestation of violence, multidimensional theories have been developed (Heise et al., 2002). One such theory is the ecological model for violence (Heise et al., 2002). This multidimensional theory contextualizes how violence manifests at different levels (Heise et al., 2002). (see figure 1). The model displays four levels: individual, relational, communal and structural (Heise et al., 2002). The individual level represents biological qualities, followed by the second level which stands for the close context of the individual, such as intimate partners and family (Heise et al., 2002). The wider community is represented in the third quadrant, and followed by the structural level (cultural social and economic environment). The model displays the interaction of factors which, when combined, lead to violence and other forms of abuse (Heise, Ellsberg & Gottmoeller, 2002).

Source: Heise 1998

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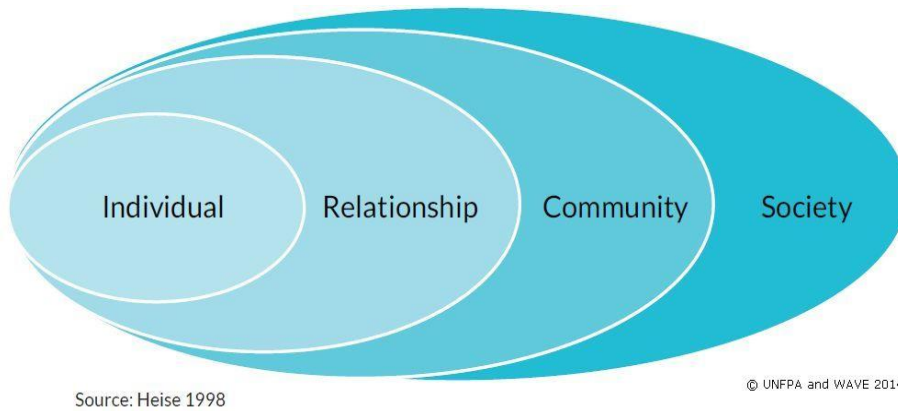
Figure 1: Ecological model of violence against women (Heise et al., 2002).

The ecological framework is rooted in evidence that no single attribute can explain why some are at higher risk of violence while others are more protected from it (WHO, 2011). Rather, it is the interaction among many factors (individual, relationships, community, and societal) which allow for the most comprehensive explanation (WHO, 2011). It is the interaction among all factors (with importance on each factor equally) which helps explain violence.

4. Data and Methods

Study Design

This is a quantitative (non-experimental), cross-sectional research design which aims to study an association among variables (Creswell, 2014). For the purpose of this study, data were selected from the Kenya Demographic Health Survey (KDHS) of 2014. All information from this chapter is derived from this DHS unless stated otherwise.

The Demographic Health Surveys (DHS) collect nationally representative data and on health and wellbeing at the population level. With focus on developing countries, the DHS collects data on topics such as HIV/AIDS, gender and youth. The KDHS (2014) is a nationally representative, cross-sectional survey. It is the largest household survey in Kenya, providing information in order to monitor and disseminate the current health status of the country.

Study Sample

Data were collected from 40,300 households in 2014 providing estimates at the population level, nationwide. The 2014 KDHS used household questionnaires. One questionnaire for women age 15-49 and one questionnaire for men age 15-54. The women's questionnaire was administered at each household, while the men's questionnaire was given to every other. For the purpose of this study, only data from the women's household questionnaire were used. Only those who were selected/interviewed for the domestic violence module remained selected for the duration of this study.

Subsample for the Violence Module

The domestic violence module administered by the KDHS (2014), included women and men in separate subsamples of households. To adhere to ethical requirements, only one woman or man was selected for the module per household. As a result of this, only 5,657 women age 15-49 (including 4,023 ever-married women) were selected. This accounted for 4,962 men age 15-54 (2,890 ever-married men). In total, four women and four men eligible could not be interviewed for the domestic violence module because of privacy reasons. Furthermore 11 women and 29 men due to other reasons. For the purpose of this study, only 5,672 women age 15-49 (both ever-married and never married alike) were used. This number of 5,672 individual women equates 100% of cases).

Quality Assurance

For the purpose of this study, data quality was taken into consideration. A total of five questionnaires (a full household questionnaire and 4 subsets) were used in the 2014 KDHS. To further ensure quality assurance, response rate was taken into account. Response rates were lower in urban areas than rural, especially in regards to male respondents. The households which were selected and interviewed for the full questionnaires amounted to a total of 15,317 women identified as eligible for the full woman's questionnaire. Of whom 14,741 were interviewed. This generated a 96 percent response rate. A total of 16,855 women from the households selected for/interviewed with the short questionnaires were identified as eligible for the women's questionnaire. Of these women, 16,338 responded, thus generating a 97 percent response rate.

A range of online databases were used for the study of this research (i.e. Oria). Search words such as: Female Genital Mutilation (FGM), Female Genital Cutting (FGC), Circumcision,

Violence, Intimate Partner Violence (IPV), domestic violence, empowerment, Kenya was used in the research (i.e. to form the literature review) of this study.

For the purpose of this study quality, cleaning and adjustments of the data were made (see 'variables'). Frequencies were run to screen for missings, outliers and normality. Internal validity was assessed to measure if items used in this study were manipulations of the independent variable rather than other factors. External validity was assessed to determine if generalizations can be made from results of this study (Norman, 2014). It is therefore important not to make too broad of a generalization of the associations between variables. Results of this study should be understood as suggestions rather than universal claims. Representativeness of the sample, the questionnaire and procedure should not be regarded as fully accurate. Sampling among participants, circumstances come with error and inconsistencies. Reliability was assessed by checking for internal consistency. This study found acceptable levels of cronbach's alpha for all scales. Had questions been worded differently for example, outcomes may have been slightly different.

Collecting both valid and reliable data on domestic violence poses many challenges. Definitions of violence and abuse vary across cultural contexts and among individuals. Sensitivity and silence towards domestic violence can influence the collection of data. To ensure validity of the study, interviewers assured the safety of respondents, protecting respondents who disclose violence, and reducing the risk of double victimization were taken into concern (see 'ethics').

Data Analysis

A binary logistic regression was used to assess an association between variables. One model was used to assess both R3 and R4. Cross tabs and frequency tables were used to assess questions R1 and R2 (See Annex 5).

4.1 Variables

Both women's and men's domestic violence questionnaires were administered in the 2014 KDHS. For the purpose of studying FGM/C v. non FGM/C women, only variables/questions from the women's household survey (including the domestic violence questionnaire) were used.

In line with empowerment theory, variables from the KDHS chapter on women's empowerment, demographic and health outcomes were explored. These questions/variables concern how demographic and health indicators influence women's empowerment. For example, this is measured by the number of decisions a woman makes, or if she believes that wife beating is justified (see 'empowerment variables').

Additional variables will be taken into account to assess the individual and societal background in accordance with the ecological theory of violence (see section 3). These include, the individual level (i.e. age, educational attainment, literacy) The familial level (i.e. ever married/in a union, wealth index), the community level (ethnic group, religion) or societal level (i.e. region).

What follows is a list of variables explored:

Dependent Variable(s):

IPV Scale

The nominal IPV variables within the KDHS were a part of the domestic violence questionnaire given to those selected from the women's household survey. This IPV scale was created by the KDHS into four IPV scales listed as follows:

Experienced any less severe violence

This variable is a nominal sum score of the following variables: Ever been pushed, shook or had something thrown by husband/partner, ever been slapped by husband/partner, ever been punched with fist or hit by something harmful by partner, ever had arm twisted or hair pulled by husband/partner. If the respondent answered 'yes' to any of the 'less severe' violence questions she was included as 'yes' of this sum score. Labels were binary: 'yes/no.'

Experienced any severe violence

This variable is a nominal sum score of the following variables: ever been kicked or dragged by husband/partner, ever been strangled or burnt by husband/partner, ever been threatened with knife/gun or other weapon by husband/partner. If the respondent answered 'yes' to any of the severe violence questions she was included as 'yes' within this sum score. Labels were binary: 'yes/no.'

Experienced any sexual violence by husband/partner

This variable is a nominal sum score of the following variables: ever been physically forced to perform sexual acts respondent didn't want, ever been forced into other unwanted sexual acts by husband/partner, ever been physically forced to perform sexual acts respondent didn't want to. If the respondent answered 'yes' to any of the sexual violence questions she was included as 'yes' of this sum score. Labels were binary: 'yes/no.'

Experienced any emotional violence by husband/partner

This variable is a nominal sum score of the following variables: ever been humiliated by husband/partner, ever been threatened with harm by husband/partner, ever been insulted or made to feel harm by husband/partner. All variables listed above contained labels "never , often, sometimes, yes, but not in the last 12 months, or yes, but frequency in last 12 months missing." If the respondent answered 'yes' to any of the emotional violence questions she was included as 'yes' of this sumscore. Labels were binary: 'yes/no.'

New IPV Variable

The main outcome variable of this study was intimate partner violence (IPV). A series of steps were taken to create this new dependent variable, as one dichotomous IPV variable. First, four (IPV) sum scores (from the KDHS, mentioned above): 'ever experienced: less severe violence, more severe violence, sexual violence and emotional violence' were each copied"d106x 'd106x' /d107x 'd107x' /d108x 'd108x' respectfully. They were recoded for the purpose of combining 'system missings' and missing '9' and were re-coded as (no=0) (yes=1) (9=99) (MISSING=99).

These four temporary variables (d106x 'd106x' /d107x 'd107x' /d108x 'd108x') were then combined into one sum score.

The minimum requirement to be marked as a 'yes' for this IPV variable was one 'yes' answer (whether sexual, emotional or physical violence mentioned above). This new sum score was relabeled as 'total violence.' To make this variable dichotomous, it was recoded again into (0) for no violence, and answers to questions (1-4) into (1). This final variable was then relabeled as 'total violence' with these new values.

Independent Variable(s):

Respondent Circumcised

This nominal variable is determined by whether a woman has had one of the 4 types of FGM/C identified by the WHO (2008). Circumcision is self-reported. The 2014 KDHS labeled responses were listed as follows: yes (1), no (0) and don't know (MISSING).

Harmful Gender Attitudes

This nominal variable is count sum score which was created by adding together scores from all the items that make up the women's attitudes towards wife beating scale. Respondents were asked whether a husband was justified in beating her under the following circumstances: (1) wife goes out without telling husband (2) wife neglects the children (3) wife argues with husband (4) wife refuses to have sex with husband (5) wife burns the food. The respondent's answers were

either 'yes' 'no' or 'don't know.' If a respondent answered 'yes' the 'yes' was counted in the nominal sum score. Those who answered 'don't now' were marked as missing.

The 5 items of the Harmful Gender Attitudes scale were subjected to principal component analysis. (PCA) using SPSS version 25. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of several coefficients of .3 and above. The Kaiser-Meyer Olkin value was .84, exceeding the recommended value of .6 (Pallant, 2016). A Bartlett's test of sphericity (Pallant, 2016) reached statistical significance, supporting the correlation matrix as factorability. Principal components analysis revealed the presence of only the first component with eigenvalues exceeding 1, explaining 58.2 % of the variance. An analysis of the scree plot revealed a clear break after the first component. Using Catell's (Pallant, 2016) scree test, it was decided to retain the first component for further investigation. To further explain component 1 contributing 58.2% of the variance, oblimin rotation was performed. Since only 1 component could be extracted, the solution revealed that the solution could not be performed.

According to (Pallant, 2016), the Harmful Gender Attitudes scale has good internal consistency, with Cronbach Alpha coefficient reported of .8.

Upon completion of factor analysis, and confirmation that the 5 variables had a good overall 'fit,' but a count score was created instead of a sum score. This would ensure cleaner, more concrete results. A count score of all 5 variables was made, counting all of the 1's for the answer 'yes' to 'beating justified' questions. This count score was labeled 'harmful gender attitudes.'

Empowerment Variable

The empowerment variables embody a series of questions related to women's ability to make decisions. The following variables were first made into a sum-score by combining the following variables: 'person who decides how to spend respondent's earnings,' 'person who usually decides on respondent's health care,' 'person who usually decides on large household purchases,' 'person who decides on visits to family or relatives,' 'person who decides on food to be cooked each day,' and 'person who decides what to do with money husband/partner earns.'

The variables listed above (included in the sumscore) were labeled as the following: Respondent alone (1), respondent and husband/partner (2), respondent and other person (3), husband/partner alone (4), someone else (5), other (6). As categories (5) and (6) contained less than 5% of the variance, both were marked as missing.

This variable and those used in the sum score were self-reported. Answers included: 'respondent alone', 'respondent and husband/partner', 'respondent and other person', 'husband/partner alone', 'someone else', 'other'.

A factor analysis of six Empowerment variables were subjected to principal components analysis (PCA) using SPSS version 25. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of one coefficient of .3 and above. The Kaiser-Meyer-Olkin value was .68, exceeding the recommended

value of .6 and above (Pallant, 2016). The Bartlett's Test of Sphericity (Pallant, 2016) reached statistical significance, supporting the factorability of the correlation matrix.

Principles components analysis revealed the presence of two components exceeding 1. revealed the presence of four components with eigenvalues exceeding 1, explaining 30.4% and 17.7% of the variance respectfully. An inspection of the screeplot revealed a clear break after the second component. Using Catell's (Pallant, 2016) scree test, it was decided to retain two components for further investigation.

The two component solution explained a total of 48.2% of the variance with component 1 contributing 30.4% and component 2 contributing 17.7%. To aid in the interpretation of these two components, oblimin rotation was performed. The rotated solution revealed both component 1 and component 2 showing a number of strong loadings. The interpretation of the two components was consistent with previous research on the PANAS Scale with positive affect items loading strongly on component 1, and negative effects items strongly on component 2 (Pallant, 2016). There was a weak correlation between the two factors (r= 0.046).

According to (Pallant, 2016) the Empowerment scale has fair internal consistency with a Cronbach Alpha coefficient reported of .52. The mean-inter-item correlation for the small sample of items was .2, indicating good internal consistency.

The variables 'person who decides on household earnings,' and 'person who decides what to do with money husband earns' were eliminated from the sum score due to too many missing lables.

The now 4 item scale was subjected to principal component analysis a second time. Inspection of the correlation matrix revealed the presence of several coefficients of .3 and above. The Kaiser-Meyer Olkin value was .68, exceeding the recommended value of .6 (Pallant, 2016). Principal components analysis revealed the presence of one component exceeding one, explaining 47.4% of the variance. An inspection of the scree-plot revealed clear break after the first rotation.

According to Pavot, Diener, Colvin and Sandvik (1991), the Satisfaction with Life Scale has good internal consistency with a Cronbach alpha coefficient reported of .85.

This mean inter-item correlation for the small sample of items was .26, indicating good internal consistency.

In the end, the empowerment sumscore was not the most effective and organized way to display the level of empowerment of the respondent. This was due to the KDHS having too many responses for the respondent to choose (i.e. respondent alone, respondent and husband/partner, respondent and other person etc.) The process of combining the responses would not give a clear picture of the degree in which the respondent was able to make decisions in her household and relationship (empowered). Therefore, the sumscore was deleted, and instead, three separate empowerment variables were used in place of the empowerment the sumscore. Regarding decisions of 'person who decides on food to be cooked each day,' seems to include the highest measure of empowerment. The KDHS expresses that this could be attributed to a socio-cultural tradition of cooking generally being a women's domain in Kenya. Answers included respondent alone (82.5%), respondent and husband/partner (11.9%) and husband/partner alone (5.5%).

Therefore, only three variables were ultimately chosen as 'empowerment variables,' as the KDHS does not account for these three variables to have a gender bias. The final empowerment variables stand alone as separate variables (not in a sum score) called 'harmful gender attitudes.'

Respondent's current age

Answers were self-reported. This is a continuous variable which indicates a higher age with a higher number.

Region

Answers were self-reported as follows: coast (1), north eastern (2), eastern (3), central (4), Rift Valley (5), Western (6), Nyanza (7), Nirobi (8).

Religion

Answers were self-reported as : (1) Roman Catholic, (2) Protestant/Other Christian, (3) Muslim, (4) no religion, and (96) other. For the purpose of this study, (96) was later changed to missing.

Number of Wives

This variable was originally labeled 'number of other wives' with values of one other wife (1), two other wives (2), three other wives (3), etc. This variable was later recorded into a dichotomous scale of: (0) no other wives (1) other wives and missing (99).

Educational Attainment

Educational attainment is a nominal variable among the female household population. It was defined by the KDHS (2014) as highest level of schooling attended/completed and median years completed (according to background characteristics, KDHS (2014). This was measured and labeled as: No education (0), incomplete primary (1), complete primary (2), incomplete secondary (3), complete secondary (4), higher (5).

Wealth Index

The wealth index is a nominal variable used in this DHS and many others as an indicator of a household's long term wealth and standard of living. This index was constructed using household assets (i.e. does the household have electricity, refrigerator, television, etc). Therefore, variables were transformed to produce a factor score for each household. This number was computed into national-level wealth quantities (lowest-highest) obtained using the household score: (1) poorest, (2) poorer, (3) middle, (4) richer, (5) richest.

4.2 Ethical Considerations

The 2014 KDHS used a household questionnaire for women aged 15-49 and one for men aged 15-54. To maintain confidentiality, one woman or one man per household were administered the questions on domestic violence. Privacy and confidentiality with the interviewer were taken into consideration in order to obtain the respondent's trust so that the respondent could safely share their experiences. The interviewers of the 2014 KDHS were trained thoroughly in research ethics such as how to ask sensitive questions and ensure privacy. In addition, considerations were taken into account in accordance with the World Health Organization's ethical and safety recommendations.

As FGM/C, and IPV are sensitive issues and asking questions regarding these topics an cause psychological harm to the survey participants. To obtain informed consent, each respondent was informed at the start of the FGM/C and domestic violence survey of the sensitive nature of the questions. After the start of the survey, consent was obtained a second time by the interviewer at the start of the domestic violence module.

A brochure which included contact information for domestic violence service centers across the country was given to all respondents after the interview was conducted. These were given despite whether or not the respondents were selected for the domestic violence module. The brochures were given to all respondents to safeguard against identifying the respondent who was selected for the module. It also was done to ensure that all respondents had access to domestic violence services.

This research was conducted for the purpose of contributing to a knowledge base of FGM/C and IPV in Kenya. For quality purposes, this research is under the supervision of researchers at the University of Bergen.

5.0 Results

5.1 Frequencies: Outcome Variable (IPV) and Predictor Variable, FGM/C

Results indicate that 44.8% of respondents reported one or more types of IPV. (The four individual subtypes which comprise the 'total IPV' score are displayed in Table 1). The highest reported IPV subtype was 'less severe violence' at 34.4 percent.

Table 1

Frequencies among IPV subtypes

Variables	Valid Percent
Experienced any less severe violence	34.4
Experienced any severe violence	16.1
Experienced any sexual violence	11.7
Experienced any emotional violence	30.4

Notes. N's range from 4506 to 4515 due to occasional missing data. For experience, 0 = no to all sub questions, 1 = answered yes to one sub question.

Of the women sampled, 32.4% are circumcised or have had one of the WHO's four types of FGM/C (see annex 2), compared to 67.6% who have not.

5.2 Background Characteristics

Background characteristics were analyzed to assess the socio-demographic landscape of the sample. These characteristics include: educational attainment, wealth index, religion, region

and ethnicity. While these background characteristics alone do not speak to the levels of FGM/C and IPV across Kenya, when crossed with other variables a greater picture of the socio-demographic indicators of FGM/C and IPV are displayed (see crosstabs).

Table 2

Frequencies of Region

Valid	Valid Percent
Coast	12.1
North Eastern	5.6
Eastern	17.0
Central	10.5
Rift Valley	28.7
Western	9.3
Nyanza	13.8
Nairobi	2.9

Notes. (N= 5672). Respondents reported one of eight categories.

Table 2 displays the region where the women who answered the domestic violence module live. The majority of respondents reported that they live in the Rift Valley (28.7%), followed by the Eastern region (17.0%) and Nyanza (13.8%) respectfully.

Educational attainment (see Table 3) was taken into account to assess the socio-demographic landscape of the women who were interviewed for the domestic violence questionnaire (see annex 4). The majority of respondents reported incomplete primary schooling 27.9%, followed by complete primary 23.6% and no education 14.7%. (See annex 4).

Table 4

Frequencies of Religion

Valid	Valid Percent
Roman Catholic	20.3
Protestant/Other Christian	64.3
Muslim	13.3
No religion	2.1

Notes. (N= 5649). Respondents reported one of 4 categories.

The most commonly practiced religion among the study sample is protestant/other Christian (64.3%) followed by Roman Catholic (20.3%), Muslim (13.3%) and no religion (2.1%). Table 5 displays the ethnic spread of the sample (see annex 4). The most prevalent ethnicities reported include: Kikuya (16.4%), Kalenjin (13.7%), Luhya (11.9%), Luo (9.7%), Kamba (9.5%).

5.3 Empowerment and Harmful Gender Attitude Variables

Empowerment Variables

The empowerment variables comprise of information based on women's participation in decision making within the household (KDHS, 2014). Decision making can affect women's circumstances and is an essential aspect of their living environment. According to the Kenya

Demographic Health Survey of 2014, women are considered to participate in decision making/be empowered if they either make decisions alone or jointly with their husbands/partners.

The respondents reported that the most frequent decision makers on respondent's health care was respondent and husband/partner (39.8%) followed by respondent alone (36.3%) and husband/partner alone (23.9%). For the person who usually decides on household purchases, women appear to be less empowered, with the respondent and husband/partner (49.9%), husband/partner alone (29.2%) and respondent alone (20.9%). Women appear to be less empowered in matters concerning large household purchases than on their own healthcare. Women have a fair level of empowerment in the category of 'person who usually decides on visits to family or relatives' with respondent and husband/partner (48.3%), husband/partner alone (27.5%), and respondent alone (24.2%) (Results not shown).

Regarding other empowerment variables in the questionnaire, the variable 'Person who decides on food to be cooked each day,' was found to be the highest measure of empowerment. This could be attributed to a socio-cultural tradition of cooking generally being a women's domain in Kenya (KDHS, 2014). Answers included respondent alone (82.5%), respondent and husband/partner (11.9%) and husband/partner alone (5.5%).

Harmful Gender Attitudes

In accordance with the 2014 KDHS emphasis on women's empowerment, women's attitudes towards domestic violence were taken into consideration. Therefore, another indicator of women's empowerment is measured by whether they believe wife beating is justified. Results of harmful gender attitudes suggest that empowerment measures are lowest when respondents were asked if beating is justified if she neglects the children, as (38.7%) of respondents reported

'yes,' compared to (60.6%) who reported 'no.' The respondents were notably more empowered when asked if beating is justified when a wife burns the food, at (91.2%), compared to the respondents who reported 'no' at (9%). The KDHS (2014) attributes highest levels of empowerment to cultural factors whereby cooking is traditionally a women's domain.

Table 6

Frequencies among Harmful Gender Attitude Variables

Variables	Valid Percent
Believes beating is justified if wife goes out without telling husband	26.6
Believes beating is justified if wife neglects the children	38.7
Believes beating is justified if wife argues with husband	24.2
Believes beating is justified if wife refuses to have sex with husband	19.8
Believes beating is justified if wife burns the food	9.0

Notes. N's range from 5552 to 5612 due to occasional missing data. For experience, 0 = no to all sub questions, 1 = answered yes to one sub question.

According to the Harmful Gender Attitudes Count Score, 2,981 of respondents reported 'no' to all 5 harmful gender attitude questions compared to 2,691 of respondents who reported 'yes' at least once (i.e. justifying wife beating for at least one instance).

5.4 Cross Tabs and Socio-demographic Factors

The crosstabulation on Table 7 displays the ratio of FGM/C (yes/no) within the sample in respect to ethnicity. Rates of FGM/C are highest among Somali (97.6% yes, 2.4% no) Kisii

(91.6%, yes, 8.4% no) among others. Other ethnicities show low rates of FGM/C. This table signifies how the practice of FGM/C varies across ethnic lines, and socio-economic backgrounds. Rates express how FGM/C can be a part of a larger practice across community and societal levels, as expressed in the ecological theory of violence.

Table 7

*Ethnicity * FGM/C Crosstabulation*

Ethnicity	% FGM/C within ethnicity
Kalenjin	35.7
Somali	97.6
Kisii	91.6
Luo	0.4
Kikuya	16.6
Maasai	83.3

Notes. N's range from 2 to 499. FGM/C, YES = respondent circumcised.

According to the crosstabulation (see Table 8), FGM/C is found among all religions groups across Kenya. FGM/C was also found to be prevalent among non-religious respondents. The highest proportion of respondents with FGM/C were reported Muslim, (69.8% of Muslim respondents reported FGM/C compared to 30.2% non FGM/C). This comprises of the majority of Muslim women in Kenya. This was followed by non-religious respondents who reported (52.4% FGM/C, 74.2% non- FGM/C).

Table 8

Religion * FGM/C Crosstabulation

Ethnicity	% FGM/C within religion
Roman Catholic	32.3
Protestant/Other Christian	23.8
Muslim	69.8
No Religion	52.4

Notes. (N = 55-2,839).

A crosstabulation of total intimate partner violence and respondent circumcised indicates that the percentage of those who are circumcised v. those who are not circumcised experience similar rates of IPV. There was no clear differential between rates of IPV and circumcision status found in the crosstabulation.

Table 9

Bivariate Logistic Regression Analysis of IPV Predictors

		Block 1	**Block 2**	**Block 3**	**Block 4**
	Variables				
Region	Coast				
	North Eastern	-1.076*	-1.045*	-1.044*	-1.143*
	Eastern	.243	.211	.189	.126
	Central	.225	.104	.045	.009
	Rift Valley	.031	.009	-.110	-.178
	Western	.701*	.557*	.471*	.492*
	Nyanza	.633*	.590*	.581*	.507*

	Nairobi	.891*	.804*	.828*	.799*
Religion	Roman Catholic				
	Protestant	.074	.047	.043	.052
	Muslim	-.417*	-.466*	-.527*	-.575*
	No Religion	.354	.301	.255	.244
Education	No Education				
	Incomplete Primary	.138	.144	.184	.220
	Complete Primary	-.268	-.252	-.189	-.139
	Incomplete Secondary	-.129	-.080	-.019	.030
	Complete Secondary	-.532*	-.474*	-.379*	-.329
	Higher Education	-.758*	-.707*	-.581*	-.519*
Wealth Index	Poorest				
	Poorer	.115	.141	.142	.160
	Middle	.009	.051	.063	.101
	Richer	-.177	-.153	-.109	-.068
	Richest	-.335*	-.289*	-.195	-.148
Age	Women's age in Years	.019	.005*	.019*	.017
Number of Wives	Number of Wives	.263*	.109	.153	.156
HC* Decisions	Respondent Alone				
	Respondent & Partner		-.420*	-.433*	-.420*
	Partner Alone		-.069	-.105	-.098
HP* Decisions	Respondent Alone				
	Respondent & Partner		-.255*	-.233*	-.239*
	Partner Alone		-.037	-.057	-.064
HGA*	Beating not Justified				
	Beating Justified 1			.503*	.505*
	Beating Justified 2			.200	.205
	Beating Justified 3			.545*	.538*

	Beating Justified 4			.587*	.569*
	Beating Justified 5*			.801*	.775*
FGM/C	FGM/C				.236*
Adjusted R2		.11	.13	.14	.15
R2 Change			.02	.01	.01
Degrees of Freedom		21	4	5	.1
Significance of Change		.000	.000	.000	.007

Notes. *Predictor is significant if p<0.05** (N=3644 due to missing cases). HC= indicates decisions regarding respondent's health care, HP= indicates decisions regarding household purchases, HGA=Harmful Gender Attitudes, Beating justified= number indicates amount of instances where respondent believed beating was justified, 1 indicates one instance, 5 indicates all 5 instances (see methods).

A binary logistic regression was performed to assess the impact of a number of factors on the likelihood or odds that respondents would experience intimate partner violence. The model contained 11 independent variables (region, religion, educational attainment, wealth index, age, number of wives, person who decides on respondent's health, person who decides on large household purchases, person who decides on visits to family/relatives and harmful gender attitudes). The full model containing all predictors was statistically significant, x^2 (11, N = 3,644) = 418.2, $p < .001$ indicating that the model was able to distinguish between respondents who reported and did not report experience with IPV. The model as a whole explained 14.6% (Nagelkerke R squared) of the variance in IPV status, and correctly classified 65.1% of cases.

As shown in Table 4, 8 of the independent variables made a unique statistically significant contribution to the model (Western, Nyanza, and Nairobi regions; Muslim respondents; women's age; education attainment of higher education; respondent and partner decide on her own health care; respondent and partner decide on large household purchases). The

strongest predictor of IPV was harmful gender attitudes (5) (answering that beating is justified in all 5 cases), recording an odds ratio of 2.17 and living in the North Eastern region 2.22. This indicated that respondents who believe that wife beating is justified in all 5 given instances were over 2 times more likely to report an experience with IPV than those who did not. Those who live in the North Eastern province were also over 2 times more likely to experience IPV than those who do not. The odds ratio of .56 was less than 1, indicating that Muslim respondents were .56 times less likely to report having an experience of IPV, controlling for other factors in the model. Wealth was not found to be a significant predictor for IPV.

Respondents who made decisions on their own health care and on household purchases together with their husbands and partners were .66 and .79 times (respectfully) less likely to experience IPV. Similarly, the odds ratio of higher educational attainment .54 was less than 1, indicating that respondents with higher education were .54 times less likely to experience with IPV. FGM/C was found to be an indicator for more IPV. Similarly, FGM/C was found to be a predictor of IPV, recording an odds ratio of 1.27. A general trend of the more cases/instances where women believe that wife beating was justified; the more likely she was to experience IPV than those never thought that wife beating was justified in the survey.

6.0 Discussion and Conclusion

Discussion of Findings

The main objective of this study was to find an association between IPV, and FGM/C. Background characteristics were explored to assess which other indicators influence the prevalence of intimate partner violence. The study's purpose was to assess the predictive power of FGM/C and odds of IPV later in life.

Findings of this study show that FGM/C was associated with IPV. The association was small, expressing that Kenyan women were 1.27 times more likely to experience any one of the 3 subtypes of IPV (emotional, physical or sexual) that non-FGM/C women. This was an unexpected result, as it was a smaller association between FGM/C and IPV than found in elsewhere in the Ivory Coast and Mali (Peltzer and Pengpid, 2014; Salihu et al., 2012). (Salihu et al., 2012) found that Malian women were 3 times more likely to experience one type of IPV than non-FGM/C women. This study did not differentiate between the 3 IPV subtypes as they do within the Kenyan Demographic Health Survey, while other studies make that differentiation (Peltzer and Pengpid, 2014; Salihu et al., 2012). As FGM/C occurs in early childhood, this trauma could be linked to exposure to IPV during adulthood. This result reinforces previous research which links childhood exposure to violence/trauma to re-victimization later in life (Peltzer and Pengpid, 2014; Salihu et al., 2012).

Rather than incorporating ethnic group in this study, region was used as a replacement as a socio-demographic predictor for IPV, as previous works have illustrated that IPV occurs across all ethnic lines (Undie et al., 2014). Diverse ethnic communities across Kenyan regions have differing cultural customs, such as marital customs like dowry, polygamy, inheritance traditions

(Mugoya et al., 2014). Thus, differing norms and cultural practices may make some women more susceptible to IPV exposure than others. These socio-cultural factors could account for the differing associations among IPV and region. The logistic regression found significant differences in associations of IPV and region, such as respondents living in the North Eastern region being 2 times more likely to report IPV than those who do not. It is important to note that the regions were compared to the first category; the coastal region, had a different region been set as the first category, results may have had slightly different outcomes. Future research could be undertaken to explore how different ethnic groups and regions perceive IPV across Kenya such as with regard to i.e. shame, stigma and embarrassment (Raitala, 2015). With a deeper understanding, culturally relevant interventions could be met to tackle potentially harmful perceptions of wife beating.

Within this study, wealth was not found to be a predictor of IPV in the final block. However, it was a predictor of IPV before empowerment-related variables were added to the equation. This was an unexpected result because poverty has been cited as an influential socio-demographic factor leading to violence, and higher risk of IPV (Simister, 2009; Kimuna et al., 2018). Kimuna et al. (2018) found that women belonging to the richest quintile are less likely to experience violence, compared to those in the poorest group. A similar study attributed high education and wealth status to be attributed to low rates of IPV (Abuya et al., 2012; Salihu et al., 2012). Despite relevant research ascribing higher exposure of violence to IPV, this study's finding is in accordance with cross-sectional research and literature on IPV, reinforcing the notion that IPV occurs among all socio-economic groups (Undie et al., 2014). Conversely, there was a relationship between wealth index and IPV before empowerment variables such as attitudes towards violence were added. Once the variables which expressed personal views

towards violence (influenced by culture) were added, the relationship disappeared. Thus, no hard conclusions regarding wealth and IPV can be made.

This study's findings may suggest that being Muslim is a protector against IPV. No other religion was found to reduce odds of IPV. (Note that all religions were compared to Roman Catholicism. Therefore, Islam is protective against IPV compared to respondents who reported being Catholic). The community and or societal context in which Islam is practiced, (such as neighborhoods, mosques, etc.) may explain why being a Muslim is a protector for IPV. According to the ecological theory of violence, being a Muslim cannot explain why some women experienced IPV while others did not. However, being a Muslim, combined with other factors (on the individual, relationship, community etc.) such as if the respondent was also highly educated (another variable found to be a protector against IPV), this could explain why Muslim women may have reduced IPV odds. It could also be possible that a particular group (such as Muslim women) score lower in IPV because violence is so commonplace that it would not be interpreted as violence. This finding (Islam as a protector for IPV) was in line with (Peltzer and Pengpid, 2014), which found that being Muslim garnered protective against the sexual and emotional IPV subtypes in the Ivory Coast. Future research could project Islam as the reference category for religion to explore if other religions would come out as protective against IPV.

This study found that when respondents make decisions together with their husband/partner are less likely to experience IPV. Thus, a certain level of decision making could indicate that they have a certain level of empowerment that is protective against violence. These decisions include: decisions regarding he own health care, and decisions related to large household purchases. This finding (a high level of decision making) is in line with the KDHS

indices for empowerment, which deduces that women are empowered and in control if she participates in the number of decisions either jointly or with her husband/partner (KDHS, 2014).

In line with empowerment, this study determined that women who believe that wife beating is justified are at heightened risk of IPV. This study illustrates a clear pattern; those who endorse wife beating (and the more times they endorse such), the more likely that they will experience IPV. This is in line with other studies which suggest that respondents who justifiy wife beating experienced more violence (Kimuna et al., 2018; KDHS, 2014). Therefore, this study reinforces the KDHS definition of empowerment that states that women who exhibit attitudes which endorse wife beating are perceived lower in status, relative to men. In respect to the KDHS women's empowerment indices, a woman who feels that a husband is justified in beating his wife (in one or more instances) is at higher risk of low status and health outcomes. Thus, women who endorse wife beating have a lower sense of self-worth and a lower status relative to men, which may make them more susceptible to IPV.

Limitations of the Study and Future Work

A further shortcoming of this study is that the sample only included the respondents who answered the domestic violence module, encompassing 5,672 participants (KDHS, 2014). A more precise sample could have been achieved by selecting for the female genital mutilation module as well. Doing this could have included fewer missing cases for the 'respondent circumcised' variable. Choosing the larger sample did however, allow for strong results because it allowed for a larger sample for the background characteristics. Thus, the decision was made to only select for the domestic violence module. It is also important to acknowledge that analyses

might have obtained stronger results had the groups been bigger (within frequencies and crosstabs, for example).

Another possible limitation of this study is sensitive nature of the domestic violence questionnaire. The high response rate of the survey begs question of whether women feel uncomfortable or forced to respond (Salihu et al., 2012; KDHS, 2014). Although the domestic violence module is offered in private domains, respondents could withhold important information regarding abuse due to fear of a confidentiality breach. Similarly, like other DHS surveys, the KDHS interviewers receive rigorous training, in areas such as respect and privacy (Salihu et al., 2012). Nonetheless, validity of the data reported is never completely guaranteed (KDHS, 2014). Thus, sensitive topics such as FGM/C and IPV may be under reported, and therefore, the association between FGM and IPV could have been underestimated.

Another limitation to the sample was that all respondents in this study were women (although this was a deliberate measure taken to find an association between FGM/C and IPV). Because the study was created to determine if there was a link between FGM/C and IPV, all forms of IPV against men were excluded. Further research could be done to assess levels and associations towards men and other gender identities of IPV in Kenya. This could be strengthened by controlling i.e. alcohol use and HIV/STD status (García-Moreno & Stockl, 2013; KDHS, 2014; WHO, 2005).

Recommendations Future Research

This study was limited to the variables that were included in the KDHS (2014) study. For future research, it would be interesting to include HIV status or sexually transmitted disease

(STD) status as a predictor for IPV, as other studies have found an association between being diagnosed with a sexually transmitted infection (STI) in recent months and IPV (both physical and sexual) (Peltzer & Pengpid, 2014). Similar studies have also found HIV associated with recent IPV (García-Moreno & Stockl, 2013); Wilson et al., 2016). IPV and HIV status can also be linked through sexual violence, transmission of HIV through risky sexual behavior, indirectly though the inability to negotiate condom use (King, 2016). IPV is also a consequence of being HIV positive (King, 2016). Violence and or fear of violence could also be a barrier to disclose HIV status (Garcia-Moreno & Stockl, 2013). Future research could use HIV status (such as if respondent sought out HIV testing, or tested positive for HIV) to better understand rates of IPV in women. Controlling for this variable could have made this study stronger. STD status could have played a role in the variance of IPV status within the regression, and doing so would have strengthened the study.

In addition, socio-demographic contexts can be taken into account for future research on IPV among women in Kenya. Socio-cultural practices discussed in Kimuna et al. (2018) and Sitawa et al. (2018) explain how deeply embedded norms in cultural and family settings may better explain intimate partner violence against women, as well as gender inequalities. Hence, one of the largest challenges to end IPV is to change the socio-cultural attitudes which bind women into inferior status (Kimuna et al, 2018). It is not only the women's attitudes towards empowerment (such as attitudes of towards wife beating) which need to be changed to eliminate IPV; men's behaviors, especially those whom are perpetrators of violence need to change (Kimuna et al., 2018). It is crucial therefore, to incorporate men into future IPV interventions. IPV intervention programs with specific emphasis on gender-based values. Thus, learning to place more value on women could ultimately lead to change. Programs targeting men

and women should be implemented not only on the individual and relationship level, but also on the community and societal levels. This has been achieved through the engagement of men and women together in dialogue and intervention within the successful organization, Tostan, which originated in Senegal (Cislaghi et al., 2018).

Conclusion

Despite the fact that IPV has been recognized as and major public health issue, hardly any studies have sought an association between IPV and FGM/C. This study revealed a small positive association between FGM/C and IPV. The association between IPV and FGM/C, although small, was found to be a significant predictor of IPV, compared to wealth and number of other wives which were found to be insignificant predictors. Finally, this study may reinforce previous research which links childhood exposure to violence, like FGM/C, to re-victimization of violence in the form of IPV later in life. As participating in decision making was found to be a protector for IPV, incorporating empowerment could be a tool into both FGM/C and IPV interventions. Similarly, programs focused on health and empowerment that are already linked to the elimination of FGM/C could dually target IPV for the best outcome in the effort to eliminate violence against women in Kenya.

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Annex

Annex 1

Forms of intimate partner violence (IPV) as defined by WHO:

Acts of physical violence, such as slapping, hitting, kicking and beating.

 Sexual violence, including forced sexual intercourse and other forms of sexual coercion.

Emotional (psychological) abuse, such as insults, belittling, constant humiliation, intimidation (e.g. destroying things), threats of harm, threats to take away children.

Controlling behaviors, including isolating a person from family and friends; monitoring their movements; and restricting access to financial resources, employment, education or medical care.

(WHO, 2010)

Annex 2

Four Types of FGM/C

As classified by the World Health Organization (WHO)

- Type 1:Clitoridectomy: Partial or total removal of the clitoris

- Type 2: Excision: Partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora

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- Type 3: Infibulation: narrowing of the vaginal opening through the creation of a covering seal

- Type 4: Other: All other harmful procedures to the female genitalia for nonmedical purposes

  (i.e. pricking, piercing)   (WHO, 2008)

Annex 3

According to the KDHS (2014), women's empowerment is an important indicator for demographic and health outcomes (i.e. family planning, child health and maternal health) throughout Kenya. Within the KDHS (2014), two indices determine whether a woman is empowered. The first index is the number of decisions in which women participate in. If a women makes decisions either alone, or jointly with their partner, she is considered empowered. The second index corresponds to the total number of instances where a women feels that a husband is justified in wife beating. (Thus, pertaining to her individual conception of men in society as a w hole, not her own experience with her own husband). A low score indicates a higher degree of self-worth and higher status.

Annex 4: Tables and Charts

Table 3

Frequencies among Educational Attainment

Variables	Valid Percent
No Education	14.7
Incomplete primary	27.9

Complete Primary	23.6
Incomplete Secondary	13.4
Complete Secondary	12.1
Higher	8.3

Notes. *N*'s range contains all 5672 cases. Answers fell into one of six categories.

Table 5

Frequencies of Ethnicity

Valid	Valid Percent
Embu	1.3
Kalenjin	13.7
Kamba	9.5
Kikuya	16.4
Kisii	5.9
Luhya	11.9
Luo	9.7
Masai	2.1
Meru	5.4
Mijikenda/Swahili	5.0
Somali	5.8
Taita/Taveta	1.4
Tukana	2.5
Samburu	2.3
Pokomo	.8

Iteso	.8
Boran	1.4
Gabbra	.7
Kuria	.7
Oma	.4
Mbere	.2
Rendille	.2
Other	1.9

Notes. (N= 5672) of cases.

Annex 5:

Some of the output generated from this study is shown below:

```
LOGISTIC REGRESSION VARIABLES viol3
  /METHOD=ENTER V024 V130 V149 V190 V447A v505X
  /METHOD=ENTER v743x V4743x V474Bx
  /METHOD=ENTER HGA
  /METHOD=ENTER G102
  /CONTRAST (V024)=Indicator(1)
  /CONTRAST (V130)=Indicator(1)
  /CONTRAST (V149)=Indicator(1)
  /CONTRAST (V190)=Indicator(1)
  /CONTRAST (v743x)=Indicator(1)
  /CONTRAST (V4743x)=Indicator(1)
  /CONTRAST (V474Bx)=Indicator(1)
  /CONTRAST (HGA)=Indicator(1)
  /CONTRAST (G102)=Indicator(1)
  /CONTRAST (v505X)=Indicator(1)
  /CLASSPLOT
  /PRINT=GOODFIT CI(95)
  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
```

Annex 6:

KDHS (2014): Domestic Violence Questionnaire:

https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf