

Health Implications of Sexual Violence Among Survivors in Selected Health Facilities in Kenya: Are There Gender Disparities?

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Abstract

Sexual based violence (SBV) is a serious public health problem with profound impact on physical, social and mental health, both immediately and many years after the assault. The global statistics on sexual assault against women indicates that, at least one in every three (34%) has been beaten and/or coerced into sex. A World Health Organisation (WHO) multi-country study reports that between 16% and 59% women from Africa had ever experienced sexual violence. In Kenya, about 24% of women have been raped at least once. Nairobi women Hospital alone receives an average of 230 survivors per month, with approximately 45% being children, 49% women and 6% men respectively. The main aim of this study was to investigate the gender disparities in health implications of SBV among survivors in three health facilities in Kenya. This was a cross-sectional study involving 236(84.3%) female and 44(15.7%) male survivors were enrolled in the study. The study established that sexual based violence resulted into health consequences (76.8%) including psychological trauma 143(51%), physical injuries 75(27%), STIs 38(14%), gynaecological disorders 35(12%), Human Immunodeficiency Virus (HIV) 32(11%), gastrointestinal disorders 21(7%) and unwanted pregnancies 17(6%). The results showed that females and males who developed health complications were not significantly different ($\chi^2=0.223$; $df=1$; $p=0.637$). Males were more likely to suffer from psychological trauma, physical injuries and gastrointestinal injuries compared to females (OR= 1.2, CI= 0.6- 2.2; OR= 0.2, CI= 0.1- 5.0; and OR= 0.7, CI= 0.4- 1.5). On the hand, the study established that females were more likely to suffer from Sexually Transmitted Infection (STIs) (OR= 1.4, CI= 0.3- 6.0), gynaecological disorders (OR= 1.5, CI=0.5- 4.5), HIV (OR= 1.9, CI= 0.6- 6.6), and unwanted pregnancies (OR= 2.3, CI= 0.7- 8.1) compared to males. There is an urgent need to deal with the problems of SBV by preventing and stopping it. There should be a collaborative approach between all the stakeholders including the community, ministries of Medical Services and Public Health & Sanitation, private and non-governmental organization in dealing with sexual based violence and health implications resulting from it.

Keywords: Sexual based violence, health implications, survivors, males

DOI: 10.7176/JHMN/66-03

Publication date:September 30th 2019

1. Introduction

Sexual based violence¹ is a pervasive global health problem (Keesbury *et al.*, 2011; Raifman, *et al.*, 2011; Keesbury & Askew, 2010, and Government of Kenya (GoK), 2010). Sexual violence affects millions across the globe. It is a medical emergency, brutally shattering the lives of women, men and children. It destroys families and damages communities (Médecins Sans Frontières, 2009). Worldwide, men experience higher levels of physical violence than women as a result of war, gang-related activity, street violence, and suicide, while women and girls are more likely to be assaulted or killed by someone they know, such as an intimate partner (Raifman, *et al.*, 2011; Keesbury & Askew, 2010; Nakijoba, 2009; Kilonzo *et al.*, 2009; Mugawe & Powell, 2006). At least one out of every three women around the world has been beaten, coerced into sex, or otherwise abused in her lifetime, with the abuser usually someone known to her (Raifman, *et al.*, 2011; Keesbury & Askew, 2010; Heise, 2008; IGWG, 2006; General Assembly, 2006; World Bank, 2005). It is estimated that worldwide, one in five women will become a victim of rape or attempted rape in her lifetime (Alcalá, 2005). Perhaps the most pervasive human rights violation that we know today, it devastates lives, fractures communities, and stalls development. According to the WHO (2005), between 16% and 59% of women from Africa had ever experienced sexual violence from intimate partners (WHO, 2005). In South Africa, a sex crime happens every twenty seconds (World Bank, 2005).

¹Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic women's sexual, using coercion, threats of harm or physical force, rape of adult and adolescent men and women, and child sexual abuse, by any person regardless of the relationship to the survivor, in any setting, including but not limited to home or work place. It includes rape, forced prostitution, vaginal, anal, or oral penetration, Sexual trafficking, sexual intercourse that one says no to.

Reported incidents of rapes in 12 African provinces increased from 182 in 2001 to 270 in the year 2002 (World Bank, 2005). Available data, while limited, demonstrate the impact of the 'dual epidemics' of sexual and gender based violence and Human Immunodeficiency Virus (HIV) in sub-Saharan Africa (Keesbury and Askew, 2010). Cases of sexual based violence in Kenya have risen significantly (Onyango *et al.*, 2009). Rape occurs every half hour in Kenya (Onyango *et al.*, 2009). Sexual violence is mostly associated with females where males are taken as perpetrators with less regard to male sexual violence where females and males are perpetrators. This study investigated gender disparities in health consequences among survivors of sexual based violence.

2. MATERIALS AND METHODS

This study used a cross-sectional study design in three randomly selected provincial hospitals in Kenya. The study used both quantitative and qualitative methods to investigate the prevalence and health implications of sexual violence among survivors. Quantitative methods ensured high levels of reliability of gathered data while Qualitative method allowed for obtaining more in-depth information about SBV.

2.1 The study area

The study involved Nairobi Women's Hospital (NWH), Nyanza Provincial General Hospital (NPGH) and Coast Provincial General Hospital (CPGH) in Kenya. Nairobi woman Hospital is situated in Nairobi city, Nairobi province. Nairobi being the capital city of Kenya is located on 1° 17'0"S, 36° 49'0"E. The city, which also forms the Nairobi province, lies on the Nairobi River in the south of the nation and has an elevation of 1661 metres (5450 ft) above sea-level. Nyanza Provincial General Hospital is located in the city of Kisumu in western Kenya, Nyanza province. Kisumu is a Port City in western Kenya located on 0° 6' 0" S / 34° 45' 0" E and has elevation of 1,131 m (3,711ft) above sea-level. Coast Provincial General Hospital is located in the city of Mombasa in south-eastern Kenya, on the coast of the Indian Ocean. Mombasa is the second-largest City in Kenya located on 4° 3' 0" S / 39° 40' 0" E.

2.2 Target and study population

The target population for this study were composed of survivors of sexual based violence accessing Nairobi Women Hospital, Nyanza and Coast provincial General Hospital for treatment, preventive therapies, and psychological support. They included patients and health workers.

2.3 Sampling Procedure

Random sampling was used to determine the study hospitals i.e. Nairobi Women Hospital, Nyanza provincial General Hospital, and Coast Provincial General Hospital. Systematic sampling was then used to select 280 survivors as the final sample based on the selection of every second survivor visiting the hospital on the day of the field work. This is an equal-probability method, in which every k^{th} survivor (every second survivor) was selected, where k , the sampling interval, was calculated as:

$$k = \frac{N}{n}$$

Where n is the sample size, and N is the population size. Using the formula, $k = 1.5$ for each hospital (*such as 100/65, 230/150 and 100/65 for CPGH, NWH and NPGH respectively*) and therefore approximately 2 meaning every second survivor. Therefore each survivor had equal probability of being selected. Where a patient was not interested in being included in the study, the next patient was considered instead. The health workers were randomly selected from the duty roster of the day from among health workers who were involved in the management of sexual violence. The health workers were randomly selected from the duty roster of the day from care providers to victims of sexual violence. Information from lay counsellors at the health facilities was used to recruit the participants for the focus group discussions (FGDs)¹ with survivors of sexual violence.

2.4 Data collection instruments

A semi-structured, open-ended a closed interview schedule questionnaire was developed with flexible probing, ideal for investigating personal experiences on sexual based violence from the subjective perspective of each respondent. This collected both qualitative and quantitative data. Observational checklists and notes were designed, taken and later used in data analysis. The notes were used to help fill in any gaps in the data obtained during FGDs or in-depth interviews. Focus group discussion guide was developed and used mainly to collect qualitative data. Choice methods were carefully done in line with sensitive studies of the same kind elsewhere (Action for

¹ Three focus group discussions (one from each study area) were conducted.

Development (ACFODE), 2009; United Nations Fund for Women (UNIFEM), 2008; Ellsberg M, and Heise L., 2005; National Family Health Survey Report of India, 2005).

2.5 Methods of data collection

Interviews were conducted with survivors of sexual based violence at the study site. During the survey, the research team upheld the research ethical value of confidentiality and assured respondents of confidentiality of their responses and that information would not be used for anything else other than the study. Written consent was sought from the study participants.

Every second patient visiting the hospital on the day of the field work was selected for data collection. Where a patient was not willing to be included in the study, the next patient was considered instead. Interviews were conducted by recruited research assistant who was also a counsellor with experience of handling sexual based survivors, in a room provided by the Hospital within where the victims were managed from. Semi-structured interview schedules were used to collect data from survivors of sexual based violence and health workers. Interviews were conducted specifically for this study. The Focused Group Discussions (FGDs) were conducted with sexual violence survivors and with representatives of the local community.

2.6 Ethical considerations

Approvals from Kenyatta University's graduate school, National Council of Science and Technology and the Medical Officer of Health/Medical Superintendents and ethical committees from the selected Hospitals were obtained to undertake this study. Effort was made to ensure that the research process complied with the National Health and Medical Research Council guidelines for research involving humans (Ministry of Health (MoH), 2007). Because of the sensitivity of the study, all participants gave a written and verbal informed consent to participate in the study. In the case of children under 18 years, parents or legal guardians gave consent where possible. Survivors did not give consent were not enrolled in the study. During the survey, the research team upheld the research ethical value of confidentiality and assured respondents of confidentiality of their responses and that information would not be used for anything else other than the study. This was still held in the reporting of findings and preparation of the survey report. Individual identifications were not used to guarantee anonymity of the respondents.

2.7 Data management and analysis

The study generated both qualitative and quantitative data. These data were managed in a relational Access database and analysed using Statistical Package for Social Sciences (SPSS) version 17. Quantitative data were initially stored in an Access database (Microsoft Access, 2007). The Pearson's Chi-square test was used to show associations between independent and dependent variables. The 95% confidence intervals were estimated by maximum likelihood ratio. Logistic regression was used to establish the relationship between several independent or predictor variables and a dependent or criterion variable. All the qualitative data were recorded and verified during the interview; focus group discussions were summarized and documented. The qualitative data were then analyzed with a view to gaining understanding of the health implications of sexual violence.

3. RESULTS AND DISCUSSION

3.1 Socio-Demographic Characteristics of the study population

Table 1 presents the socio-demographic characteristics of sexual based violence survivors. Overall, a total of 280 survivors in three provincial hospitals (Coast Provincial General Hospital (CPGH), Nairobi Women Hospital (NWH), and Nyanza Provincial General Hospital (NPGH) were enrolled in the study.

The result indicated that 55.4% of minors (<18 years) compared to adults (44.6%) were sexually abused. The overall mean age of survivors was 19 years with the highest mean survivor age being in NWH (22.2) followed by NPGH (16.4) and the least was CPGH (14.6). The study found out that the youngest survivor was 2 months old while the oldest survivor was 68 years. There was significant difference between the prevalence of child survivors and the adult survivors ($p=0.011$) (Table 1).

It would appear that young people and children were the target by perpetrators.

The results indicate that the proportion of females compared to that of males was consistently higher in all the three study areas (CPGH = 53(81.5%), NWH = 121(80.7%), NPGH = 62(95.4%) (Table 4.1). The proportions of females to males differed significantly ($p < 0.001$).

Table 1: Socio- Demographic characteristics of the study population.

Investigative Variable	CPGH, n=65	NWH, n=150	NPGH, n=65	Total, n(%)
Survivor type				
Minors (<18 years)	48(73.8)	68(45.3)	39(60)	155(55.4)
Adult	17(26.2)	82(54.7)	26(40)	125(44.6)
Sex				
Female	53(81.5)	121(80.7)	62(95.4)	236(84.3)
Male	12(18.5)	29(19.3)	3(4.6)	44(15.7)
Education level				
Primary and below	51(78.5)	69(46)	34(52.3)	154(55)
Post secondary level	3(4.6)	47(31.4)	16(24.6)	66(23.6)
Secondary level	11(16.9)	34(22.7)	15(23.1)	60(21.4)
Marital status				
Unmarried	61(93.9)	118(78.7)	62(95.4)	241(86.1)
Married	4(6.2)	32(21.3)	3(4.6)	39(13.9)
Occupation				
Student/Pupil	30(46.2)	51(34)	29(44.6)	110(39.3)
Unemployed	22(33.8)	32(21.3)	19(29.2)	73(26.1)
Business	6(9.2)	20(13.3)	7(10.8)	33(11.8)
Casual labour	4(6.2)	16(10.7)	5(7.7)	25(8.9)
Office	1(1.5)	20(13.3)	2(3.1)	23(8.2)
Housewife	2(3.1)	11(7.3)	3(4.6)	16(5.7)

Approximately (41.4%) of the respondents had less than elementary education majority of whom were from {CPGH = 51(78.5%), NWH = 69(46%) and NPGH = 34(52.3%)} CPGH. It was found out that 66 (23.6%) of the respondents had attained post secondary level of education {NWH =47(31.4%), NPGH = 16(24.6%) and (CPGH =3(4.6%)} . only 60(21.4%) had achieved secondary level of education (Table 1).

With regard to occupation, majority of the survivors were students or pupils 110(39.3%). About 73(26.1%) were unemployed, 33(11.8%) business people, 25(8.9%) casual labourers, 23 (8.2%) Office, and 16(5.7%) (Table 4.1).

On marital status, the result showed that the highest number of survivors 241(86.1%) were unmarried while 39(13.9%) married. It appeared that unmarried were most susceptible to sexual violence (Table 4.1).

For majority of the respondents (84.3%), this was their first time to be involved in sexual SBV (Figure 1). There was no significant difference between the proportion of female (86%) and male (77%) survivors who reported first time experience ($p=0.164$).

Many perpetrators of SBV were people known to the victims 163(58%), and strangers 117(42%). Approximately 141(60%) of female and male 22(50%) survivors reported that they were sexually abused by people known to them. Figure 1 indicates that perpetrators of SBV who were well known to the survivors. They included male/female friends 88(31%), fathers 30(10%), cousins (23%), father in law 7(3%), mothers 5(2%), pastors 5(2%), employers 2(1%), and former husbands 2(1%) (Figure 1).

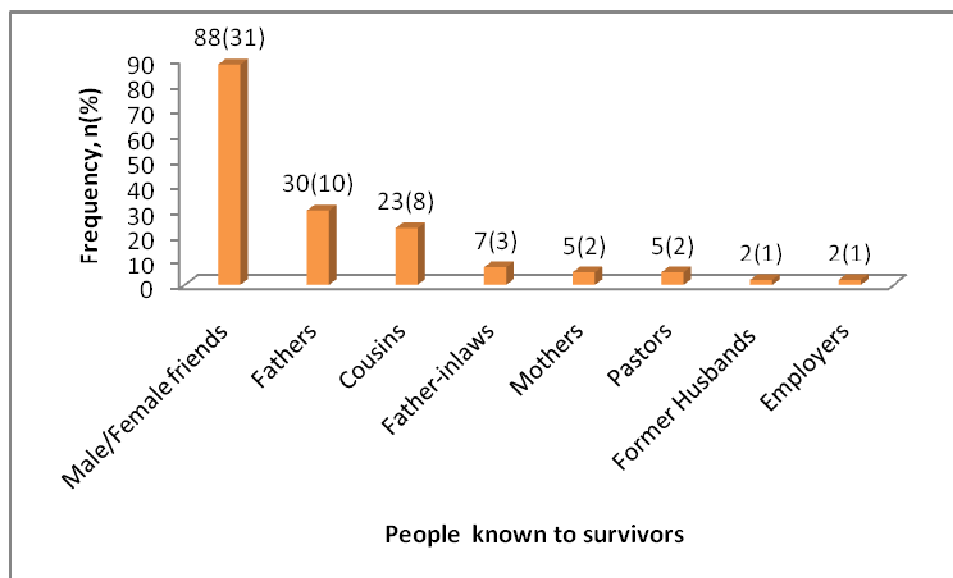


Figure 1: Proportion of perpetrators of SBV known to survivors.

3.2 Health implications of sexual based violence.

The study revealed that sexual based violence resulted into health consequences (76.8%) among the survivors. The proportions of survivors with health problems due to SBV were high in all the study areas (NPGH = 92%, NWH = 72% and CPGH = 70%) (Figure 2).

The study established that health problems significantly occurred in the study areas ($P=0.003$). The likelihood of a survivor reporting a health problem in CPGH was almost equal with that of NWH ($OR=0.9$, $CI=0.5-1.7$). The proportion of survivors who reported health problems at NPGH significantly differed with those from CPGH ($p=0.002$). New Nyanza Provincial General Hospital was more likely to experience reported cases of health problems compared to CPGH and NWH ($OR=5.0$, $CI=1.6-16.6$ and $OR=4.5$, $CI=1.6-13.8$).

The results showed that the proportion of females (79%) and males (76%) who developed health complications were not significantly different ($\chi^2=0.223$; $df=1$; $p=0.637$) (Figure 4.5). However males were 1.2 time more likely to develop health complications than female ($OR=1.2$, $CI=0.5-2.7$). The study did not establish a significant association between health complications and the age of the survivors ($p=0.892$).

3.3 Types of Complications

The study revealed that SBV resulted into various types of health problems ranging from psychological trauma 143(51%), physical injuries 75(27%) to unwanted pregnancies 17(6%) (Figure 3). Psychological trauma 143(51%) was the most reported health problem {CPGH = 24(37%), NWH = 66(44%), NPGH = 53(81%)} (Figure 3 and Table 2).

The result showed that the health problems reported differs significantly from one study area to another apart from gastrointestinal disorder ($\chi^2=3.184$; $df=2$; $p=0.204$) (Table 2). Psychological trauma was much more reported in NPGH 53(81%), physical injuries was most reported in CPGH 29(45%), and STIs in NWH 27(18%), and HIV 8(5%) (Table 2)

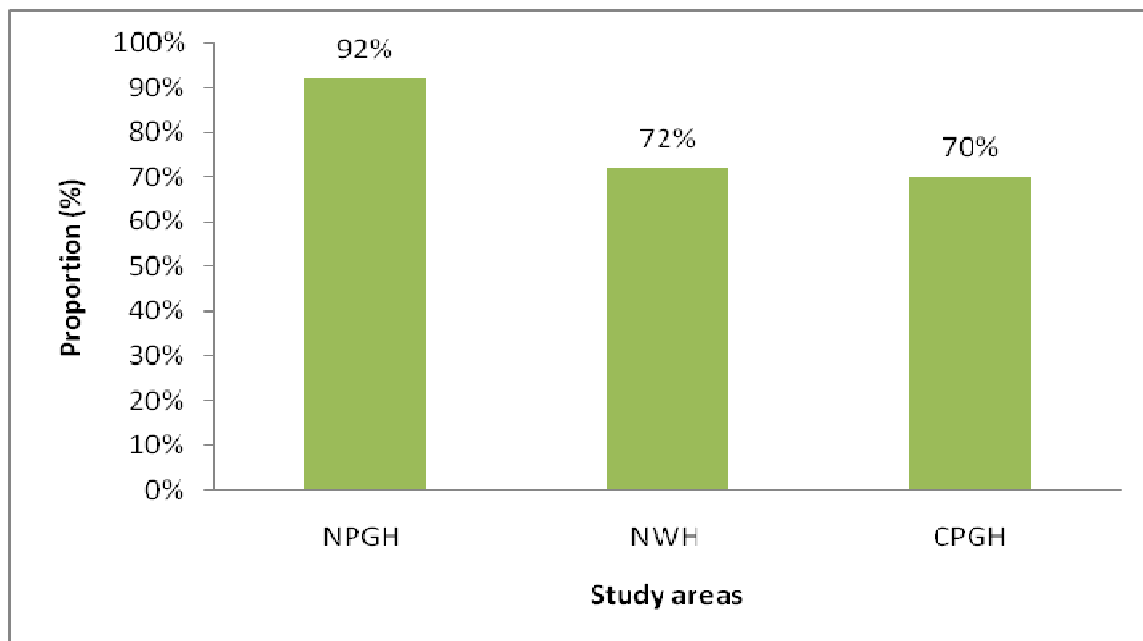


Figure 2: Proportion of survivors who developed health problems in the study areas.

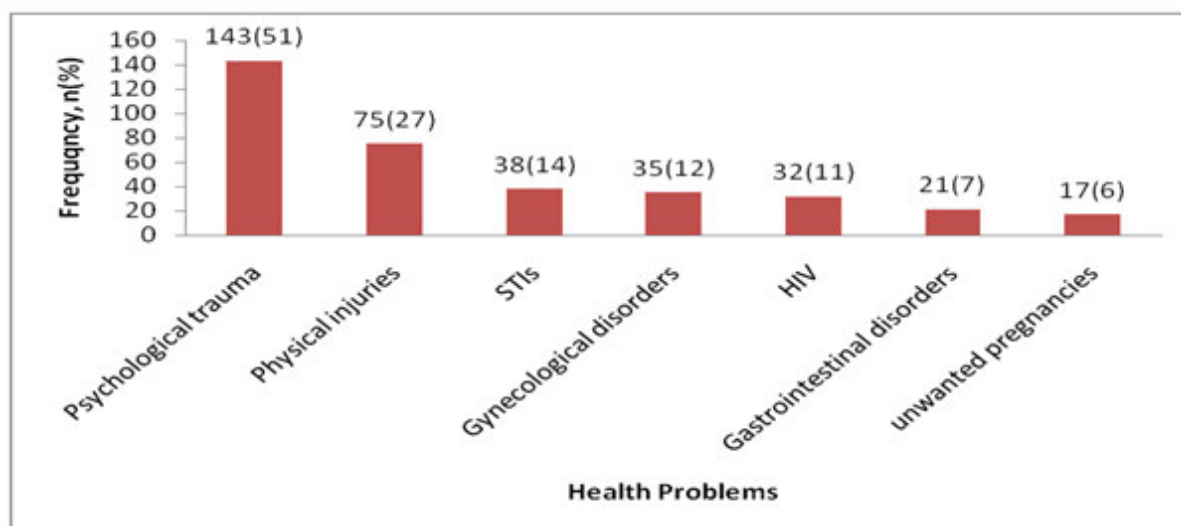


Figure 3: Types of health complications suffered by survivors.

Table 2: Health problems suffered by survivors in relation to study area.

Health problems	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Test of significance
Psychological trauma	24(37)	66(44)	53(81)	$\chi^2=32.354$; df=2; p< 0.001
Physical injuries	29(45)	30(20)	16(25)	$\chi^2=14.215$; df=2; p=0.001
STIs	4(6)	27(18)	7(11)	$\chi^2=5.992$; df=2; p=0.050
Gynaecological disorders	10(15)	23(15)	2(3)	$\chi^2=6.872$; df=2; p=0.032
HIV	2(3)	25(17)	5(8)	$\chi^2=9.441$; df=2; p=0.009
Gastrointestinal disorders	8(12)	8(5)	5(8)	$\chi^2=3.184$; df=2; p= 0.204
Unwanted pregnancies	3(5)	14(9)	0(0)	$\chi^2=7.242$; df=2; p=0.027

The proportion of females and males with health problems did not differ significantly except for gastrointestinal disorders which differed significantly ($P < 0.001$) (Table 3). Males were more likely to suffer from psychological trauma, physical injuries and gastrointestinal injuries compared to females (OR= 1.2, CI= 0.6- 2.2; OR= 0.2, CI= 0.1- 5.0; and OR= 0.7, CI= 0.4- 1.5) (Table 3). On the hand, the study established that females were more likely to suffer from STIs (OR= 1.4, CI= 0.3- 6.0), gynaecological disorders (OR= 1.5, CI=0.5- 4.5), HIV (OR= 1.9, CI= 0.6- 6.6), and unwanted pregnancies (OR= 2.3, CI= 0.7- 8.1) compared to males (Table 3).

Table 3: Health problems by survivors in relation to study area

Health problems	Sex		OR (95% CI)	p-value
	Female, n (%)	Male, n (%)		
Psychological trauma	122(52)	21(58)	1.2(0.6- 2.2)	P= 0.629
Physical injuries	61(26)	14(32)	0.7(0.4- 1.5)	P= 0.674
STIs	35(15)	3(7)	2.3(0.7- 8.1)	P= 0.154
Gynaecological disorders	31(13)	4(9)	1.5(0.5- 4.5)	P= 0.546
HIV	29(12)	3(7)	1.9(0.6- 6.6)	P= 0.295
Gastrointestinal disorders	12(5)	9(20)	0.2(0.1- 5.0)	P< 0.001
Unwanted pregnancies	15(6)	2(4)	1.4(0.3- 6.0)	P= 0.644

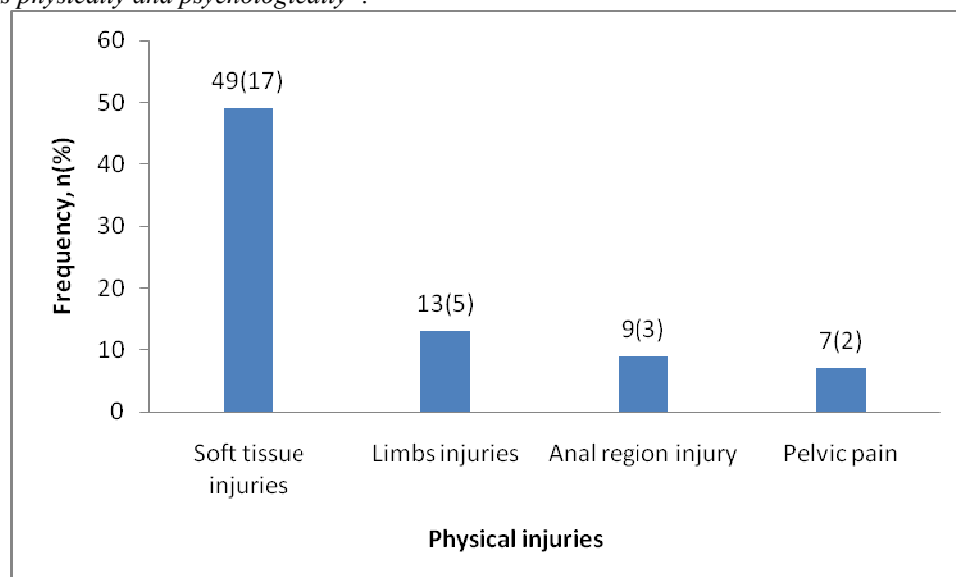
On examining the proportion of those who had various health problems between children (<18 years) and adults (>18 years), there was no significant differences between them except for gynaecological disorders ($\chi^2=5.799$; $df=1$; $p= 0.016$) (Table 4). Female children were 2.5 time more at risk of suffering from gynaecological disorders (OR= 2.5, CI= 1.2- 5.7). The risk of suffering from physical injuries, STIs and HIV after SBV was almost equal between adults and children (OR=0.9, CI= 0.5- 1.5; OR= 0.8, CI= 0.4- 1.5; and OR= 0.9, CI= 0.4- 1.9 respectively) (Table 4).

Table 4: Proportion of children and adults who suffered health problems

Health problems	Groups		OR (95% CI)	p-value
	Child, n (%)	Adult, n (%)		
Psychological trauma	72(46)	71(57)	0.7(0.4- 1.1)	P= 0.085
Physical injuries	40(26)	35(28)	0.9(0.5- 1.5)	P= 0.680
STIs	19(12)	19(15)	0.8(0.4- 1.5)	P= 0.475
Gynaecological disorders	26(17)	9(7)	2.5(1.2- 5.7)	P= 0.016
HIV	17(11)	15(12)	0.9(0.4- 1.9)	P= 0.787
Gastrointestinal disorders	8(5)	13(10)	0.5(0.2- 1.2)	P= 0.098
Unwanted pregnancies	11(7)	6(5)	1.5(0.5- 4.2)	P= 0.424

3.3.1 Types of physical injuries

Soft tissue injuries 49(17%) mainly featured among people who suffered physical injuries as a result of SBV. Other injuries included limb injuries 13(5%), injuries on the anal region 9(3%) and pelvic pain 7(2%) (Figure 4). One elderly mother said “sexual abuse make one disoriented physically and psychologically, making one not to mention it for long because of the fear of how she will be seen and what people will say about her. Sexual violence hurt victims physically and psychologically”.

**Figure 4: Proportion of survivors who suffered from physical injuries.**

The results showed that there was significant differences in the proportion of survivors who had soft tissue injuries ($\chi^2=10.502$; $df=2$; $p= 0.005$), anal region injuries ($\chi^2=6.493$; $df=2$; $p=0.039$) and limbs injuries ($\chi^2=11.363$; $df=2$; $p=0.003$) in the study areas. There was no significant difference in the proportion of survivors who reported pelvic pain in CPGH, NWH and NPGH ($\chi^2=1.594$; $df=2$; $p=0.451$) (Table 5).

Table 5: Proportion of survivors with physical injuries in various study areas

Type of physical injuries	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Test of significance
Soft tissue injuries	17(29)	16(11)	16(25)	$\chi^2=10.502$; df=2; p= 0.005
Anal region injury	5(8)	4(3)	0(0)	$\chi^2=6.493$; df=2; p=0.039
Pelvic pain	1(1)	3(2)	3(5)	$\chi^2=1.594$; df=2; p=0.451
Limbs injuries	8(12)	4(3)	1(1)	$\chi^2=11.363$; df=2; p=0.003

In examining the physical injuries among gender, females were more at risk of suffering from soft tissue injuries (OR= 2.4, CI= 0.2- 6.9). Males were more at risk of suffering from anal region injuries (OR= 0.2, CI= 0.0- 1.6) and limbs injuries (OR= 3.0, CI= 0.8- 0.9) compared to females (Table 6).

Table 6: Proportion of female and male with various types of injuries

Type of injuries	Sex		OR (95% CI)	p-value
	Female, n (%)	Male, n (%)		
Soft tissue injuries	45(19)	4(9)	2.4(0.2- 6.9)	P= 0.110
Anal region injuries	1(4)	8(18)	0.2(0.0- 1.6)	P< 0.001
Limbs injuries	8(3)	5(11)	3.0(0.8- 0.9)	P= 0.021
Pelvic pain	6(2)	-	-	-

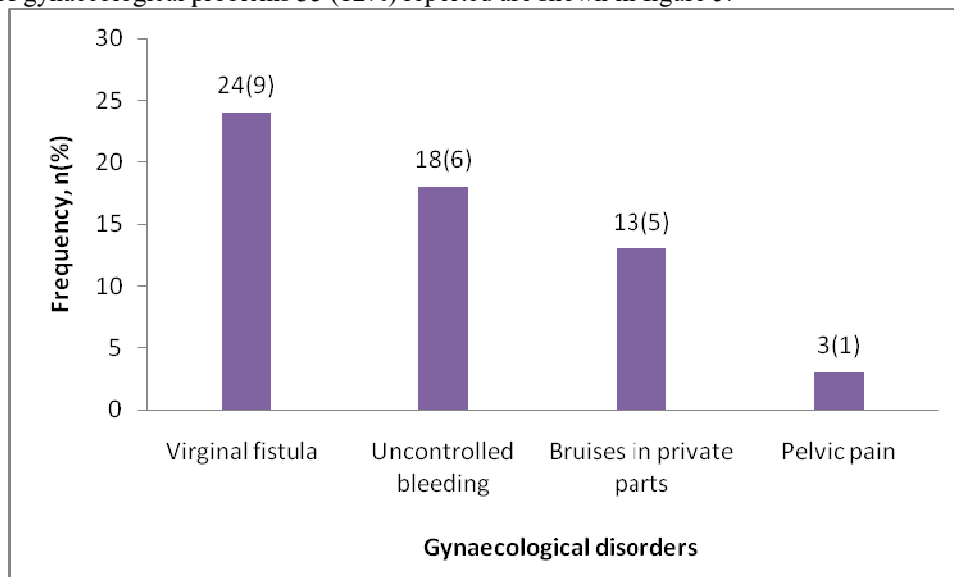
The study did not establish significant differences between females and males in regard to all types of physical injuries (Table 7). Both adults and children were almost equally vulnerable to soft tissue injuries (OR= 0.9, CI= 0.5- 1.8).

Table 7: Types of physical injuries among children and adults

Type of injuries	Groups		OR (95% CI)	p-value
	Child, n (%)	Adult, n (%)		
Soft tissue injuries	27(17)	22(18)	0.9(0.5- 1.8)	P= 0.968
Anal region injuries	7(4)	2(1)	2.9(0.6- 14.2)	P= 0.169
Pelvic pain	6(4)	1(1)	5.0(0.6- 42.0)	P= 0.102
Limbs injuries	5(3)	8(6)	0.5(0.1-1.5)	P= 0.210

3.3.2 Gynaecological disorders

The types of gynaecological problems 35 (12%) reported are shown in figure 5.

**Figure 5: Proportion of survivors with various gynaecological disorders.**

Majority of the respondents reported virginal fistula 24(9%), and others including uncontrolled bleeding 18(6%), bruises in private parts 13(5%) and pelvic pain 3(1%) (Figure 5 and Table 8).

Table 8: Proportion of survivors with various gynaecological disorders in the study areas.

Gynaecological disorders	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Test of significance
Virginal fistula	8(12)	15(10)	1(1)	$\chi^2=5.651$; df=2; p= 0.059
Uncontrolled bleeding	5(8)	12(8)	1(1)	$\chi^2=3.372$; df=2; p=0.185
Bruises in private parts	1(1)	10(7)	2(3)	$\chi^2=3.163$; df=2; p=0. 206
Pelvic pain	0(0)	2(1)	1(1)	$\chi^2=0.935$; df=2; p=0.627

Most of the health workers interviewed pointed out that gynaecological disorders treated in the study hospitals included Bruises in private parts 28(76%), Uncontrolled bleeding 26(70%), Virginal fistula 21(57%), pelvic inflammatory disease (PID) 22(60%), Pelvic pain 23(62%) (Table 9). Pelvic inflammatory disease was a health problem commonly mentioned by key informants in all study areas {CPGH = 6(50%), NWH = 9(75%), NPGH = 7(54%)} and which was never mentioned by survivors.

Table 9: Gynaecological disorders by key informants in the study areas

Gynaecological disorders	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Total, n (%)	Significance
Bruises in private parts	10(83)	10(83)	8(61)	28(76)	p= 0.337
Uncontrolled bleeding	9(75)	9(75)	8(61)	26(70)	p=0.694
Virginal fistula	8(67)	8(67)	7(74)	23(62)	p=0.745
PID	6(50)	9(75)	7(54)	22(60)	p=0.403
Pelvic pain	6(50)	8(67)	7(54)	21(57)	p=0. 688

There was a noted significant differences in female children and adults regarding virginal fistula (p=0.043) and bruises in the private parts (p=0.030) (Table 10). Children had a higher risk of getting all the gynaecological disorders compared to adults (Table 10).

Table 10: Proportion of children and adult survivors with different gynaecological disorders

Gynaecological disorders	Groups		OR (95% CI)	p-value
	Child, n (%)	Adult, n (%)		
Virginal fistula	12(8)	6(5)	2.6(1.0- 6.8)	P= 0.043
Uncontrolled bleeding	12(8)	6(5)	1.7(0.6- 4.6)	P= 0. 318
Bruises in private parts	11(7)	2(2)	4.7(1.0- 21.6)	P= 0.030
Pelvic pain	3(2)	0(0)	1.8(1.6- 2.0)	P= 0.118

3.3.3 Gastrointestinal disorders

The only gastrointestinal disorder 20(7%) reported by survivors was flatulence {CPGH =7(11%), NWH= 8(5%), NPGH 5(8%)}. This was confirmed by the key informants 18(49%) who also reported flatulence in all the study hospitals {CPGH =5(42%), NWH= 6(50%), NPGH 7(54%)}. There was no significant difference in reported cases of flatulence among survivors in the study areas ($\chi^2=2.059$; df=2; p=0.357). There was a significant difference in reported cases of flatulence between females 12(5%) and males 8(18%). Males were more likely to report flatulence compared to female (OR=0.2, CI= 0.1- 0.6). Adults 13(10%) were more likely report flatulence compared to children 7(4%) (OR=0.4, CI= 0.1- 1.0). However no significant difference was reported between children and adults ($\chi^2=3.612$; df=1; p=0.557).

3.3.4 Sexually transmitted infections

Sexually transmitted infections 38(14%) which were reported included HIV 35(12%), syphilis 3(1%), and urinary tract infection 1(0.4%) (Figure 6). One of the rape survivors said, "The most dangerous health issue today is HIV and AIDS infection which is all over. Many people are suffering from HIV/AIDS and you cannot tell who is infected and who is not infected."

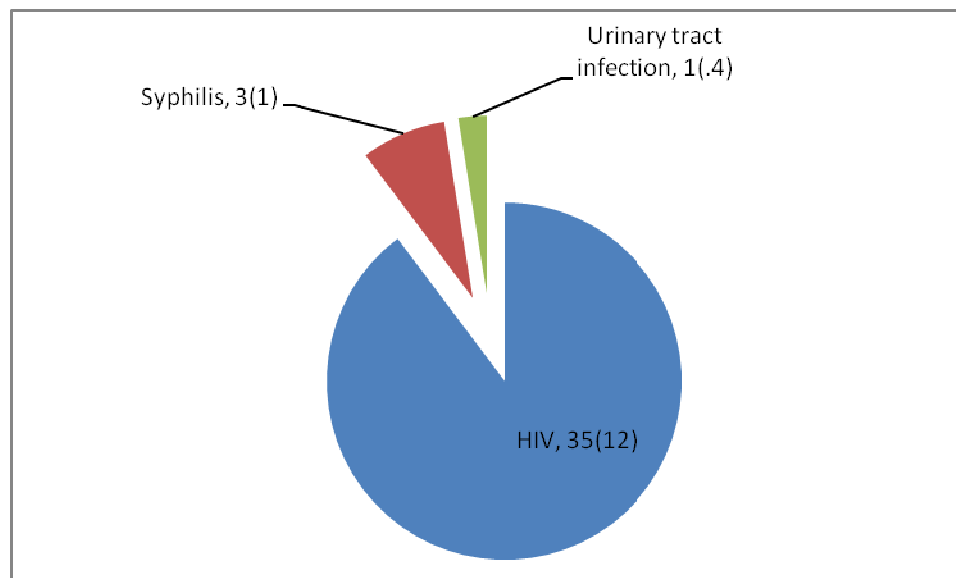


Figure 6: Types of STIs reported by survivors of SBV.

Table 11 shows the proportion of survivors who reported STIs in the study areas. There were no significant differences in the number of reported cases of STIs in the study areas.

Table 11: Proportion of survivors with STIs in the study areas

STIs	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Test of significance
HIV	4(6)	25(17)	6(9)	$\chi^2=5.410$; df=2; p= 0.067
Syphilis	0(0)	2(1)	1(1)	$\chi^2=0.935$; df=2; p=0.627
Urinary tract infection	0(0)	1(1)	0(0)	$\chi^2=0.870$; df=2; p=0.647

Key informants listed a number of STIs which resulted from SBV and treated in their hospitals (Table 12). They included HIV 29(78%), Chlamydia 28(76%), Chancroid 27(73%), Candidiasis 27(73%), Syphilis 26(70%), Gonorrhoea 26(70%), Genital herpes 20(54%), Trichomoniasis 20(54%), Human Papilla Virus 18(49%), Hepatitis B 18(49%) and Urinary tract infection 16(43%). Some of these infections would not be mentioned by survivors due to lack of knowledge on them. The study found that, records were poorly kept as it was hard to trace previous data. However as from the time of this study, study hospitals had started to keep SBV information.

Table 12: Proportions of key informants with types of STIs in various study areas

STIs	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Total	Test of significance
HIV	10(83)	8(67)	11(85)	29(78)	p= 0.486
Chlamydia	8(67)	8(67)	12(92)	28(76)	p= 0.222
Chancroid	8(67)	7(58)	12(92)	27(73)	p= 0.135
Candidiasis	8(67)	7(58)	12(92)	27(73)	p= 0.135
Syphilis	8(67)	7(58)	11(85)	26(70)	p= 0.337
Gonorrhoea	8(67)	7(58)	11(85)	26(70)	p= 0.135
Genital herpes	6(50)	5(41)	9(69)	20(54)	p= 0.363
Trichomoniasis	7(58)	7(58)	6(46)	20(54)	p= 0.777
Human P Virus	6(50)	6(50)	6(46)	18(49)	p= 0.975
Hepatitis B	6(50)	6(50)	6(46)	18(49)	p= 0.975
Urinary tract infection	5(41)	3(25)	8(61)	16(43)	p= 0.182

There was no significant difference between STIs cases in female and male (p=0.214), however female were at a higher risk of contracting STIs than males (Table 13).

Table 13: Cases of STIs among females and males

STIs	Sex		OR (95% CI)	p-value
	Female, n (%)	Male, n (%)		
HIV	32(14)	3(7)	2.1(0.6- 7.3)	P= 0.214
Syphilis	3(1)	0(0)	1.2(1.1- 1.2)	P= 0.452
Urinary tract infection	1(.4)	0(0)	1.2(0.1- 1.2)	P= 0.665

Whereas there was no significant difference in cases of infection between children and adults, the risk of contracting HIV was among adults (OR= 0.7, CI= 0.4- 1.5). Children stood a higher chance than adults to contract syphilis (OR= 1.6, CI= 0.1- 18.1) and urinary tract infections (OR= 1.8, CI= 1.6- 2.0).

3.3.5 Psychological consequences

Psychological consequences 143(51%) reported among the survivors of sexual based violence included fear 120(43%), shame 91(32%), depression 81(29%), anxiety 53(19%) and low-self esteem 46(16%) (Figure 7)

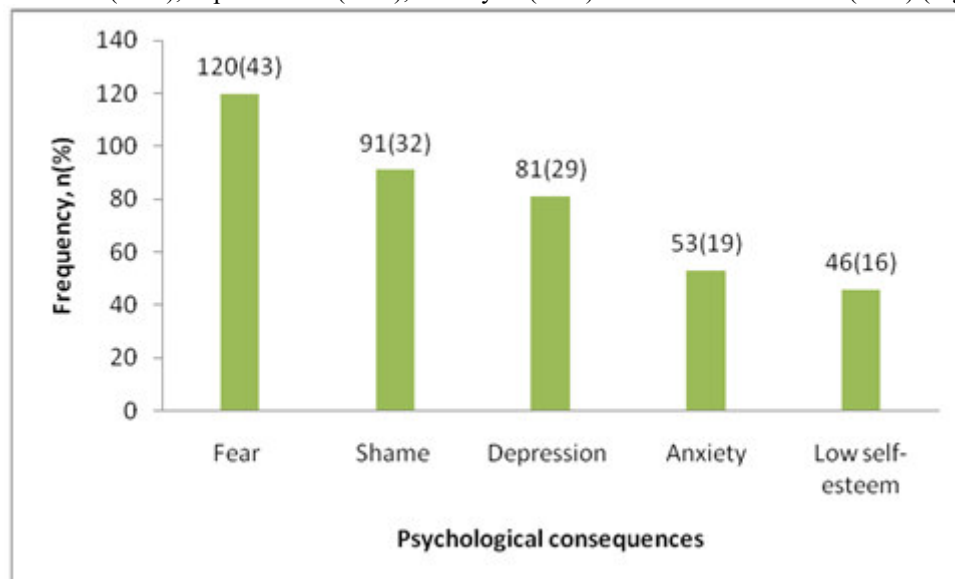


Figure 7: Proportion of survivors with psychological consequences.

The results show that reported cases of all the psychological consequences were significantly different from one study area to another (Table 14). New Nyanza Provincial Hospital reported the highest subjects with psychological consequences among the study areas. This would be attributed to socio-economic and cultural factors of survivors associated with sexual based violence.

Table 14: Proportion of survivors with psychological disorders in the various study areas.

Psychological consequences	CPGH, n (%)	NWH, n (%)	NPGH, n (%)	Test of significance
Fear	17(26)	52(35)	51(78)	$\chi^2=45.160$; df=2; p<0.001
Shame	15(23)	35(23)	41(63)	$\chi^2=36.079$; df=2; p<0.001
Depression	20(31)	32(21)	29(45)	$\chi^2=12.096$; df=2; p=0.002
Anxiety	14(21)	21(14)	18(28)	$\chi^2=5.916$; df=2; p=0.052
Low self - esteem	8(12)	19(13)	19(29)	$\chi^2=10.109$; df=2; p=0.006

The study did not find significant differences in reported cases of psychological consequences between females and males (Table 15). Females were more likely than males to experience fear (OR=1.4, CI= 0.7- 2.7) while males were more likely to experience shame (OR=0.8, CI= 0.4- 2.7) and anxiety (OR=0.7, CI=0.3- 1.6). Depression and low self-esteem were likely to be experienced equally by both sexes.

Table 15: Proportion of females and male with psychological consequences

Psychological consequences	Sex		OR (95% CI)	p-value
	Female, n (%)	Male, n (%)		
Fear	104(44)	16(36)	1.4(0.7- 2.7)	P= 0.343
Shame	75(32)	16(36)	0.8(0.4- 2.7)	P= 0.551
Depression	68(29)	13(29)	1.0(0.5- 1.9)	P= 0.922
Anxiety	43(18)	10(23)	0.7(0.3- 1.6)	P= 0.484
Low self-esteem	39(16)	7(16)	1.0(0.4- 2.5)	P= 0.919

The result of psychological consequences among children and adults indicated no significant difference in cases between them {depression (P= 0.122); shame (P= 0.386); Low self-esteem (P= 0.618); anxiety (P= 0.839) and fear (P= 0.890)}. However adults were more likely to experience shame (OR=0.8, CI= 0.5- 1.3), and depression (OR=0.7, CI= 0.4- 1.1). Children were more like to experience low self-esteem (OR=1.1, CI= 0.6- 2.2). Fear and anxiety were likely to be experienced equally among children and adults (OR=1.0, CI= 0.6- 1.7).

4. DISCUSSION

4.1 Health Implications of Sexual Based Violence

The study shows that both males and females experienced health consequences almost equally. These findings are consistent with studies done by Médecins Sans Frontières, (2009), Kilonzo, (2009). Population Council (2008) pointed out that contrary to female victims of sexual assault, male victims are likely to suffer from a range of

health problems, both in the immediate period after the assault and over the longer term.

The study established that males were 1.2 time more likely to develop health complication than females. These findings were important in the sense that most male sexual based violence are underreported due to shame, guilt and fear. Various studies (Médecins Sans Frontières, 2009 and Bhandari, 2005) demonstrate that, myths and strong prejudices surrounding male sexuality also prevent men from coming forward. That means that they continue suffering silently without professional assistance.

Additionally, the study revealed that sexual violence resulted in serious health implications ranging from physical injuries, gynaecological disorders, psychological problems, to gastrointestinal disorders and sexually transmitted infections among others. This dovetails with the findings of other studies (Nakijoba, 2009; Population council, 2008, Kilonzo, 2009; Médecins Sans Frontières, 2009) which list death, injuries, gynaecological disorders, unwanted pregnancy, adverse pregnancy outcomes, sexually transmitted infections including HIV and mental distress such as fear, shame and anxiety among others. In her presentation, Nakijoba (2009) reported that the effects of sexual based violence are enormous and multi-edged including physical, psychological, legal and economic and are realized at various levels: individual (by both victim and perpetrator), family, community and national levels. To mitigate all these effects of SBV, immediate medical response is required.

4.2 Physical injuries

Physical injuries reported included soft tissue injuries, limb injuries, and injuries on the anal region. The study found out that sexual violence hurt victims physically. The results showed that there were significant differences in the proportion of survivors who were physically injured. Highest proportions of soft tissue injuries, anal region injuries and limb injuries were from CPGH. Population health (2008), reported that some of this physical injuries would be life threatening and survivors of sexual abuse may have physical injuries that require immediate attention. Life threatening injuries take precedence over other components of medical management (Kenya Ministry of Health/Division of Reproductive Health, 2004; Kilonzo, & Taegtmeier, 2005;). The study found out that both females and males were almost the same in regard to all types of physical injuries. Both adults and children were vulnerable to injuries almost equally. As note earlier injuries resulted due to physical violence which included slapping, kicking, hitting, or use of weapons. These finds are the same as those documented by Population council, (2008). Population council (2009), noted that physical violence resulted to fractures, chronic pain syndromes, fibromyalgia, permanent disability, gastro-intestinal disorders among other problems.

4.3 Reproductive health problems

Reproductive health problems reported by participants of the study included: unwanted pregnancies, bruises in private parts, urinary tract infections, uncontrolled bleeding, virginal fistula, pelvic inflammatory disease (PID), and Pelvic pain. These problems were mainly for female. Girls (<18 years) had a higher risk of suffering from all the gynaecological disorders compared to adult women. These findings are the same as those documented by Population council (2008); Campbell, *et al.*, (2004); Campbell and Self, (2004); Garcia-Moreno, (2002). Population council (2011) notes that child marriage, and childbearing during childhood can have both immediate and lifelong repercussions. Population council (2009) found out that reproductive health problems related with SBV included urinary tract infections, unwanted pregnancy, pregnancy complications, vaginal bleeding, traumatic gynaecologic fistula, unsafe abortion, and chronic pelvic pain.

Female survivors of sexual violence not only sustain physical injuries, but are more likely than other women to have unintended pregnancies, report symptoms of reproductive tract infections (Campbell & Self, 2004).

4.4 Sexually transmitted infections

Cases of sexually transmitted infections such as HIV, syphilis, urinary tract infection and gonorrhoea were reported. Other STIs included chlamydia, chancroid, candidiasis, syphilis, gonorrhoea, genital herpes, trichomoniasis, human P Virus, hepatitis B and Urinary tract infection. Sexually transmitted infections have been documented in various studies including Keesbury *et al.*, (2011); Sajeda and Althea (2011); Keesbury and Askew (2010); Population council (2009); Population council (2008); Speight, *et al.* (2006); Ellis, *et al.*, (2005); Fonck, *et al.*, (2005); Kishor & Johnson, (2004).

Female were at a higher risk of contracting STIs than males. These findings dovetail other studies (American Social Health Association, 1998; Institute of Medicine, 1997; Wong *et al.*, 2004) which documented that Women are at higher risk than men for most STIs, and young women are more susceptible to certain infections than older women. Due to cervical ectopy that is extremely common in adolescent females, the immature cervix of adolescent females is covered with cells that are especially susceptible to STIs such as chlamydia.

The study did not find significant difference in the infection rates between children and adults. However the risk of contracting HIV was more among children. These findings were consistent with findings documented by Population council (2011) and Speight, *et al.* (2006). Data from Demographic and Health Surveys have shown that women who have suffered violence are twice more likely to have an STI than women who have not (Fonck, *et al.*,

2005). Female survivors of sexual violence are more likely than other women to have multiple partners, and less likely to use condoms and other contraceptives (Campbell & Self, 2004).

4.5 Psychological consequences

Psychological consequences were mostly reported among the survivors of sexual based violence. Psychological problems reported included fear, shame, depression, anxiety and low-self esteem. These findings are the same as various studies on psychosocial consequences (Elson & Keesbury, 2010; Ajema, *et al.*, 2009; ESOG, 2009; Keesbury, *et al.*, 2009; Tshwaranang Legal Advocacy Centre 2009; and Vetten, *et al.* 2008). New Nyanza Provincial Hospital in Nyanza reported the highest subjects of psychological consequences among the study areas. The study did not find significant differences in reported cases of psychological consequences between females and males. However males were more likely to experience shame and anxiety compared to females. Females experienced fear more than males while depression and low self esteem were experienced equally among the two genders. Africa Regional Sexual and Gender-Based Violence Network Consultation (2008), pointed out that a greater proportion of male survivors expressing interest than female survivors when requested to join a support group.

Females were more likely than males to experience fear while males were more likely to experience shame and anxiety. Depression and low self-esteem were likely to be experienced equally by females and males. On examining psychological consequences adults were more likely to experience shame and depression than children. Children were more like to experience low self-esteem. Psychological trauma makes it difficult to take the necessary history and statements from the survivor, conduct a physical examination, or collect forensic evidence (Keesbury & Askew 2010).

5. CONCLUSION

This study revealed that sexual based violence resulted into health consequences (76.8%) among survivors. Both males (79%) and females (76%) experienced health consequence almost equally. Males were 1.2 time more likely to develop health complications than female. SBV resulted into various types of health problems ranging from psychological trauma 143(51%), physical injuries 75(27%) to unwanted pregnancies 17(6%). Psychological trauma 143(51%) was the most reported health problem. Males were more likely to suffer from psychological trauma, physical injuries and gastrointestinal injuries compared to females while females were more likely to suffer from STIs, gynaecological disorders, HIV, and unwanted pregnancies than males. Soft tissue injuries 49(17%) mainly featured among people who suffered physical injuries as a result of SBV. Other injuries included limb injuries 13(5%), injuries on the anal region 9(3%) and pelvic pain 7(2%). Females were more at risk of suffering from soft tissue injuries while males from anal region injuries and limbs injuries. Majority of the respondents reported vaginal fistula 24(9%) uncontrolled bleeding 18(6%), bruises in private parts 13(5%) and pelvic pain 3(1%). The only gastrointestinal disorder 20(7%) reported by survivors was flatulence. Males were more likely to report flatulence compared to females. Adults 13(10%) were more to report flatulence compared to children 7(4%). Sexually transmitted infections 38(14%) which were reported included HIV 35(12%), syphilis 3(1%), and urinary tract infection 1(0.4%). There was no significant difference between STIs cases in females and males; however females were at a higher risk of contracting STIs than males. Psychological consequences 143(51%) were largely reported among the survivors of sexual based violence including fear 120(43%), shame 91(32%), depression 81(29%), anxiety 53(19%) and low-self esteem 46(16%). Females were more likely than males to experience fear while males were more likely to experience shame and anxiety. Depression and low self-esteem were likely to be experienced equally by females and males.

6. RECOMMENDATIONS AND POLICY IMPLICATION

The study recommends that:

- a) Life skills training is needed for both gender and mechanisms for coping with sexual violence need to be develop to minimise further suffering.
- b) Formation of male and female action groups; mass/community sensitization on sexual violence including using vernacular FM radio stations and enhancing the capacity of ant-sexual violence advocates.
- c) Education and communication strategy; Strengthening of the existing institutions handling sexual violence; Coordination of sexual violence related interventions by different stakeholders and strengthening networking.
- d) Gender equity is essential in mitigating health consequences of sexual based violence; Legal aid services should be provided to those who are unable to meet them.
- e) Environmental/collaborative/mutual approach or model can be used in dealing with SBV and health problems brought by it. It can also be called environmental approach/model or mutual approach/model. Collaborative approach should encompass the individual level, dealing with relationships, community level involvement, and societal level which should be supported by working legal institutions, committed

political systems and active healthcare systems

7. ACKNOWLEDGEMENT

We appreciate the support given by Kenyatta University. Thanks to all respondents to the study and others who contributed to this script.

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