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THE PROFILE OF CHILDREN AND ADOLESCENTS AGED BELOW 19 YEARS PRESENTING WITH SEXUAL ABUSE IN KENYATTA NATIONAL HOSPITAL

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE DEGREE OF MASTER OF MEDICINE IN PAEDIATRICS AND CHILD HEALTH OF THE UNIVERSITY OF NAIROBI

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DECLARATION

This dissertation is my original work and has not been presented elsewhere. References to work done by others have been clearly indicated.

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APPROVAL

This proposal for dissertation has been submitted with our approval as university supervisors

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- To God almighty for always being at my side.

DEDICATION

This book is dedicated to my husband Patrick Waiganjo and our children Wachinga and Wachira for their unending love and support throughout my study period.

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ABBREVIATIONS

WHO	World Health Organization
KNH	Kenyatta National Hospital
MTRH	Moi Teaching and Referral Hospital
NWH	Nairobi Women's Hospital
CSA	Child Sexual abuse
GOK	Government of Kenya
UNICEF	United Nations International Children's Emergency Fund
HIV	Human Immune deficiency Virus
UNHCR	United Nations High Commissioner for Refugees
GBVC	Gender Based Violence Clinic

ABSTRACT

Background

Cases of child sexual abuse are on an increase in our African set-up. Awareness of the problem and knowledge of its manifestations is essential. Outlining of the profile of sexually abused children will show the high risk population in the community and help in educating parents, teachers, children and the community.

Objectives

Primary objective

To describe the characteristics of children aged below 19 years presenting with sexual abuse in Kenyatta National Hospital.

Secondary objectives

1. To establish factors associated with child sexual abuse.
2. To establish the degree of injury in sexually abused children seen in Kenyatta National Hospital.

Study design

Cross sectional study

Study population

Children aged below 19 years presenting with sexual abuse in Kenyatta National Hospital.

Study site

Kenyatta National Hospital

Study participants

One hundred and five (105)

Study period

August 2013 to December 2014

Study procedure

Consecutive sampling of sexually abused children below 19 years until the sample size was reached. A questionnaire was administered to those who fit the criteria.

Results

The mean age of sexually abused children presenting in Kenyatta National Hospital is 11.1 years with the youngest being 2 years old. 83.3% of the sexually abused children were females with a female to male ratio of 5:1. Lack of supervision during play and poor social economic status are factors associated with child sexual abuse.

1.0 BACKGROUND

1.1 DEFINITION

Child sexual abuse refers to any sexual act with a child performed by an adult or an older child. It includes a number of acts such as sexual touching of any part of the body, penetrative sex including penetration of the mouth, encouraging a child to engage in sexual activity including masturbation, showing children ponography and engaging in child prostitution.

1.2 EPIDEMIOLOGY OF CHILD SEXUAL ABUSE (CSA)

According to World Health Organisation (WHO) report of 2002, twenty percent (20%) of females and 6-10% of males report having been sexually abused as children. Child sexual abuse accounts for 45% of child abuse cases. In Kenya, there are 3 Gender Violence recovery centers (Kenyatta National Hospital-KNH, Moi Teaching and Referral Hospital-MTRH and Nairobi Women's Hospital-NWH) where sexually assaulted victims are attended. Forty one percent (41%) of patients seen in these centres are children aged less than 18 years.

However, there is gross underreporting of sexual abuse cases. This is contributed to by intimidation of children by the perpetrators of the crime, monetary compensation given to families to silence the cases, the embarrassment associated with the assault, the unfriendly response especially from the police officers and loss of case files from the police.

1.3 VICTIMS OF CSA

Girls are more sexually abused than boys [(1).] Children who are emotionally needy because of family problems, poor parental supervision and low self-esteem are more vulnerable. Other groups of children who are at risk include unaccompanied children, including children in refugee camps, children in foster care or adopted children, physically and mentally handicapped children, those with a history of past abuse, children living in single parent homes or broken homes and children whose parents have mental illness or, are alcohol and drug dependent [(2).]

1.4 PERPETRATORS OF CSA

Males perpetrate the majority of child sexual abuse [(3).] Children are more susceptible to abuse by people who are close to them or hold power over them. Girls are more likely to be sexually abused by someone within the family such as parent, step parent, grandparent, uncle, cousin or sibling.

Boys are more likely to be sexually abused by someone outside the family such as a coach, teacher, neighbor or babysitter.

1.5 HISTORICAL TREND OF CHILD SEXUAL ABUSE

In traditional African society child sexual abuse was unheard of. The society created a system through which children were protected against such evil acts [(4).]

With the breakdown of family ties, especially migration of populations to urban areas with its attendant loss of traditional extended family checks, cases of CSA have been on the increase, being reported daily in the media and social networks. This increase in CSA has been attributed to by factors such as unemployment, poverty, breakdown in family ties, lack of value system in the society and the increase in ponography through mobile phones, computers and the media.

Policies and laws relating to children are not implemented in many countries in Africa. This has given room for child trafficking where children serve as househelps, in the labour force and also provide sexual services.

1.6 EFFECTS OF CSA

1.6.1 PHYSICAL

Depending on the age and size of the child and the degree of force used, CSA may cause internal lacerations and bleeding. In severe cases there is damage to the genitalia and rectum. Excessive bleeding and trauma can lead to death. CSA may lead to sexually transmitted infections including Human Immunodeficiency Virus(HIV). Depending on the age of the child, due to lack of sufficient vaginal fluid, chances of infections are higher.

1.6.2 PSYCHOLOGICAL

CSA can lead to an acute stress disorder and posttraumatic stress disorder, suicidal ideation, depression and low self-esteem. Long term effects include sexual dissatisfaction, promiscuity, homosexuality, alcohol and drug abuse and an increased risk of revictimisation. Frequency and duration of abuse, abuse involving penetration, force or violence, and a close relationship to the perpetrator appear to be the most harmful in terms of long standing effects on the child [(24).]

2.0 LITERATURE REVIEW

2.1 DEFINITION

Kempe (2006) defines childhood sexual abuse as the involvement of dependent, developmentally immature children and adolescents in sexual activities that they do not fully comprehend, to which they are unable to give informed consent or that violate the social taboos of family roles [6].

Finkelhor D (1994) describes CSA as inappropriately exposing or subjecting a child to sexual contact, activity or behavior, including oral, anal, genital, buttock and breast contact. It also includes the use of objects for vaginal or anal penetration, fondling or sexual stimulation, for the benefit of the offender. Exploitation of a child for ponographic purposes and making a child available to others as a child prostitute are also forms of sexual abuse [7].

The United Nations Global Study on violence against children defines CSA as any kind of sexual activity to which children are subjected, especially by someone who is responsible for them or has power or control over them, and who they should be able to trust [8].

2.2 EPIDEMIOLOGY OF CHILD SEXUAL ABUSE

2.2.1 PREVALENCE

Global prevalence of CSA has been estimated at 19.7% for females and 7.9% for males according to a 2009 study from 22 countries [9].

In Sub-saharan Africa, the HIV epidemic has led to an increase of orphans and child-headed families which increases the risk of child sexual abuse [9]. In Malawi, 24% of 4,412 school children surveyed reported being forced to have sex against their will, 14% were touched on the breast and genitalia against their will and 4% of the children were forced to engage in some form of oral sex [10].

In a retrospective study on childhood experiences, among 18-24 year old girls in some countries in Sub-Saharan countries, forced sexual intercourse was the third most prevalent type of child abuse reported, Ethiopia(30%), Kenya(26%), Uganda(43%) [2].

Lifetime exposure to sexual abuse was reported by an average of 23% (9%-33%) of 13-15 year old school children from Namibia, Uganda and Zimbabwe [9].

A study done in Kenya in 2006 by Starvopoulus found the prevalence rate of rape to be 26%. Table 1 below shows the prevalence rate of rape in selected countries.

Table 1: Rape prevalence from selected studies. [9]

Country	Year	%	Source
Cameroon	2008	5.2	Ndoko et al
Ghana	2004	30	Moore et al
Kenya	2006	26.3	Starvopoulus
South Africa	1998	6.1	Madu
Uganda	2006	42.6	Starvopoulus

2.2.2 VICTIMS OF CSA

Ellen et al (1990) [11] found the mean age of CSA to be 9.2 years with a range from 2 months to 17 years. In this study, 86% of the victims were girls, 30% of the victims had more than one episode of assault and 5% of the victims had more than one assailant.

Only 45% of the victims were examined within 72 hours and adolescents were more likely to be examined within 72 hours of the assault than younger children. Of the victims examined within 72 hours, 75% were older than 12 years while 25% were 12 years and below. Victims abused by strangers tend to seek medical attention quickly compared to those abused by a known person. Ellen et al [11] found that 85% of victims abused by strangers were examined within 72 hours whereas only 20% of father-daughter incest were examined within 72 hours.

In Kenya, Nduati et al, (1995) [12] found that 38.1% of sexually abused children were between 10 - 15 years, 28.6% were 5-9 years old, 20% were less than 5 years and the remaining 13.3% were 15-19 years old. In Cape town Cox et al (2004), [13] 54% of sexually abused children were under 5 years old. Female victims were predominantly aged less than 5 years while male victims were mostly between 5 and 9 years old. Sixty four percent (64%) of the victims came from single parent homes while twenty eight percent (28%) had parents who were in a stable married relationship. Of the victims' families 45% reported to have no income.

2.2.3 PERPETRATORS OF CSA

Most perpetrators of CSA are people known to the victim. Nduati et al (1985), [12] found that 53% of perpetrators were relatives or friends of the victim. Nineteen percent (19%) of the victims did not have information about the assailant. Ninety percent (90%) of the cases of CSA occurred after dark on a parent motivated errand, and the abuse occurred close to the victim's home. This is similar to the Cameroon study in which (Koki et al) [14] found that 70% of the perpetrators were either a member of the victim's family, a friend or neighbor of the victim. Fifty eight percent (58%) of the perpetrators were single men aged 19-45 years.

According to Ellen et al (1990), [11] 82% of the victims had been assaulted by people known to them, 55% of these being the fathers. Older children and adolescents were likely to be assaulted by strangers. The mean age of victims assaulted by strangers was 12.2 years while those assaulted by people known to them were mostly below ten years.

Cox et al in 2004 in Cape Town, [13] found that 79% of the perpetrators were known to the victim while 7% of the victims were abused by their fathers. Thirty-four (34%) of the assaults occurred in the victims own home.

Haffejee (1991), [15] described 37 cases (34 female, 3 male) of CSA in Durban. Of the thirty seven, thirty five (35) of the perpetrators were identified. Of these, 67% were either the father, step father or uncle of the victim.

2.2.4.RISK FACTORS FOR CSA

Poverty has led to an increase in CSA. In poor family settings, young girls sell sex for survival. Overcrowding and poor housing seen in poor families contributes to the increased incidence of CSA. Cox et al [13] found that 45% of CSA occurred in families with no income, 33% in families with an income of about 20-40 dollars per month. Most of the victims lived in congested homes where adults were sharing a room with children.

Disaster and conflict situations predispose children to CSA. The societal integrity is broken in times of conflict. Children are at risk of abuse by both the community members and the peace keepers. In 1994, during war in Rwanda the Hutu soldiers forced mothers from the Tutsi clan to give them their daughters for sexual pleasure [16]. During the post-election violence in Kenya, there was an increase in cases of child sexual abuse.

Street children and children living in foster homes are at an increased risk of CSA. Shrestha (2011), [17] found out that such children are 7-8 times more likely to be assessed by a paeditrician for abuse than a child in the general population. Substandard institutional care arrangements contribute to the increase in CSA.

Illicit drug use is associated with many social problems in the adults. Excessive use of alcohol and drugs has been associated with an increase in CSA. Shante et al (2010) found a strong graded relationship between drug use in adults and the desire for sexual adventure and exploitation. Children and adolescents who are mentally retarded or have physical disabilities are at an increased risk of CSA. These children are vulnerable due to their life long dependence on care givers. Tharinger (1990) [18] found out that children with handicaps are 10 times more at risk of CSA. Similarly, children living in refugee camps alone or with strangers are at an increased risk of CSA. A United Nations High Commissioner for Refugees(UNHCR) report of 2002 shows that the peace keeping forces in war torn countries were trading humanitarian commodities and services for sex with girls under 18 years of age.

2.2.5 CSA IN BOARDING SCHOOLS

Student unrests that sometimes culminate in violent expressions have had a long history in Kenyan schools. There is a rise in incidents of reported crimes of a sexual nature and periodic mass sexual violence directed at girls and boys within learning institutions. A study done in Kenya in 70 secondary schools from 10 districts showed that 29% of boys and 24% of girls reported to have been forced into unwanted sex. The main perpetrators of the violence were mentioned as peers [2]. At the infamous St. Kizito Girls High School incident in Meru, Kenya, 70 girls were raped while 19 others lost their lives when their male peers from a neighbouring Boys' High School descended on them during what was supposed to be a school strike. Several other group sexual violations have occurred since then.

2.2.6 EFFECTS OF CSA

Lacerations and bleeding from the genitalia are some of the initial effects of CSA, usually occurring where excessive force was used. Ellen (1990) [11] found 16% of examined patients having injuries on the genitalia. Victims less than four years of age and adolescents were more likely to have evidence of genital trauma. The longer the delay to examination, the less is the injury identified. Forty-two (42%) of victims of vaginal intercourse and sodomy had evidence of genital trauma when examined within 24 hours while only 11% examined after 24 hours had evidence of genital trauma. Grossin (1998) [19] found trauma in the genitalia in 35.7% of the cases reported within 72 hours and 6.3% in those seen after 72 hours. In Benin Olusanya (1986) [20] found 45% of assaulted children to have genitalia injuries.

According to the study by Nduati et al (1985) [12], 66.7% of the victims presented with injuries ranging from perineal tears (19%),vaginal tears (19%),Rectal Vaginal Fistula (4.8%),Vulvo vaginal Fistula (19.1%) and abdominal haematomas in 4.8%.

Sexually transmitted infections can be acquired after CSA. Ellen [11] found 7.4% of the assaulted children had gonorrhea. Haffejee (1991) [15] found 28.5% of the victims had gonorrhea and 2% had syphilis. In Cape town, Larsan found that 65.9% of sexually abused children had sexually transmitted infections.

According to the study by Ito et al (1998) [22] traumatic stress including stress caused by sexual abuse causes notable changes in brain functioning and development.

Teicher et al (1993) [23] found an increased likelihood of ictal temporal lobe epilepsy like symptoms and reduced corpus collosum in abused subjects. Briere et al (2004) [24] found that 22.2% of females and 19.5% of males with psychological disorders had a history of child sexual abuse. These disorders included low self-esteem, anxiety, depression, anger and aggression, substance abuse and sexual difficulties.

2.3 HOW TO IDENTIFY CHILD SEXUAL ABUSE

Child sexual abuse can be identified by both physical and behavioral indicators as shown in Table 2 below.

Table 2: According to Gil 1991, [25] the following signs and symptoms are indicators of child sexual abuse.

PHYSICAL INDICATORS	BEHAVIOURAL INDICATORS
Unexplained genital injury	Regression in behavior, school performance, or attaining developmental milestones.
Recurrent vulvovaginitis	Acute traumatic response such as clingy behavior and irritability in young children.
Vaginal or penile discharge	Sleep disturbances
Bed wetting and fecal soiling beyond the usual age	Eating disorders
Anal complains eg, pain, fissures, bleeding	Problems at school
Pain on urination	Social problems
Urinary tract infection	Depression
STI	Low self esteem
Pregnancy	Inappropriate sexualized behaviours.
Presence of sperm	

2.4 MANAGEMENT OF CHILD SEXUAL ABUSE

The Ministry of Health has guidelines on management of child sexual abuse [14]. Once sexual abuse is suspected, a thorough history and physical examination should be done. Examined areas include the mouth, throat, penis, anus, vagina and hymen. Photographs of injuries seen should be taken.

Laboratory tests that are taken include a high vaginal swab for wet preparation microscopy, anal swab, skin swab and oral swab for culture and sensitivity, urine for pregnancy test, microscopy , drugs and alcohol, blood sample for HIV, hepatitis B and Veneral Disease Research Laboratory (VDRL) test. Pubic hair and nail clippings should also be taken for Deoxyribonucleic Acid (DNA) analysis.

Medical management includes treatment of sexually transmitted infections, HIV prophylaxis and emergency contraceptives for post-menarcheal girls if reviewed within 72 hours. The health care provider should write a report to the police and children's officer based in the Children's department. Mental health evaluation and treatment of acute stress reaction and later post-traumatic stress disorder should be carried out. Support groups care for abused children, their parents and caretakers should be provided. Victims of CSA are reviewed at 2 weeks, 6 weeks and 3 months of abuse for HIV testing and follow up counseling.

3.0 STUDY JUSTIFICATION

KNH receives many sexually abused children in its Gender Based Violence Clinic (GBVC), the casualty department and in the paediatric surgical wards in cases with severe physical injuries. The characteristics of sexually abused children have changed with the increase in cases of CSA. This study will show the children at a higher risk of CSA. It will help in sensitizing the medical staff on identification, effects and management of CSA as well as educating parents, teachers, children and the community.

4.0 STUDY OBJECTIVES

4.1 PRIMARY OBJECTIVE

To describe the characteristics of children aged below 19 years presenting with sexual abuse in Kenyatta National Hospital.

4.2 SECONDARY OBJECTIVE

4.2.1 To establish factors associated with child sexual abuse.

4.2.2 To establish the degree of injury in sexually abused children in Kenyatta National Hospital.

5.0 STUDY METHODOLOGY

5.1 Study design

A Cross sectional study design was used to address the study question.

5.2 Study Site

The study was conducted at Kenyatta National Referral and Teaching Hospital.
It is one of the two National Referral and Teaching Hospitals in the country. It is one of the three public hospitals in Nairobi City with a population of more than four million people. It therefore also serves patients within Nairobi and its environs as a primary level care center. Sexually abused children seeking help at the hospital are seen in the Gender Based Violence clinic, the Acute Gynaecology Room in the casualty department and in the Paediatric Surgical Wards. In the year 2012, about 144 cases of CSA were seen in KNH.

5.3 STUDY POPULATION

Sexually abused patients aged less than 19 years, attended to in KNH were studied.

Operational definitions

1. Child sexual abuse

Any child less than 19 years complaining of:

- Forceful penetration through the vagina or anus.
- Attempted forceful penetration through the vagina or anus.
- Forceful fondling and touching of the breasts or genitalia.
- Being forced into oral sex.

2. Child/adolescent –any individual whose age is no greater than 19 years as established by verbal report or written documentation.

3. Consent –to agree to take part in the study after understanding the facts and implications. The consent **will be in written form and will be signed** by the parent/caregiver.

4. Assent – minors aged above 13 years **will give** a verbal approval to take part in the study before a written consent is signed by the parent or guardian.

5. Teenager- any child 13 to 19 years old and is able to give an account of what transpired.

INCLUSION CRITERIA

1. All children and adolescents aged below19 years old seen in KNH complaining of sexual abuse.
2. Children who had already received initial management for the assault.
3. Children whose parents or guardians gave a written consent.

EXCLUSION CRITERIA

1. Children (teenagers) who consented to having sexual intercourse.

5.4 STUDY PERIOD

The study was carried out for a period of six months from August 2013 to January 2014.

5.5 SAMPLE SIZE

Sample size was calculated using the fischer's formula. This is based on the prevalence from a Kenyan study by Starvopoulos which found a prevalence of 26%.

$$n = \frac{Z^2 P (1-P)}{d^2}$$

P = 26%

$$n = \frac{1.96 \times 1.96 \times 0.26 (0.74)}{0.1 \times 0.1}$$

n =74

n = required sample size

z = confidence level at 95% (standard value of 1.96)

P = estimated prevalence

D = margin of error at 10% (standard value of 0.1)

5.6 DATA COLLECTION

There was consecutive recruitment of all sexually abused children aged below 19 years until the sample size was arrived at. Questionnaires were administered after the victim had been attended to by the attending clinician or during the two week follow up visit. Forty two (42) of the victims were captured in their two week follow up visit. After approval by the Ethics Committee, two research assistants were recruited and trained on how to fill the questionnaires. Posters with the researcher's and assistants numbers were circulated in all entry points for sexually abused children. The posters advised the primary care giver to contact the researcher when they receive a sexually abused child who was less than 19 years. Patients reporting at night or during the weekend were interviewed in their follow up visit at 2 weeks after assault.

5.7 DATA MANAGEMENT

All questionnaires completed within a day were checked for completeness, errors and outliers, at the end of the day by the principal investigator if the data was collected by the research assistant and by the assistant if the data was collected by the principal investigator. The gaps and errors identified were corrected as appropriate. The data collected was entered into a Microsoft access database. After verification, analysis was done using SPSS software for windows with the help of a biostatistician.

5.8 DATA ANALYSIS

Data was collected, cleaned, stored then analysed. Categorical data was tabulated. Tests of associations were performed using chi-square test for categorical variables. Comparisons of mean was done using the student's t test. Data analysis was performed using SPSS version 17.0 software.

6.0 ETHICAL CONSIDERATIONS

The participants of this study were children aged below 19 years. These are minors thus full explanation of the study was given to parents/guardians and written consent sought from them. Assent for participation was sought from the children above 13 years.

All participants' information was treated with strict confidentiality. All paper records were kept in locked cabinets and electronic records within the database was password protected and only data entry personnel, clinicians overseeing the database and researchers involved in this project had access hence confidentiality was maintained. In addition, patient names and identifiers were removed from all data tables and records prior to data entry. Approval for the study was sought from the Ethics and Review Committee in KNH/UON.

7.0 RESULTS

7.1 Characteristics of study participants

One hundred and five (105) sexually abused children were recruited into the study. Table 3 below summarizes the characteristics of sexually abused children who participated in the study. Forty-nine (46.7%) victims were aged between 6 and 12 years and the youngest victim was 2 years of age. The mean age of sexually abused children was 11.1 years (SD = 5.4). Eighty one percent of the sexual abuse victims resided in urban areas, and 83.8% were females (female: male ratio 5:1). Of the boys who were abused, 15(88%) were aged 6-12 years old whereas 2(12%) were 14 years old. Six (6.1%) of the total cases had a physical disability. Of the disabled children, two had mental retardation, two were deaf/ dumb and two were autistic. Most children were from families with monthly incomes between Kshs 2500-5000 and Kshs 5000-10000 with these income categories accounting for 38.1% and 36.2% of the participants, respectively. Sixty eight (68%) of the guardians/parents interviewed were casual laborers who had to work for twelve hours a day and therefore leave their children unattended.

Table 3: Characteristics of Sexually abused children seen at KNH

Characteristic	Category	Frequency (n)	Percent (%)
Age (in years)	<5	12	11.4
	6-12	49	46.7
	13-19	44	41.9
Gender	Female	88	83.8
	Male	17	16.2
Physical disability	Yes	6	6.1
	No	99	93.9
Residence	Rural	20	19.0
	Urban	85	81.0
Family income (in Kshs)	<2500	5	3.8
	2500 - 5000	40	38.1
	5000 - 10000	38	36.2
	Above 10000	22	21.0

7.2 Household characteristics

Forty-six (45.4%) victims of sexual abuse lived with both parents, while 4 (4%) were from child-headed families and 8 (7.9%) from street families. Six (5.9%) of the children lived with their fathers only while 26 (25.7%) lived with their mother only. This is seen in Table 4 below. Most index children reported that they lived in two bed-roomed (63.8%); stone walled (78.1%) houses. All the participants shared a bedroom with at least one person with most (56.2%) sharing a bedroom with two people.

Table 4: Characteristics of households of sexually abused children seen at KNH

Characteristic	Category	Frequency (n)	Percent (%)
Child living with	Both parents	46	45.4
	Mother only	26	25.7
	Father only	6	5.9
	Grandparents	11	10.9
	Child headed family	4	4.0
	Street family	8	7.9
Type of housing	Stone walled house	82	78.1
	Wooden house	22	19.0
	Other type of housing	1	0.9
Number of bedrooms	One	23	21.9
	Two	67	63.8
	Three	15	14.3
Number of persons sharing bedroom with child	One	21	20.0
	Two	59	56.2
	Three	18	17.1
	Four	7	6.7

7.3 Sexual assault

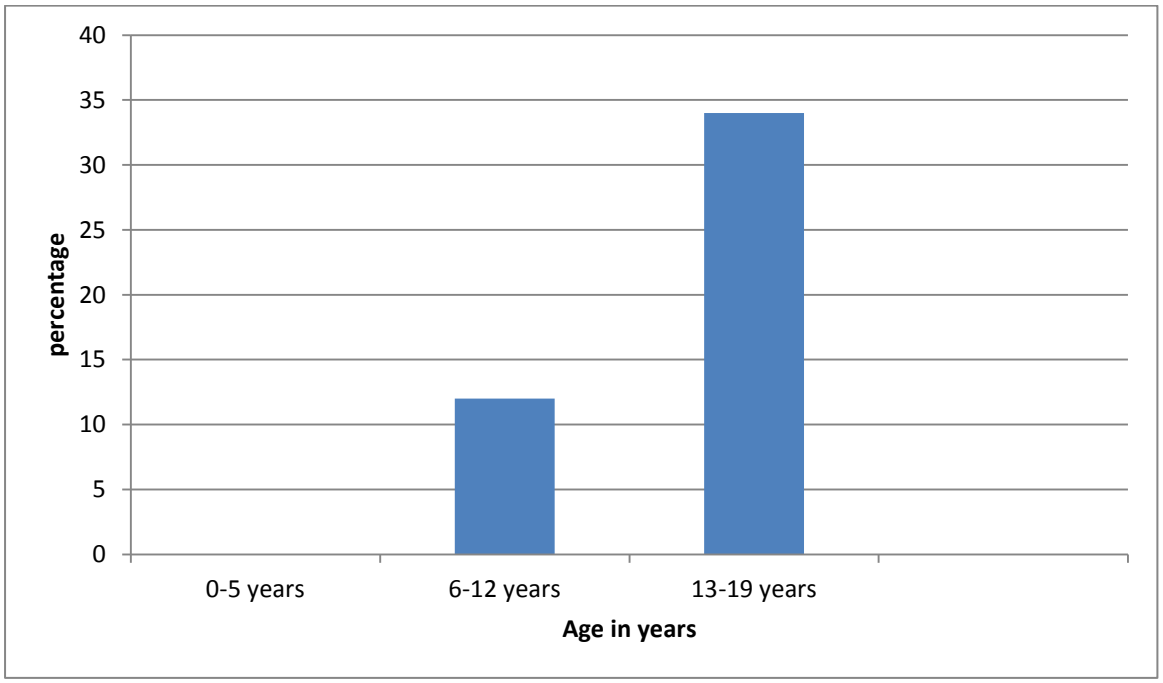
In 86 (81.9%) of the cases, the perpetrator of sexual abuse was known to the victim (Table 5). Twelve (11.4%) of the participants reported that they had suffered prior sexual abuses and for 11 (91.7%) of these prior abuses, the perpetrator was known to the victim. Characteristics of child sexual abuse are presented in Table 3. Vaginal penetration was the most common (79.1%) type of abuse and anal penetration occurred in 20 (19%) of the sexually abused children including all 17 males and 3 females. One-fifth (20%) of all cases reported that they had been gang raped.

Table 5: Child sexual abuse cases reported at KNH

Sexual abuse	**Category**	**Frequency (n)**	**Percent (%)**
Occurrence	Multiple	12	11.4
	Single	92	88.5
Type	Vaginal penetration	83	79.1
	Anal penetration	20	19.0
	Sexual fondling	2	1.9
Perpetrator known to victim		86	81.9
Number of perpetrators	Single perpetrator	84	80.0
	Two or more perpetrators	21	20.0

There was a statistically significant association between the age of victims and number of perpetrators of sexual abuse. The number of victims abused by more than one perpetrator increased from none in the children < 5 years to 15 out of 44 children aged 13-19 years (p = 0.006) as shown in Figure 1 below.

Figure 1: percentage of children abused by more than one perpetrator according to age



Age of victims did not show statistically significant associations with prior sexual abuse, type of sexual abuse and knowledge of alleged perpetrator.

Of all the sexual assault cases 67 (64.4%) were reported to police. As shown in Table 6, cases of sexual abuse perpetrated by two or more perpetrators were significantly more likely to be reported to police compared to sexual abuse where the perpetrator was one (Odds Ratio = 4.3, 95% CI 1.2-15.7, p value 0.028). Similarly, all cases of sexual abuse in which the perpetrator was unknown to the victim were reported to police compared to only 57% of cases among abuses perpetrated by persons known to the victim (p < 0.001). Whether a case of alleged sexual abuse was reported to police or not did not show statistically significant association with age of the child, type of sexual abuse (p = 0.85) or prior sexual abuse (p=0.31), Table 6.

Table 6: Factors associated with reporting of sexual assault.

	Reported to police					P value
	Yes		No		OR (95% CI)	
	N	%	n	%		
Alleged perpetrator						
Known	49	57	37	43	-	<0.001
Unknown	18	100	0	0	NA	
Age of child (in years)						
0-5	10	83.3	2	16.7	1.0	
6-12	28	57.1	21	42.9	0.3(0.1-1.3)	0.11
13-19	29	67.4	14	32.6	0.4(0.1-2.0)	0.26
Number of perpetrators						
Single perpetrator	49	58.3	35	41.7	1.0	
Two or more perpetrators	18	90.0	2	10.0	4.3(1.2-15.7)	0.028
Type of abuse						
Vaginal penetration	55	66.3	28	33.7	1.0	
Anal penetration	12	63.2	7	36.8	0.9(0.3-2.5)	0.85
Sexual fondling	0		2	100	NA	NA
Multiple/ prior sexual abuse						
Yes	6	50.0	6	50.0	1.0	
No	60	65.9	31	34.1	1.9(0.6-6.3)	0.31

7.4 Characteristics of the boys who were sexually abused.

Of the children abused, 17 (16.1%) were boys. Fifteen of them were aged 6-12 years old whereas 2 were 14 years old. All the boys were abused by people known to them – 74% were abused by their uncles, 20% by neighbors who were friends to their families and 6% by friends who were older than them. In circumstances where the uncles were the perpetrators, abuse occurred at night as they were all living together in a shared bedroom. Five of those abused by their uncles reported more than one episode of abuse. All the forms of abuse were anal penetration. Sixty three percent (63%) of the boys abused reported the cases to the police. Ten of the abused boys were reviewed in hospital within 72 hours of the abuse and were found to have anal bruises. The other 7 were reviewed two weeks after the abuse and had no injuries on examination.

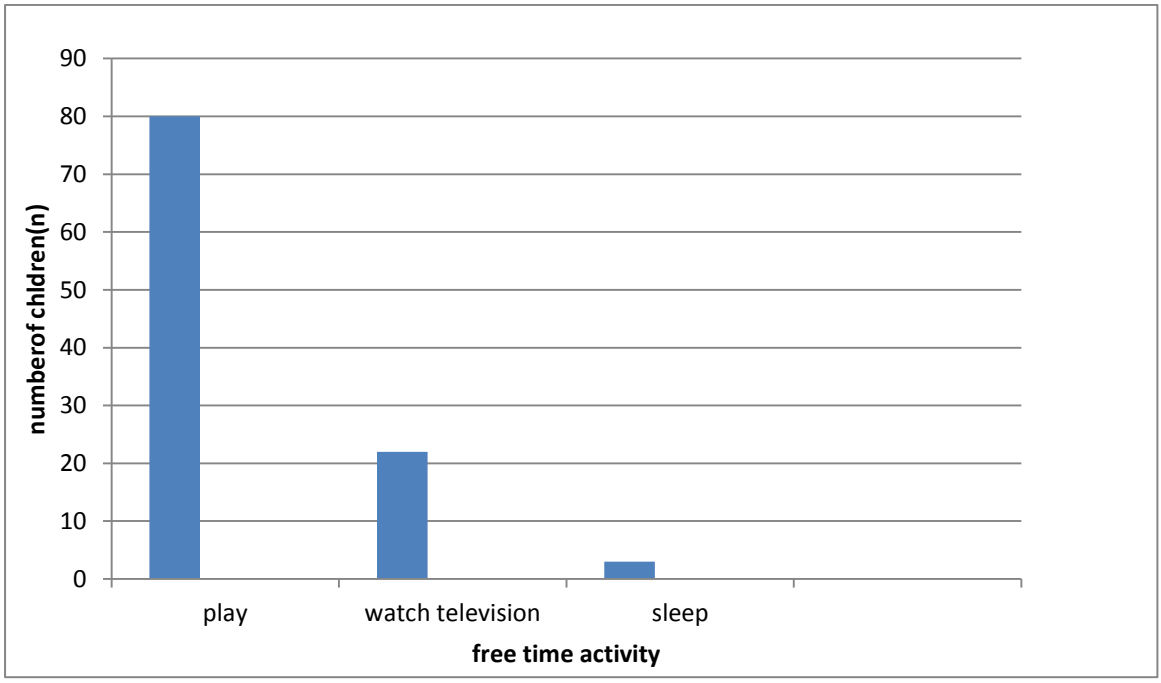
7.5 Characteristics of girls who were sexually abused

Eighty three percent (83%) of the sexually abused children were girls. All the abused children below five years were girls. 47% of the girls were from a single parent home. 38% of the girls were abused by their fathers or step fathers, 30% by their neighbors, 18%by their friends or cousins and 18% did not know their perpetrators. Vaginal penetration was the common form of abuse with anal penetration occurring in three girls. A condom was use in only 3% of the sexually abused girls. 40 % of the girls abused were reviewed in hospital within 72 hours of the assault.

7.6 Care of children

Eighty (76.2%) of the children engaged in play whereas 21(20%) watched television when they were through with their school work and household chores (Figure2). Only 2 (1.9%) of the sexually abused children were supervised by a parent/guardian during play. 71% of the children play in places that are far from their homes and this makes supervision difficult.

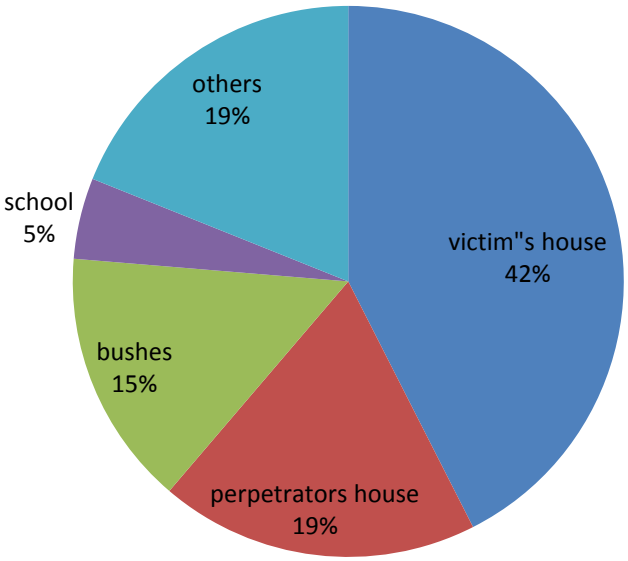
Figure 2: Activities that children do in their free time.



7.7 Place of sexual abuse

Sexual abuse took place in the victim's house for 44(42%) of the sexually abused children whereas 20(19%) were abused in the perpetrators house. Five (5%) of the children were sexually abused in the school compound and six (15%) were abused in bushes. Ninety five (90%) of the children abused in the perpetrators houses were enticed with sweets or juices into the house. The rest had been sent on errands by their parents to the perpetrators house. Children abused in their houses were abused by people known to them and had responsibility over them such as fathers, uncles or friends. Four (4%) of the victims were abused in their homes when attacked by thugs at night. The children abused in school were in a dayschool setting. The abuse occurred during the day and in corners of the school which are infrequently visited. The perpetrators were older children in the school. Sixteen (15%) of the children were abused in the bushes when it was dark. The perpetrator in these cases were not known and 38% of these cases were gang rapes. The remaining20(19%) of the children were abused in various places such as in a matatu or an abandoned building. Figure 3 below shows the place where sexual abuse occurred.

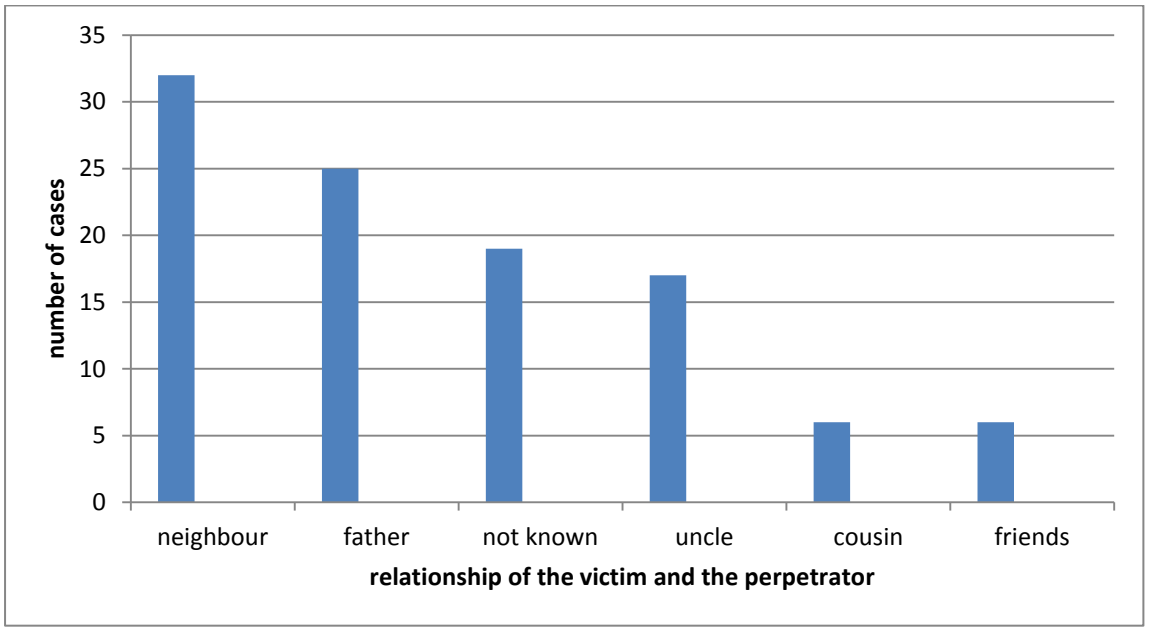
Figure 3: Place of sexual abuse



7.8 Perpetrators of Child Sexual Abuse.

In 86 (81.9%) of the cases, the perpetrator was known to the victim. As shown in Figure 4 below, a neighbor was the most common perpetrator defiling 32 (31%) of the children. The neighbors included people who were well known to the victim and shared the same compound with the victim's family, or had come visiting the victim's family. Twenty five (24%) of the children were abused by their fathers and step fathers. This was mostly seen in father-headed-households where the sole responsibility of taking care of the children was the father's. The fathers promised favors to the children so that the cases of abuse are not reported. All the children abused by their fathers were abused during the day, in their houses, were reviewed in hospital after two weeks and did not report the case to the police. In 19 (17%) of the cases, the perpetrators of the sexual abuse were unknown. This was mostly seen in teenagers who were abused in the bushes at night most of them being gang rapes. Uncles were the perpetrators in 17 (16%) of the cases. The uncles were living in the same household as the victim and abused the children when their guardians/parents were out at work. 6 (6%) of the children were abused by their friends. Of these, 5 were abused in school during break time.

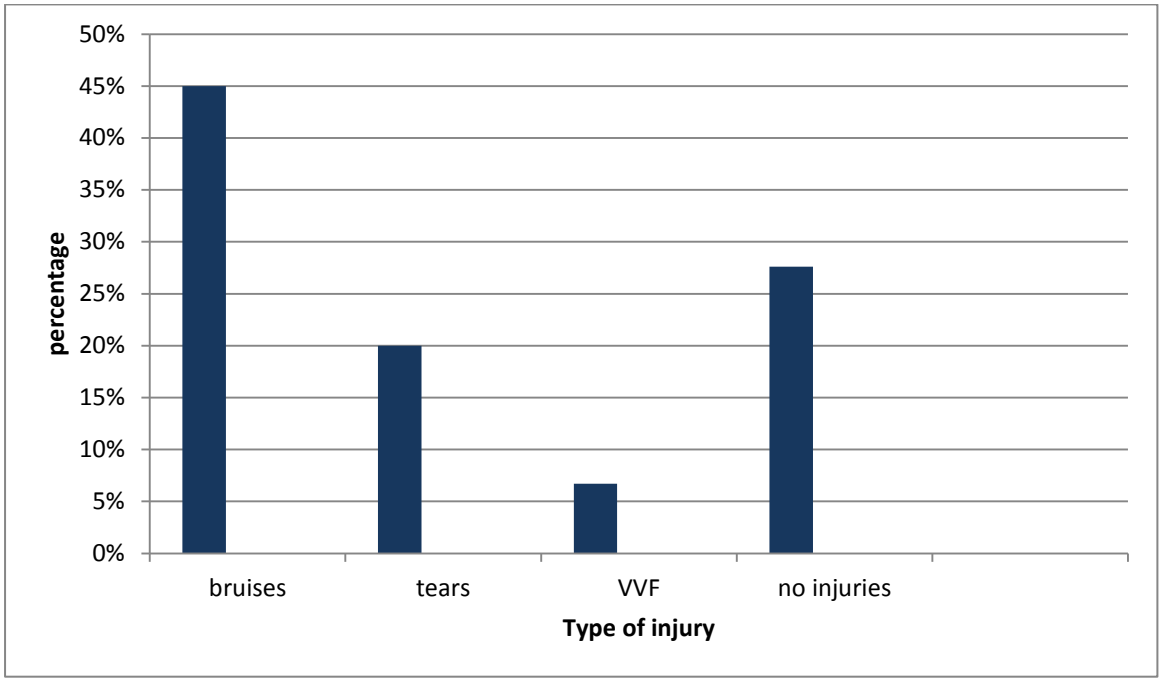
Figure 4: Relationship between the victim and perpetrator



7.9 Types of injuries

Most (45%) of the sexually assaulted children were found to have bruises in the genitalia. Twenty percent (20%) of the victims had perineal tears whereas 6.7% of the children examined had vesicle vaginal fistulas. Twenty seven percent (27%) of the children were found to have no injuries on examination. Victims who were reviewed in hospital more than two weeks after the assault were found to have no injuries. Figure 5 below shows the injuries on examination. All the children found to have VVF were less than 12 years old.

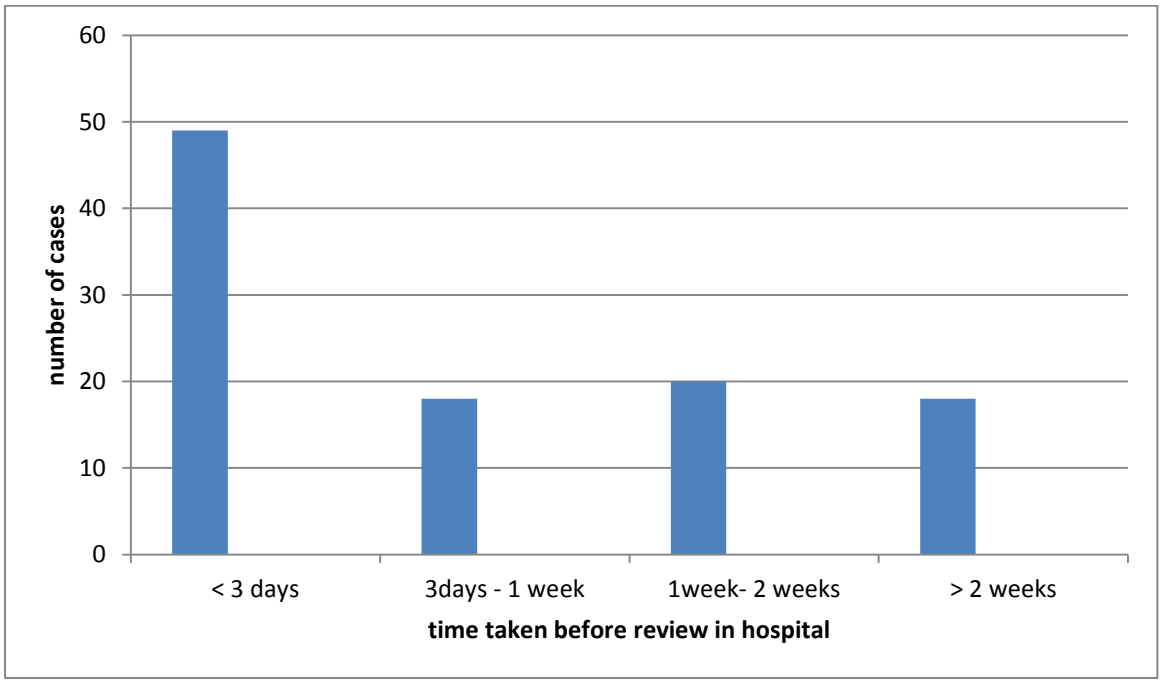
Figure 5: Type of injuries



7.10 Time taken before review in hospital

Only 49 (47%) of the assaulted children were reviewed in hospital within 72 hours. This is shown in figure 6 below. More adolescents were examined within 72 hours of the assault than younger children. Of the victims examined within 72 hours 71% were older than 12 years. In all cases where the perpetrator was unknown, the victim was reviewed in hospital within 72 hours. In cases where the perpetrator was known, incentives offered to the children and efforts by the family to conceal the abuse led to the delay in seeking medical attention.

Figure 6: Time taken before review in Hospital



8.0 DISCUSSION

The mean age of sexually abused children who were seen in Kenyatta National Hospital was 11.1 years old. The majority were aged between 6 and 12 years and the youngest victim was 2 years of age. Majority of the sexually abused children were female with a female to male ratio of 5:1. This is probably because girls are more vulnerable and majority of the perpetrators are men. In addition, most cases of sexual abuse in boys are not reported because boys are never seen as victims. These findings are close to Ellen's study [(11)] which found a mean age of child sexual abuse to be 9.2 years old and the majority of sexually abused children were female.

Children from a mother – only family set up were found to be at an increased risk of child sexual abuse. This is contributed to by the fact that male relatives who act as father figures in the family turn to be the perpetrators of child sexual abuse. A considerable number of children were living with their grandparents having been left as orphans. This puts the children in a position of dependency which increases their risks of molestation in exchange for favors. Similarly, Cox study [(13)] showed a higher proportion of sexually abused children coming from a single mother family set up.

Majority of the children were from families whose monthly income ranged from 2500 – 10000 ksh. Most of the parents or guardians were casual laborers who worked for twelve hours in a day leaving their children unattended to. Poverty increases the chances of child sexual abuse especially when money is used for enticement. Unsupervised children are easily taken advantage of either forcefully or through enticement. This finding is almost similar to that of Cox [(13)] in which most of the victims were from very poor families.

All participants shared a bedroom with at least one person with most sharing a bedroom with two people. This increases the risk of children being exposed to sexualized behavior especially when sharing a room with adults and this can make older children become perpetrators of sexual abuse. Of note is that there were very few children from single room houses. This could be attributed to by the fact that the very poor probably do not report the cases of sexual abuse or lacked the finances to come and seek medical help in hospital. Most of the victims resided in urban areas with majority coming from the slum areas of Kibera, Kawangware and Mathare. According to Cox [(13)], most of his victims lived in congested homes where adults were sharing a room with children.

In majority of the cases the perpetrator was known to the victim. Most children less than five years old were abused by people known to them compared to the children between 13-19 years majority of whom did not know their perpetrators. Younger children are likely to be abused by people whom they trust and have responsibility over them. Older children on the other hand are likely to be abused by strangers. Majority of the known perpetrators were neighbors. The neighbors were people who were well known to the family and majority shared the home compound with the victim's family. Fathers were found to be the abusers in homes where the father was the only parent. The fathers abused the children during the day and in their homes. They promised the children favors which led to the delay in seeking medical attention and reporting of the abuse to police and this leads to fathers being habitual perpetrators of CSA. In all case where the uncles were the perpetrators, they were living in the victim's homes. In almost all cases of sexual assault in boys, the perpetrators were their uncles abused 74% . In all cases where the perpetrators were unknown, the abuse occurred at night. All this points to the disintegration of family and societal values where older members of the society had a responsibility towards the children and child sexual abuse was unheard of. In the current situation, caretakers who are well known and trusted by the children are turning to become the perpetrators of child sexual abuse. This finding is similar to three other studies by Nduati [(12)], Koki [(14)] and Ellen [(11)] .

Of the participants, twelve children reported that sexual abuse had occurred on multiple occasions and in the majority of these prior abuses, the perpetrator was known to the victim. This is contributed to by the fact that known perpetrators are rarely reported especially when they are the guardians or have responsibility over the children. They perpetuate the abuse because no action is taken against them. One fifth of all cases reported that they were gang raped. All the children who were gang raped were between 13-19 years and the perpetrators were not known. In contrast, Ellen [(11)] found out that only 5% of the victims had more than one assailant. There was a statistically significant association between the age of the victims and number of perpetrators of sexual abuse. The number of victims abused by more than one perpetrator increased from none in children less than five years to 15 out of 44 children aged 13 to 19 years. This is probably because the younger children are likely to be abused by people known to them who would like it to remain a secret and therefore are unlikely to commit such a crime in gangs. Age of the victims did not show statistically significant associations with occurrence of multiple sexual abuses, type of sexual abuse and knowledge of alleged perpetrator.

Of all sexual assault cases, only 67 were reported to the police. Cases of sexual abuse perpetrated by two or more perpetrators were significantly more likely to be reported to police compared to sexual abuse perpetrated by one person. Similarly, all cases of sexual abuse in which the

perpetrator was unknown to the victim were reported to the police compared to only slightly more than half of cases where the perpetrator was known by the victim. Whether a case of sexual abuse was reported to the police or not did not show statistically significant association with age of the child, type of sexual abuse or prior sexual abuse. Threats from perpetrators contribute to lack of reporting of cases to the police. However, in some families, the perpetrators are family members who are bread winners and this contributes to the cover up of the cases which in turn lead to perpetuation of the assault. In some cases out of court settlements are preferred owing to the long period of time taken for a court case to be heard and determined.

Less than half of the assaulted children were reviewed in hospital within 72 hours with majority of the cases being reviewed more than one week after the sexual assault. This is similar to Ellen's study [(11)] where only 45% of the victims were examined within 72 hours. Threats to children by the perpetrators delay the reporting of the incident to the parents which in turn delays their review in hospital. This emphasizes the importance of good and open relationship between parents and their children. Parents and guardians should be keen to probe any behavioral change in children such as withdrawal, lack of interest in play, pain on passing urine or stool and abnormal discharge from the vagina or urethra. Adolescents were more likely to be examined within 72 hours of the assault than younger children. In all cases where the perpetrator was unknown, the victim was reviewed in hospital within 72 hours. This explains why the adolescents, majority of whom did not know their perpetrators, were examined in hospital before 72 hours. Ellen [(11)] found that almost all of those abused by strangers were reviewed within 72 hours whereas only one fifth of father – daughter incest was examined within 72 hours. Review in hospital after 72 hours delays the start of post exposure prophylaxis and emergency contraceptive pills in girls and this increases the risk of acquiring HIV if the perpetrator is infected and unwanted pregnancies. The delay also leads to loss of forensic evidence especially when some of the injuries inflicted are no longer visible.

In majority of the cases, sexual abuse took place in the victim's house. This was seen in cases where the perpetrator was known to the victim and had responsibility over the victim. In cases where the abuse took place in the perpetrators house, the perpetrator was a known neighbor and lured the children to his house. Some cases occur when the children are sent by their parents to go to their neighbor's houses. According to Nduati's study [(12)] most of the cases of child sexual abuse occurred at the victims house or close to the victims home.

In five of the cases, the abuse took place in the school compound. This happened in areas of the school which were less frequented and the abuse happened during non-class hours and was perpetrated by older school children. Poor supervision of children during school hours is a contributory factor. With the introduction of free primary education in Kenya, the number of pupils

has markedly increased and this has destabilized the teacher – pupil ratio making round the clock supervision difficult. Children are nowadays exposed to explicit ponographic material which is likely to make them perpetrators of sexual abuse as they try to experiment what they see. Introduction of sex education in primary school curriculum plays a vital role in educating children on the risks involved in engaging in early sexual behavior.

Majority of the sexually abused children were found to have injuries in the genitalia which included bruises in the vulva or anus, perineal and vulval tears and a small number had vesical vaginal fistulas. Those with VVF were aged less than 12 years. Victims who were reviewed in hospital more than two weeks after the abuse were found to have no injuries. This emphasizes the need of review in hospital immediately after the sexual assault. According to Nduati [12] two thirds of the cases had genital injury with VVF found in 4.8% of the cases. Grossin [19] found trauma in the genitalia in almost half of the cases of child sexual abuse.

9.0 STUDY LIMITATONS

1. Some parents/guardians were unwilling to give information especially when they wanted to protect the perpetrator of the crime.
2. Reliance on the primary health care provider to determine which children have been sexually abused.
3. Emotional trauma on some of the parents/guardians made them unwilling to participate in the study.
4. Patients who were not recruited in the first visit and failed to come for follow up visits were missed out of the study.

10.0 CONCLUSION

1. The characteristics of the sexually abused children were as follows:
   - Most of the children were aged between 6 and 12 years – 47%.
   - The majority were females – 86%
   - 46% were from a both parent family set up.
   - The perpetrator was known to the victim in 81.9% of the cases.
   - Sexual abuse occurred in the victim's house in the majority of cases – 42.9%.
2. The factors that were associated with child sexual abuse were:
   - Most of the children play during the day outside the home compound and only 1.9% are supervised during play.
   - Most of the parents/guardians were casual laborers with 74.3% having a family income of kshs 2500 – 10000 per month.
3. On examination of the sexually abused children, the following was found:
   - Most of the children (40%) were found to have bruises in the genitalia.
   - 6.7% of the children examined had a vesicle vagina fistula (VVF).
   - Of the older children aged 13 -19 years, 40.9% were found to have no injuries on examination.

11.0 RECOMMENDATIONS

1. Parents/guardians should be advised to have a well-structured method of supervising children all the time.
2. Perpetrators of child sexual abuse should be reported to police regardless of their relationship with the victim.
3. Children should be taught on what sexual abuse is so that they can report in time.
4. Parents/guardians should be advised to seek medical attention within 72 hours of an assault.
5. Full time supervision of children while in school should be introduced.

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13 APPENDICES

APPENDIX 1
QUESTIONNAIRE

Study no _____

Age _____

1. Sex
   a) Male
   b) Female
2. Does the child have any disabilities?
   a) Yes → go to no.3
   b) No

3. Which disability does the child have? _____
4. Residence
   a) Rural
   b) Urban

5. Type of housing
   a) Stone built house
   b) Wooden house
   c) Others , specify _____

6. Number of bedrooms in the house
   a) One
   b) Two
   c) Three
   d) Others , specify _____

7. How many people share the bedroom
   a) Two

b) Three
c) Four
d) Five

8. Who does the child share the bed with while sleeping? _____
9. What is the family set up
   a) Both parents
   b) Father only
   c) Mother only
   d) Living with grandparents
   e) Child headed family
   f) Street family
   g) Living with other relatives, specify_____

10. Number of people in the household _____

11. Has any other person in the household ever been sexually abused?
   a) Yes
   b) No
12. Number of households sharing a compound_____

13. What does the child do in her free time
   a) Play
   b) Watch the television
   c) Sleep
   d) Others, specify _____

14. Where does the child play
   a) In the house
   b) In the compound
   c) Outside the compound

15. Is the child supervised during play?
   a) Yes

b) No

16. Who takes care of the child during the day
    a) Parents
    b) Older child
    c) Relative
    d) Neighbor
    e) Househelp

17. What is the occupation of the parent/guardian? _____

18. Family income per month
    a) 0 – 2500
    b) 2500 – 5000
    c) 5000 – 10000
    d) Above 10000

Sexual abuse

19. Has the child been sexually abused before this episode?
    a) Yes → If yes go to question 20
    b) No
20. When was the assault _____

21. Was the perpetrator known?
    -Yes→ go to question 22
    -No
22. What was the relationship between the victim and the perpetrator? _____

23. What was the date and time of the present assault _____

24. Where was the child before the assault _____

25. Who was with the child before the assault? _____

26. Date and time of examination after the assault _____

27. Number of perpetrators _____

28. Alleged perpetrator

a) Known → go to number 29
b) unknown

29. What is the relationship of the victim and the perpetrator?_____

30. Place abuse occurred _____

31. Type of abuse

a) Vaginal penetration
b) Anal penetration
c) Sexual fondling

32. Use of condom

a) Yes
b) No
c) Don't know

33. Reported to police

a) Yes
b) No

Hospital management

34. Physical examination done
    a) Yes →go to number 35
    b) No

35. What injuries were found? _____

36. STI treated
    a) Yes → go to no.34
    b) No

37. Which STI was treated?
    a) Gonorrhea
    b) Syphillis
    c) Others, specify _____

APPENDIX 2

CLIENT INFORMATION AND CONSENT FORM

Title: The profile of children aged below 19 years presenting with sexual abuse in KNH.

Principal investigator: Dr. Peris Wanjiku Njiiri

Supervisors: Prof Onyango, associate Professor, Department of Paediatrics and Child health

: Dr. Kumar, Lecturer, Department of Paediatrics and Child health.

: Dr. Josephine Omondi, paediatric psychiatrist, KNH

KNH Ethics review committee chairperson: Prof Guantai, 2726300 ext 44102

INTRODUCTION

I am a postgraduate student pursuing a degree in paediatrics and child health in the University of Nairobi. As part of this degree I am carrying out a study to establish the characteristics of children aged under 19 years seen in KNH who are sexually abused.

OBJECTIVES OF THE STUDY

1. To describe the characteristics of children aged below 19 years presenting with sexual abuse in Kenyatta National Hospital.
2. To establish factors associated with child sexual abuse.
3. To establish the degree of injury in sexually abused children seen in Kenyatta National hospital.

BENEFITS OF THE STUDY

Child sexual abuse is on the increase in our setup. This study will help in identifying the high risk groups of children. The information from this study will help in educating the health care providers, teachers, children and the community.

STUDY PROCEDURE

A questionnaire will be administered to parents/guardians of sexually abused children. The researcher will ask the questions and fill the answers appropriately.

COST OF THE STUDY

I will incur all costs involved in the study. No money will be paid to you for your participation.

RISKS INVOLVED IN THE STUDY

The study will not be of any risk to you.

PARTICIPATION IN THE STUDY

Your participation in this study will be on a voluntary basis. You shall not be forced to participate in the study and your management will not be compromised if you choose not to participate.

CONFIDENTIALITY

All the information that we will gather about your child will be kept highly secret. Your name or that of your child will not be used at any time in the report of this research.

STUDY APPROVAL

The ethics and research committee of UON/KNH have studied the proposed study carefully and given permission for it to be done.

For questions about this study you can contact;

Dr. Peris Wanjiku Njiiri 0722908635

KNH Ethics review committee chairperson: Prof Guantai, 2726300 ext 44102

ENGLISH CONSENT

A study to establish the profile of children aged under 19 years presenting with sexual abuse in KNH.

I as the guardian/parent, voluntarily agree to participate in this study. I understand that participation in the study does not entail financial benefit. I have been informed that information obtained will be treated with utmost confidentiality and my treatment will not be compromised if I decline participation or withdraw from the study. The results of this study may be published for scientific purposes but will not give my name or that of my child or include any identifiable reference to me.

I have had a chance to ask questions. If I have questions later, I can ask the researcher. No coercion has been used to influence my decision to participate in the study whose nature, benefits and risks have been explained to me by

Dr/Mr./Mrs. ……. Signature:……

Name of child ……

Parent/guardian

Signature ……..

Tel No. ……

MAELEZO KWENYE CHETI CHA RIDHAA

Kichwa cha habari: Kubaini vielekezi vya watoto kati ya miaka 0-19 ambao wamenajisiwa wanaoonekana katika hosptali kuu ya Kenyatta.

Anayeongoza utafiti ; Dr. Peris Wanjiku Njiiri

Wasimamizi : Prof Onyango, associate Professor, Department of Paediatrics and Child health

: Dr Kumar, Lecturer, Department of Paediatrics and Child health.

: Dr Josephine Omondi, Paediatric Psychiatrist, KNH

UTANGULIZI

Mimi ni daktari katika chuo kikuu cha Narobi kule ambako ninafunzwa taluma ya matibabu ya watoto. Ninahitajika kufanya utafiti katika taluma hii. Ningependa kufanya utafiti ili nibaini vielekezi vya watoto kati ya miaka 0-19 ambao wamenajisiwa.

KUSUDI LA UTAFITI

1. Kubaini vielekezi vya watooto chini ya miaka kumi na tisa walionajisiwa na kuonekana katika hospitali kuu ya Kenyatta.
2. Kubaini mambo yanayochangia kunajisiwa kwa watoto.
3. Kubaini mathara ya kimwili yanayotokea na kunajisiwa.

MANUFAA YA UTAFITI HUU

Visa vya watoto kunajisiwa vimeongezeka. Utafiti huu utasaidia kujua watoto ambao wako na uwezekano mkubwa wa kunajisiwa. Matokeo ya utafiti huu yatasaidia kuelimisha wahudumu wa hospitali

MWELEKEZO WA UTAFITI HUU

Kijikaratasi chenye maswali kitatumika. Swali litasomewa mzazi na jibu atakalopatiana litajazwa kwenye karatasi.

MALIPO YA UTAFITI HUU

Nitagharamia pesa zote zitakazo tumiwa kwenye utafiti huu. Hakuna malipo yoyote utakayo patiwa kwa kuwa katika utafiti huu.

MATHARA YA UTAFITI HUU

Utafiti huu hautakua na mathara yoyote kwa wewe binafsi ama mtoto wako.

KUJIHUSISHA KATIKA UTAFITI HUU

Kujihusisha kwako katika utafiti huu ni kwa kujitolea. Hakuna yeyote anayekulazimisha. Kutibiwa kwa motto wako kutaendelea vizuri hata ukikataa kujihusisha na utafiti huu.

SIRI

Habari yote tutakayo pata kutoka kwako itakua siri. Jina la mtoto halitatumiwa.

RUHUSA YA KUFANYA UTAFITI HUU

Kamati ya Ethics na Research ya chuo kikuu cha Nairobi na hospitali kuu ya Kenyatta imeangalia pendekezo langu la kufanya utafiti huu na ikanipa kibali.

Kwa swali lolote kuhusu utafiti huu unaweza kuasiliana na

Dr Peris Wanjiku Njiiri 0722-908635

Mwenyekiti wa kamati ya Ethics ya KNH : Prof Guantai, 2726300 ext 44102

KISWAHILI CONSENT

Mimi kama mzazi/msimamizi nimeitikia kuhusishwa kwenye utafiti huu bila kulazimishwa. Ninajua ya kwamba hakuna pesa nitakayopatiwa. Nimeambiwa kuwa habari nitakayopeana itaekwa siri, na majibu kutoka huu utafiti yanaweza kuchapishwa.

Nimepewa muda wa kuuliza maswali na mambo yote kuhusu huu utafiti yameelezwa kwangu na

Dr/Mr/Mrs _____saini _____

Jina la mtoto _____

Saini ya mzazi/msimamizi _____

Tel.Number_____

APPENDIX 3

BUDGET AND TIME FRAME

BUDGET

ITEM	**QUANTITY**	**UNIT PRICE**	**TOTAL**
Biro pens	10	20	200
Pencils	10	10	100
Box file	2	100	200
Printing and photocopying	1	15,000	15,000
Final proposal booklet	1	10,000	10,000
Poster	1	3,000	5,000
Data statistician	1	20,000	20,000
Research assistant	2	10,000	20,000
Total			70,500

TIME FRAME

ACTIVITY	**FROM**	**TO**
Research proposal and development	September 2012	February 2013
Approval by KNH ERC	May 2013	June 2013
Data collection/data analysis	August 2013	November 2013
Data presentation	January 2014	