ORIGINAL ARTICLE

Medicolegal Analysis of Child and Adolescent Victims of Sexual Assault in Lahore- A Retrospective Study

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ABSTRACT

Introduction: Sex crimes are complex and multidimensional. Children and adolescent oriented sexual assaults are increasing, and both females and males become victims of this heinous crime in high percentages in any period of their lives.

Aim: To evaluate sexual assault against children and adolescents in Lahore, to assess the prevalence of sexual assault and to determine its demographic and medicolegal aspects among its victims.

Methods: This retrospective study was conducted in Forensic Medicine Department of King Edward Medical University, Lahore from January 2012 to December 2013. 19 cases were brought for medicolegal examination during the two year period. Details pertaining to age, sex, socioeconomic status, residential area, type of offence, place of incident, time lapse between incident and medical examination, number of assailants, relationship with assailants, method used by assailant to overcome resistance, findings of physical and genital examination and results of evidence collected were noted.

Result: There were 19 cases in the age range of 4–18 years (79% girls and 21% boys). The highest incidence was found in age group 12-15 years (57.89 %) followed by 16-18 years (21.05 %). The most frequently reported sexual assault was rape (73.68%), while there were 4 cases of male sodomy (21.05%) and 1 case of mixed(anal and vaginal) assault (5.26%). All cases belonged to lower socioeconomic class and were from urban area. In 42.1% of the cases, the assailants were known to the victim. 26% reported sexual assault by more than one assailant. The most common site of offence was the house of the accused (57.89%). Sexual assault was made under verbal threat in 21.05% of the cases, while it was made by the use of physical force in 15.78% of cases. Physical injuries on the body of victim were seen in 10.52% of cases. Hymen was intact in 2 cases (13.33%). The tears of hymen were fresh in 3 girls (20%). Tears of anal mucous membrane were seen in 3 victims of sodomy.

Conclusion: Multidisciplinary approach encompassing emotional, medical and forensic care is mandatory for the victims of sexual assault.

Key words: Sexual assault, rape, sodomy, medicolegal examination, child and adolescent victims.

INTRODUCTION

Forensic medicine in Pakistan has gone through great development over the past few years. The forensic medical examiner is responsible for not only postmortem examination but also for examination of living victims with history of assault[1]. The one age group that presents to the forensic department for medicolegal examination comprises of children and adolescents with various types of assaults. Careful assessment and evaluation of these victims is highly important for legal purposes due to its significant role in identification of perpetrator of the crime[2].

Childhood is a period in development that is considered highly vulnerable to physical and psychosocial trauma[3]. Child abuse is a violation of a child's basic human rights and its etiology includes multiple interrelated familial, social, psychological, and economic factors[4]. Sexual abuse occurs when a child is involved in sexual activity that he or she cannot understand, for which he or she is physically not developed, and cannot give consent[5].

Moreover, young people, especially females, are particularly vulnerable to sexual coercion (rape) and violence. Sometimes, this coercion clearly involves the use of force; at other times, it is more subtle and involves economic or psychological manipulation[6]. Sexual offences can be categorized into two groups, i.e. those in the domain of psychiatrist (masochism, fetichism, etc.) and those that are criminal in nature, e.g., rape, buggery, pederasty, incest, bestiality and indecent assault[7].

Sexual assault is defined as any offense in which an adult touches a minor for the purpose of sexual gratification; for example, rape (including sodomy), and sexual penetration with an object[8].

The American Psychiatric Association states that "children cannot consent to sexual activity with adults" and condemns any such action by an adult:

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"An adult who engages in sexual activity with a child is performing a criminal and immoral act which never can be considered normal or socially acceptable behavior"[9]. Physical injury from child sexual assault varies in severity depending on the age and size of the child and the degree of force used. It may cause internal lacerations and bleeding in severe cases, and even damage to the internal organs that, in some cases, may be fatal[10].

Besides physical injuries, child and adolescent sexual assault can cause both short-term and long-term morbidity, including psychopathology in later life[11]. The psychological effects include depression[12, 13], anxiety[3], eating disorders[14], poor self esteem[14], somatization[13], sleep disturbances[15,16] and dissociative and anxiety disorders including post-traumatic stress disorder[17].

Sexual assault is rarely reported for many reasons: social stigma, embarrassment, guilt, lack of awareness regarding victim's rights, unwillingness to confront the legal system and fear of not being believed[18,19]. This under reporting makes determination of actual incidence a difficult yet challenging task.

The global prevalence of child sexual abuse has been estimated at 19.7% for females and 7.9% for males, according to a 2009 study published in *Clinical Psychology Review* based on review of 65 studies from 22 countries. The highest prevalence rate geographically was found in Africa (34.4%), mainly because of high rates in South Africa; Europe showed the lowest prevalence rate (9.2%); America and Asia had prevalence rates between 10.1% and 23.9%[20].

Most assailants are acquainted with their victims; approximately 30% are relatives, most commonly brothers, fathers, uncles or cousins; around 60% are other acquaintances, such as family friends, babysitters, or neighbors; strangers are the offenders in approximately 10% of child and prepubertal sexual assault cases[21].

Crimes against Children Research Center in USA report that 1 in 5 girls and 1 in 20 boys is a victim of sexual abuse. Ages between 7-13 years are the most common victims[22].

In Pakistan the situation is quite shocking inspite of contemporary culture prevalent in the society. 2,788 child sexual abuse cases were reported in 2012, compared to 2,303 in 2011. 71 per cent of the children who suffered abuse were girls. The age group most vulnerable to sexual abuse among girls and boys was 11 to 15 years. Some 5,689 abusers were involved in nearly 3,000 abuse cases, out of which 47 per cent were acquaintances and 1,214 cases took place either at the acquaintances' or the victims' houses[23] .

It has been accepted that the victims of sexual assaults keep the matter to themselves for a variety of reasons and do not consult legal authorities; therefore, many cases are not judicially processed or are done very late[24]. Because of late consults and medical examinations, evidence pertaining to the sexual assault disappears, and conviction rate is low[25,26].

Child sexual abuse is outlawed nearly all over the world, generally with severe criminal penalties, including in some jurisdictions, life imprisonment or capital punishment[4].

Statutory rape is defined as an adult's sexual intercourse with a child below the legal age of consent (under 18 years) based on the principle that a child is not capable of giving consent and that any apparent consent by a child is not considered to be legal consent [27].

OBJECTIVES

The aim of the study was to evaluate the data with respect to:

- Socio- demographic characteristics of the victims.
- History of assault: Place of incident, number of assailants, type of act, type and site of injures, relation between the victims and assailants, time lapse between incident and examination, method used to overcome resistance of victim.
- Examinations: General examination including evidence of general violence, local examination of genitalia and anus, including evidence of local violence.
- Results: tests done for detection of semen
- Statistical analysis of all cases

MATERIAL AND METHODS

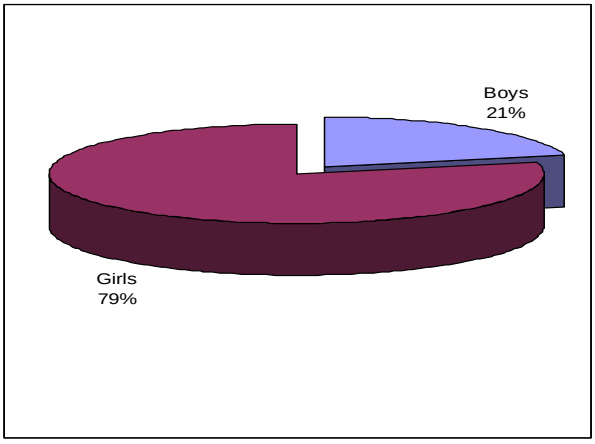
This retrospective study was carried out in the Forensic Medicine Department of King Edward Medical University, Lahore from January 2012 to December 2013. The record of the sexual assault victims (child and adolescent) who had been brought for examination in the department was reviewed. These victims were from the area which comes within the jurisdiction of police stations attached with Mayo hospital, Lahore. Examination of all female victims was carried out by the female doctors of the said department. Details pertaining to age, sex, socio economic status, residential area of victim, type of offence, place of incident, time lapse between incident and medical examination, number of assailants and relationship with the assailants, method used by assailant to overcome resistance, findings of physical and genital examination and results of evidence collected during the examination

were noted. The source of data was court orders, police papers, medico-legal certificates, clinical notes and history as narrated by the victims during the examination. The cases with incomplete data were excluded. Total 19 cases which fulfilled the above criteria were included; data entered on a predesigned proforma, was then studied and statistically analyzed.

RESULTS

Out of 19 victims of sexual assault, 15(79%) were girls and 4 (21%) were boys as shown in fig.1.

Fig.1: Percentage of victims according to gender



Majority of cases were of rape 14(73.68%) while sodomy cases were 4(21.05%) and there was 1 case of mixed (anal and vaginal) assault (5.26%). All boys were victims of sodomy (Table 1).

Table 1: Type of sexual offence according to gender

Offence	Girls	Boys	n	%age
Rape	14	0	14	73.68
Sodomy	0	4	4	21.05
Mixed assault	1	0	1	5.26
Total	15	4	19	100

P- value: 0.0001 (Significant)

The age of victims ranged from a four year old child to an eighteen years old girl. The highest incidence was found in age group 12-15 years (57.89%) followed by 16-18 years (21.05%), 7-11 years (15.78%) and 2-6 years (5.26%) in decreasing order of frequency as shown in Table 2.

Table 2: Distribution of the victims according to age group

Age Group (years)	Girls	Boys	n	%age
2-6	1	0	1	5.26
7-11	2	1	3	15.78
12-15	8	3	11	57.89
16-18	4	0	4	21.05
Total	15	4	19	100

x^2:1.862 ; p-value: 0.60(not significant)

All the victims lived in the urban area (table 3).

Table 3: Distribution of victims according to residential area

Victim's Residency	n	%age
Urban	19	100
Rural	0	0
Total	19	100

P value: < 0.001 (Significant)

Majority of the victims knew the assailant 8(42.1%). The offence was committed by neighbor, stranger and teacher in 7(36.84%), 3(15.78%) and 1(5.26%) cases respectively (Table 4).

Table 4: Distribution of victims according to relationship with assailant

Relationship with assailant	n	%age
Acquaintance	8	42.1
Stranger	3	15.78
Neighbor	7	36.84
Student of the same school	0	0
Teacher and student	1	5.26
Total	19	100

P value: 0.009(Significant)

There were 14(74%) cases of sexual assault by single assailant and 5 cases involving multiple assailants (26%) shown in Fig.2

Fig.2: Number of assailants

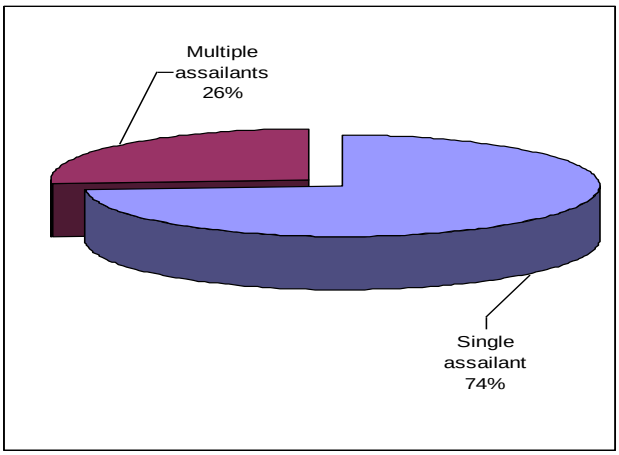


Table 5: Distribution of victims according to place of incident

Place of incident	n	%age
Victim's house	1	5.26
Accuser's house	11	57.89
Isolated place	7	36.84
Field / park	0	0
Hotel	0	0
Hostel	0	0
School / madrassa	0	0
Total	19	100

P value: <0.001(Significant)

The most common site of offence was the house of the accused 11 (57.89%) followed by isolated place 7 (36.84%) while the victims house was least common 1 (5.26%) shown in table 5. Sexual assault was committed under verbal threat in 21.05 % of the cases, while it was made by use of physical force in 15.78% of cases (Table 6).

Table 6: Method to overcome the resistance of victim

Method	n	%age
Physical force	3	15.78
Armed threat	2	10.52
Verbal threat	4	21.05
Unspecified	10	52.63
Total	19	100

P value: 0.04(Significant)

On examination, injuries comprising of abrasions and bruises were seen on the body of 2 victims (10.52%). Hymen was intact in 2 cases (13.33%). The tears of hymen were fresh in 3 girls (20%). Tear of anal mucous membrane was seen in 3 victims of sodomy (15.78%) shown in table 7.

Table 7: Distribution of injuries in sexual assault victims

Injuries	n	%age
External findings		
Physical injuries on body	2	10.52
Bleeding, bruises, abrasions in ano-genital region	2	10.52
Fissure, Foreign body	0	0
Internal findings		
Intact hymen	2	13.33
Ruptured hymen(fresh)	3	20
Ruptured hymen(old)	0	0
Tear of anal mucous membrane	3	15.78

P value: 0.006(Significant)

The highest number of victims was examined within 2-4 days 7(36.84%). Examinations done within 1-2 weeks come next 4(21.05%) followed by those on the first day 3(15.78%). Equal number of victims was examined within 4-7 days and 2-3 weeks 2(10.52%). Least number of victims was examined after more than 3 weeks of the incident 1(5.26%) as shown in table 8.

Table 8: Distribution of the victims according to time of examination

Days/ Weeks	n	%age
24 hours	3	15.78
2-4 days	7	36.84
4-7 days	2	10.52
1-2 weeks	4	21.05
2-3 weeks	2	10.52
More than 3 weeks	1	5.26
Total	19	100

x^2 : 7.21 ; p- value: 0.20(not significant)

Swabs were taken for the presence of semen in 18 cases. In one case, it was not taken as more than three weeks had elapsed since the incident. Semen was detected in 5 cases only (27.77%) while the result was negative in 13 cases (72.22%) as shown in table 9.

Table 9: Results of chemical examiner report

Result of semen detection	n	%age
Positive	5	27.77
Negative	13	72.22
Total	18	100

x^2 : 3.556 ; p- value: 0.05(not significant)

DISCUSSION

According to the studies conducted throughout the world, children and adolescent oriented sexual assaults are increasing, and both females and males become victims of this heinous crime in high percentages in any period of their lives[28,29].

The abhorrence of sexual violence is deep rooted and appears to be enshrined in culture and religion. In some parts of the world, the perpetrator is subjected to death by stoning; in the old Jewish law, such people were ostracized from the society[30].

Defilement, which means sexual intercourse with under aged girls (i.e., under 16 years), is usually by a close relation or by an acquaintance and rarely by a complete stranger[30]. Several studies have shown assailants of rape to be authority figures, job supervisors, older male teachers, policemen and relatives[31-33].

Sexual activities involving a child may include activities meant for sexual stimulation, such as those involved in intimate sexual abuse, penetrating injury or non-penetrating injury. However, a charge of sexual assault can be made without any of the above features. The child's or a witness account of the assault is the most important determinant for the offence [4]. Physical injuries may be present, such as bruises on the skin, abrasions on wrist and ankle, bruises of genital areas and rectal abnormalities. Hymenal abnormalities may be evident signifying chronic abuse or acute injury[35]. Most feared and devastating morbidity of sexual assault is emotional and psychological trauma.

Sex related cases are increasing day by day in our country. The study was conducted on 19 alleged victims of sexual assaults (children and adolescents) examined during 2012-13. There were 27, 23, 19, 31, 17 and 11 cases of child sexual abuse reported in Suez Canal area in Egypt in years 2004, 2005, 2006, 2007, 2008 and 2009 respectively in a study by Hagras et al[4] which is in accordance with our study . The number of cases of child and adolescent sexual violence could be higher because many victims do

not report for the reason that they are ashamed or fear of being blamed.

In our study, majority of victims were girls (79%) while boys were sexually assaulted in 4 cases (26%). This is in agreement with study by Hagras et al[4] and Sarkar et al[25] who reported that girls were victims in 69(53.9%) and 80(88.9%) cases while boys represented 59(46.1%) and 10(11.1%) cases respectively. This female predominance has also been noted by Bhardwaj et al[36], Tamuli et al[37] and Grossin et al[29].

In our study, the female to male ratio was 3.75 (N=15/4) which is similar to studies by Küçüker[26] and Jänisch et al[38] who found that this ratio was 4.5 and 4.3 in their respective studies. However, in a similar study by Sarkar et al[25], this ratio was 8 whereas it was 1.5 in a study in Egypt[39]. This difference could be due to sociocultural characteristics of the area of study. The higher prevalence rates reported among women in the studies reviewed enable us to infer that most victims of sexual assault are females, although the small yet important percentage of male victims should not overlooked. The explanation of the lower prevalence rates among males is underreporting due to sex stereotyping, social denial, the minimization of male victimization, and the relative lack of research on sexual abuse of boys.

In keeping with the study of Sarkar et al [25] and Bhardwaj et al[36], all males were victims of sodomy in the study which is regarded as unnatural sexual offence and not a male rape according to the law of our country.

The most frequently reported sexual assault was rape, reported in 14 cases (73.68%), whereas there were 4 cases of male sodomy (21.05%) and 1 case of mixed assault (5.26%). This is in agreement with the study by Küçüker[26]. Sarkar et al[25] noted 87.77% cases of rape supporting our findings. Riggs at al[31] reported anal assault in 17% of cases thus in accordance with our results.

All victims lived in urban area. A significant correlation was proved between residential area of the victims and the occurrence of the crime in our study. Similar significant relationship has been reported by Hagras et al[4].

Regarding age of assaulted children, the present study revealed that 15.7% of assaults were against children (victims) who were younger than 10 years old, while 84.3% cases were older than 10 years , and their age ranged from 4 to 18 years (mean 13.2 for females and 11.2 for males). These results are similar to those of a study done in Tanzania which revealed that the mean age of sexual assault is 13.8 years for females and 13.5 years for males[40]. The highest incidence was found in age group 12-15 years (57.89%) followed by 16-18 years (21.05%). This is similar to study by Küçüker[26] who reported that the majority of victims were in the 12–15 years of age group (63.8%), followed by the 16–18 years of age group (21.3%). Islam et al[41] noted 33.5% cases in 12-15 years age group. Other authors also quoted similar results[24,29]. Significant correlation between the age group of victims and sexual assault was not found in our study. This can be attributed to the fact that findings from researches on child sexual abuse are often not comparable because of nonstandard definitions of child sexual abuse, different age groups used to differentiate childhood and adolescence, and varying study populations.

A study carried out on 87 cases of sexual assault in the Assiut Governorate from 2003 to 2007 showed that the most vulnerable age group was 15–18 years (35 cases, 40.2%) of which females represented 34 cases, followed by age group 5–9 (20 cases, 23%) of which male represented 17 cases. Young males are often playing outdoors not under the supervision of their families while younger females tend to stay at home close to their mothers[42].

All cases belonged to lower socioeconomic class. Sarkar et al[25] and Al-Azad et al[43] noted that lower socioeconomic class was prevalent in 92.22% and 93.04% victims respectively thus in agreement with our results.

Majority of the victims knew the assailant 8 (42.1%). This is in line with study by Sarkar et al (44.4%)[25], Parveen et al (59.1%)[44] and Hassan et al (57%)[45]. Studies in other countries also reported that the assailant was known to the victim in most cases[29,38]. Prevalence of parental child sexual abuse is difficult to assess due to secrecy and privacy. However, in a study in Israel, the majority of perpetrators were strangers, and the intra-family abuse was more common in females than in males[46].

The victim was assaulted by more than one assailant in 26% of the cases which is in accordance with findings of Parveen et al (31.18%)[44] and Hassan et al (30%)[45].

Physical force was used to overcome the resistance in 15.78% cases while armed threats were used by assailants in 10.52% cases. There is a similarity between this and a study in Tanzania which documented that about 13% of females mentioned physical force as a major form of persuasion[40]. In the study by Hagras et al[4], 8.6% of cases reported physical assault, while 3.9% reported armed threat. The use of physical force is rarely necessary to engage a child in sexual activity because children are trusting and dependent. Children are taught not to question authority and they believe that adults are always right. Perpetrators of child sexual abuse know this, and take advantage of these vulnerabilities in children.

Physical injuries on the body were found in 10.52% cases. 12.1% of the children had extra-genital lesions in study by Jänisch et al[38] while Hagras et al[4] found that 7.1% of cases reported sexual assault combined with physical assault. All these studies are in accordance with our findings.

According to our study, hymen was intact in 13.3% cases, fresh hymenal tears were seen in 20% cases and anal tears in boys in 3 cases (15.78%). Hagras et al[4] also quoted genital injuries comprised of recent hymen tear in 2 cases in girls(18.2%) and recent anal tear in boys in 2 cases (18.2%) which is in accordance with our study. Genital and body injuries are not routinely found in adolescents and children after allegation of rape or sexual assault, even when there has not been previous sexual experience. This may be due to the absence of the completion of intercourse, with or without consent (cases of allegation)[47].

In the present study, the time lapse between the incident and examination ranged from 2 hours to 1 month. 47.36% presented to the medicolegal department for examination within 72 hours while 52.64% were examined after 72 hours. This is in accordance with study by Jansisch et al[38] who reported that 40.7% of the children were seen within 72 hours after the alleged assault. As in earlier studies [6, 31], cases involving younger girls who are easily threatened or pacified to keep quiet report late as compared to older girls. The offence is usually suspected by the parent when they notice foul-smelling vaginal discharge, difficulty in walking, etc. in children.

Semen was detected in 27.77% cases while it was negative in 72.22% cases. This is consistent with results of Daru et al[30] and Al Madni et al[48] who detected sperms in 22% and 28.3% in their respective studies. This can be explained by the fact that the probability of detecting semen decreases as the interval between the assault and medical examination increases. The chances of yielding positive results become even lower if the victim has washed private parts, urinated, taken bath or changed clothes.

CONCLUSION

Predominance of sexual assault is found in girls and in age group 12-15 years. The most frequently reported sexual assault is rape. Majority of the offences has been committed by a single person, having acquaintance at his place. All cases belong to lower socioeconomic class and urban area. Use of physical force is reported in few cases. The absence of physical and anogenital injuries does not rule out sexual abuse.

Sexual assault leaves a permanent scar on the mind and body of the victim. Child victims suffer the greatest. The impact of sexual assaults on female's honor and dignity _ especially in Pakistan make it a shameful situation about which neither the victims nor the families want to talk . As sexual assault is a private and secretive crime, it can be difficult for law enforcement and other agencies to detect without help. Any information, regardless of how small or insignificant it may seem to the physician, could help protect a child and adolescent from this barbarous crime. Pediatric programs should be organized to provide training and resources for child abuse education. Decisions about reporting to child protective services must be guided by injury characteristics and history, knowledge of and experiences with the family, consultation with senior colleagues, and previous experiences with child protective services. Some offenders have a habit of abusing children. It is important that all members of the community take responsibility for reporting suspected abuse. Sexual assaults among children and adolescents are not rare in our society. Doctors and other health professionals should be aware of this high prevalence rate and its potential for short and long-term deleterious effects.

We recommend that sexual assault cases should be furnished with trained staff's psychological support and Medico-Legal examiners around the clock to facilitate the legal process and early clinical forensic examination to document and collect evidence.

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