

A Retrospective Study on Presentation, Patterns, and the Prevalence of Injuries in Alleged Sexual Assault Cases, Presented to District General Hospital Gampaha from July 2018 to April 2019

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Abstract


Introduction: Sexual abuse is an undesired sexual behavior by one person upon another. In Sri Lanka, all sexual abuse cases are expected to be examined by a medico-legal specialist before the court procedure. This study was conducted to identify the presentation, pattern, and prevalence of injuries among the sexual abuse victims presented to District General Hospital Gampaha. The findings of this study will help to improve the knowledge on different variables that can influence or affect the medico-legal opinion, and the management of victims including prevention.

Methodology: A retrospective descriptive study was conducted using medico-legal records of all the cases with alleged sexual abuse reported to DGH Gampaha, during the 10 months from July 2018 to April 2019. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 26 with descriptive statistics. Bivariate analysis and multiple logistic regression model used where necessary.

Results: A total of 103 alleged sexual assault cases were assessed with 85% females, and remaining 15% were male victims. The median age of victims was 15 years. Almost all the perpetrators were males and the mean age is 31 years. There was 92% probability of an abuser become a known person or a relative of the victim. Ten percent (10%) (n=10) of victims sustained non-genital injuries following a sexual assault with injuries in more than one site and 11 % (n=11) victims had genital injuries. About 40% (n=40) of victims gave a history of repeated abuse with no statistically significant difference among the genders (chi-square =2.6, p = 0.105>0.05). On multiple logistics regression, those who had a history of repeated abuse and who became pregnant following the abuse were significantly associated with the length of time to reporting (Exp (B) = 3.082; 95% CI, 1.224 - 7.76; p-value = 0.017<0.05 and (Exp (B) = 17.066; 95% CI, 2.001 -145 .56, p-value =0.009<0.05) respectively). Sexually assaulted unmarried females have a 13% (95% Confidence interval, 06% - 22%) chance of getting pregnant.

Conclusion: Female sex, and less than 16 years of age, is the most vulnerable group. Early adolescents had comparatively higher genital injury prevalence. Also, the genital injury prevalence was almost four-fold among the victims that presented to the medicolegal examination within one week or less. All the victims, who had anal/perianal injuries, were less than 15-year-old males. History of repeated abuse and presence of pregnancy was significantly associated with the duration of time to report to the hospital. 13% of sexually assaulted unmarried females being presented with pregnancy, is an alarming finding and needs evaluation with further studies.

Keywords: Gampaha, Sexual abuse, Sri Lanka

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Introduction

Sexual abuse is an undesired sexual behavior by one person upon another. Perpetrators do this for their

stimulation or gratification of another person's like in child pornography.[1,2,3] Although the majority of the victims are females, it can also occur in

males.[4] In a study done in the USA, one in five women and one in 71 men have been sexually abused at some point in their lives.[5]

Based on WHO report, in 2018 there were about 2000 police cases with sexual abuse.[6] However, there were no published data specific to the Gampaha district and it is the second most populous district of Sri Lanka.[7] District General Hospital (DGH) Gampaha receives referrals for medico-legal examination from eight out of 13 Divisional Secretary divisions in the district.

This study was designed to understand the presentation, pattern, and prevalence of injuries of sexual abuse victims presented to DGH Gampaha from July 2018 to April 2019. The findings of this study will use to identify the different variables that can influence the medico-legal examination, opinion, planning of management, and prevention.

Methodology

A retrospective descriptive study based on the medico-legal records of all the cases with alleged sexual abuse reported to DGH Gampaha, during the period of 10 months from July 2018 to April 2019 was assessed. Adults and children of both sexes were included and case records with incomplete data were excluded.

Information from the Medico-Legal Examination Forms, Medico-Legal Reports, and other case-related materials such as Bed Head Tickets of the victims was used to fill the proforma. There was a total of 103 case records included in the study. Data were coded and entered into IBM Statistical Package for Social Sciences (SPSS) version 26 and analyzed using descriptive statistics. Bivariate analysis and multiple logistic regression were calculated where necessary and “P” values and confidence intervals were calculated depending on the variables assessed.

Data transferring to proforma, coding, and entering into statistical package and analysis were done personally by the principal investigator. None of the personal identification data were collected and data stored in a secure official cabinet and only used for the research purpose.

Ethical clearance was obtained from the Ethical Review Committee (ERC) Faculty of Medicine, Ragama, and permission to extract data from the case records were obtained from the Director, DGH Gampaha.

Results

Socio-demographic characteristics of victims

A total of 103 alleged sexual assault cases, were assessed. 88 (85%) females and 15 (15%) males. The median age of victims was 15 and ages ranged from 3 years to 87 years. (Figure 1) Cases were reported from 17 police divisions from 8 DS. Almost one-quarter (n=25) of cases were reported from the Gampaha police division. 70% (n=72) of victims have completed their secondary education and almost 90 % of victims were unmarried.

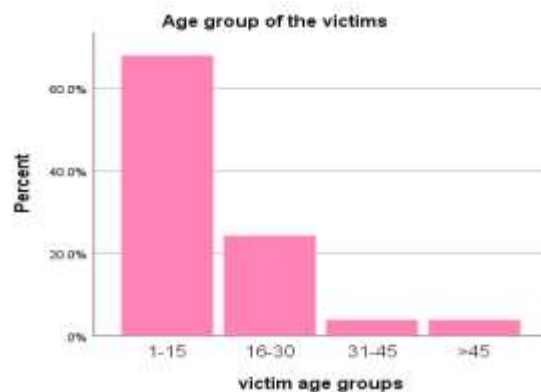


Figure 1: Age distribution of victims

Characteristics of perpetrators

Almost all the perpetrators were males and the mean age was 31 years (SD=14, range 14 to 70). 61% of abusers were between 16 to 30 age group and 5% of them were more than 60 years (Figure 2). Abusers were known persons, not relatives (82%, n=84), relative under incest law (law or strangers. There was a 92% probability of an abuser become a known person or a relative of the victim. (95% confidence interval is 85 %- 96%)

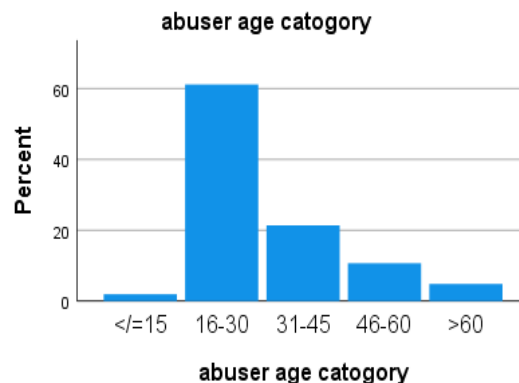


Figure 2: Age distribution of abusers

Presentations and patterns of injuries

In about 45% of females, the nature of hymen could not be assessed due to factors like advanced age, previous sexually active state, etc. However, 42%

had annular, 11% fimbriated, and 3% crescentic hymen types.

Ten percent (10%) (n=10) of victims sustained non-genital injuries following a sexual assault with injuries in more than one site. Breast (33%), head and face (28%), and neck (24%) are the commonest sites. Abrasions (35%), bites (18%), and contusions (18%) were the injury type.

11 % (n=11) victims had genital injuries and 55% of them are less than 15 years. All the genital injuries (n=11) were at the hymen with 90% hymenal lacerations and 10% contusions. Common positions of the hymenal injuries were 6 O'clock (50%) and 03 o'clock (30%). Out of the victims with genital injuries, almost 75% presented within one week or less from the incident.

Only about 03% of victims (n=03) had anal/perianal anal injuries and all of them were less than 15-year-old males and none of the male victims had any other physical injury except for that. The injuries were either perianal erythema (02%) perianal abrasions (01%) or anal tear/lacerations (01%). All the victims with anal injuries had reflex anal dilatation.

Nature and location of the sexual abuse.

About 40% (n=40) of victims gave a history of repeated abuse (20% males vs. 42% of females) with no statistically significant difference among the genders (chi-square =2.6, p = 0.105>0.05). One-fifth of repeated abuse cases have occurred within 1-6 months before the presentation.

The commonest time duration spent per act was 15-30 minutes (61%) followed by less than 15 minutes (18%) and almost 90% of incidences occurred at a smooth location. Almost one-quarter of cases (n=25) complained of ejaculation.

Factors associated with the time duration to present to the hospital

Almost 60% of cases presented within 3 days of the incident. The median time to the first presentation from the incidence was 3 days (range = 1 day to 2.7 years) (Figure 3).

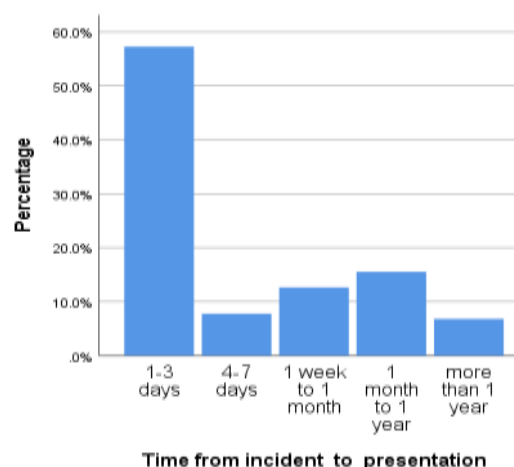


Figure 03: Time taken by victims for the presentation.

On multiple logistics regression, those who had a history of repeated abuse and who became pregnant following the abuse were significantly associated with the length of time to reporting. (Exp (B) = 3.082; 95% CI, 1.224 - 7.76; P-value = 0.017<0.05 and (Exp (B) = 17.066; 95% CI, 2.001 -145 .56, p-value =0.009<0.05) respectively)

Victim age (<15 vs. >15), place of residence, sex, civil status, type of abuser (known and relative vs. stranger), and presence of injuries were not significantly associated with the time duration to report to the hospital.

However, the prevalence of genital injuries was almost four-fold among the victims that presented within one week or less from the incident compared to those presented after one week.

Health effects of the victims and medico-legal opinion

All the cases were routinely referred to the Venereologist, and baseline syphilis and HIV serology were negative in all cases. And one case was treated as genital HSV. Follow-up HIV and syphilis serology was planned in 3 months in all cases.

In 5% of cases, victims had psychological problems even before the incidence and about 07% (n=07) of victims were psychologically disturbed after the incidence, according to the psychiatrist.

Sexually assaulted unmarried females have a 13% (95% Confidence interval, 06% - 22%) chance of getting pregnant and 11% (95% Confidence interval, 05% -20%) chance of being presented with an acute hymenal tare following sexual abuse.

Regarding medico-legal opinion, 35% of cases were reported as no physical/medical evidence, followed by chronic vaginal penetration 33% and acute vaginal penetration 5%.

Discussion

All age groups are vulnerable to sexual violence. Victims may end up with physical and mental trauma. Sexually transmitted diseases, unwanted pregnancy, and sexual dysfunctions continued to be public health and human rights issues around the world including in Sri Lanka. [5,8]

According to Sri Lanka's first dedicated national survey on physical and sexual violence against women and girls (2019), there was a 02% prevalence of intimate partner sexual violence and 01% of none partner sexual violence among 15 years old and above females during the last 12 months.[9] Although there is only a few documented evidence regarding the prevalence of sexual violence against men and boys, the anecdotal reports and scattered evidence regarding such incidence described from diverse settings are not uncommon.[10]

However, studies on prevalence and patterns of injuries following sexual abuse discussed in medico-legal perspectives, especially concerning specific geographic areas of the country are inadequate.

During the 10 months study period, a total of 103 cases were presented, and almost 90% of them were females. This can be the tip of the iceberg as most cases remain unreported similar to elsewhere in the world.

There can be several reasons for underreporting of the total number of cases as well as markedly low male cases. Minor forms of abuse may not present to the hospital as the victims themselves consider, it was negligible. In addition, attitudes toward the gender norms of the society, and towards violence against females may indirectly influence the presentations. In a women's wellbeing survey, almost half of the women interviewed agreed with male superiority (47%).[9] Therefore, cases of intimate partner violence may be under-reported. Further, cases of sexual abuse always tend to remain hidden due to the fear of stigmatization, lack of social support, loss of confidence in the justice system, or as a result of the absence of social services and support for survivors. According to the World Health Organization, cultural and traditional male superiority entitlement, the social acceptance of violence against women, inadequate legal and community sanctions against the abusers, areas with social conflicts with increased crimes and poverty

are the main risk factors that admire this type of crime throughout the world.[4] Also, male survivors may discourage to come forward due to discrimination and criminalization of same-sex sexual acts leading to be accused of themselves as homosexual activists.[10] Moreover, fear of repercussions both to themselves and to family members remains a significant barrier to reporting sexual abuse in Sri Lanka.

In our study the median age of victims was 15years. However, according to the women's wellbeing study, the prevalence of sexual violence by non-partner during the last 12 months, was highest among the age group of 35 to 44 (01%). The reason for the deviation may be because it is based on an interview and our study was done using the cases who made a police complaint. Older may reluctant to make an official complaint.

In this study, abusers are almost always male as females are more vulnerable due to their unequal social status. Also, male victims tend to underreport when abusers are females as most of the time it is considered to be an insult when a male is abused by a female. In contrast, females tend to report more due to fear and stigma of loss of virginity and risk of pregnancy.

Most of the abusers were known persons or relatives according to our findings. In another study on child sexual abuse in Sri Lanka, had similar findings, with 83% of abusers are known to the child.[11] As most of the victims were less than 16 years in our study also, it can be related to the fact that the known persons have more access to minors than strangers. The same reason may be the cause for the significantly higher number of repeated abuse cases (40%). Considering the relatives under the incest law, the majority were the father of the victim or the grandfather. Similarly, in another study done in Sri Lanka in 2004, out of 1200 women surveyed, in 9% of cases, the abuser was the father.[12]

Most of the abusers mainly being 16-45 age group are expected, as it reflects the usual range of the age of sexually active males. This also explains and tally with fact that the male sex hormone (testosterone) usually peaks around the age of 20 and decreases slowly after 30 years. A study done in Ethiopia reflects the same findings as ours about the age distribution of perpetrators.[13]

In 45% of victims, the nature of hymen could not be assessed due to various other factors like changes of hymen due to previous sexual activeness, attenuation due to chronic vaginal penetration, age-related

changes, changes due to pregnancy and vaginal delivery, etc. The annular type hymen being the commonest is tallying with the various other studies done all around the world. [14]

Regarding genital injuries, lacerations are the commonest type and the hymen is the commonest site of the injuries. The commonest positions of the hymenal injury were 6 O'clock and 3 O'clock. Other types of injuries were contusions and abrasions. The less than 15 year age group had a higher prevalence of genital injuries compared to other age groups. However, this difference was not statistically significant.

The prevalence of victims having a genital injury is about 10% in our study. However, more than 50% of them were in the less than 15 years age group, and hymen was the injury site in almost all of them. A study done in Nigeria regarding genital injuries in adolescent rape victims had similar results with 45% of the victims having genital injuries reflecting the fact that younger victims are more susceptible to genital injuries following an abuse.[15] In contrast, it was 66% to 85% among the adolescent victims of sexual assault in two cities in USA.[16] The result may be due to the fact that developing countries have limited facilities for a detailed forensic examination than in developed countries. According to a study done in 2005, usage of colposcopy, digital imaging, and staining with contrast media such as toluidine blue, gentian violet, fluorescein, Lugol's solution, has increased the prevalence of genital injuries almost about 90%.[17]

It also can be related to the delayed presentation of the victims, as minor injuries can heal with time before the medical-legal examination. In the Nigerian study, it was also four-fold lower among the victims that presented after 72 hours which is similar to our study and thereby supporting the above fact. [15]

All the victims, who had anal/perianal anal injuries were less than 15-year-old males. All of them had reflex anal dilatation which is suggestive but not confirmative of chronic anal abuse. However, the history didn't support this finding as all of them had denied previous anal intercourse.

In our study, more than one-third of victims gave a history of repeated abuse. However, there is no statistically significant difference between repeated abuses with regard to the gender of victims. The commonest time duration spent per act was 15-30 minutes and almost all the incidences occurred at a smooth location. It may be due to the reason that

majority of the victims being children, and most of them were abused by known persons usually in their home environment.

More than half of the victims had presented to medico-legal examination within 3 days of the incident. History of previous or chronic sexual abuse had a significant delay in presentation similar to those who were pregnant compared to non-pregnant counterparts.

Inability to find a statistically significant association between length of time to present with victim age, place of residence, sex, civil status, type of the abuser (known/relative vs. stranger) and presence of injuries may be due to smaller sample size. However, the prevalence of genital injuries was almost four-fold among the victims that presented within one week or less compared to those presented later.

Thirteen percent (13%) of sexually assaulted unmarried females being presented with pregnancy is an important finding of the study which may need evaluation with further studies. Concerning medico-legal opinion, 35% of cases were reported as no physical evidence, followed by chronic vaginal penetration 33% and acute vaginal penetration 05%.

The smaller sample size, lack of appropriate instruments for examination, retrospective nature of the study using secondary data may probably have affected the findings and is a limitation. Also, as it was hospital-based, it may not reflect the true prevalence of the general population. However, the validity of the study will not completely be affected by this.

Still, in most of the centers of developing countries, the genital examination carried out only using the naked eye. Therefore, governments need to establish forensic centers with modern technology and facilities to facilitate detailed forensic examination, as the lack of data may strongly influence the opinion of the forensic expert and thereby affect the court procedure when it comes to final judgment.

Conclusions

The majority of victims were females and the majority of the abusers were males. Known persons or relatives were the most potential abusers. Females less than 16 years of age are the most vulnerable group and had a higher prevalence of genital injuries compared to other age groups. The prevalence of genital injuries was almost four-fold among the victims that presented to the medicolegal examination within one week or less. All the victims, who had anal/perianal injuries were less

than 15-year-old males. The presence of repeated abuse and presence of pregnancy was significantly associated with the duration of the time to present to the hospital. Thirteen percent (13%) of sexually assaulted unmarried females being presented with pregnancy is an important finding which may need evaluation with further studies.

Disclosure statement

Conflicts of interests: The author declares that she has no conflicts of interest.

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