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# Analysis of the variation of injury patterns in people who have experienced sexual violence

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### ARTICLE INFO

**Article history:**

Received Nov 17, 2023

Revised Nov 20, 2023

Accepted Dec 30, 2023

**Keywords:**Pattern of Injury  
Sexual Violence  
Trauma

### ABSTRACT

Establishing sexual violence can be a complex process due to the lack of witnesses other than the perpetrator and victim. So, law enforcers rely on medical practitioners to find medical evidence, such as physical damage to the victim's body. The objective of this study is to establish the characteristics of different injury patterns in individuals who have experienced sexual violence. This study is a comprehensive descriptive analysis of medical records and visum et repertum (VeR) data obtained from five hospitals in Yogyakarta, Indonesia. A total of 84 cases met both the inclusion and exclusion criteria. The findings indicated that 60.7% of victims did not experience recurring incidents of sexual violence. In most cases, the perpetrator typically had a preexisting relationship with the victim (81%), and 25% of the victims underwent a medical examination more than 45 days after the incident. The predominant injuries observed on the victim's body were contusions, with 52.6% occurring in the chest region and 26.3% in the upper extremities. The prevailing genital injury observed was an old rupture of the hymen. There was no apparent relationship between the injuries that occurred outside the genital and genitoanal area. Moreover, a significant correlation was found between the proximity of the perpetrator to the victim.

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## INTRODUCTION

Sexual violence is a sexual act that is committed or attempted by another person without freely given consent of the victim or against someone unable to consent or refuse (Bonar et al., 2022; Smith et al., 2018). Women commonly face sexual violence, which is a prevalent kind of violence (Mas'udah, 2022; Rahma et al., 2020). Sexual violence embraces any non-consensual sexual act, including attempts to engage in such acts, as well as unwelcome sexual advances and statements targeting an individual's sexuality, regardless of the perpetrator's identity or location (Stöckl &

Quigg, 2021). Sexual violence encompasses various forms of violence, such as sexual, psychological, physical, social, and economic, which lead to gender-based discrimination (Akram & Yasmin, 2023).

Sexual violence is widespread in the majority of societies. Tolerant attitudes towards sexual violence lead to a feeling of normalcy among women (Barker et al., 2019). The adverse effects encompass somatic, reproductive, and psychological consequences that can manifest in the short or long term (Jina & Thomas, 2013). Sexual violence not only affects individuals personally but also has repercussions on a societal level. This is due to the prevailing belief among a significant number of individuals that sexual violence is provoked by the victim, leading to increased social isolation for the victim (dos Reis, Lopes, & Osis, 2017).

The prevalence of sexual violence is gradually increasing (Barbara et al., 2019; Li et al., 2023). According to a systematic analysis conducted by Araujo JO et al. in 2019, the global occurrence of SV ranges from 0% to 99.8%. In Africa, the reported prevalence ranges from 1.3% to 99.8%. The prevalence of the condition ranges from 0 to 84.6% in Asia, while in the Americas and Europe, it is reported as 3.5% and 3.3%, respectively (Araujo et al., 2019; Borumandnia et al., 2020). Daily, a minimum of 35 women experiences sexual violence. The Indonesian Women's National Commission reported the following statistics on sexual violence against women and girls: in 2014, there were 4,475 cases; in 2015, there were 6,499 cases; in 2016, there were 5,785 cases; and in 2017, there were 2,979 cases of sexual violence within domestic or personal relationships, as well as 2,670 cases in public or community environments (Ramadhan & Besila, 2019). In 2019, the Special Region of Yogyakarta earned the second position in the province in terms of reported incidents of sexual violence targeting women with disabilities, accounting for 24% of such occurrences (Farid, 2020).

Several global studies have been conducted to evaluate the frequency of sexual violence. Most of these studies focus on specific demographics, such as students, college students, or professional groups (Sweeney et al., 2019). Despite the majority of victims being women, it does not preclude the occurrence of sexual violence against men (Stemple & Meyer, 2014). Men tend to have less impact from sexual violence (Thomas & Kopel, 2023). Sexual violence can lead to psychological damage with varying effects. Nevertheless, no woman would be unaffected by such violations (Güneş & Karaçam, 2017).

Establishing the incidence of sexual violence is frequently a complex issue, as there is typically a lack of eyewitnesses to the incident (Huda, 2018). Therefore, the assistance of medical professionals is necessary for law enforcement to gather evidence indicating the occurrence of sexual abuse within the victim's body (Budiono et al., 2020). However, in real life, several limitations exist that hinder clinicians from effectively treating individuals who have experienced sexual harm (Ariawan Samatha et al., 2018). Most individuals who have experienced sexual violence do not immediately report their problems (Aida Fathya et al., 2020). This phenomenon results in the disappearance or gradual disappearance of incriminating evidence on the victim's body, such as the presence of the perpetrator's sperm or visible marks of violence (Kalangit et al., 2013). If doctors are not cautious in conducting examinations or if there is a lack of equipment for supporting examinations, there is a risk of missing this evidence in the reporting process (Ariawan Samatha et al., 2018). The inaccuracies in completing the VeR (venus et repertum) in the case of sexual violence can be seen as allowing the perpetrator freedom while restricting the victim's movement. To ensure the protection, recovery, and justice for victims of sexual violence, doctors need to possess the necessary expertise in medicolegal aspects. This enables them to thoroughly analyze all aspects of injuries caused by sexual violence, ensuring that the evidence is valid in legal proceedings (Budiono et al., 2020).

The researcher aims to perform a study to analyze different types of injury patterns in individuals who have experienced sexual violence based on these issues. Hence, the researcher proposed the term "Analysis of the Variation of Injury Patterns in People Who Have Experienced Sexual Violence."

## RESEARCH METHOD

This study aims to determine the different variety of injury patterns observed in victims of sexual violence through a descriptive and analytical methodology. The study was conducted in several hospitals in Yogyakarta, Indonesia, from January 2018 to December 2020. The variables examined included gender, age, educational levels, occupation, disability status, previous sexual activity, repeated instances of sexual violence, number of perpetrators, location of the incident, classification of sexual violence, the relationship between the perpetrator and the victim, the time interval of medical examination from the time of the incident, type, and region of non-genitoanal injuries, type and location of genitoanal injuries, and additional examinations.

The study utilized secondary data sources, such as medical records and visum et repertum (VER). The study's inclusion criteria included all cases of sexual violence that were examined from January 2018 to December 2020. Cases that did not offer information about the date of the incident and had victims who were of legal age and gave consent for sexual activity were omitted. The data was analyzed utilizing the Statistical Package for the Social Sciences (SPSS) version 25.0. Chi-square analysis examines the relationships or gaps between two categorical variables. This research has received ethical approval from the Faculty of Medicine and Health Sciences Ethics Committee at Universitas Muhammadiyah Yogyakarta, number 057/EC-EXEM-KEPK FKIK UMY/VII/2021.

## RESULTS AND DISCUSSIONS

According to research conducted at Several Hospital in Yogyakarta, Indonesia, a total of 84 cases of sexual violence were recorded between January 2018 and December 2020, which met the specified criteria for inclusion and exclusion.

**Table 1.** Gender distribution of sexual violence victims

Gender	Hospital (n %)					Total
	A	B	C	D	E	
Male	-	1	-	-	-	1
	-	12,5%	-	-	-	12,5%
Female	1	7	17	22	36	83
	100%	87,5%	100%	100%	100%	98,8%
Total	1	8	17	22	36	84
	100%	100%	100%	100%	100%	100%

According to the data presented in Table 1, out of the 84 cases analyzed, just 1.2% (1 victim) were male, while 98.8% (83 victims) were female. This study also revealed that sexual violence was reported across different age groups, with the youngest age group being toddlers aged 0-5 years, accounting for 2.4% (2 victims), and the oldest age group being the early elderly, accounting for 1.2% (1 victim). Furthermore, this study revealed that cases of sexual violence were reported across all educational levels, ranging from individuals who had not received any formal education to those at the college level. The highest prevalence of such violence was observed among junior high school students, accounting for 33.3% (28 victims). Additionally, 13% (11 victims) of individuals with disabilities reported experiencing sexual violence.

**Tabel 2.** Description of the repeated sexual violence

History of Repeated Sexual Violence	Hospital (n %)					Total
	A	B	C	D	E	
Yes	-	-	9	10	14	33
	-	-	53%	45,5%	38,9%	39,3%
No	1	8	8	12	22	51
	100%	-	47%	54,5%	61,1%	60,7%
Total	1	8	17	22	36	84

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100%    100%    100%    100%    100%    100%

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The research data in Table 2 reveals that 69% (58 people) of sexual violence victims had no previous sexual experience, whereas 31% (26 victims) had engaged in sexual behavior before the incident. This study also identified cases of recurring sexual violence experienced by victims perpetrated by the same individual. The prevalence of victims who had experienced repeated sexual violence was 39.3% (33 cases), with a majority of these victims (60.7%, 51 victims) having recently experienced sexual violence. Notably, the victim's home was the most frequent location for sexual violence, accounting for 26.2% (22 cases) of incidents, which is almost more than 23.7% (20 cases) that occurred in the perpetrator's home. Incidences of sexual violence were reported in several public settings, including schools (10.7% or 9 cases), mosques (2.4% or 2 cases), workplaces (3.6% or 3 incidents), and other public places (9.5% or 8 cases).

The study revealed that 78 perpetrators were identified in 84 cases. Regarding the relationship between the perpetrator and the victim, most of the people who perpetrate sexual violence are acquaintances of the victim. The highest percentage of these perpetrators, accounting for 16.7% (14 cases), are neighbors. Following this, stepfamilies, particularly stepfathers, account for 7.1% (6 cases), and biological families account for 4.8% (4 cases). The majority of perpetrators of sexual violence per case was one person, with a percentage of 94% (79 cases). This was followed by cases involving two perpetrators, which accounted for 3.6% (3 cases). Cases involving more than two perpetrators were less common, accounting for 2.4% (2 cases).

The category of sexual violence under criminal law mainly was comprised of inappropriate acts against children, accounting for 35.7% of instances. This was followed by sexual intercourse, which accounted for a slightly lower percentage of 32.1% (27 cases). The two suspected criminal activities also coincided in 8.3% (7 cases) out of the total 84 cases. Additionally, there were 10 cases (11.9%) of rape, 2 cases (2.4%) of attempted rape, and 4 cases (4.8%) of inappropriate acts committed against victims above the age of 4. There was a single instance (1.2%) where the category was not identified. Out of a total of 84 instances of sexual violence, 14 cases, or 16.7% of the victims, suffered non-genitoanal injuries. Bruises accounted for most injuries, with a prevalence of 52.6%. Non-genitoanal injuries were most commonly observed in the upper extremities and chest, each accounting for 26.3% of cases. The head and neck areas were the next most affected, representing 15.8% of cases. The back region accounted for 10.5% of cases, while the abdomen region was the least commonly affected, with a prevalence of 5.3%.

Not every individual who falls victim to sexual violence suffers injuries to the genitoanal region. Out of about 13 cases, the genital examination conducted on the victims revealed no abnormalities; however, in 9 cases, the victims refused to take genital examinations. Old lacerations were the most prevalent damage in the genitoanal region, accounting for 54.4% of cases, whereas new lacerations were only present in 15.2% of cases. The prevalence of other injuries was 12.7% for old and new abrasions, 7.6% for redness, and 5.1% each for bruises and remnants of the hymen or caruncula hymenales.

According to the findings of this research, further examinations were conducted on 53 out of 84 victims. Out of the 53 cases that had supporting examinations, the vaginal swab was the most commonly administered test, accounting for 40.7% (35 cases). This was followed by ultrasound at 25.6% (22 cases), PP test at 22.1% (19 cases), HIV test at 3.5% (3 cases), urinalysis at 3.5% (3 cases), and psychiatric assessment at 3.5% (3/ cases). Moreover, the examination results revealed that sexual violence had a consequential effect, leading to pregnancy in 10 victims, which accounted for 11.9% of all reported cases.

This study did not find a statistically significant relationship between the occurrence of non-genitoanal trauma and the occurrence of genitoanal trauma. This finding is consistent with a retrospective study conducted by Suttipasit (2018) which found no statistically significant association between non-genitoanal trauma and the occurrence of genitoanal trauma.

Nevertheless, this outcome contradicts the findings of Zilkens et al., (2017) which showed an increase in the identification of genitoanal trauma when non-genitoanal trauma had been previously identified. Therefore, given that there is no correlation between non-genitoanal trauma and genitoanal trauma, it is advised to keep checking the genitoanal region even in the lack of previous injury to other body areas (Suttiposit, 2018).

This study also discovered a correlation between the duration between medical examinations and the timing and occurrence of new genitoanal injuries. This study is consistent with the findings of Zilkens et al., (2017) who reported that the time lapse between the occurrence of an incident and the victim receiving medical examination was linked to the identification of injuries in the victim's genital region. In addition, Zilkens et al., (2017) discovered that as the period between the evaluation and the incidence increases, the presence of genital injuries decreases. In a study conducted by Lincoln, Perera, Jacobs, & Ward, (2013) it was discovered that the occurrence of visibly observable genital trauma was less common compared to the occurrence of genital trauma. Due to the strong correlation between the timing of the incident and the discovery of genitoanal trauma, it is recommended for victims of sexual violence to promptly report the incident and get medical examinations to preserve possible medical evidence.

Nevertheless, this finding contradicts the findings of a study conducted by Suttiposit (2018) in Bangkok, which revealed no substantial correlation between the relationship with the perpetrator and the duration of the examination interval. The difference in results could be attributed to the lack of a maximum time interval for medical examinations as an exclusion criterion in this study, whereas Suttiposit (2018) exclusively utilized data from victims who underwent examinations within 120 hours following the incidence of sexual violence. This study also discovered a noteworthy correlation between victims who had experienced repeated sexual violence in the past and the duration of time between medical evaluations following the incident.

In 2019, the National Commission on Violence Against Women discovered that individuals who perpetrate sexual violence are primarily individuals who were already acquainted with the victim. The close relationship between the perpetrator and the victim often inhibits the victim from reporting the incident due to fear or the perception of being threatened, mainly if the perpetrator is a family member or someone living with the victim. Perpetrators typically use authority to persuade the victim to comply with their desires (Farid, 2020). Child victims are particularly vulnerable as they lack the necessary insight to determine if the activities of the perpetrator constitute criminal behavior. In the majority of cases involving a pattern of sexual violence, it is frequently observed that the perpetrator employs threats with the dual purpose of deterring the victim from reporting the crime and exerting power over them, resulting in the victim feeling powerless to resist. In contrast, the perpetrator's power can force the victim into a position where they have no alternative but to rely on the perpetrator to survive.

These gaps hinder victims from reporting the sexual violence they have experienced. However, if an individual concerned for the victim is aware of the victim's condition, would typically encourage or urge the victim to make a report. However, it is crucial to note that this coincidence does not always occur promptly, resulting in a longer time gap between the medical examination and the occurrence of the incident. This reduces the probability of discovering new injuries. However, there might still be injuries with preexisting marks.

## CONCLUSION

The findings revealed that most of the victims did not experience repeated incidences of sexual violence. The predominant injuries seen on the victim's body were contusions in the chest area and the upper extremities. There was no apparent relationship between the injuries that occurred outside the genital and genitoanal area. Moreover, a significant correlation was found between the proximity of the perpetrator to the victim. A limitation of this study is its use of secondary or retrospective data derived from medical records and visum et repertum (VER). This enables the

occurrence of inaccuracies or incomplete data, which might arise from errors in data recording. Future studies should establish the optimal timeframe for assessing the condition, commencing from the occurrence that enables a broader range of injuries to be observed. Hospitals can conduct examinations, sampling, and document medical evidence in compliance with international standards. We also hope for the prompt implementation of policies by the government to eradicate sexual violence. Sexual violence is a complex issue that cannot be eliminated alone through legal measures. A comprehensive approach is necessary, encompassing aspects such as public education, preventative programmes, support for victims, and rehabilitation efforts.

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