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Epidemiological and Medico Legal Profile of Sexual Assault Victims in Urban Guinea: A Retrospective Hospital Based Study in Conakry

Namandian Traore[1*], Thierno Mamadou Cherif Diallo[2], Ousmane Camara[3], Sia Marie Ouendeno[1], Ousmane Soumah[1], Djenabou Bah[1], Sambou Oulare[4], Marie Rose Lamah[1], Idiatou Balde[1], Alpha Oumar Binta Diallo[2]

[1]Department of Forensic Medicine, Regional Hospital of Conakry, Conakry, Guinea
[2]Department of Forensic Medicine, Donka National Hospital, Conakry, Guinea
[3]Ignace Deen National Hospital, Conakry, Guinea
[4]Ministry of Health and Public Hygiene, Conakry, Guinea

Email: *mamadoma2012@yahoo.fr, drcherif2003@yahoo.fr, drocmedleg@gmail.com, souendeno80@gmail.com, ousmanesoumah707@gmail.com, daffdjenabou@gmail.com, sambououlare4@gmail.com, mrlamah52@gmail.com, idiatoubalde2018@gmail.com, aobjalloh90@gmail.com

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Abstract

Introduction: Sexual assault is a major public health and criminal justice issue in Guinea. The vulnerability of victims, often minors, justifies detailed epidemiological and medico-legal analysis. This study described the profile of victims examined at the Department of Forensic Medicine of the Regional Hospital of Conakry and assessed the influence of age and consultation delay on traumatic injury detection. **Methods**: A retroprospective descriptive and analytical study was conducted on sexual assault cases recorded between 2021 and 2025. Variables included victims' sociodemographic characteristics, assault circumstances, medico-legal findings, consultation delay, and perpetrator characteristics. Descriptive statistics, Chi-square tests, and Odds Ratios were used. **Results**: Among 7645 medico-legal consultations, 929 sexual assault cases were identified (12.16%). Victims were predominantly female (99.78%) with a mean age of 16.64 years. Minors formed the majority and were more likely than adults to present traumatic injuries (45% vs 28%; OR = 2.10; 95% CI: 1.55 - 2.83). Injury detection decreased significantly with increasing examination delay (48.2% within 24 h vs 9.7% after 72 h; $p < 0.0001$). Assaults were mainly extra-familial (70.08%) and frequently occurred at the perpetrator's

residence (47.47%). Perpetrators were exclusively male with a mean age of 29.8 years. **Conclusion**: Sexual assaults mainly affect adolescent girls and young women. Early medico-legal examination and the vulnerability of minors significantly influence injury detection. Strengthening rapid referral, protection of minors, and medico-judicial responses is essential in Guinea.

Keywords

Sexual Assault, Forensic Medicine, Perpetrator Profile, Conakry

1. Introduction

Sexual assault constitutes one of the most serious forms of interpersonal violence worldwide. According to the World Health Organization (WHO), sexual violence includes any sexual act, attempt to obtain a sexual act, or unwanted sexual advance carried out through force or coercion, regardless of the relationship between the perpetrator and the victim [1]. It represents a major public health, criminal justice, and human rights issue due to its often long-lasting physical, psychological, and social consequences [1]. Globally, approximately one in three women has experienced physical or sexual violence during her lifetime, most often perpetrated by an intimate partner or someone known to the victim [2]. Adolescents and young women constitute a particularly vulnerable population [3]. Medical consequences include genital and extra-genital trauma, sexually transmitted infections, unintended pregnancies, and psychiatric disorders such as post-traumatic stress disorder [1] [4]. From a forensic perspective, rigorous clinical examination and accurate documentation of injuries play a central role in establishing judicial evidence [5]. The assessment of Total Temporary Incapacity (TTI) is a determining factor in the legal classification of the offense and the direction of prosecution [6]. Forensic medicine services therefore represent a key observatory of sexual violence and contribute to the production of evidence necessary for the development of public policies [7]. In sub-Saharan Africa, the prevalence of sexual violence remains high in a context marked by persistent gender inequalities and socio-economic constraints [8]. Studies conducted in Nigeria have shown a predominance of adolescent victims, with most assaults perpetrated by individuals known to the victim [9]. In South Africa, medico-legal data have documented genito-anal injuries among rape survivors, although the absence of visible injury remains common [10]. Similarly, a hospital-based study in Senegal highlighted the vulnerability of young girls and the frequency of assaults occurring within socially proximate environments [11]. In Guinea, despite the presumed magnitude of the phenomenon, published forensic data remain limited. The Department of Forensic Medicine at the Regional Hospital of Conakry constitutes a key institutional observatory of sexual violence, contributing to the generation of data to inform public health policies and judicial responses. Importantly, this study does not aim to estimate

the population-level incidence or prevalence of sexual violence, but rather to describe the proportion and characteristics of cases recorded within a medico-legal service.

2. Materials and Methods

2.1. Study Design and Setting

This was a retrospective observational study with both descriptive and analytical components, based on medico-legal records. It was conducted at the Department of Forensic Medicine of the Regional Hospital of Conakry (Guinea), which serves as the main public forensic referral center operating under judicial requisition for the capital and surrounding areas. The study period extended from January 1, 2021 to December 31, 2025. The study comprised two components: 1) an overall assessment of the medico-legal activity of the department over the study period, and 2) a specific retrospective analysis of all sexual assault cases examined during the same period.

2.2. Study Population

All alleged sexual assault cases examined during the study period were retrospectively included. Eligible cases comprised victims received under judicial requisition, referred by healthcare facilities or non-governmental organizations, or brought by relatives, provided that a complete medico-legal examination had been performed by a trained forensic physician. Exclusion criteria included cases in which sexual assault was ruled out after medico-legal evaluation, refusal of examination, and incomplete or non-exploitable records. Information related to alleged perpetrators was collected from victim statements and judicial requisition documents available at the time of examination.

2.3. Study Flow and Data Completeness

During the study period (2021-2025), a total of 7645 medico-legal records were screened at the Department of Forensic Medicine of the Regional Hospital of Conakry. Of these, 3801 records were excluded because medico-legal evaluation ruled out sexual assault, 9 records were excluded because the victim refused the medico-legal examination, and 2906 records were excluded because the records were incomplete or contained insufficient information for analysis. The remaining 929 alleged sexual assault cases fulfilled the eligibility criteria and were included in the descriptive analyses. Missing data were assessed for each study variable before statistical analysis. Descriptive analyses were performed using all available observations for each variable. The multivariable logistic regression analysis was conducted using a complete-case approach and included 894 complete cases. Consequently, the denominator varied according to the availability of data for each variable. No statistical imputation was performed in order to avoid introducing potential bias. The study flow is presented in **Figure 1**.

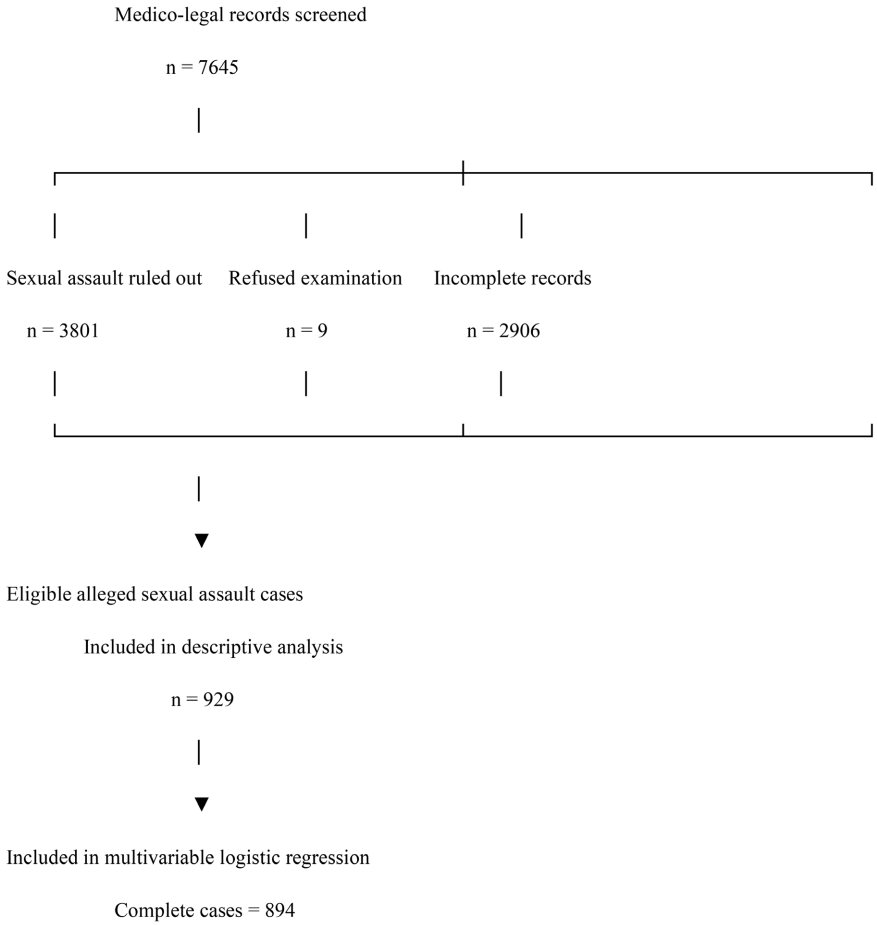


Figure 1. Study flow diagram.

2.4. Data Collection Procedure

Data were retrospectively extracted from standardized medico-legal records completed at the time of examination. A structured data collection form was systematically used, allowing for consistent recording of sociodemographic, circumstantial, clinical, and forensic variables. All examinations were conducted by physicians trained in forensic medicine, following a standardized protocol that included a detailed medico-legal interview, a general physical examination, a gynecological or ano-genital examination when indicated, an assessment of extra-genital injuries, and an evaluation of the victim's immediate psychological status.

2.5. Variables

The following categories of variables were analyzed: **1) Sociodemographic variables**: age (continuous and categorical), sex, marital status, place of residence, and socio-professional category. **2) Circumstantial variables**: location of the assault, time of occurrence, relationship to the alleged perpetrator, type of threat, condom use, and nature of the sexual act. **3) Medico-legal variables**: mode of admission, consultation delay, presence of traumatic injuries, type of genital and extra-genital injuries, hymenal status, total temporary incapacity (TTI), and psychological con-

dition at examination. **4) Alleged Perpetrator-related variables**: number of perpetrators, age and age group, educational level, socio-professional category, substance use (alcohol, tobacco, and illicit drugs), and judicial status.

2.6. Operational Definitions

A study case was defined as any alleged sexual assault victim who underwent a complete medico-legal examination during the study period and whose case met the predefined inclusion criteria. Case eligibility was determined using three complementary sources of information: 1) the victim's statement obtained during the medico-legal interview, 2) the findings of the standardized forensic clinical examination, and 3) the judicial requisition or referral document when available. Because the objective of this study was to describe medico-legal consultations for alleged sexual assault rather than to establish criminal responsibility, the victim's allegation constituted the primary criterion for inclusion, provided that a complete medico-legal examination had been performed. Clinical findings were considered supportive evidence but were not required to confirm case eligibility, as the absence of genital or extra-genital injuries does not exclude the occurrence of sexual assault, particularly when examination is delayed or penetration is not associated with visible trauma. When discrepancies existed between the victim's account, clinical findings, and judicial documentation, priority was given to the medico-legal assessment performed by the forensic physician. Cases were excluded only when the medico-legal evaluation concluded that the available findings were incompatible with the reported allegation or when the available documentation was insufficient to complete the forensic assessment. Judicial documents were used to verify administrative and legal information but did not override the clinical interpretation of the forensic examiner. The relationship between the victim and the alleged perpetrator was classified as intra-familial (parents, relatives, or members of the same household) or extra-familial (acquaintances, neighbors, authority figures, or strangers). Cases in which this relationship could not be established were classified as "not identified." **Information on alleged perpetrators**: Information regarding the characteristics of alleged perpetrators (relationship to the victim, age, sex, and number of perpetrators) was extracted from victims' statements recorded in the medico-legal files and, when available, from judicial requisition forms. These variables reflect allegations reported during the medico-legal examination and should not be interpreted as judicially established facts. The denominator reported for each characteristic corresponds to the number of records in which the relevant information was available.

2.7. Statistical Analysis

Data were analyzed using IBM SPSS Statistics version **XX** (IBM Corp., Armonk, NY, USA). Categorical variables were summarized as frequencies and percentages, while continuous variables were described using means and standard deviations or medians and interquartile ranges, as appropriate.

Associations between age group, consultation delay, and the presence of traumatic injuries were first explored using univariable analyses. A multivariable logistic regression model was then performed to assess the independent association of these two variables with traumatic injuries. Age group and consultation delay were selected a priori because of their clinical relevance and their potential influence on injury detection. Participants aged > 18 years served as the reference category for age group, while a consultation delay of 24 - 72 hours served as the reference category for consultation delay. Adjusted odds ratios (aORs), 95% confidence intervals (95% CIs), and p-values were reported.

The multivariable analysis was conducted using a complete-case approach. Of the 929 included cases, 894 had complete data and were included in the regression analysis. No statistical imputation was performed. Model calibration was assessed using the Hosmer-Lemeshow goodness-of-fit test. A two-sided p-value < 0.05 was considered statistically significant.

2.8. Statistical Power Considerations

The retrospective and consecutive inclusion of 929 cases over five years provided a substantial sample size. Based on observed proportions (45% injury rate among minors versus 28% among adults), the study had a statistical power greater than 80% to detect a moderate association (OR ≥ 1.8) at a 5% significance level.

2.9. Data Completeness and Missing Data Handling

Although a standardized medico-legal protocol was used, some variables were incompletely recorded, particularly TTI and psychological status. These limitations reflect the clinical context, resource constraints, and variability in assessment conditions. Missing data were handled using a complete-case approach for each variable, with explicit reporting of missing data rates. No statistical imputation was performed in order to avoid introducing potential bias.

2.10. Ethics and Consent

This study was conducted in accordance with ethical principles for research involving human subjects. Given its retrospective design based on anonymized medico-legal records, ethical approval was obtained from the National Ethics Committee for Health Research (Guinea). Informed consent for medico-legal examination was obtained from all victims or from their legal guardians in the case of minors, in accordance with national regulations and standard forensic practice. All data were anonymized prior to analysis to ensure confidentiality.

3. Results

The number of sexual assault cases recorded by the Department of Forensic Medicine increased over the study period, rising from 10 cases in 2021 to 373 cases in 2025. The proportion of sexual assault consultations among all medico-legal consultations also increased from 4.72% in 2021 to 13.41% in 2025, although it re-

mained relatively stable between 2022 and 2024 (12.18%, 12.00%, and 11.43%, respectively). These findings reflect the trend in cases managed by the department and should not be interpreted as evidence of an increasing incidence of sexual assault in the general population. The annual distribution of medico-legal consultations and sexual assault cases is summarized in Table 1.

Table 1. Summary of the activities of the department of forensic medicine at the regional hospital of Conakry (2021-2025).

Year	Sexual assault consultations (n)	Total medico-legal consultations (n)	Annual proportion (%)
2021	10	212	**4.72**
2022	80	657	**12.18**
2023	199	1658	**12.00**
2024	267	2336	**11.43**
2025	373	2782	**13.41**

The completeness of the study variables is presented in Table 2.

Table 2. Missing data by variable.

Variable	Available records (n)	Missing data (n)	Missing data (%)
Age	929	0	0%
Sex	929	0	0%
Time to consultation	929	0	0%
Traumatic injuries	929	0	0%
Relationship with the alleged perpetrator	929	0	0%
Total temporary incapacity (TTI)	192	737	79.33%
Psychological status	523	406	43.70%

The distribution of victims according to sex and age group is presented in Table 3.

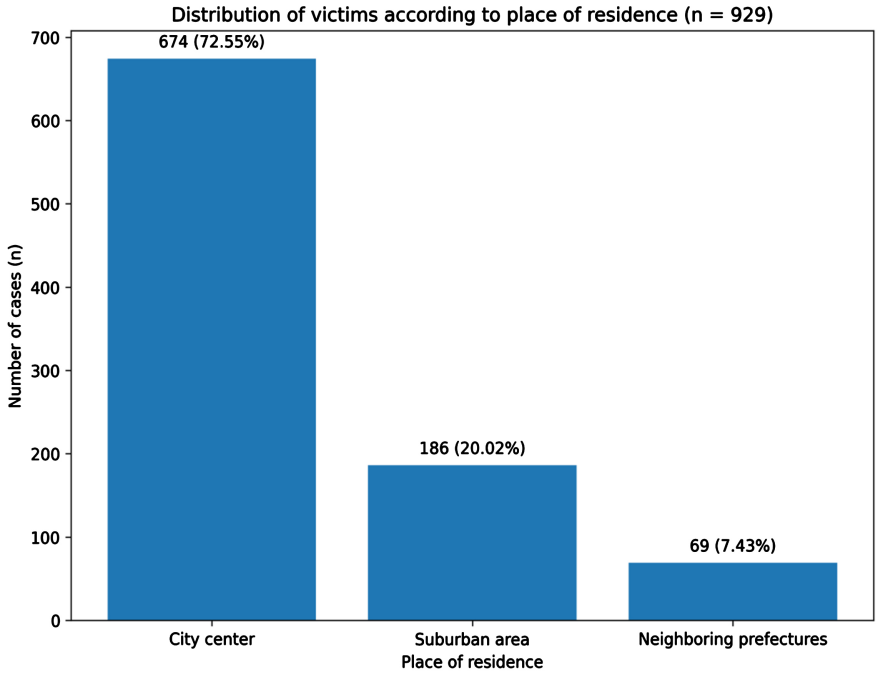
Table 3. Distribution according to sex and age group.

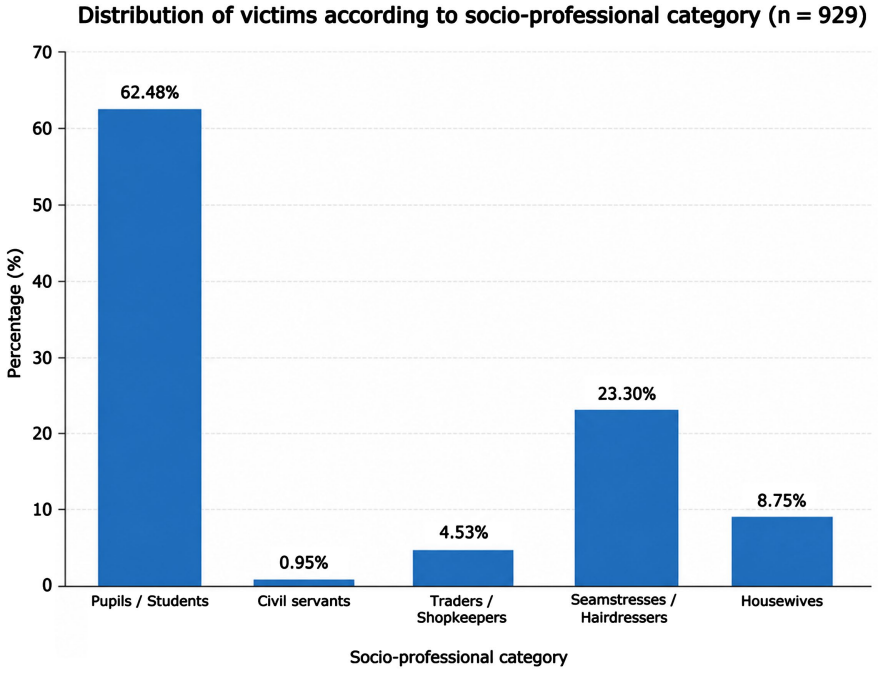
Age group (years)	Male (n)	Female (n)	Total (n)	Percentage (%)
≤5	0	8	8	0.86
6 - 10	2	12	14	1.51
11 - 15	0	219	219	23.57

Continued

16 - 20	0	615	615	66.2
>20	0	73	73	7.86
Total	2	927	929	100
Percentage (%)	0.22	99.78	100	-

The marital status distribution of victims is shown in Figure 2.





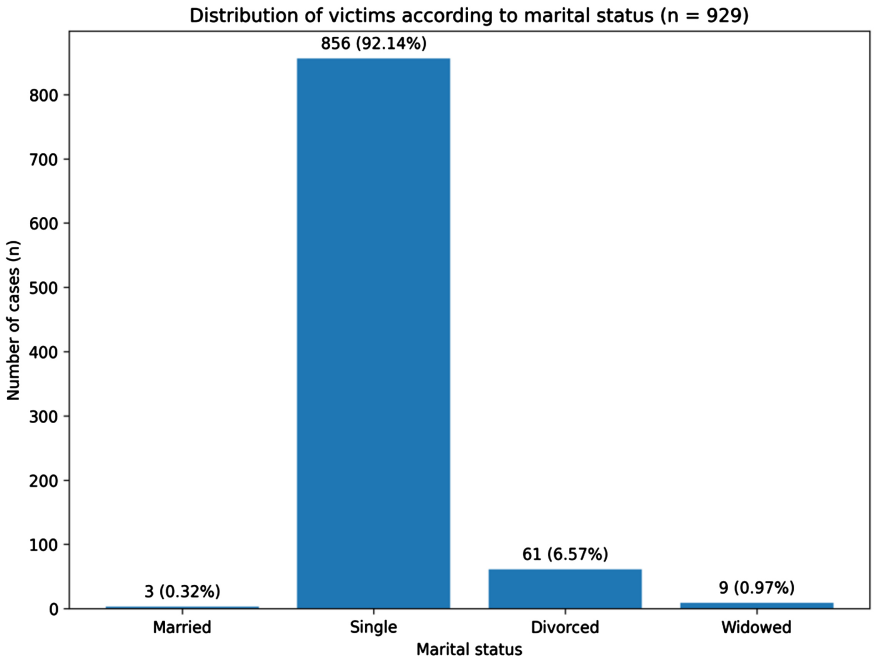


Figure 2. The distribution of victims according to marital status.

The relationship between victims and alleged perpetrators is illustrated in **Figure 3**.

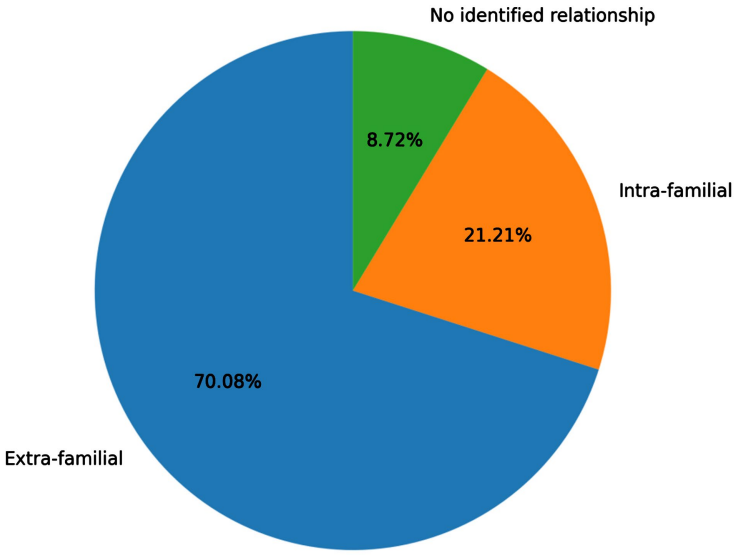


Figure 3. Relationship between victims and alleged perpetrators, based on victims' statements (n = 929).

The relationship with the alleged perpetrator was established from the victim's statement recorded in the medico-legal file. The category "*No identified relationship*" includes cases in which the victim was unable to identify or specify any relationship with the alleged perpetrator. The temporal distribution of sexual assaults according to the time of occurrence is presented in **Figure 4**.

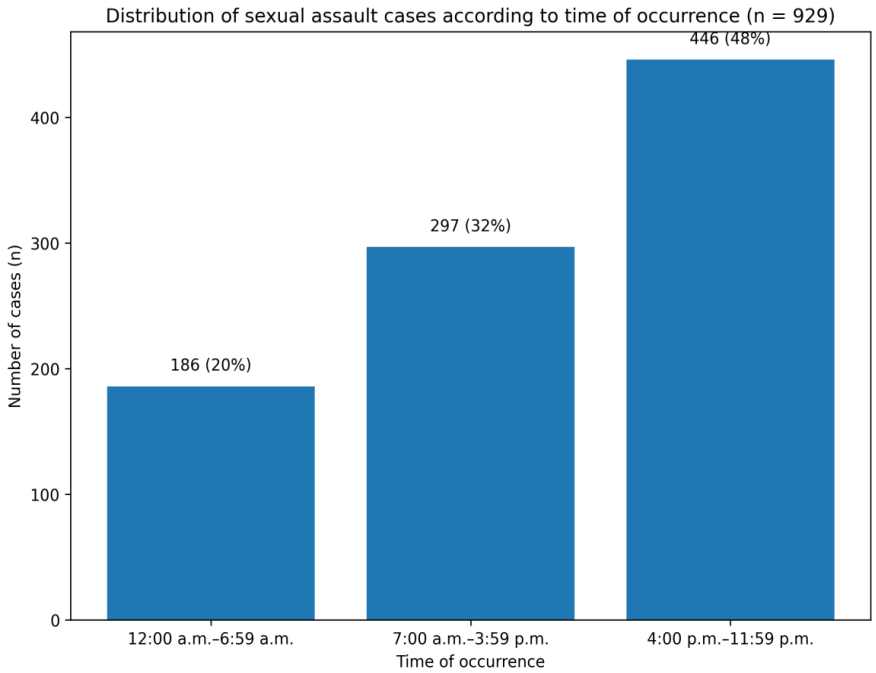


Figure 4. The temporal distribution of sexual assault cases according to time of occurrence.

The distribution of assault locations is presented in Table 4.

Table 4. Distribution according to the location of occurrence (N = 929).

Location of assault	Number (n)	Percentage (%)
Alleged perpetrator's residence	441	47.47
Victim's residence	94	10.12
Vacant lots/abandoned houses	253	27.23
School/apprenticeship setting	129	13.89
Other	12	1.29
Total	929	100

Table 5 presents victim-level prevalence, while Table 5 reports lesion-level counts, allowing multiple injuries per victim.

Table 5. Medico-legal characteristics of sexual assaults (n = 929).

Main variable	Category	Number (n)	Percentage (%)
Mode of admission	Brought by parents	34	3.66
	Received under judicial requisition	874	94.10
	Referred by an NGO	2	0.22
	Referred by a healthcare professional	19	2.04

Continued

Nature of threat	Verbal	893	96.12
	Bladed weapon	26	2.80
	Firearm	1	0.10
	Strangulation/punching	9	0.97
Condom use	Yes	0	0
	No	879	94.62
	Not documented	50	5.38
Nature of sexual violence	Sexual touching	133	14.32
	Digital and/or object penetration	84	9.04
	Penile penetration	710	76.43
	Complete or partial amnesia of events	2	0.22

The prevalence of traumatic injuries and hymenal findings is presented in Table 6.

Table 6. Prevalence of traumatic injuries among victims (n = 929).

Variable	Category	Effectif (n)	Percentage (%)
Presence of injuries	Yes	362	38.97
	No	567	61.03
Hymenal status	Previous rupture	610	65.66
	No rupture	232	24.97
	Recent rupture	87	9.36

The anatomical distribution of genital and extra-genital injuries is summarized in Table 7.

Table 7. Distribution of lesions by anatomical site.

Variable	Category	Effectif (n)	Percentage (%)
Genital injuries (n = 369)	Vulva	211	57.18
	Hymen	98	26.56
	Vaginal wall/cervix	28	7.59
	Perineo-anal	32	8.67
Extra-genital injuries (n = 878)	Bruises	509	58.00
	Wounds	268	30.52
	Osteo-articular	73	8.31
	Hematomas	28	3.19

The medico-legal and psychological characteristics of victims are presented in Table 8.

Table 8. Medico-legal and psychological parameters of victims (n = 929).

Main variable	Category	Number (n)	Percentage (%)
Total Temporary Incapacity (TTI)	TTI < 20 days	105	11.30
	TTI ≥ 20 days	87	9.36
	Not assessed	737	79.33
Consultation delay	≤24 hours	629	67.71
	24 - 72 hours	207	22.28
	72 hours - 5 days	93	10.01
Psychological status	Mutism	21	2.26
	Indifference	19	2.05
	Anxiety	460	49.52
	Refusal of gynecological examination	5	0.54
	Confusion	2	0.22
	Irritability	16	1.72
	Not assessed	406	43.70

The association between consultation delay and traumatic injuries is shown in Table 9.

Table 9. Association between traumatic injuries and consultation delay (n = 929).

Consultation delay	Injuries (n)	No injuries (n)	Total (n)	% with injuries
≤24 hours	303	326	629	48.2
24 - 72 hours	50	157	207	24.2
72 hours - 5 days	9	84	93	9.7
Total	362	567	929	-

The relationship between age group and traumatic injuries is presented in Table 10.

Table 10. Association between age group (minors vs adults) and traumatic injuries.

Age group	Injuries (n)	No injuries (n)	Total (n)
≤18 years	270	330	600
>18 years	92	237	329
Total	362	567	929

The results of the multivariable logistic regression analysis are presented in Table 11.

Table 11. Multivariable logistic regression analysis of factors associated with traumatic injuries among victims of sexual assault (complete-case analysis, n = 894).

Variables	Category	aOR	95% CI	p-value
Age group	≤18 years	2.05	1.50 - 2.80	<0.001
	>18 years	1 (ref)	-	-
Consultation delay	≤24 hours	2.80	1.95 - 4.00	<0.001
	24 - 72 hours	1 (ref)	-	-
	72 hours - 5 days	0.35	0.18 - 0.65	<0.001

Model calibration: Hosmer-Lemeshow goodness-of-fit test: $\chi^2 = 5.28$, df = 8, p = 0.728.

Characteristics of alleged perpetrators were available only for records in which this information had been documented in the medico-legal file or judicial requisition. Consequently, the denominator varies across variables and is reported for each analysis. The final multivariable logistic regression model included age group and consultation delay, which were selected a priori because of their clinical relevance and their potential influence on traumatic injury detection.

The socio-demographic, behavioral, and judicial characteristics of the alleged perpetrators are summarized in Table 12.

Table 12. Socio-demographic, behavioral, and judicial characteristics of alleged perpetrators (N = 1014).

Variables	Categories	Number (n)	Percentage (%)
Number of alleged perpetrator	1	916	90.33
	2	94	9.27
	≥3	4	0.39
Sex	Male	1014	100
	Female	0	0
Age group (years)	<18	6	0.6
	18 - 30	610	60.2
	31 - 45	371	36.6
	>45	27	2.7
	Estimated mean age	29.8 years	-
	Estimated range	15 - 58 years	-
Educational level	None	219	21.6
	Primary	580	57.2
	Secondary	194	19.1
	Higher	21	2.1

Continued

Socio-professional category	Unemployed	175	17.3
	Pupil/Student	316	31.2
	Laborer/Manual worker	412	40.6
	Trader	35	3.5
	Artisan	46	4.5
	Driver/Motorcycle taxi driver	57	5.6
Addictive behaviors	None known	783	77.2
	Alcohol	74	7.3
	Tobacco	124	12.2
	Drugs	24	2.4
	Alcohol + drugs	9	0.9
Judicial status	Identified	588	58.0
	Apprehended	416	41.0
	At large	7	0.7
	Not identified	3	0.3

4. Discussion

Importantly, this study does not aim to estimate population-level incidence or prevalence of sexual violence. Rather, it describes the proportion and temporal trends of cases recorded within a single medico-legal service. Therefore, the observed increase over time should be interpreted cautiously and likely reflects changes in reporting practices, judicial referral patterns, and access to medico-legal services, rather than a true increase in population-level occurrence. This study represents one of the largest recent medico-legal case series on sexual assault in Guinea. It provides a comprehensive overview of victim characteristics, circumstances of assault, modes of coercion, medico-legal findings, and alleged perpetrator profiles in an urban West African setting. Sexual assaults accounted for 12.16% of all medico-legal activities during the study period, a proportion consistent with findings from other hospital-based African studies (10% - 20%) [12] [13], highlighting the substantial contribution of sexual violence to medico-legal workload. The overwhelming majority of victims were examined under judicial requisition (94.1%), reflecting a highly formalized medico-legal pathway. The World Health Organization recommends that victims of sexual violence have timely access to standardized medico-legal examinations integrated with medical and psychosocial care, irrespective of legal proceedings [14]. However, the limited proportion of referrals from healthcare facilities or non-governmental organizations suggests restricted access to medico-legal services outside the judicial system. This finding is important because international guidelines emphasize the need for timely, com-

prehensive, survivor-centred medical and medico-legal care following sexual violence, including appropriate clinical management and preservation of forensic evidence [14]. The predominance of female victims (99.78%) and the concentration of cases among adolescents (mean age 16.6 years) confirm the particular vulnerability of young girls, in line with regional and international literature [13]. At the same time, male victims remain an underrecognized group, particularly in sociocultural contexts where stigma may limit disclosure [15]. Similarly, sexual violence affecting older adults, although less frequently documented, may present specific medico-legal and clinical challenges, including delayed reporting and increased vulnerability associated with dependency or social isolation [16]. These observations underscore the need for more inclusive research frameworks addressing underrepresented populations. The high proportion of pupils and students reflects patterns of daily mobility and social dependence. Assaults occurred predominantly in private or semi-private settings, particularly at the alleged perpetrator's residence (47.47%) or in isolated locations (27.23%), consistent with findings from other sub-Saharan African studies [12]. The temporal distribution, with a peak in late afternoon and evening hours (48%), likely reflects periods of reduced supervision and increased vulnerability. A major finding of this study is the strong association between consultation delay and the likelihood of documenting traumatic injuries. The proportion of injuries decreased markedly as the delay increased (48.2% within 24 hours, 24.2% at 24 - 72 hours, and 9.7% beyond 72 hours; $p < 0.0001$). Unlike analyses based solely on bivariate comparisons, the use of multivariable logistic regression allowed adjustment for potential confounding factors, thereby strengthening the robustness of these associations. Minors (≤18 years) were approximately twice as likely to present documented traumatic injuries compared to adults (45% vs 28%; OR = 2.10; 95% CI: 1.55 - 2.83). This association remained significant after adjustment, suggesting that age-related differences may reflect a combination of biological vulnerability and contextual factors. However, these findings should be interpreted with caution, as key variables such as pubertal stage, detailed sexual history, and examination conditions were not available and may have influenced injury patterns. The observed decline in injury detection over time is consistent with biological healing processes. Superficial genital and extra-genital lesions may resolve rapidly due to mucosal regeneration and rich vascularization. Previous studies have reported higher detection rates when examinations are performed within the first 24 hours [17] [18]. Slaughter *et al.* described a progressive decrease in detectable injuries beyond 72 hours [17], while Sommers emphasized the influence of examination timing and techniques on reported injury rates [18]. In our setting, the absence of systematic colposcopy may have further limited the detection of subtle lesions. From a methodological perspective, the use of a composite variable combining genital and extra-genital injuries represents a major limitation. These types of injuries may arise from different mechanisms and contexts of violence. Genital injuries are more directly related to the sexual act and tissue vulnerability, whereas extra-genital in-

juries often reflect physical coercion or associated violence. Their aggregation into a single outcome may have reduced analytical specificity and diluted mechanism-specific associations. Consequently, the observed relationships, particularly those involving age and consultation delay, should be interpreted cautiously. The increased vulnerability of minors may also be related to anatomical and developmental factors, including reduced tissue elasticity, hymenal fragility, and genital immaturity, which may increase the likelihood of visible injuries in cases of forced penetration. McCann *et al.* highlighted that certain hymenal injuries are more readily detectable in younger individuals, while also emphasizing that the absence of injury does not exclude sexual assault [19]. Furthermore, assaults involving minors may be associated with greater physical constraint or anatomical mismatch, which may contribute to injury occurrence. The potential interaction between consultation delay and age deserves consideration. Minors may be more likely to present early following disclosure, particularly in family or school settings, thereby increasing the probability of detecting injuries. In contrast, adults may delay consultation due to stigma, fear, or economic dependence, reducing the likelihood of documenting lesions. This interaction could not be formally assessed in the present study. Extra-familial alleged perpetrators predominated (70.08%), although underreporting of intra-familial violence is likely. Verbal coercion was the main form of threat (96.12%), whereas the use of weapons or severe physical violence was uncommon. This pattern highlights the central role of psychological coercion, particularly in familiar or domestic environments [14]. The interpretation of alleged perpetrator characteristics requires caution. While some variables were derived from judicial records, others were based on victim reports and may therefore be subject to reporting bias. Distinguishing between confirmed and reported information is essential to avoid overinterpretation. From a medico-legal perspective, the absence of severe physical violence or visible injury does not invalidate the occurrence of sexual assault. Injuries were documented in 38.97% of cases, a proportion consistent with the forensic literature [5]. Genital injuries mainly involved the vulva, and recent hymenal tears were relatively uncommon (9.36%), while previous hymenal rupture was frequent (65.66%), confirming that hymenal status alone is not a reliable indicator of sexual assault [5]. Extra-genital injuries, particularly bruises, suggest mechanisms of restraint or struggle. Psychologically, anxiety was the most frequently observed manifestation (49.52%), reflecting an acute stress response following assault. However, the high proportion of cases without documented psychological assessment (43.70%) indicates a lack of standardization in comprehensive medico-legal evaluation. The integration of structured psychotrauma assessment tools would improve both documentation and victim care. Although early consultation (<24 hours) was observed in a majority of cases (67.71%), which is favorable for evidence preservation, substantial gaps remain in medico-legal documentation. In particular, TTI was not assessed in 79.33% of cases, representing a major limitation in medico-judicial evaluation, as TTI is a key element in legal classification and sentencing. These deficiencies likely reflect

operational constraints, including limited resources, time pressure, and insufficient specialized training. Alleged Perpetrators were exclusively male and predominantly young adults (18 - 30 years: 60.2%), most often acting alone (90.33%), in line with findings from other African studies [12]. Although low educational level and informal occupations were common, these characteristics should not be interpreted as causal factors. Most alleged perpetrators had no reported substance use (77.2%), suggesting that substance use is not a systematic determinant in this context.

5. Limitations

This study has several limitations. First, it is based on data from a single medico-legal center and does not capture unreported cases or those not referred through judicial pathways, limiting the generalizability of the findings. Second, the use of a composite injury variable and the absence of key clinical parameters restrict the interpretation of lesion patterns. Third, the high proportion of missing data for variables such as TTI and psychological status may have introduced information bias. Finally, some alleged perpetrator-related variables were based on reported information and could not be systematically verified, potentially affecting the accuracy of alleged perpetrator profiling. Despite these limitations, this study provides valuable insights into medico-legal practices in a resource-limited setting and highlights critical areas for improvement, including standardization of examinations, systematic documentation of medico-legal findings, and improved access to care independent of judicial procedures.

6. Conclusion

This study demonstrates that sexual assaults constitute a significant and increasing component of medico-legal activity in Conakry. They primarily involve adolescent girls and young women, predominantly from central urban areas, and are committed by young male alleged perpetrators who most often act alone. The assaults mainly occur in private or isolated settings, with penile penetration predominating and condom use being almost absent. The high proportion of early consultations represents a favorable factor for forensic documentation and post-exposure prophylaxis. However, the incomplete assessment of Total Temporary Incapacity (TTI) highlights the need for greater standardization of medico-legal practices. These findings underscore the importance of targeted preventive strategies focused on adolescent girls, strengthening medico-legal expertise capacity, and systematically integrating structured psychological care. Improved harmonization of procedures could enhance evidentiary quality and the judicial response to sexual violence in urban Guinea.

Ethics Approval and Consent to Participate

This study was approved by the National Ethics Committee for Health Research

of Guinea (Comité National d'Éthique pour la Recherche en Santé, Guinea). The study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants and/or their legal guardians prior to inclusion in the study.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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