

Sexual Abuse of Minors in a West African Urban Setting: Epidemiological Profile, Clinical Features, and Management at Gaspard Kamara Health Center, Senegal

Astou Coly Niassy^{1,2}, Babacar Biaye^{2,3}, Salif Diallo³, Fatimata Bintou Sall³, Ndeye Sokhna Dia³, Rahadat Ibrahim³, Moussa Diallo⁴, Marieme Ba Gueye³

¹Diamniadio Health District, Dakar, Senegal

²Gynecology and Obstetrics Clinic, Le Dantec Hospital, Dakar, Senegal

³Gaspard Kamara Health Center, Dakar, Senegal

⁴National Hospital Center of Pikine, Dakar, Senegal

Email: medacn@gmail.com

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Abstract

Background: Sexual abuse of minors is a major public health and human rights concern, particularly in sub-Saharan Africa where underreporting remains frequent due to cultural taboos and limited medico-legal services. In Senegal, few studies have systematically documented the epidemiological and clinical characteristics of sexual abuse in health facilities. **Objective:** To describe the epidemiological profile, clinical and paraclinical features, and management of minors who were victims of sexual abuse at the Gaspard Kamara Health Center in Dakar, Senegal, over a five-year period. **Methods:** We conducted a retrospective descriptive and analytical study from January 2019 to June 2024. The study population included all female patients under 18 years presenting with suspected or confirmed sexual abuse. Data were collected from standardized medical and medico-legal records and analyzed using descriptive statistics and chi-square tests, with a significance threshold of $p < 0.05$. **Results:** A total of 147 cases of sexual abuse were recorded, of which 104 (70.7%) involved minors. The mean age was 13.8 ± 2.4 years, with the 12 - 15-year group being the most represented (58.6%). Most victims were unmarried schoolgirls residing in urban districts. The assaults primarily occurred at the perpetrator's home (44.0%) and during the afternoon (38.7%), with a single aggressor in 83.3% of cases. Clinical findings included old hymenal tears (49.4%), recent tears (16.5%), and extra-genital injuries (21.1%). Serological testing for HIV, syphilis, and hepatitis B/C was performed in 98.9% of cases; pregnancy was detected in 2.9%. Management included antibiotic prophylaxis or treat-

ment (75.3%), emergency contraception (34.7%), HIV post-exposure prophylaxis (22.1%), and medico-legal certification (96.1%). Only 10.1% of victims received structured psychological support. **Conclusion:** Sexual abuse of minors at Gaspard Kamara Health Center predominantly affects adolescent school-girls aged 12 - 15 years, often occurring in domestic settings and perpetrated by non-familial males. While medico-legal certification and STI screening were consistently provided, significant gaps remain in psychological care and post-exposure prophylaxis. Addressing these shortcomings requires a multidisciplinary approach and strengthened intersectoral collaboration to ensure comprehensive care and protection for victims.

Keywords

Sexual Abuse, Minors, Adolescents, Medico-Legal Care, Senegal, Sub-Saharan Africa

1. Introduction

Sexual abuse of minors is a major global public health concern, associated with profound physical, psychological, and social consequences. The World Health Organization (WHO) estimates that approximately 12% of girls and 5% of boys worldwide experience some form of sexual abuse before the age of 18, with higher prevalence rates reported in low- and middle-income countries, particularly in sub-Saharan Africa [1] [2]. These acts of violence not only violate fundamental human rights but also increase the risk of short- and long-term health complications, including sexually transmitted infections (STIs), unintended pregnancies, post-traumatic stress disorder (PTSD), depression, and suicidal behaviors [3]-[5].

In sub-Saharan Africa, the reported incidence of sexual abuse is likely underestimated due to cultural taboos, fear of stigmatization, and lack of accessible medico-legal services [6]. In Senegal, despite the existence of legal frameworks criminalizing sexual violence, underreporting remains a significant challenge, and medical documentation is often incomplete, limiting the possibility of judicial prosecution [7]. Health facilities thus play a crucial role not only in providing medical care but also in collecting forensic evidence, initiating psychosocial support, and facilitating access to justice for survivors.

The Gaspard Kamara Health Center (CSGK) in Dakar is one of the major referral centers for gynecological and obstetric care, including medico-legal evaluation of sexual assault victims. Despite the clinical and social relevance of this problem, few studies have systematically described the epidemiological patterns, clinical presentations, and management strategies for sexual abuse cases in this setting.

The present study aims to:

- 1) determine the frequency of sexual abuse among minors seen at CSGK,
- 2) describe the epidemiological profile of victims and alleged perpetrators,

- 3) document the clinical and paraclinical findings, and
- 4) assess therapeutic and medico-legal management practices over a five-year period.

2. Materials and Methods

2.1. Study Design and Setting

We conducted a retrospective, descriptive, and analytical study over a period of five and a half years, from January 1, 2019, to June 30, 2024, at the Gaspard Kamara Health Center (CSGK), a tertiary-level public facility located in Dakar, Senegal. CSGK is a major referral center for obstetrics, gynecology, and medico-legal evaluation of victims of sexual assault, serving both urban and peri-urban populations.

2.2. Study Population

The study included all female patients under the age of 18 years who presented to the CSGK Gynecology-Obstetrics Department with suspected or confirmed sexual abuse during the study period.

1. Inclusion criteria were:

- 1) Age < 18 years at the time of the incident,
- 2) Documentation of suspected or confirmed sexual abuse in the medical records,
- 3) Availability of complete clinical and paraclinical data.

2. Exclusion criteria were:

- 1) Incomplete or missing medical files,
- 2) Cases in which abuse was reported but could not be clinically or legally substantiated and lacked follow-up documentation.

2.3. Data Collection

Data were extracted from standardized medical and medico-legal records, emergency department registers, and follow-up consultation files. A structured data collection form was used to capture:

1) **Sociodemographic characteristics:** age, residence, educational status, marital status.

2) **Circumstances of the assault:** location, time of day, relationship to alleged perpetrator, number of perpetrators.

3) **Clinical findings:** general physical examination, genital examination (including hymenal status and presence of lesions), and extra-genital injuries.

4) **Paraclinical investigations:** laboratory testing (serologies for HIV, syphilis, hepatitis B and C), vaginal swabs for microbiology, pregnancy testing, and imaging if indicated.

5) **Therapeutic interventions:** post-exposure prophylaxis (PEP) for HIV, empirical antibiotic therapy, emergency contraception, wound care, psychological support, and medico-legal certification.

Table 1. Sociodemographic characteristics of minor victims of sexual abuse managed at Gaspard Kamara Health Center, Dakar, Senegal (2019-2024).

Variables	N (Total = 104)	Percentage (%)
Mean age (years)	13.8 ± 2.4	
Age group 5 - 11	15	14.4
Age group 12 - 15	61	58.6
Age group 16 - 17	28	27
Female sex	104	100
Single marital status	104	100
Students	67	64.4
Non-students	37	35.6
Urban residence	72	69.2
HLM district residents	33	31.4

Table 1 summarizes the distribution of age, marital status, school attendance, and place of residence among 104 minors victims of sexual abuse. The majority were unmarried schoolgirls aged 12 - 15 years, living in urban districts.

2.4. Definitions and Operational Terms

Sexual abuse: Any act involving a minor in sexual activity, with or without penetration, including genital-genital, genital-anal, or genital-oral contact, as well as non-contact acts when coercion, manipulation, or force is involved [8].

Recent hymenal tear: Disruption of the hymenal membrane with erythema, edema, or bleeding consistent with a lesion within the preceding 7 - 10 days.

Old hymenal tear: Scarred or healed hymenal disruption without acute inflammatory signs.

2.5. Data Analysis

Data were entered into Microsoft Excel 2016 and analyzed using SPSS® version 26.0 (IBM Corp., Armonk, NY, USA). Quantitative variables were expressed as means ± standard deviation (SD) or medians with interquartile ranges (IQR), while qualitative variables were expressed as frequencies and percentages. Associations between categorical variables were assessed using the Chi-square test or Fisher's exact test, as appropriate. A p-value < 0.05 was considered statistically significant.

2.6. Ethical Considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. Administrative authorization was obtained from the CSGK medical directorate. Confidentiality was strictly maintained by anonymizing data before analysis. Given the retrospective nature of the study and the sensitive topic, informed consent for participation was waived, but written informed consent had been obtained at the time of care for all medico-legal examinations and interventions.

3. Results

Between January 2019 and June 2024, a total of 147 cases of sexual abuse were recorded in the Gynecology-Obstetrics Department of CSGK. Among these, 104 involved minors, representing 70.7% of all sexual abuse cases managed during the study period.

Table 2. Circumstances of sexual assault among minors at Gaspard Kamara Health Center, Dakar, Senegal (2019-2024).

Variables	N	Percentage (%)
Location: Perpetrator's home	46	44
Location: Victim's home	30	28.4
Location: Public places	18	17.6
Time of day: Morning	21	20.2
Time of day: Afternoon	40	38.7
Time of day: Night	23	22.1
No familial relationship with perpetrator	61	58.6
Single perpetrator	87	83.3
Multiple perpetrators	17	16.7

Table 2 details the circumstances surrounding the assaults, including location, time of occurrence, and number of perpetrators. Most assaults occurred at the perpetrator's home, often during the afternoon, and were committed by a single aggressor.

The mean age of victims was 13.8 ± 2.4 years (range: 5 - 17 years), with the 12 - 15 years age group being the most represented (58.6%).

Table 3. Clinical and paraclinical findings in minor victims of sexual abuse at Gaspard Kamara Health Center, Dakar, Senegal (2019-2024).

Variables	N	Percentage (%)
Genital-to-genital contact	66	63.8
Digital penetration	19	18.2
Anal penetration	10	9.6
Oral-genital contact	9	8.4
Multiple forms of abuse	13	12.5
Old hymenal tears	51	49.4
Recent hymenal tears	17	16.5
Intact hymen	35	34
Extra-genital injuries	22	21.1

Table 3 presents physical examination findings (hymenal status, extra-genital

injuries) and paraclinical investigations (STI serologies, microbiological swabs, pregnancy testing). Nearly half of the victims had old hymenal tears, and systematic STI screening was performed in almost all cases

All victims were female, single, and the majority were students (64.4%). Most resided in urban districts, particularly the HLM neighborhood (31.4%).

In most cases, the assault occurred at the perpetrator's home (44%), followed by the victim's home (28.4%) and public places (17.6%). The afternoon was the most frequent time of occurrence (38.7%). All alleged perpetrators were male; in 58.6% of cases, there was no familial relationship with the victim. The perpetrator acted alone in 83.3% of cases.

The most frequent form of abuse was genital-to-genital contact (63.8%), followed by digital penetration (18.2%), anal penetration (9.6%), and oral-genital contact (8.4%). Multiple forms of abuse occurred in 12.5% of cases.

On admission, 49.4% of victims presented with old hymenal tears, 16.5% with recent hymenal tears, and 34.0% had an intact hymen. Extra-genital injuries such as ecchymoses and excoriations were observed in 21.1% of cases.

Serologic testing for HIV, syphilis, and hepatitis B/C was performed in 98.9% of victims. Vaginal swabs for microbiology were conducted in 82.5% of cases. Pregnancy testing was performed in all post-menarcheal victims, with a positivity rate of 2.9%.

Management strategies included antibiotic prophylaxis or treatment in 75.3% of victims, emergency contraception in 34.7% of post-menarcheal girls, local antiseptics in 84%, and post-exposure HIV prophylaxis in 22.1%. Only 10.1% of victims received structured psychological support. A medico-legal certificate was issued in 96.1% of cases to facilitate judicial proceedings.

Table 4. Therapeutic and medico-legal management of minor victims of sexual abuse at Gaspard Kamara Health Center, Dakar, Senegal (2019-2024).

Variables	N	Percentage (%)
STI serologies performed (HIV, syphilis, HBV, HCV)	103	98.9
Vaginal swabs performed	86	82.5
Pregnancy test positive	3	2.9
Antibiotic prophylaxis/treatment	78	75.3
Emergency contraception	36	34.7
Local antiseptics	87	84
HIV post-exposure prophylaxis (PEP)	23	22.1
Structured psychological support	11	10.1
Medico-legal certificate delivered	100	96.1

Table 4 describes the medical and legal care provided, including antibiotic prophylaxis, emergency contraception, HIV post-exposure prophylaxis, psychological support, and medico-legal certification. Most victims received antibiotics

and a medico-legal certificate, while structured psychological support was rarely provided.

These findings indicate that sexual abuse among minors at CSGK predominantly affects adolescent schoolgirls aged 12 - 15 years, often occurs in familiar environments, and is committed by male perpetrators who are usually known but not related to the victims. Clinical presentation is variable, with old hymenal lesions being the most common finding. Psychological support remains insufficient despite the significant medico-legal implications.

4. Discussion

This study highlights the alarming prevalence of sexual abuse among minors, representing over two-thirds of all cases managed in the Gynecology-Obstetrics Department of CSGK during the study period. The predominance of adolescent girls aged 12 - 15 years (**Table 1**) is consistent with findings from other African and global studies, which report peak vulnerability during early to mid-adolescence, when physical maturity increases the risk of being targeted, while psychosocial immaturity reduces the ability to resist coercion or report abuse [1]-[3]. Similar age distributions have been described in Senegal [4], Nigeria [5], and South Africa [6], suggesting a widespread regional pattern.

The majority of victims in our cohort were students (**Table 1**), highlighting the need for targeted school-based prevention programs. The high proportion of urban residents, particularly from the HLM district, may reflect increased reporting in urban settings or actual higher exposure due to population density, reduced parental supervision, and socio-economic vulnerability. Previous studies have identified poverty, overcrowding, and neighborhood insecurity as significant risk factors [7] [8].

Most assaults occurred in the perpetrator's home and during the afternoon (**Table 2**), reflecting periods of reduced adult supervision. This pattern is consistent with other African studies where perpetrators often exploit moments when victims are alone or in transit [9]. In our series, perpetrators were exclusively male, and more than half had no family relationship with the victim (**Table 2**). This differs from some reports in which intrafamilial abuse accounts for a significant proportion of cases [10] [11], possibly reflecting differences in disclosure dynamics and social stigma.

The predominance of genital-to-genital contact as the main abuse modality (**Table 3**) aligns with findings from other Sub-Saharan cohorts [12]. However, the presence of old hymenal tears in nearly half of victims (**Table 3**) suggests chronic or repeated abuse, a pattern that has been documented but remains underreported due to the lack of systematic follow-up [13]. The 34% of victims with intact hymens (**Table 3**) underscores the fact that absence of hymenal disruption does not exclude abuse, as many forms of sexual assault do not involve vaginal penetration [14].

The high rate of paraclinical investigations—particularly serology for sexually

transmitted infections (**Table 4**)—reflects good adherence to WHO recommendations for the medical management of sexual assault survivors [15]. Nevertheless, the rate of pregnancy testing (**Table 4**) and HIV post-exposure prophylaxis (**Table 4**), although relatively high, remains suboptimal compared to best practice standards [16].

The most concerning gap identified is the very low proportion (10.1%) of victims who received structured psychological support (**Table 4**). Numerous studies have documented the long-term psychological consequences of sexual abuse, including post-traumatic stress disorder, depression, anxiety, and suicidal ideation [17]-[19]. Integration of mental health professionals into emergency care pathways and establishing referral networks is critical to improving holistic care.

From a medico-legal perspective, the issuance of certificates in 96% of cases (**Table 4**) is encouraging, as it facilitates prosecution and potential deterrence. However, legal processes in Senegal remain slow, and victim protection measures are often insufficient, which may discourage reporting and cooperation with law enforcement [20]. Strengthening collaboration between health, legal, and social services is essential to improving both justice outcomes and victim recovery.

This study has several limitations. Being retrospective, it relied on the completeness of medical records, and underreporting is likely, given the stigma and fear associated with disclosure. The monocentric design may limit generalizability, although the CSGK serves a large and diverse population in Dakar. Nevertheless, the findings underscore the urgent need for integrated prevention, rapid medical and forensic care, and sustained psychological and social support.

In conclusion, sexual abuse of minors at CSGK predominantly affects adolescent girls (**Table 1**), occurs mainly in domestic environments (**Table 2**), and is perpetrated by adult males known but unrelated to the victim. The gaps in psychological care and post-exposure prophylaxis (**Table 4**) must be addressed through policy reforms, capacity building, and intersectoral collaboration. Given the long-term physical, psychological, and social consequences, combating sexual abuse in minors should be a public health priority in Senegal and across Sub-Saharan Africa.

5. Conclusion

Sexual abuse of minors remains a critical public health and human rights concern in Senegal. The present study conducted at the Centre de Santé Gaspard Kamara demonstrates that adolescent girls aged 12 - 15 years are disproportionately affected, with most assaults occurring in domestic settings and perpetrated by adult males unrelated to the victims. While medical management, particularly STI screening and antibiotic prophylaxis, was generally adequate, significant gaps were noted in the provision of psychological support and optimal post-exposure prophylaxis. Addressing these shortcomings requires a coordinated, multidisciplinary approach involving healthcare providers, mental health specialists, law enforcement, and social services. Prevention strategies should be community- and school-based, with

emphasis on awareness, early detection, and victim protection. Ultimately, reducing the incidence and impact of sexual abuse in minors demands both systemic reforms and sustained advocacy at national and regional levels.

Conflicts of Interest

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

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