

Sexual Violence Against Adolescents in a Brazilian State: an Analysis of Reported Cases

Mayara Alves Luis

Universidade Federal do Espírito Santo Centro de Ciências da Saúde <https://orcid.org/0000-0002-5162-8899>

Franciele Marabotti Costa Leite (✉ francielemarabotti@gmail.com)

Graduate Program in Public Health. Federal University of Espírito Santo

Nataly Jiménez Monróy

Universidade Federal do Espírito Santo

Luciana Graziela de Godoi

Universidade Federal do Espírito Santo

Nicole Letourneau



University of Calgary

Research

Keywords: Domestic Violence, Adolescents, Sexual Violence, Health Information Systems, Epidemiology

Posted Date: October 27th, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-997126/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Background: sexual violence against adolescents is a highly prevalent problem with profound impacts throughout life, and most often perpetrators are relatives and acquaintances of the victims. In Brazil, sexual violence is a problem that must be reported in all health services and the data collected must be registered in the Information System for Reporting Diseases (SINAN - *Sistema de Informação de Agravos de Notificação*). This study aimed to describe the frequency of reported cases of sexual violence against adolescents and to analyze their associated factors.

Method: a cross-sectional analytical study was conducted with reported data on sexual violence against adolescents in the state of Espírito Santo registered in SINAN between 2011 and 2018. Variables to characterize the victim, aggression and perpetrator were used. Bivariate analyzes were performed using Chi-Square (χ^2) and Fisher's exact tests. Multivariate analysis considered the log-binomial model and adjustment results were presented in Prevalence Ratio. All analyzes were stratified by sex. The study was approved by the Institutional Review Board of Federal University of Espírito Santo, under Opinion 2,819,597.

Results: among the full-filled forms in the variables analyzed in the study, the frequency of sexual violence was 32.6% and 93% of victims were female. The occurrence of injury reporting was associated in both sexes with adolescents aged between 10 and 12 years, the place of occurrence being the home, the relationship with the victim, and the recurrence of violence. In females, the outcome was also associated with number of perpetrators, and in males, with perpetrator's age.

Conclusion: through this study, prevalence and factors associated with reporting sexual violence in Espírito Santo were observed. The importance of information systems for disseminating data and the need for measures to prevent and treat the disease among adolescents is verified.

PORTUGUESE ABSTRACT

Introdução: a violência sexual contra adolescentes é um agravo de alta prevalência e de profundos impactos ao longo da vida, sendo os agressores em sua maior parte são familiares e conhecidos das vítimas. No Brasil, a violência sexual é um agravo de notificação compulsória em todos os serviços de saúde e os dados coletados devem ser registrados no Sistema de Informação de Agravos de Notificação (SINAN). O objetivo desse estudo foi descrever a frequência dos casos de violência sexual notificados contra adolescentes e analisar os seus fatores associados.

Método: estudo analítico do tipo transversal realizado com os dados notificados de violência sexual contra adolescentes no Espírito Santo registrados no SINAN entre 2011 e 2018. Foram utilizadas as variáveis de caracterização da vítima, da agressão e do agressor. Foram realizadas análises bivariadas por meio do teste Qui-Quadrado (χ^2) e exato de Fisher. A análise multivariada considerou o modelo log-binomial e os resultados do ajuste foram apresentados em Razão de Prevalência. Todas as análises foram estratificadas por sexo.

Resultados: entre as fichas de preenchimento completo nas variáveis analisadas no estudo, a frequência de violência sexual foi 32,6%, sendo que 93% das vítimas eram do sexo feminino. A ocorrência da notificação do agravo esteve associada em ambos os sexos a adolescentes com idade entre 10 e 12 anos, ao local de ocorrência ser a residência, à variável vínculo com a vítima, e à reincidência da violência. No sexo feminino o

desfecho também se manteve associado à variável quantidade de agressores e no sexo masculino à variável idade do agressor. Através desse estudo, foi observado a prevalência e os fatores associados à notificação de violência sexual em um estado do Espírito Santo.

Conclusão: constata-se a importância dos sistemas de informação para a disseminação de dados e a necessidade de medidas de prevenção e tratamento do agravo entre os adolescentes.

Background

Adolescence is a stage of extreme vulnerability to sexual violence, whether in the domestic or community context. Within the home, most cases are perpetrated by relatives or acquaintance of the victims [1, 2]. On the other hand, in the community context, the risks facing the occurrence of sexual violence increase as adolescents begin to attend new environments, where there is greater contact with groups of peers and involvement in affective relationships [2, 3].

According to data from the United Nations Children's Fund (UNICEF) [2], around 15 million adolescent girls between 15 and 19 years old have experienced forced sex during their lifetime. In a survey conducted in 20 countries, approximately 9 out of 10 victims of sexual violence reported that the act occurred for the first time during adolescence. A systematic review and meta-analysis study suggested that the prevalence of child sexual violence worldwide is approximately 20% among girls and 8% among boys [4].

Data on sexual violence in Brazil against children and adolescents are alarming. According to the Brazilian National Human Rights Ombudsman, 17,073 reports of sexual violence were made through Dial 100, a telephone channel for anonymous reporting of acts that violate human rights in Brazil [5]. Between 2011 and 2017, 184,524 suspected or confirmed cases of sexual violence were registered in the Information System for Reporting Diseases (SINAN - Sistema de Informação de Agravos de Notificação), with 45% of these cases occurring against adolescents [6]. A study conducted in the state of Santa Catarina demonstrates that the prevalence of reporting of sexual violence is higher in adolescents when compared to occurrence in women over 20 years of age [1]. Still, the Brazilian National Survey of School Health (PeNSE - Pesquisa Nacional de Saúde do Escolar) shows a prevalence of sexual violence among students enrolled in elementary school in Brazil, in 2015, was 4.0% [7].

In this scenario, adolescence is perceived as a period of great vulnerability to sexual violence, especially in the case of girls, and affecting youth of all levels of income, development, ages, contexts, and countries [2]. Regardless of the type, every act of sexual violence is both intrusive and traumatic, ranging from direct physical contact to the use of force, or occurring through less direct forms, such as unwanted exposure to sexual language and images [8].

This phenomenon has short to long-term impacts on adolescents' physical and mental health, such as sexually transmitted infections, early pregnancy, gastrointestinal disorders [9–12], post-traumatic stress disorder, anxiety, depression, eating and sleep disorders, relationship problems, and suicidal behaviors [11, 13, 14]. In addition to these consequences, studies also show engagement in risky sexual behavior [15, 16] and substance abuse [17, 18] as a consequence of sexual violence. In this context, the protection of youth against all forms of violence is a fundamental right guaranteed by international treaties and human rights standards [19]. The Convention on the Rights of the Child, held in 1989, had an impact on national and international legislation, programs and policies in favor of promotion and protection of their rights.

In Brazil, until the advent of the Federal Constitution of 1988, children and adolescents were not considered subjects of rights. Since then, modern legislation has been adopted in accordance with the United Nations Convention on the Rights of the Child, in order to ensure the rights of those under eighteen years of age [20]. As the main normative instrument in Brazil with regard to this population, in 1990 the Children and Adolescents Statute was sanctioned to ensure full protection for these individuals [21].

In the field of health, compulsory reporting of sexual violence is an instrument to guarantee rights and social protection that allows health, education, social assistance, Guardianship Councils and justice professionals to adopt measures to care for victims [22]. The Ministry of Health's Ordinance 1271 of 2014 made sexual violence a grievance with mandatory immediate reporting (within 24 hours), to ensure intervention in cases through the health sector [23], being an institutional obligation, and it is up to healthcare professionals to notify in accordance with current legislation [24], in order to introduce the adolescents into a protection and health care network.

Given the above, this study aimed to describe the frequency of cases of sexual violence reported against adolescents and to analyze their associated factors.

Materials And Methods

An analytical cross-sectional study was carried out with all reported cases of sexual violence against adolescents (10 to 19 years old) in Espírito Santo, between 2011 and 2018, registered in SINAN. SINAN aims to collect, convey and disseminate data generated by the Epidemiological Surveillance System to support the investigation process and provide subsidies for analysis of information on compulsory reporting injuries. It is fed by records of diseases and injuries that are of compulsory reporting, such as interpersonal and self-inflicted violence, among others [25].

Espírito Santo is situated in southeastern Brazil, having 46,074.444 km² of land area. According to the last census (IBGE), the state had about 3.5 million inhabitants, and the population of adolescents estimated at the time was 603,835, with a demographic density of 76.25 inhab./km² and a Human Development Index (HDI) of 0.740 [26].

Initially, in order to qualify the data, an exploratory descriptive analysis was carried out following instructive reporting of interpersonal and self-inflicted violence guidelines. Duplicate cases were verified by organizing the records by date of reporting, comparing date of occurrence, victim's name, date of birth and mother's name, and were later excluded. Furthermore, only reporting forms whose variables of interest in the study do not have the terms "ignored" or "blank" were analyzed.

The study's dependent variable was sexual violence, and the independent variables were victim characteristics, aggression and perpetrator characteristics. Victim characteristics were categorized as follows: age (10 to 12 years, 13 to 17 years, 18 to 19 years); race/color (white/non-white - brown, yellow, indigenous); disability/disorder (no/yes); area of residence (urban/rural, peri-urban); place of occurrence: home (yes/no - collective housing, school, sports venue, bar or similar, public road, commerce/services, industries/construction, other), occurred other times (no/yes); number of perpetrators (one/two or more); perpetrator's age (up to 19 years/20 years or older); perpetrator's sex (male/female/both sexes); relationship with the victim (partners and ex-partners -

spouses, ex-spouse, boyfriend, ex-boyfriend/parental relationship - father, mother, stepmother, stepfather/acquaintance and others/unknown); suspected alcohol use (no/yes) referral (no/yes).

To obtain the Prevalence Ratios, adjustment was considered via the log-binomial regression model, which is the particular case of the generalized linear regression model when considering the response variable with Bernoulli distribution and logarithmic link function [27].

The study was approved by the Institutional Review Board of Federal University of Espirito Santo, under Opinion 2,819,597, and all norms and guidelines of Resolution 499/2012 were respected.

Results

From 2011 to 2018, 561 cases of sexual violence were reported, representing a frequency of 32.6% of cases of reporting violence against adolescents, of which 522 (93.0%) cases occurred among female adolescents and 39 (7.0%) among male adolescents.

Table 1 presents victim characteristics. It is noted that, regardless of sex, most youth were between 13 and 17 years old, were non-white, did not have any disorders or disabilities, and lived in urban areas. Sexual violence mostly occurred at home and victims reported a history of A previous sexual violence. Regarding perpetrator characteristics, it is observed that in most cases there was only one perpetrator, who was typically over 20 years old, male, an acquaintance of the victims, and without suspicion of alcohol use. Almost all victims received referral.

Table 1
 Characteristics of reported cases of sexual violence against adolescents aged 10 to 19 years.
 Espirito Santo, 2011 to 2018 (N=561).

Variables	Female (N=522)			Male (N=39)		
	n	(%)	95% CI	N	(%)	95% CI
Age group						
10 to 12 years	169	32.4	28.50 – 36.51	17	43.6	29.30 – 59.02
13 to 17 years	300	57.5	53.19 – 61.64	19	48.7	33.87 – 63.80
18-19 years	53	10.2	7.85 – 13.04	03	7.7	2.65 – 20.32
Race/color						
White	137	26.1	22.47 – 29.98	06	15.4	7.25 – 29.73
Non-white	386	73.9	70.02 – 77.53	33	84.6	70.27 – 92.75
Disability/Disorder						
No	481	92.1	89.52 – 94.16	33	84.6	70.27 – 92.75
Yes	41	7.9	5.84 – 10.48	06	15.4	7.25 – 29.73
Area of residence						
Urban	451	86.4	83.19 – 89.07	35	89.7	76.42 – 95.94
Rural/Peri-urban	71	13.6	10.93 – 16.81	04	10.3	4.06 – 23.58
Place of occurrence: Home						
No	113	21.6	18.33 – 25.38	08	20.5	10.78 – 35.53
Yes	409	78.4	74.64 – 81.67	31	79.5	64.47 – 89.22
Occurred other times						
No	219	42.0	37.79 – 46.23	10	25.6	14.57 – 41.08
Yes	303	58.0	53.77 – 62.21	29	74.4	58.92 – 85.43
Number of perpetrators						
One	459	87.9	84.86 – 90.45	32	82.1	67.33 – 91.02
Two or more	63	12.1	9.55 – 15.14	07	17.9	8.98 - 32.67
Perpetrator's age (years)						
Up to 19 years	122	23.4	19.94 - 27.19	08	20.5	10.78 - 35.53
20 years and older	400	76.6	72.81 - 80.06	31	79.5	64.47 - 89.22
Perpetrator's sex						
Both sexes	07	1.3	0.65 - 2.74	01	2.6	0.45 - 13.18

Variables	Female (N=522)			Male (N=39)		
Female	07	1.3	0.63 - 2.74	04	10.3	4.06 - 23.58
Male	508	97.4	95.57 - 98.40	34	87.1	73.29 - 94.40
Relationship with the victim						
Partners and ex-partners	77	14.8	11.97 - 18.05	02	5.1	1.42 - 16.89
Parental relationship	147	28.2	24.47 - 32.17	04	10.3	4.06 - 23.58
Acquaintance/others	219	41.9	37.79 - 46.23	27	69.2	53.58 - 81.43
Unknown	79	15.1	12.32 - 18.46	06	15.4	7.25 - 29.73
Suspected alcohol use						
No	395	75.7	71.81 - 79.16	30	76.9	61.66 - 87.35
Yes	127	24.3	20.84 - 28.19	09	23.1	12.65 - 38.34
Referral						
No	49	9.4	7.17 - 12.19	02	5.1	1.42 - 16.89
Yes	473	90.6	87.81 - 92.83	37	94.9	83.11 - 98.58

Table 2 describes the bivariate analyses. It is observed that sexual violence in both sexes was predicted by the act, place of occurrence, occurred other times, and relationship with the victim ($p < 0.05$). In females, the prevalence of sexual violence was also related to disability/disorder, number of perpetrators, perpetrator's sex and perpetrator with suspected alcohol use ($p < 0.05$).

Table 2
Distribution of characteristics of reports of sexual violence among adolescents by sex Espirito Santo, 2011 to 2018 (N=561).

Variables	Female (N=522)				Male (N=39)			
	n	(%)	95% CI	p-value	n	(%)	95% CI	p-value
Age group								
10 to 12 years	169	65.5	59.51 - 71.04	0.000	17	14.9	9.52 - 22.59	0.013
13 to 17 years	300	41.7	38.12 - 45.30		19	7.3	4.73 - 11.13	
18-19 years	53	18.2	14.20 - 23.05		03	3.8	1.28 - 10.45	
Race/color								
White	137	40.8	35.70 - 46.20	0.899	06	4.9	2.27 - 10.32	0.091
Non-white	386	41.2	38.13 - 44.42		33	9.9	7.17 - 13.63	
Disability/Disorder								
No	481	40.3	37.54 - 43.09	0.014	33	8.2	5.92 - 11.33	0.435(*)
Yes	41	54.7	43.45 - 65.43		06	11.3	5.29 - 22.58	
Area of residence								
Urban	451	40.5	37.64 - 43.40	0.207	35	9.2	6.72 - 12.57	0.271
Rural/Peri-urban	71	45.8	38.16 - 53.66		04	5.3	2.09 - 12.93	
Place of occurrence: Home								
No	113	28.2	24.00 - 32.77	0.000	08	3.5	1.77 - 6.68	0.000
Yes	409	47.1	43.82 - 50.45		31	13.9	9.97 - 19.06	
Occurred other times								
No	219	36.0	32.25 - 39.85	0.000	10	3.7	2.02 - 6.68	0.000
Yes	303	45.9	42.14 - 49.72		29	15.8	11.20 - 21.72	
Number of perpetrators								
One	459	44.3	41.27 - 47.30	0.000	32	10.3	7.38 - 14.16	0.057
Two or more	63	27.2	21.84 - 33.22		07	4.9	2.39 - 9.76	
Perpetrator's age (years)								
Up to 19 years	122	39.7	34.42 - 45.31	0.568	08	6.1	3.10 - 11.50	0.219

(*) Fisher's exact test.

Variables	Female (N=522)				Male (N=39)					
20 and older	400	41.6	38.51 - 44.72		31	9.6	6.87 - 13.34			
Perpetrator's sex										
Both sexes	07	10.6	5.23 - 20.31		0.000	01	2.9	0.52 - 14.92	0.262(*)	
Female	07	2.9	1.40 - 5.80			04	5.2	2.04 - 12.61		
Male	508	53.0	49.81 - 56.11			34	9.9	7.18 - 13.53		
Relationship with the victim										
Partners and ex-partners	77	24.0	19.64 - 28.95		0.000	02	11.8	3.29 - 34.34		0.014(*)
Parental relationship	147	44.1	38.91 - 49.51			04	2.9	1.12 - 7.17		
Acquaintance/others	219	45.9	41.49 - 50.40			27	11.3	7.91 - 16.00		
Unknown	79	57.3	48.91 - 65.19			06	10.0	4.66 - 20.15		
Suspected alcohol use										
No	395	43.8	40.63 - 47.10		0.002	30	9.0	6.34 - 12.50		0.642
Yes	127	34.5	29.84 - 39.51			09	7.6	4.03 - 13.75		
Referral										
No	49	36.8	29.12 - 45.30		0.288	02	3.8	1.04 - 12.75		0.293(*)
Yes	473	41.6	38.80 - 44.53			37	9.2	6.77 - 12.46		
(*) Fisher's exact test.										

The prevalence of cases of sexual violence against girls was 2.69 times (95%CI: 2.07 - 3.50) higher among those aged between 10 and 12 years compared to the group of girls aged 18 and 19 years. There is a higher occurrence of sexual violence at home than other spaces (PR: 1.57; 95%CI: 1.33 - 1.86) when there is a history of sexual violence and (PR: 1.21; 95%CI: 1.08 - 1.36) and was 1.58 times (95%CI: 1.28 - 1.95) by a lone perpetrator. As for the relationship with the victims, sexual violence against girls is approximately 1.9 times more perpetrated by strangers than by partners or ex-partners (e.g. boyfriends, girl-friends) (95% CI: 1.57 - 2.34) (Table 3).

Table 3

Raw and adjusted analysis of the effects of characteristics of cases of sexual violence against female adolescents. Espírito Santo, 2011-2018 (N=522)

Variables	Raw analysis			Adjusted analysis (**)		
	PR	95% CI	p-value	PR	95% CI	p-value
Age group						
10 to 12 years	3.60	2.78 - 4.66	0.000	2.69	2.07 - 3.50	0.000
13 to 17 years	2.29	1.77 - 2.96		2.05	1.58 - 2.64	
18-19 years	1.0	–		1.0	–	
Race/color						
White	1.0	–	0.899	1.0	–	0.985
Non-white	1.01	0.87 – 1.17		0.99	0.93 - 1.15	
Disability/Disorder						
No	1.0	–	0.014	1.0	–	0.176
Yes	1.36	1.09 - 1.69		1.17	0.93 - 1.46	
Area of residence						
Urban	0.88	0.73 - 1.06	0.207	0.92	0.77 - 1.09	0.312
Rural/Peri-urban	1.0	–		1.0	–	
Place of occurrence: Home						
No	1.0	–	0.000	1.0	–	0.000
Yes	1.67	1.41 - 1.98		1.57	1.33 - 1.86	
Occurred other times						
No	1.0	–	0.000	1.0	–	0.001
Yes	1.28	1.12 - 1.46		1.21	1.08 - 1.36	
Number of perpetrators						
One	1.63	1.31 - 2.03	0.000	1.58	1.28 - 1.95	0.000
Two or more	1.0	–		1.0	–	
Perpetrator's age (years)						
Up to 19 years	1.0	–	0.568	1.0	–	0.720
20 and older	1.05	0.89 – 1.22		1.03	0.89 – 1.18	
Relationship with the victim						
Partners and ex-partners	1.0	–	0.000	1.0	–	0.000

Variables	Raw analysis			Adjusted analysis (**)		
Parental relationship	1.84	1.46 - 2.31		1.25	1.01 - 1.54	
Acquaintance/others	1.91	1.54 - 2.38		1.70	1.39 - 2.07	
Unknown	2.39	1.87 - 3.04		1.92	1.57 - 2.34	
Suspected alcohol use						
No	1.0	–	0.002	1.0	–	0.271
Yes	0.79	0.67 - 0.92		0.92	0.79 - 1.06	

In males, sexual violence was 3.47 times (95%CI: 1.01 – 11.92) higher among adolescents aged between 10 and 12 years when compared to the occurrence among those aged between 18 and 19 years. It associated with a higher prevalence of occurrences at home (PR: 4.44; 95%CI: 1.97 – 10.01), and with a history of sexual violence (PR: 3.56. 95%CI: 1.71 – 7.39). Perpetrators aged 20 years or more increased the prevalence of sexual violence against boys by approximately two times (95%CI: 1.03 - 4.02) and the outcome was practiced more by partners and ex-partners than by parents (PR: 0.12; 95%CI: 0.03 - 0.53).

Table 4

Crude and adjusted analysis of the effects of characteristics of cases of sexual violence against male adolescents. Espirito Santo, 2011-2018

Variables	Raw analysis			Adjusted analysis (**)		
	PR	95% CI	p-value	PR	95% CI	p-value
Age group						
10 to 12 years	3.98	1.21 - 13.12	0.013	3.47	1.01 - 11.92	0.037
13 to 17 years	1.95	0.59 - 6.42		2.34	0.69 - 7.89	
18-19 years	1.0	--		1.0	--	
Race/color						
White	1.0	--	0.091	1.0	--	0.982
Non-white	2.02	0.87 - 4.70		1.01	0.51 - 1.97	
Disability/Disorder						
No	1.0	--	0.435(*)	1.0	--	0.377
Yes	1.38	0.61 - 3.13		1.23	0.78 - 1.95	
Area of residence						
Urban	1.73	0.63 - 4.73	0.271	1.03	0.42 - 2.56	0.942
Rural/Peri-urban	1.0	--		1.0	--	
Place of occurrence: Home						
No	1.0	--	0.000	1.0	--	0.000
Yes	4.01	1.89 - 8.54		4.44	1.97 - 10.01	
Occurred other times						
No	1.0	--	0.000	1.0	--	0.000
Yes	4.26	2.13 - 8.52		3.56	1.71 - 7.39	
Number of perpetrators						
One	2.10	0.95 - 4.65	0.057	1.61	0.77 - 3.35	0.239
Two or more	1	--		1	--	
Perpetrator's age (years)						
Up to 19 years old	1.0	--	0.218	1.0	--	0.020
20 and older	1.59	0.75 - 3.36		2.04	1.03 - 4.02	

(*) Fisher's exact test

(**) Log-binomial model

Variables	Raw analysis			Adjusted analysis (**)		
Relationship with the victim						
Partners and ex-partners	1.0	--	0.018	1.0	--	0.000
Parental relationship	0.24	0.05 - 1.24		0.12	0.03 - 0.53	
Acquaintance/others	0.96	0.25 - 3.72		1.61	0.49 - 5.29	
Unknown	0.85	0.19 - 3.84		2.17	0.56 - 8.42	
Suspected alcohol use						
No	1.0	--	0.642	1.0	--	0.937
Yes	0.84	0.41 - 1.73		1.01	0.55 - 1.82	
(*) Fisher's exact test						
(**) Log-binomial model						

Discussion

It is observed that the frequency of reports of sexual violence in Espirito Santo was 32.6%, higher than the previously reported national prevalence of 24.7% between 2011 and 2017 [28]. As for associated factors, the sexual violence was significantly predicted by younger age of the victim with 10 to 12 year olds most at risk. Most sexual violence, cases occurred at home, and were part of a history of violence with a perpetrator known to the victims. In females, the sexual violence was also more likely by a lone perpetrator, and in males, perpetrators aged 20 years and older.

It is noted that the number of reported cases of sexual violence against girls is significantly higher when compared to the number of reported cases in male adolescents. This finding is similar to that found in a study conducted with reported cases of sexual violence throughout Brazil, in which the prevalence of the outcome was 77.1% in females [29], which is similar to that found in other studies [30–32]. It is worth highlighting a study of cases of violence reported in Pernambuco, that the prevalence of sexual violence was higher in females compared to males [33].

Historically, in the context of a patriarchal society deeply marked by the asymmetry of power in gender relations, there is a perpetuation of eroticization and objectification of the female body, which begins during childhood and intensifies during adolescence [34]. In this context, it is important to emphasize that sexual violence is one of the manifestations of gender inequality that mainly affects women across the lifespan, and one of the cruelest forms of demonstration of dominance imposed on them [1]. Sexual violence against adolescents is a favored form of gender-determined violence, as it is usually perpetrated by an older, experienced man who has a trusting relationship with the victim [35].

Although sexual violence is mostly committed against girls, it is important to emphasize that it also affects male youth; however, the data available in the literature limit knowledge of its magnitude [2]. Some factors may be related to the underreporting of these cases in males, namely: fear of homosexuality and/or fear of being seen as homosexual; emotional responses differentiated from teenagers; fear of being blamed, as they are generally seen

as able to defend themselves; difficulty of guardians to perceive relevant signs and symptoms of abuse, and; denial of abuse when it occurs through perpetrators such as parents and other adolescents [36, 37]

In both sexes, there is a higher prevalence of reports of sexual violence against adolescents aged between 10 and 12 years. Girls become more exposed to sexual violence during puberty, when secondary sexual characteristics develop [2, 30]. Moreover, individuals in the early stages of adolescence are physically, psychologically and socially more vulnerable, not having sufficient maturity to understand or anticipate violence by the perpetrators, who often gain the victims' trust and may also impose authority over victims to perpetrate violence [1, 30]. Therefore, in order to break with this type of violence, it is necessary that third parties denounce and activate the protection network for adolescents, as they depend on the initiative of others to break the silence [1].

It is important to highlight the higher prevalence of sexual violence against girls in the age groups from 10 to 12 years and from 13 to 17 years, compared to the age of 18 to 19 years, suggesting perpetuation of the cycle of violence throughout adolescence. On the other hand, in males, the highest prevalence was associated only with boys aged between 10 and 12 years. These findings suggest that boys are victims more often while there is still no possibility of defense, and for this reason the outcome is less prevalent in older ages [34].

In the present study, the main place of occurrence of sexual violence was in the victims' homes. A survey of reported cases of sexual violence registered in SINAN observed that the chances of sexual violence were approximately twice as high at home than other spaces [31]. In a study carried out in the state of Paraná, sexual violence was most often carried out in the homes of victims, followed by the homes of perpetrators and relatives [30].

The first experience of human interaction usually takes place at home, in a positive, nurturing, and loving context. However, the home is also a place where the first exposure to violence and perpetuation of the cycle is likely to occur [2]. Due to home privacy, violence against children and adolescents is practiced without public knowledge, making interventions difficult to be carried out to deconstruct youths' perception of a safe and trustworthy place [30, 31]. In addition to these factors, home privacy contributes to the silence of recurrent episodes [31].

After adjusting for the multivariate analysis, revictimization remained associated with a higher prevalence of sexual violence in both sexes. In a longitudinal study carried out with adolescents in the United States, there was a recurrence of sexual violence in a quarter of victims during the academic semester [38]. Between 2010 and 2014, 680 cases of sexual violence against adolescents were reported in schools, of which 40.0% were recurrent cases [29], supporting similar prevalence found in other studies conducted with data from SINAN [39] [31].

In a study that analyzed the recurrence of reported cases of violence, it was possible to note that there was a recurrence of sexual violence or negligence, even after previous reports of physical and sexual violence, suggesting that in some cases reporting is not enough to change the victim's environment may not prevent revictimization [40]. A systematic review revealed that, revictimization is associated with greater suffering, presence of psychiatric disorders, difficulty in interpersonal relationships and coping, self-blame, shame, and revictimization in adult life [41–44].

Regarding perpetrator characteristics, a higher prevalence of sexual violence among females remained associated with having only one perpetrator. According to national descriptive studies that used reported data on violence, most sexual assaults against adolescents are by a lone perpetrator [28, 31]; however, it is important to

emphasize that although the reported cases mostly contain only one perpetrator, adolescents may be exposed to more than one perpetrator frequently [38].

In males, the perpetrator was likely to be an adult (aged 20 years or more) regardless of r adjustment. This finding corroborates other research in which most perpetrators were adults [45]. The relationship of adults with children and adolescents is guided by hierarchy and power relations; thus, adults can more easily take advantage of these relationships to coerce, manipulate and attack their victims who are more vulnerable [46].

As for the perpetrators' relationships with the victims, the highest prevalence of sexual violence was associated with the perpetrator being unknown. During adolescence, contact with people in environments outside family life tends to increase, which makes adolescents more exposed to violence by people outside the home. However, it is worth raising a hypothesis that suspected or confirmed cases of sexual violence committed by strangers or by acquaintances without family ties to the victim can be more easily reported by youth and relatives, compared to cases where the perpetrator is a relative, since chronicity and silence are common in the domestic environment [35]. Additionally, it is noteworthy that the data in this study come from the reporting of the health sector, which can facilitate the omission by victims and their families as to the perpetrator's true identity [1].

Limitations of this study include the use of a secondary database, which makes it impossible to correct, or fill in, missing data. Furthermore, selection bias may also be a limitation as only cases reported via the health system are reported, that is we did not access legal system reports. Thus, it is not possible to infer the real prevalence of sexual violence, since there are cases that, even when they arrive at the health service, are not reported, and cases that occur in the community in general that are not attended to by health services.

Despite the limitations, studies using secondary databases such as SINAN are important for determining the predictors and profiles of sexual violence for healthcare professionals and managers. This type of study is also relevant to signal managers about possible improvements that can be made in the sexual violence reporting instrument, in information systems and in continuing education of professionals about identification and report of injuries.

Conclusions

This study revealed the high frequency sexual violence among youth, as well as the characteristics of victims, perpetrators, and sexual violence, with attention paid to sex differences.

Factors associated with the reporting of suspected or confirmed cases of sexual violence against adolescents in Espírito Santo, the first study in the state to explore these data. Therefore, given the high magnitude and complexity of the injury throughout the Brazilian territory, carrying out studies that assess the distribution and factors associated with sexual violence at the municipal and state levels are relevant, to assess systemic weaknesses and intervene adequately responding to situations according to local reality.

It is important to consider the need to approach and work on sexual education with adolescents so that they can know their rights, recognize possible situations of sexual violence, and expose such experiences in order for them to be protected. In this context, schools are fundamental to fostering such age-appropriate discussions, and to promote an environment where: (1) students can expose situations in which their rights have been violated, and (2) students feel safe and protected.

It is hoped that the reporting of cases of sexual violence against youth can be encouraged, contributing to the development and improvement of public policies to promote health and provide safety for youth. National studies with primary data should be conducted to strengthen enable greater understanding and the creation of policies, programs and intervention strategies that can be carried out in local contexts.

Declarations

Ethics approval

The study was approved by the Institutional Review Board of Federal University of Espirito Santo, under Opinion 2,819,597.

Consent for publication

Not applicable.

Availability of data and materials

The original data from the survey are available upon request.

Competing interests

Not applicable.

Grant numbers and/or funding information

Espírito Santo Research and Innovation Support Foundation (FAPES) (In Portuguese: Fundação de Amparo à Pesquisa do Espírito Santo). Edital FAPES/CNPq/Decit-SCTIE MS/SESA Nº 03/2018 – PPSUS.

Authors' contributions

FMCL contributed substantially to the concept and design of the study; ML wrote the first draft; NM and LG conducted the data analyses; all authors contributed to the interpretation of data and approved the final version to be published, with NL and FMCL primarily responsible for revising the drafts for publication. All authors read and approved the final manuscript

Acknowledgment and Credits

The authors would like to thank the Espirito Santo Research and Innovation Support Foundation (FAPES) for funding the study.

Conflict of interests, if any

There is no conflict of interest to declare.

References

1. Delzियो CR, Bolsoni CC, Nazário NO, Coelho EBS. Características dos casos de violência sexual contra mulheres adolescentes e adultas notificados pelos serviços públicos de saúde em Santa Catarina, Brasil. *Cad Saúde Pública*. 2017;33. doi:10.1590/0102-311x00002716.
2. UNICEF. A familiar face: violence in the lives of children and adolescents. New York: United Nation's Children's Fund; 2017. <https://data.unicef.org/resources/a-familiar-face>. Accessed 12 Jan 2021.
3. Miller E. Prevention of and Interventions for Dating and Sexual Violence in Adolescence. *Pediatric Clinics of North America*. 2017;64:423–34. <https://doi.org/10.1016/j.pcl.2016.11.010>
4. Stoltenborgh M, van IJzendoorn MH, Euser EM, Bakermans-Kranenburg MJ. A Global Perspective on Child Sexual Abuse: Meta-Analysis of Prevalence Around the World. *Child Maltreat*. 2011;16:79–101. <https://doi.org/10.1177/1077559511403920>
5. Brasil. Ministério da Mulher, da Família e dos Direitos Humanos (2019). Disque direitos humanos. Brasília, Brasil. Retrieved from https://brasil.estadao.com.br/blogs/vencer-limites/wp-content/uploads/sites/189/2020/06/disque100-relatorio2019-04jun20-blogvencerlimites_040620202052.pdf
6. Brasil. Ministério da Saúde (2018). Secretaria de Vigilância em Saúde Ministério da Saúde. Análise epidemiológica da violência sexual contra crianças e adolescentes no Brasil, 2011 a 2017. Brasília, Brasil. Retrieved from: <https://antigo.saude.gov.br/images/pdf/2018/junho/25/2018-024.pdf>
7. Santos M de J, Mascarenhas MDM, Malta DC, Lima CM, Silva MMA da. Prevalência de violência sexual e fatores associados entre estudantes do ensino fundamental – Brasil, 2015. *Ciênc saúde coletiva*. 2019;24:535–44. <https://doi.org/10.1590/1413-81232018242.13112017>
8. Greijer, S., & Doek, J. (2016). Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse. Luxembourg.
9. Ajayi AI, Ezegbe HC. Association between sexual violence and unintended pregnancy among adolescent girls and young women in South Africa. *BMC Public Health*. 2020;20:1370. <https://doi.org/10.1186/s12889-020-09488-6>
10. Berkowitz CD. Medical Consequences of Child Sexual Abuse. *Child Abuse & Neglect*. 1998;22:541–50. [https://doi.org/10.1016/S0145-2134\(98\)00023-4](https://doi.org/10.1016/S0145-2134(98)00023-4)
11. Khadr S, Clarke V, Wellings K, Villalta L, Goddard A, Welch J, et al. Mental and sexual health outcomes following sexual assault in adolescents: a prospective cohort study. *The Lancet Child & Adolescent Health*. 2018;2:654–65. [https://doi.org/10.1016/S2352-4642\(18\)30202-5](https://doi.org/10.1016/S2352-4642(18)30202-5)
12. Reading R, Rannan-Eliya Y. Evidence for sexual transmission of genital herpes in children. *Archives of Disease in Childhood*. 2007;92:608–13. <https://doi.org/10.1136/adc.2005.086835>
13. Chen W, Lee K-H. Sharing, Liking, Commenting, and Distressed? The Pathway Between Facebook Interaction and Psychological Distress. *Cyberpsychology, Behavior, and Social Networking*. 2013;16:728–34. <https://doi.org/10.1089/cyber.2012.0272>
14. Maniglio R. The impact of child sexual abuse on health: A systematic review of reviews. *Clinical Psychology Review*. 2009;29:647–57. <https://doi.org/10.1016/j.cpr.2009.08.003>
15. Richter L, Komárek A, Desmond C, Celentano D, Morin S, Sweat M, et al. Reported Physical and Sexual Abuse in Childhood and Adult HIV Risk Behaviour in Three African Countries: Findings from Project Accept (HPTN-043). *AIDS Behav*. 2014;18:381–9. <https://doi.org/10.1007/s10461-013-0439-7>

16. Senn TE, Carey MP, Venable PA. Childhood and adolescent sexual abuse and subsequent sexual risk behavior: Evidence from controlled studies, methodological critique, and suggestions for research. *Clinical Psychology Review*. 2008;28:711–35. <https://doi.org/10.1016/j.cpr.2007.10.002>
17. Fontes LFC, Conceição OC, Machado S. Violência sexual na adolescência, perfil da vítima e impactos sobre a saúde mental. *Ciênc saúde coletiva*. 2017;22:2919–28. <https://doi.org/10.1590/1413-81232017229.11042017>
18. Hudson A, Wekerle C, Goldstein AL, Ellenbogen S, Waechter R, Thompson K, et al. Gender Differences in Emotion-Mediated Pathways from Childhood Sexual Abuse to Problem Drinking in Adolescents in the Child Welfare System. *Journ Child Adol Trauma*. 2017;10:19–28. <https://doi.org/10.1590/1413-81232017229.11042017>
19. United Nations Children’s Fund (2014). *Hidden in Plain Sight: A statistical analysis of violence against children*. New York, United States. Retrieved from <https://data.unicef.org/resources/hidden-in-plain-sight-a-statistical-analysis-of-violence-against-children/>
20. de Azambuja, M.R.F. Violência sexual intrafamiliar: é possível proteger a criança. *Textos & Contextos*. 2006;5:1-19.
21. Brasil. (1990, Julho). Lei 8.069, de 13 de Julho de 1990. *Diário Oficial da União*. Retrieved from: http://www.planalto.gov.br/ccivil_03/leis/l8069.html
22. Garbin CAS, Dias I de A, Roviada TAS, Garbin AJ. Desafios do profissional de saúde na notificação da violência: obrigatoriedade, efetivação e encaminhamento. *Ciênc saúde coletiva*. 2015;20:1879–90. <https://doi.org/10.1590/1413-81232015206.13442014>
23. Brasil. (2014, Abril). Portaria nº 485, de 1º de abril de 2014. *Diário Oficial da União*. Retrieved from https://bvsms.saude.gov.br/bvs/saudelegis/gm/2014/prt0485_01_04_2014.html
24. Brasil. Ministério da Saúde (2016). *Viva: instrutivo notificação de violência interpessoal e autoprovocada*. Brasília, Brasil. Retrieved from https://bvsms.saude.gov.br/bvs/publicacoes/viva_instrutivo_violencia_interpessoal_autoprovocada_2ed.pdf
25. Brasil. Ministério da Saúde (2007). *SINAN: normas e rotinas*. Brasília, Brasil Retrieved from http://portalsinan.saude.gov.br/images/documentos/Portarias/Manual_Normas_e_Rotinas.pdf
26. Instituto Brasileiro de Geografia e Estatística (2017). *Espirito Santo*. Retrieved from <https://cidades.ibge.gov.br/brasil/es/panorama>
27. McCullagh, P. and Nelder, J. A. (1989). *Generalized Linear Models*. London: Chapman & Hall/CRC.
28. Pereira VO de M, Pinto IV, Mascarenhas MDM, Shimizu HE, Ramalho WM, Fagg CW. Violências contra adolescentes: análise das notificações realizadas no setor saúde, Brasil, 2011-2017. *Rev bras epidemiol*. 2020;23 suppl 1:e200004.SUPL.1.
29. Santos M de J, Mascarenhas MDM, Rodrigues MTP, Monteiro RA. Caracterização da violência sexual contra crianças e adolescentes na escola - Brasil, 2010-2014. *Epidemiologia e Serviços de Saúde*. 2018;27. doi:10.5123/S1679-49742018000200010.
30. Martins CB de G, Jorge MHP de M. Abuso sexual na infância e adolescência: perfil das vítimas e agressores em município do sul do Brasil. *Texto contexto - enferm*. 2010;19:246–55. <https://doi.org/10.1590/S0104-07072010000200005>

31. Miranda MHH, Fernandes FECV, Melo RA de, Meireles RC. Violência sexual contra crianças e adolescentes: uma análise da prevalência e fatores associados. *Rev esc enferm USP*. 2020;54:e03633. <https://doi.org/10.1590/s1980-220x2019013303633>
32. Ngo QM, Veliz PT, Kusunoki Y, Stein SF, Boyd CJ. Adolescent sexual violence: Prevalence, adolescent risks, and violence characteristics. *Preventive Medicine*. 2018;116:68–74. <https://doi.org/10.1016/j.ypmed.2018.08.032>
33. dos Santos TMB, Pitangui ACR, Bendo CB, Paiva SM, Cardoso MD, de Melo JPR, et al. Factors associated with the type of violence perpetrated against adolescents in the state of Pernambuco, Brazil. *Child Abuse & Neglect*. 2017;67:216–27. <https://doi.org/10.1016/j.chiabu.2017.02.006>
34. Sousa M de O de, Sirelli PM. Nem santa, nem pecadora: novas roupagens, velhas dicotomias na coisificação da mulher. *Serv Soc Soc*. 2018;:326–45. <https://doi.org/10.1590/0101-6628.144>
35. Gessner R, Fonseca RMGS da, Oliveira RNG de. Violence against adolescents: an analysis based on the categories gender and generation. *Rev esc enferm USP*. 2014;48 spe:102–8. <https://doi.org/10.1590/S0080-623420140000600015>
36. Briggs F, Hawkins RMF. A comparison of the childhood experiences of convicted male child molesters and men who were sexually abused in childhood and claimed to be nonoffenders. *Child Abuse & Neglect*. 1996;20:221–33. [https://doi.org/10.1016/S0145-2134\(95\)00145-X](https://doi.org/10.1016/S0145-2134(95)00145-X)
37. Watkins B, Bentovim A. The Sexual Abuse of Male Children and Adolescents: A Review of Current Research. *J Child Psychol & Psychiat*. 1992;33:197–248. <https://doi.org/10.1111/j.1469-7610.1992.tb00862.x>
38. Edwards KM, Banyard VL. Prevalence and Correlates of Sexual Revictimization in Middle and High School Youth. *J Interpers Violence*. 2020;:088626052090919. <https://doi.org/10.1177/0886260520909191>
39. Silva, S.B.J., da Conceição, H.N., Câmara, J.T., Machado, R.S., Chaves, T.S., Moura, D.E.S, Borges, L.V.A., & Moura, P.R (2020). Profile of notifications of violence against children and adolescents. *Rev enferm UFPE*, 14 (e244171). <https://doi.org/10.5205/1981-8963.2020.244171>
40. Fonseca FF, Sena RKR, Santos RLA dos, Dias OV, Costa S de M. As vulnerabilidades na infância e adolescência e as políticas públicas brasileiras de intervenção. *Rev paul pediatr*. 2013;31:258–64. <https://doi.org/10.1590/S0103-05822013000200019>
41. Cividanes GC, Mello AF, Mello MF. Revictimization as a high-risk factor for development of posttraumatic stress disorder: a systematic review of the literature. *Braz J Psychiatry*. 2019;41:82–9. <https://doi.org/10.1590/1516-4446-2017-0013>
42. Papalia N, Mann E, Ogloff JRP. Child Sexual Abuse and Risk of Revictimization: Impact of Child Demographics, Sexual Abuse Characteristics, and Psychiatric Disorders. *Child Maltreat*. 2020;:107755952093266. <https://doi.org/10.1177/1077559520932665>
43. Scoglio AAJ, Kraus SW, Saczynski J, Jooma S, Molnar BE. Systematic Review of Risk and Protective Factors for Revictimization After Child Sexual Abuse. *Trauma, Violence, & Abuse*. 2021;22:41–53. <https://doi.org/10.1177/1524838018823274>
44. Walker HE, Freud JS, Ellis RA, Fraine SM, Wilson LC. The Prevalence of Sexual Revictimization: A Meta-Analytic Review. *Trauma, Violence, & Abuse*. 2019;20:67–80. <https://doi.org/10.1177/1524838017692364>
45. Grimaldi, E. F. B. N. G., Costa, M. C. O, do Nascimento, O C., Santos, C. B. A., da Costa, A.M, & Souza, D.P. P. Sexual aggressor of children and adolescents: profile and perpetration, according to a decade of records of Specialized Police Departments. *Adolescência e Saúde*. 2018;15:34-44.

46. Pfeiffer L, Salvagni EP. Visão atual do abuso sexual na infância e adolescência. J Pediatr. 2005;8.
<https://doi.org/10.1590/S0021-75572005000700010>