DOI: 10.1590/1413-81232022279.07242022EN

Sexual violence: evaluation of cases and care for women in specialized and non-specialized health services

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Abstract *The objective was to characterize the cases of sexual violence (SV) against women in Minas Gerais state, associating the care provided in cases of rape with the type of health service that provided the care (specialized or not). The Notifiable Diseases Information System was used for data referring to the notification of SV among women (age ≥10 years old), which occurred in 2017, and the National Registry of Health Facilities for information on the type of health service. The SV occurred mainly among women under 29 years old (77.1%), blacks (61.1%), singles (69.7%), and with low education (42.4%). Rape was the most frequent SV (73.5%), with the majority being notified within 72 hours of the occurrence. For all the procedures recommended for acute situations of SV, there was an association between attendance at a specialized service and a greater chance of carrying out the planned procedures. The only exception was abortion permitted by law. The results demonstrated the importance of continuing investment in the qualification and expansion of the SV care network and the importance of a better territorial distribution of reference services in Minas Gerais.*

Key words *Violence against Women, Health Evaluation, Health Information Systems*

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Introduction

Violence against women is considered one of the most severe human rights violations, and sexual violence (SV) is one of its most perverse expressions. It articulates different types of violence, oppresses, and subjugates women, imposing serious consequences and impacts on their whole lives[1,2]. Their estimates are inaccurate[3,4], making it difficult to know the quantitative dimension of this violence and, consequently, to legitimize the need for public policies to cope with it.

Despite the fragile Brazilian statistics due to the underreporting of cases, as well as to problems in the quality and completeness of the reported data[5,6], the numbers are impactful. In 2017 and 2018, 127,585 rape occurrences were recorded in the country. From the victims, 81.8% were women, mostly girls up to 17 years (71.8%). The rape rate in the female population was 50.7/100,000 (2017) and 53.4/100,000 (2018), an increase of 5.4%. In 75.9% of the cases, the victims had a bond with the aggressors[7].

Circumscribed by hierarchical relationships and abusive manifestations of power, SV has its roots in gender inequalities. Many women tend to silence because of fear, shame, and guilt, as the idea that prevails in the social imagination, revealing a conservative and stigmatizing moral[8] reproduced also by the care service. In some cases, the absence of physical marks of violence prevents the recognition of aggression, putting the victim's words in doubt. These issues indicate challenges in facing the various forms of violence and assisting women in situations of violence, especially in the case of SV.

In Brazil, only from the 1980s, motivated mainly by the feminist movement, the combat of violence against women began to gain public notoriety and legitimacy to enter the government agenda. In 2003, with the creation of the Department of Policies for Women (SPM), this movement was intensified based on recognizing that confrontation with violence requires an intersectoral approach. In this context, actions have been proposed to integrate sectors such as justice, public security, social assistance, and health[8].

In the health sector, we can list advances in the care of women in situations of violence, such as the elaboration of technical standards that deal with the care of injuries resulting from SV[9], emergency contraception[10], and attention to abortion provided by law[11]. Another important advance was the Law No. 10,778/2003[12], addressing the compulsory notification of cases of violence against women treated in health services, and Ordinance No. 104/2011, which defined domestic and sexual violence as a compulsory notification grievance[13]. Such legal instruments were necessary for structuring the production of official information and the surveillance of violence against women in the health field.

The advances achieved, however, have not been sufficient to address the weaknesses inherent in health information systems (HIS), especially those dealing with sensitive issues such as violence. Cases of violence against women, including SV, are sometimes not identified by health services and, therefore, are not notified to the HIS, culminating in the underreporting of data. Furthermore, when performed, notifications often omit essential information to carry out qualified analyses on the characteristics of violence and women[6,14,15]. Despite problems, the HIS are an important institutional mechanism to measure the magnitude of violence and, even with weaknesses, have allowed the gathering and recording of information that contributes to the visibility of the phenomenon and subsidizes political actions.

Between 2010 and 2015, under the SPM intervention, efforts were made by the federal government through the Ministry of Health (MH) and the Ministry of Justice to improve and provide opportunities for the care of women in situations of SV, including determinations of the collection and storage of material for legal expertise and production of evidence, by attending physicians in reference hospitals of the Unified Health System (SUS in Portuguese), following the Law No. 12,845/2013[16], Decree No. 7,958/2013[17] and Interministerial Ordinance No. 288/2015[18].

In addition, it was necessary to create mechanisms to operationalize these services and procedures (Ordinances No. 485/GM/MS, No. 618 / SAS/MS of 2014 and No. 662/SAS/MS of 2015[19-21] and the Technical Standard for Humanized Care for people in situations of SV with the registration of information and collection of traces[22]) by the MH.

Based on recommendations of the World Health Organization (WHO), Brazilian regulations advocate complete and timely care, with reception, followed by multidisciplinary care, assessment of physical and emotional needs, emergency contraception, detection and treatment of Sexually Transmitted Infections (STIs) and HIV, preferably within 72 hours after the incident, and referrals to other health issues, social assistance, public security or other networks according to the need or wishes of the woman served. It also

provides for the regular monitoring of women by the health service for at least six months after the occurrence of violence, abortion in cases of pregnancy resulting from rape, and the participation of the health sector in the collection and preservation of forensic evidence or traces that may corroborate the investigation of the crime[22,23].

Despite the efforts made in Brazil to implement actions aimed at the qualified and effective care of women in situations of SV, the important investment in terms of organization and definition of a legal and technical framework was not accompanied by significant advances. There is a tiny network of specialized services to assist SV, and little is known about the established work processes" implementation, quality, and effectiveness.

Data from the Ministry of Health informed that, throughout the country, there are 836 health services registered for specialized care to SV, of which only 150 (17.9%) are qualified to collect traces and 106 (12.7%) to perform the abortion provided by law. In some states, there are no facilities registered to conduct these procedures. In Minas Gerais, there are currently 52 health services registered for specialized care, of which 21 (40.4%) are qualified to collect traces and seven (13.5%) the abortion provided by law[24].

Based on these considerations, the motivating questions for the development of this study were: (i) What are the characteristics of the reported SV cases, the main procedures performed in cases of rape, and the main referrals? (ii) Are there differences between the care provided to women victims of SV performed in health services registered by the SUS for specialized care of cases in relation to services not registered?

This is a complex, relevant, and often overlooked issue. Thus, assuming the health sector is strategic in the care of SV women situations, and considering that few Brazilian studies evaluate the care provided in different SUS health services, the conduct of this research is justified. The study results can indicate ways to improve the health care women policies in SV situations, a priority schedule because of the magnitude of the problem and social and health impacts.

This study is part of a larger research on the evaluation of care provided to women in a situation of SV in Minas Gerais and aimed to describe the cases of SV against women, reported in Minas Gerais, investigating the association between the care provided in cases of rape and the type of health service (specialized or not), where the care was performed.

Methods

Design, study population, and data sources

This is a cross-sectional study using secondary data on SV, which occurred between January 1st and December 31st, 2017, in Minas Gerais, among the resident female population aged 10 years or older. The National System of Notifiable Diseases (SINAN in Portuguese), "interpersonal/self-inflicted violence" module, available by the SUS Department of Informatics (Datasus) through the Tab for Windows software (TabWin) version 4.1.6 of 2018, was consulted to obtain non-nominal and disaggregated information on SV cases. Data from 2017 were used considering the time needed by the health service to adjust the publication of technical standard[22], the laws that deal with SV care, and mechanisms to operationalize services and procedures provided for in legislation[19-21].

Information from the National Registry of Health Facilities (CNES in Portuguese)[24] was used to characterize the health services responsible for the care and notification of cases. The health services included in the CNES as a specialized service – "code 165" (care for people in situations of sexual violence) – were considered "specialized" until June 2017 and remained active throughout the year.

In January 2017, there were 36 services registered as specialized service "code 165" in Minas Gerais (MG), and only six of them were also qualified to collect traces. Of them, 34 remained active throughout the year; two services remained registered until October of the same year (CNES 2119773 and 7326610); and nine services registered throughout 2017, four in the first semester (CNES 2200473; 2219654; 2145960 and 2775999). Therefore, for this study, 40 health services were considered "specialized" (Chart 1). The other SUS health services, which assisted women in situations of violence in 2017, were considered "non-specialized" services.

Data analysis

The study was conducted in two stages. The first one was descriptive and considered the entire SV women situation. In the second stage of the study, analytical, it was considered a subsample of the SINAN database, containing only cases of rape, assisted up to 72 hours after the occurrence of violence. Figure 1 illustrates the search and selection process of the SINAN data used in

the present study, according to the type of analysis performed.

For the descriptive analysis of the data, it was estimated the frequencies of the qualitative variables related to the sociodemographic characteristics of the women (age group, race-skin color, education, and marital status), the reported cases of SV (type of violence, place of occurrence, whether chronic or recurrent, health macro-region of occurrence), the aggressor, and the referrals made.

The characterization of the aggressor was made from the variable "bond/degree of kinship with the person assisted," categorized as: intimate partner (boyfriend/girlfriend, ex-boyfriend/girlfriend, spouse, former spouse); family member (son/daughter, father, mother, stepfather, stepmother, and sibling); acquaintance (friend/acquaintance, caregiver, employer/boss); unknown and others (police officer/law enforcement officer, person with institutional relationship, among others).

The categorization was also used for the variable referral since the same case may have more than one referral. Therefore, the categorization was conducted as follows: health network; social care network (including Reference Center for Social Assistance – CRAs, Reference Center for Social Assistance – CREAS, Guardianship Council, Council for the Elderly, among others); public security network (included: Specialized Police Station for the Protection of Children and Adolescents, Police Stations on Assistance to Women, other police stations); network for the care of women; justice system (included: Public Prosecutor's Office, Justice of Children and Youth, Public Defender's Office) and other referrals (included: education network, Reference Center for Human Rights).

Besides, according to the macroregions of Minas Gerais, the prevalence of SV, precisely, rape, was calculated. For this, we considered the cases that occurred among women living in the 14 macro-regions of the state and the female population estimated by the TCU for 2017, both information obtained through Datasus/Tabnet[25].

For the analytical stage, we considered as interest outcomes the procedures performed by health services recommended for rape cases: "HIV prophylaxis", "STI prophylaxis", "hepatitis B prophylaxis", "blood collection", "semen collection", "vaginal discharge collection", "emergency contraception", and "abortion provided by law". The explanatory variable was the type of health service that performed the care, that is, the "specialized" or "non-specialized".

To verify the strength of the association, we estimated the odds ratios (OR) and the respective 95% confidence intervals (95%CI) for each procedure using simple logistic regression. Complementarily, the prevalence ratios (PR) were estimated to inform the prevalence of each procedure among women treated in specialized services concerning the prevalence among those treated in non-specialized services. We used the log-binomial model to calculate PR and CI (95%). The statistical program RStudio, version 1.3.1093, was used for statistical analysis.

Ethical aspects

The study was submitted to the Research Ethics Committee of René Rachou Institute - Fiocruz Minas and it was approved on December 18th, 2020, under opinion number: 4,476,736. According to the Resolution of the National Health Council No. 466, December 12th, 2012, the Free and Informed Consent Form was not necessary once the study was based on secondary databases in the public domain.

Results

In 2017, according to SINAN, there were 32,483 notifications of interpersonal/self-inflicted violence among women living in MG, whose occurrence was also in the state, representing 74.3% of the total notifications of violence carried out in the period. Regarding reports of violence among women, 30,590 (94.2%) affected the female population aged 10 years or more, and in 2,455 cases (8.0%), SV was present (Figure 1).

SV occurred mainly among young women under 29 years (77.1%), and in 38.3% of cases, the victims were girls between 10 and 14 years old. There was also a higher number of notifications among black women (61.1%), single (69.7%), and with low education (42.4% of women had only complete or incomplete elementary school) (Table 1).

Rape was the most frequent SV (73.5%), representing an average of five rapes reported by health services per day in MG. 65.5% of these cases were reported less than 72 hours after the occurrence. Harassment accounted for 32.1% of SV notifications, followed by sexual exploitation (3.7%) and child pornography (1.7%). Other types of SV represented 3.9% of the cases (data not shown in tables).

For both rape and other sexual violence, the main aggressor was primarily male (95.0 and

Chart 1. Health services registered by SUS for specialized sexual violence care are included in the study as "specialized" services. Minas Gerais, 2017.

CNES	Institution	City	Health Macro-Region
2192896	Hospital Metropolitano Odilon Bherens	Belo Horizonte	Downtown
27022	Hospital Julia Kubitschek	Belo Horizonte	Downtown
26972	Maternidade Odete Valadares	Belo Horizonte	Downtown
27049	Hospital das Clínicas da UFMG	Belo Horizonte	Downtown
2191164	Centro Materno Infantil Juventina Paula de Jesus	Contagem	Downtown
2200473	Hospital Municipal de Contagem	Contagem	Downtown
2126494	Hospital Público Regional Prefeito Osvaldo Rezende Franco	Betim	Downtown
2126508	Maternidade Municipal Hayde Espejo Conroy	Betim	Downtown
6669026	Serviço de Assistência Especializada de Ibirité	Ibirité	Downtown
2115786	Unidade Municipal de Pronto Atendimento	Ibirité	Downtown
6892256	Hospital e Maternidade Regional de Ibirité	Ibirité	Downtown
2170671	Centro de Saúde Industrial	João Monlevade	Downtown
2709848	Hospital Margarida	João Monlevade	Downtown
6150063	Centro Viva Vida Integrado Hiperdia Minas	Santa Luzia	Downtown
2206528	Hospital Nossa Senhora das Graças	Sete Lagoas	Downtown
2136945	Hospital Queluz	Conselheiro Lafaiete	South Center
7951604	UPA Congonhas	Congonhas	South Center
2127989	Hospital das Clínicas Samuel Libanio	Pouso Alegre	South
2208857	Hospital Escola Aisi	Itajubá	South
2760657	Hospital São Sebastião	Três Corações	South
2775999	Santa Casa de Misericórdia de Passos	Passos	South
2208156	HPS Dr Mozart Geraldo Teixeira	Juiz De Fora	Southeast
2796570	Hospital Monsenhor Marciano	Santa Rita de Jacutinga	Southeast
2218887	PSF de Santa Bárbara Monte Verde	Santa Barbara do Monte Verde	Southeast
2142139	UBS de Santa Barbara do Monte Verde	Santa Barbara do Monte Verde	Southeast
2184249	UBS dr. Claudionor Valle Ferreira	Belmiro Braga	Southeast
2219719	UBS de Maripá de Minas	Maripá de Minas	Southeast
7326610	Pronto Socorro Municipal	Itaúna	West
2760924	Hospital Municipal dr. Joaquim Brochado	Unaí	Northwest
2205440	Hospital Márcio Cunha	Ipatinga	Vale do Aço
7415737	CCDIP	Ipatinga	Vale do Aço
2164620	Santa Casa	Araxá	Southern Triangle
2196220	Policlínica de Patrocínio	Patrocínio	Northern Triangle
6272150	Centro Estadual de Atenção Especializada d. Lica	Patrocínio	Northern Triangle
2145960	Santa Casa de Misericórdia de Araguari	Araguari	Northern Triangle
2219654	Hospital Universitário Clemente de Faria	Montes Claros	North
2139049	HEFA	Pedra Azul	Northeast
2139073	Hospital Vale do Jequitinhonha	Itaobim	Northeast
2119773	Ambulatório Especializado dra. A Araruna	Rio do Prado	Northeast
2120070	UBS de Divisa Alegre	Divisa Alegre	Northeast

Source: Prepared from CNES data - Jan/2017 to Dec/2017.

87.1%) and unknown to the victims (36.4 and 18.9%) (Table 2).

Concerning the place of violence, most cases occurred in the victims" residence, for cases of rape (51.1%) and other sexual violence (59.6%). "Public road, bar, and commerce" also represented significant percentages for cases of rape (24.7%) and other sexual violence (17.2%) (Table 2).

Chronic or repeated violence characterized 31.5% of cases of rape and 34.3% of other violence. Regarding the referral, the social assistance network followed by public security, were main-

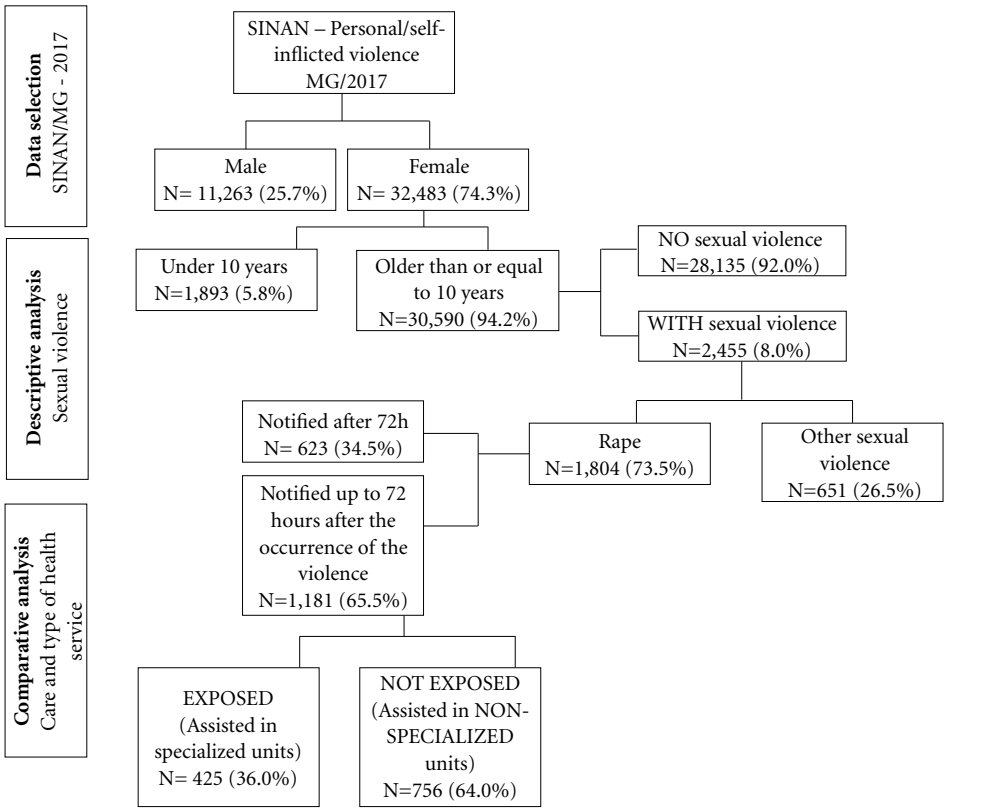

Figure 1. Search and selection flowchart of SINAN data, interpersonal/self-inflicted violence module. Minas Gerais, 2017**.**

Source: Authors.

ly activated in cases of rape (25.8%; 24.8%) and other sexual violence (26.7%; 16.6%) (Table 2).

The procedures provided for rape situations assisted up to 72 hours after the occurrence of the violence were performed in the following frequencies: blood collection (77.2%); prophylaxis for STIs (67.1%), HIV (62.5%), and hepatitis B (42.3%); emergency contraception (44.8%) and abortion provided by law (1.6%). The procedures for collecting vaginal discharge and semen related to the production of forensic evidence were performed in 25.8 and 8.2% of the notified cases, respectively (data not shown in tables).

The comparative analysis of the care of women victims of rape, carried out in "specialized" and "non-specialized" services, showed an association between the frequency of procedures performed and the type of service that offered the care. Only for abortion provided by law, the difference was not statistically significant (Table 3).

Considering the odds ratio (OR), women treated in specialized services had higher chances of performing STI prophylaxis procedures (4.0 times the odds), HIV (3.6 times the odds), hepatitis B (2.6 times the odds), emergency contraception (3.2 times the odds), blood collection (6.1 times the odds), semen (1.7 times the odds), vaginal discharge (3.1 times the odds) (Table 3).

Similar to OR, the PR indicated that the prevalence of performing recommended procedures is higher in specialized services than in non-specialized services. The following proportions were identified: performance of STI and HIV prophylaxis, 54% higher; hepatitis B prophylaxis, 71% higher; blood collection, 86% higher; semen collection, 62% higher; and emergency contraception, 78% higher. The prevalence of vaginal discharge collection was 2.25 times higher (Table 3).

Concerning the distribution of specialized services in MG, in 2017, as shown in the method

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Table 1. Description of cases of sexual violence (all types) and rape, according to socioeconomic and demographic characteristics of women. Minas Gerais, 2017.

Socioeconomic characteristics	Rape		Other sexual violence		Total (all sexual violence)	
	%	N=1,804	%	N=651	%	N=2,455
Age group						
10 to 14	34.8	627	47.9	312	38.3	939
15 to 19	20.5	369	18.1	118	19.8	487
20 to 29	21.5	388	12.1	79	19.0	467
30 to 39	11.8	212	8.6	56	10.9	268
40 to 49	6.0	109	7.4	48	6.4	157
50 to 59	3.2	57	3.4	22	3.2	79
60 and above	2.3	42	2.5	16	2.4	58
Pregnant						
Yes	9.5	172	4.2	27	8.1	199
No	74.9	1,352	82.8	539	77.0	1,891
Ignored*	15.5	280	13.1	85	14.9	365
Ethnicity/skin color						
White	30.4	548	31.6	206	30.7	754
Black	14.8	266	12.6	82	14.2	348
Yellow	1.0	18	1.1	7	1.0	25
Brown	47.3	853	45.9	299	46.9	1,152
Indigenous	0.1	2	0.3	2	0.2	4
Ignored*	6.5	117	8.5	55	7.0	172
Schooling						
Illiterate	1.2	21	0.3	2	0.9	23
Complete and incomplete elementary school	40.9	738	46.7	304	42.4	1,042
Complete and incomplete high school	22.6	407	17.2	112	21.1	519
Complete and incomplete higher education	6.7	120	3.5	23	5.8	143
Ignored*	28.7	518	32.3	210	29.7	728
Marital Status						
Single	69.9	1,261	69.1	450	69.7	1,711
Married/Consensual Marriage	12.1	219	14.1	92	12.7	311
Widow	1.7	30	0.9	6	1.5	36
Separated	4.6	83	2.8	18	4.1	101
Not applicable	4.6	83	5.8	38	4.9	121
Ignored*	7.1	128	7.2	47	7.1	175
Disability						
Yes	11.6	209	12.9	84	11.9	293
No	80.3	1,448	75.9	494	79.1	1,942
Ignored*	8.1	147	11.2	73	9.0	220
Size of the municipality (inhabitants)						
<50 thousand	34.1	614	45.9	299	37.2	913
50 mil to 100 thousand	10.2	184	10.1	66	10.2	250
>100 thousand	55.8	1,006	43.9	286	52.6	1,292

*For analysis purposes, we consider "Ignored," the fields marked as ignored and those not informed or blank.

Source: Authors.

section, there were 40 health services registered for specialized care to SV, distributed in 11 of the 14 macroregions of the state, most (37.5%) in Downtown macroregion. Of the rape cases that occurred in the state in the same period, approximately 10% occurred in health macro-regions

Table 2. Description of cases of sexual violence (all types) and rape, according to characteristics of violence. Minas Gerais, 2017.

Socioeconomic characteristics	Rape		Other sexual violence		Total (all sexual violence)	
	%	N=1,804	%	N=651	%	N=2,455
Occurrence location						
Public road, bars, or commerce	24.7	446	17.2	112	22.7	558
Residence	51.1	921	59.8	389	53.4	1,310
Other	14.1	255	11.5	75	13.4	330
Ignored*	10.1	182	11.5	75	10.5	257
Health macro-region of occurrence**						
Downtown	38.3	691	28.9	188	35.8	879
South Center	2.6	46	2.8	18	2.6	64
South	6.4	115	11.5	75	7.7	190
Southeast	6.6	119	11.8	77	8.0	196
West	2.8	50	4.0	26	3.1	76
Vale do Aço	3.4	62	2.6	17	3.2	79
Northwest	2.3	41	2.8	18	2.4	59
Southern Triangle	9.8	177	5.2	34	8.6	211
Northern Triangle	6.8	123	6.5	42	6.7	165
North	8.3	150	8.6	56	8.4	206
Northeast	3.3	60	2.6	17	3.1	77
South East	3.5	63	4.6	30	3.8	93
Jequitinhonha	3.5	63	5.5	36	4.0	99
East	2.4	44	2.6	17	2.5	61
Chronic violence						
Yes	31.5	568	34.3	223	32.2	791
No	57.4	1,035	48.1	313	54.9	1,348
Ignored*	11.1	201	17.7	115	12.9	316
Sex of the probable aggressor						
Male	95.0	1,713	87.1	567	92.9	2,280
Female	1.1	20	2.9	19	1.6	39
Both sexes***	1.2	22	3.4	22	1.8	44
Ignored*	2.7	49	6.6	43	3.7	92
Relationship with the aggressor						
Unknown	36.4	657	18.9	123	31.8	780
Intimate partner	16.8	303	17.4	113	16.9	416
Relative	11.6	210	20.7	135	14.1	345
Acquaintance	27.0	487	27.8	181	27.2	668
Other	7.4	133	13.1	85	8.9	218
Ignored*	6.6	119	8.6	56	7.1	175
Referrals						
Health network	0.4	8	0.5	3	0.5	11
Social assistance network	25.8	465	26.7	174	26.0	639
Public security network	24.8	448	16.6	108	22.7	556
Women's care network	13.5	243	6.6	43	11.6	286
Justice	0.9	17	2.2	14	1.3	31
Other	1.1	20	2.3	15	1.4	35
Ignored*	5.5	100	5.5	36	5.5	136

*For analysis purposes, we consider "Ignored," the fields marked as ignored and those not informed or blank; **Health macroregions of MG indicated in DATASUS/Tabnet; ***Occurs when there is more than one aggressor reported.

Source: Authors.

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where there were no specialized services and 23% in macro-regions with only one specialized health service (data not shown in tables).

About the prevalence of SV, specifically rape, for the entire state, the coefficient for every 10,000 women was 1.9. For the macroregions, we observed the following coefficients in descending order of values: South Triangle (5.3), Jequitinhonha (3.6), Downtown (2.3), North Triangle (2.2), North (2.1), East South (2.1), Northeast (1.7), Vale do Aço (1.7), Southeast (1.6), East (1.4), Northwest (1.4), South Center (1.3), South (0.9), and West (0.9) (data not shown in tables).

Discussion

From the descriptive analysis of the cases, it was possible to verify the highest proportion of rapes among the sexual violence reported in MG. Moreover, we found that most of the reported cases of rape involved girls between 10 and 19 years old, black, and with low education. This information corroborates findings from other studies conducted nationally and internationally that show that, although violence is present in the lives of all women, vulnerabilities to SV tend to be higher among younger women, women with disabilities, black women, and those with low educational and economic levels[4,26,27]. This finding leads to reflection on how the intersection of dimensions such as gender, race, and class, among others, potentiates vulnerabilities and inequalities in situations of violence experienced by women.

Although the data presented in this study characterize women considering the dimensions of age, race, education, and disability separately, it is necessary to reflect that these characteristics sometimes overlap each other, implying different

Table 3. Procedures performed in cases of rape, assisted up to 72 hours after the violence, according to the type of care service (specialized and non-specialized). Minas Gerais, 2017.

Service Type	Procedures performed		OR (95%CI)	PR (95%CI)
	Yes	No		
STI prophylaxis				
Specialized	328	71	4.06 (3.02; 5.51)	1.54 (1.41; 1.68)
Non-specialized	341	300		
HIV prophylaxis				
Specialized	316	82	3.63 (2.73; 4.86)	1.54 (1.41; 1.69)
Non-specialized	330	311		
Hepatitis B prophylaxis				
Specialized	214	170	2.62 (2.02; 3.40)	1.71 (1.48;1.98)
Non-specialized	205	427		
Blood collection				
Specialized	334	68	6.08 (4.51; 8.29)	1.86 (1.69;2.05)
Non-specialized	285	353		
Semen collection				
Specialized	38	328	1.70 (1.06; 2.70)	1.62 (1.06;2.49)
Non-specialized	40	587		
Vaginal discharge collection				
Specialized	149	233	3.06 (2.28; 4.10)	2.25 (1.82;2.80)
Non-specialized	107	512		
Emergency contraception				
Specialized	248	134	3.23 (2.48; 4.22)	1.78 (1.57;2.03)
Non-specialized	226	395		
Abortion provided by law				
Specialized	2	328	0.73 (0.10; 3.42)	0.73 (0.10;3.39)
Non-specialized	5	602		

OR=Odds Ratio; CI=Confidence Interval; PR=Prevalence Ratio.

Source: Authors.

forms of oppression against women. The intersectional perspective contributes to this reflection by proposing that women are not equally discriminated, oppressed, or exploited since different power systems operate, establishing relationships that subjugate and oppress women concerning men and women themselves[28,29].

Regarding the victim and aggressor relationship, unlike what has been reported in the literature, which points out the intimate partner as the principal perpetrator of violence against women[23,30,31], the results of the present study showed that most of the aggressors were unknown to the victims. This finding, added to the fact that women are single and have no previous record of violence, may be related to the difficulty of identifying and naming the situations of sexual violence that occur in a naturalized way in our society, for example: rape occurring within intimate relationships, or other sexual violence, such as harassment. This implies, consequently, problems in the registration of cases (underreporting) and in the care provided to women at the various points of the health care network.

Women who live or have experienced situations of violence usually access health services and demand mental health care frequently due to the suffering caused by these situations. Nevertheless, women or even professionals do not always perceive or name what was experienced as violence. These situations are invisible and sometimes highly medicalized[32].

Due to their characteristics, SV and rape require the establishment of urgent actions, demanding from the entire network of services that assist women in situations of violence, especially health and psychosocial assistance, public security, and justice, the organization of the way to ensure timely and quality care.

Despite the importance of organizing expanded care networks and coping with violence, we observed, based on the results of this study, that women were mainly referred to services of the social assistance network and public security. Considering that public security is traditionally triggered when violence occurs, the observed data elucidate the importance assumed by the Social Assistance policy in SV care, indicating its presence and capillarity in the territories of Minas Gerais.

It is necessary, however, to reflect on the challenges of dealing with the agenda of violence more broadly, involving not only public security and social assistance but other sectors such as health. Primary health care services, for example, are the potential for building bonds with the community and with women. As presented by Santos *et al.*[33], they constitute essential elements to compose the expanded network of coping and care for violence, addressing cases in a less invasive way, contributing to the protection of women, and access to other public policies.

Since the implementation of SPM, Brazil has initiated an essential move toward the organization of care networks for women in situations of violence, specifically, sexual violence and the standardization of care in the health sector. By the Brazilian Ministry of Health, technical standards were issued in order to guide and establish guidelines on procedures and referrals of SV cases. Also, ordinances establish criteria for registering health services to assist SV cases, qualifications to conduct specialized procedures, such as outpatient care and collection of traces for forensic purposes, and the creation of procedures in the SUS table to ensure financial transfer to realization of such actions. The main objective of this movement was to subsidize the SUS health services and their professionals to provide qualified care, as provided for in national technical standards and international recommendations[18,22,34].

The establishment of mechanisms for the registration of health services, as well as the creation of procedures in the SUS table for remuneration for the services performed, constitute essential incentives for the implementation of SV care in the care network since they make it possible to identify and remunerate the health services that serve people in situations of violence.

Despite this movement and the existence of the financial incentive, the number of health services registered for specialized care for SV in MG is still incipient. Besides, the study results show a concentration of existing services, especially in the Downtown macro-region, and, simultaneously, the existence of care gaps[24].

The regionalization of health actions, with a concentration of services in certain places, such as larger municipalities, proposes the operational viability of the SUS through rationalizing the use of technological and human resources. Nevertheless, regionalization must presuppose the enhancement of decentralization through the equitable distribution of health services in the territories, guaranteeing access with quality and resolvability[35].

Notably, the macro-region with the highest SV coefficient notified in 2017 (South Triangle) had only one specialized service in the same year. The Jequitinhonha and South East macro-re-

gions, with significant SV incidence coefficients, did not have registered reference services. In this sense, considering the vulnerability of SV women situations, urgent care for rape cases requires development actions, preferably up to 72 hours, and considering the MG size and its macro-regions, which in the most of the cases involve more than 50 municipalities, with diverse realities; the lack of specialized reference services can be a hindrance to access to care. This implies the precariousness of care for women and the complications resulting from SV.

The results of the present study reinforced the clear need for expansion of specialized services and better distribution in the macro-regions of MG, which indicated the importance of specialized services in the qualification of care for women. The main argument for this statement was that women assisted in specialized services had a greater chance of performing procedures after sexual assault (rape) compared to women assisted in non-specialized health services. In the same sense, the prevalence ratios for performing the procedures recommended for rape cases were higher for women treated in specialized services. It is essential to consider that, although there is variation in exposure situations (type of exposure - anal, vaginal, oral; susceptibility of women - vaccinated, hysterectomized; use of condoms during violence; use of regular contraceptives, among others) which requires careful and individualized evaluation to decide on the prescription or not of prophylaxis and other care. The difference between the number of procedures performed in specialized services was statistically more significant than those performed in non-specialized.

On the other hand, it is noteworthy that the only procedure for which there was no statistically significant difference between the frequency of procedures performed in the different SUS health services was the abortion provided by law. This fact is interesting because it contradicts the proposals" arguments in Law No. 6,055/2013 (still pending), which proposes repealing Law No. 12,845/2013, which "provides for mandatory and comprehensive care for people who are victims of sexual violence"[17]. Authored by Congressman Pastor Eurico and others, including the current president of the republic Jair Bolsonaro, the law uses as justification that the implementation of specialized care for people in situations of sexual violence would "have the as main objective to prepare the political and legal scenario for the complete legalization of abortion in Brazil"[36]. Therefore, according to justification, the specialization of SV care would be a stimulus to abortion, which was not observed in this study.

The period between 2010 and 2015 was specifically productive in developing public policies to qualify the care for women in situations of SV in Brazil, implying the health field in the network of coping with SV, especially in cases of rape. It was especially innovative the possibility of SUS, in addition to providing health care to victims, participating in the collection of traces, contributing to the criminal prosecution of the aggressor. Nonetheless, the discontinuity in investments experienced in recent years may imply the stagnation of actions or even setbacks.

The care organization needs reliable data that evaluates and monitors cases and actions implemented. Despite the limitations, the SIS, especially SINAN, has made it possible to conduct necessary analyses on violence against women since access to part of the information on notifications is free through DATASUS.

However, there is a limitation identified in the data record regarding collecting traces for forensic purposes in cases of rape. Whether in the interpersonal/self-inflicted violence notification form (SINAN form), updated in 2015, or the instruction produced by the Ministry of Health for the guidance of professionals on the completion of the mentioned form, there is no mention of specific fields for recording this information[22].

In field 50 of the SINAN form, where the procedures performed by the health service in cases of SV are informed, it is possible to record the collection of semen and/or vaginal discharge. Even with the existence of this field, it is not explicit that it can be filled in when materials are collected for forensic purposes. There is still no space for recording other collections eventually made for these purposes, such as anal discharge, subungual trace, hair and fur, robes, and objects with possible presence of semen and/or other biological fluids for DNA research, data that can also contribute to the production of expert evidence, as provided for in the technical standard produced by the Ministry of Health in 2015[22].

Besides the epidemiological nature, the SINAN form can contribute to the orientation of care since it allows visualization of the possibilities of intervention and referrals of cases. In this sense, the better recording of information regarding the care provided to women in the health field, including the collection of forensic traces, could contribute to monitoring and evaluating the performance of this procedure by health services and the qualification of care.

Final considerations

This study demonstrated the importance of continuing investment in the qualification, expansion, and improvement of the distribution of specialized care services in MG to ensure access to the recommended procedures in cases of rape, especially those assisted in the acute phase (up to 72 hours after the occurrence of violence); and also the urgent need to understand the obstacles to the implementation of specialized services.

Regarding the characteristics of SV cases reported in MG and, considering that this is a complex and culturally sensitive topic, recognized as necessary the development of appropriate efforts to sensitize health services in general, their managers and workers, as well as the community in relation to gender violence, especially SV, enabling them to identify cases and offer adequate and timely care to women.

As limitations of this study, we mention problems related to using secondary data. We highlight the underreporting of SV cases, especially those perpetrated by intimate partners and those resulting from domestic violence, whose recognition may be more complex and, consequently, the less performed notification; the lack of standardization in filling out the SINAN notification forms and the slowness in making the data available in DATASUS for public access.

It is also noteworthy the low completeness of the fields related to the socioeconomic information of women and the procedures performed by health services in the care of rape cases. The absence of data, as well as the incorrect filling of fields in the notification form, may hide relevant information to understand the characteristics of SV and its care by the health services of MG or even mask them, which may compromise the results of the research.

Collaborations

CM Melo participated in the study design, data analysis and interpretation, writing, critical review of the content and approval of the final version of the manuscript. MQ Soares participated in the writing, critical review of the content and approval of the final version of the manuscript. PD Bevilacqua participated in the study design, writing, critical review of the content and approval of the final version of the manuscript.

Acknowledgments

The authors thank the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG), for the financial support and grant for the research, through the Programa de Pesquisa para o SUS: Gestão Compartilhada em Saúde (PPSUS) - Call 3/2020 (Process APQ-00814-20).

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Article submitted 07/01/2022
Approved 24/05/2022
Final version submitted 26/05/2022

Chief editors: Romeu Gomes, Antônio Augusto Moura da Silva