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# Intimate partner violence after the diagnosis of sexually transmitted diseases

## Violência por parceiro íntimo após diagnóstico de doenças sexualmente transmissíveis

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### ABSTRACT

**OBJECTIVE:** To assess the prevalence and factors associated with intimate partner violence after the diagnosis of sexually transmitted diseases.

**METHODS:** This cross-sectional study was conducted in Fortaleza, CE, Northeastern Brazil, in 2012 and involved 221 individuals (40.3% male and 59.7% female) attended to at reference health care units for the treatment of sexually transmitted diseases. Data were collected using a questionnaire applied during interviews with each participant. A multivariate analysis with a logistic regression model was conducted using the stepwise technique. Only the variables with a  $p$  value  $< 0.05$  were included in the adjusted analysis. The odds ratio (OR) with 95% confidence interval (CI) was used as the measure of effect.

**RESULTS:** A total of 30.3% of the participants reported experiencing some type of violence (27.6%, psychological; 5.9%, physical; and 7.2%, sexual) after the diagnosis of sexually transmitted disease. In the multivariate analysis adjusted to assess intimate partner violence after the revelation of the diagnosis of sexually transmitted diseases, the following variables remained statistically significant: extramarital relations (OR = 3.72; 95%CI 1.91;7.26;  $p = 0.000$ ), alcohol consumption by the partner (OR = 2.16; 95%CI 1.08;4.33;  $p = 0.026$ ), history of violence prior to diagnosis (OR = 2.87; 95%CI 1.44;5.69;  $p = 0.003$ ), and fear of disclosing the diagnosis to the partner (OR = 2.66; 95%CI 1.32;5.32;  $p = 0.006$ ).

**CONCLUSIONS:** Individuals who had extramarital relations, experienced violence prior to the diagnosis of sexually transmitted disease, feared disclosing the diagnosis to the partner, and those whose partner consumed alcohol had an increased likelihood of suffering violence. The high prevalence of intimate partner violence suggests that this population is vulnerable and therefore intervention efforts should be directed to them. Referral health care services for the treatment of sexually transmitted diseases can be strategic places to identify and prevent intimate partner violence.

**DESCRIPTORS:** Sexually Transmitted Diseases, diagnosis. Spouse Abuse. Violence. Cross-Sectional Studies.

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## RESUMO

**OBJETIVO:** Analisar a prevalência e fatores associados à violência por parceiro íntimo após diagnóstico de doença sexualmente transmissível.

**MÉTODOS:** Estudo transversal realizado em Fortaleza, CE, em 2012, com 221 pessoas (40,3% do sexo masculino e 59,7% do feminino) atendidas em serviços de referência para tratamento de doenças sexualmente transmissíveis. Os dados foram coletados por meio de questionário aplicado face a face aos participantes. Realizou-se análise multivariada com modelo de regressão logística, utilizando-se a técnica de *stepwise*. Para análise ajustada, permaneceram as variáveis que tiveram o valor de  $p < 0,05$ . Como medida de efeito, usou-se a razão de chances (OR) com intervalo de confiança de 95%.

**RESULTADOS:** Referiram ter sofrido violência após o diagnóstico de doenças sexualmente transmissíveis 30,3% dos participantes (27,6% psicológica, 5,9% física e 7,2% sexual). Na análise multivariada ajustada para sofrer violência por parceiro íntimo após a revelação do diagnóstico de doença sexualmente transmissível, mantiveram significância estatística: ter tido relações extraconjugais (OR = 3,72; IC95% 1,91;7,26;  $p = 0,000$ ), parceiro usar álcool (OR = 2,16; IC95% 1,08;4,33;  $p = 0,026$ ), sofrer violência antes do diagnóstico (OR = 2,87; IC95% 1,44;5,69;  $p = 0,003$ ) e ter receio de revelar o diagnóstico ao parceiro (OR = 2,66; IC95% 1,32;5,32;  $p = 0,006$ ).

**CONCLUSÕES:** Pessoas que tiveram relações extraconjugais, que sofreram violência antes do diagnóstico e que tiveram receio de revelar o diagnóstico ao parceiro, bem como o parceiro fazer uso de álcool, tiveram as chances aumentadas para sofrer violência. A prevalência elevada de violência por parceiro íntimo sugere que pessoas com diagnóstico de doenças sexualmente transmissíveis é uma população crítica para a qual devem ser direcionados esforços de intervenção, e que os serviços de referência para atendimento das doenças sexualmente transmissíveis podem ser locais estratégicos para identificar e prevenir a violência por parceiro íntimo.

**DESCRITORES:** Doenças Sexualmente Transmissíveis, diagnóstico. MausTratos Conjugais. Violência. Estudos Transversais.

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## INTRODUCTION

Violence is a worldwide phenomenon of complex management that demands intersectoral actions. It is one of the main public health problems.<sup>a</sup> Its incidence has increased in recent years, with an impact on morbidity and mortality of the population and increasing costs to social, economic, and health care systems.<sup>10,16</sup>

Intimate partner violence (IPV) is a pattern that is difficult to break because it involves affection and economic dependence, among other things.<sup>1,10</sup> Women are the main target of this violence. However, acts of physical violence are sometimes reciprocal between the genders.<sup>24</sup> In Sao Paulo, Schraiber et al<sup>19</sup> found a prevalence of 59.0% of IPV, and women who had experienced IPV multiple times were more likely to seek health care services.<sup>19</sup>

Previous studies have shown an association between having suffered IPV and the increased vulnerability to sexually transmitted diseases (STD).<sup>1,11,17</sup> However, only a few studies have analyzed IPV after the disclosure of the diagnosis of STD to the partner. A study conducted with adolescents attended to at reproductive health clinics in Boston, United States, observed a prevalence of 32.0% and 21.0% for physical and sexual IPV, respectively.<sup>9</sup>

Violent acts among couples where one of the partners has HIV/AIDS<sup>1,17</sup> may compromise their physical and emotional health. It is possible that the disclosure of the diagnosis of other STD to the sexual partner leads to violence, which may account for the difficulty in treating the sexual partners of patients with STD.<sup>2,3</sup>

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<sup>a</sup> Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, editors. World report on violence and health. Geneva: World Health Organization; 2002.

This study aimed to analyze the prevalence and factors associated with IPV after the diagnosis of STD.

## METHODS

This cross-sectional study was conducted in Fortaleza, CE, Northeastern Brazil, in 2012. At present, the city has a network of health care services with three reference hospitals for treatment of individuals with STD. In 2011, 8,966 individuals diagnosed with STD visited these units.

Participants were men and women with syndromic and/or etiological diagnosis of STD. The sample size was calculated based on the population of 8,966 individuals attended to in 2011, the expected frequency of IPV of 18.0% among patients treated at STD clinics,<sup>11</sup> a sampling error of 5%, and a 95% confidence interval (CI), and totaling to 221 individuals.

The study included individuals diagnosed with STD who were monitored at one of the clinics, who had had at least two consultations, who had a maximum diagnosis time of three months, and who had disclosed the diagnosis to their sexual partner. In Brazil, it is a routine practice for health care services to instruct STD patients to return to the clinic for treatment assessment.<sup>b</sup> The criterion “individuals who attended at least two consultations” was included to ensure that there would be enough time to disclose the diagnosis to the sexual partner.

Individuals diagnosed with HIV/AIDS, those who had mental illnesses, and those who had no sexual partner at the time of diagnosis were excluded. STD must be identified and treated in primary health care units; the control efforts are neglected when compared with those for HIV/AIDS.<sup>14</sup> Measures to prevent the transmission of HIV/AIDS are widely disseminated, funded, and implemented and are independently assessed from those focused on other STD.

IPV is defined as any intentional act in an intimate relationship that causes physical, psychological, or sexual harm to individuals in that relationship; i.e., physical and psychological violence, rape, and other forms of sexual coercion, in addition to various dominant behaviors, such as isolating a person from their family or friends, watching their movements, or restricting their right to information or health care. Intimate partners included sexual partners, husband/wife, boyfriend/girlfriend, fiancé(e), or any other individual with whom an intimate-affective relationship was established.

Data were collected between March and September 2012 using a questionnaire applied during an interview conducted in a private room. All patients in the

waiting room of the STD outpatient clinics were asked whether they were there for a follow-up visit; those who responded positively and met the inclusion criteria were invited to participate in the study.

The questionnaires were administered by an appropriately trained nurse experienced in approaching STD patients and skilled in managing issues related to the theme of violence. It was considered that the gender of the interviewer did not affect the quality of data collected from male participants.

The questionnaire comprised the following variables: sociodemographic variables (gender, age, education, and personal and family income); behavioral variables (number of sexual partners, sexual orientation, extramarital relations, consumption of alcohol, use of illicit drugs, and use of condoms); institutional and clinical variables (type of STD and approach taken by the health care service with respect to violence); and variables regarding violence suffered before and after the diagnosis of STD (nature of violence, frequency). The dependent variable was IPV after the disclosure of the diagnosis of STD to the sexual partner.

IPV was categorized as psychological, physical, or sexual and was considered present when the respondent answered affirmatively to at least one of the questions regarding violence.

The questions related to IPV were elaborated using, as reference, the questionnaire from the international study on women's health and domestic violence from the World Health Organization validated in Brazil.<sup>18,a</sup>

A total of 234 individuals were considered eligible, of whom 5.5% refused to participate. Of the 221 individuals with STD included in the present study, 40.3% were men and 132 (59.7%) were women. Most patients (68.3%) were treated for genital wart, 18.6% for syphilis, 8.1% for genital herpes, 3.2% for gonorrhea, 0.9% for trichomoniasis, and 0.5% for pelvic inflammatory disease and donovanosis.

Table 1 presents the demographic data of the participants. The mean age was 30.3 years (52.5% were younger than 29 years), 59.7% individuals had more than nine years of education, and 80.5% reported non-white ethnicity. In addition, 69.2% of the individuals were married or living in common law marriage. The average monthly personal income was R\$540.69, and the majority (63.8%) earned up to one Brazilian minimum wage.

Descriptive analysis was performed using the distribution of frequencies for categorical variables and the mean and standard deviation for numerical variables.

<sup>b</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Programa Nacional de DST e Aids. Manual de controle das doenças sexualmente transmissíveis. 4a ed. Brasília (DF): Ministério da Saúde; 2006.

**Table 1** Sociodemographic variables of individuals attending reference health care services for sexually transmitted diseases. Fortaleza, CE, Northeastern Brazil, 2012.

Variable	n	%
Gender		
Female	132	59.7
Male	89	40.3
Age group (years)		
≤ 19	43	19.5
20 to 29	73	33.0
≥ 30	105	47.5
Education (years of study)		
≤ 4	18	8.1
5 to 9	71	32.2
≥ 10	132	59.7
Ethnicity (self-reported)		
White	43	19.5
Non-white	178	80.5
City of origin		
Fortaleza	182	82.4
Other cities	89	17.6
Marital status		
Married (civil and/or religious)	42	19.0
Common law marriage	111	50.2
Single, with steady partner	68	30.8
Currently employed		
Yes	142	64.3
No	79	35.7
Currently studying		
Yes	60	27.1
No	161	72.9
Monthly personal income (minimum wages)*		
≤ 1	141	63.8
> 1	80	36.2
Total	221	100

\* Brazilian minimum wage in 2012: R\$622.00, equivalent to USD240.15

In the bivariate analysis, Pearson's Chi-square test and Fisher's exact test were used to determine statistical associations between categorical variables, establishing a 5% significance level and a 95%CI. Data were entered and stored into the Statistical Package for the Social Sciences, version 19.0.

Multivariate analysis was performed using a logistic regression model and the stepwise technique. For the

adjusted analysis, only the variables with a p-value < 0.05 were included. The odds ratio (OR) with a 95%CI was used as a measure of effect. The Stata statistical package version 11.0 was used for the statistical analysis.

This study was approved by the Research Ethics Committee of the *Universidade de Fortaleza* (Protocol 437/2011) and the *Hospital Universitário Walter Cantídio* (Opinion 043.06.12) and met the WHO recommendations for research on domestic violence.<sup>c</sup> All participants signed an informed consent form. Considering that these individuals were receiving treatment for STD, a situation in which the HIV test is offered, and that adolescents have autonomy for decision-making in such circumstances,<sup>d</sup> the need for an informed consent form signed by the parents of individuals under 18 years was waived.

## RESULTS

Of the individuals included in the present study, 30.3% reported having experienced some form of violence after the diagnosis of STD (28.8% women and 32.6% men, without statistical significance). Moreover, 27.6% of the individuals reported experiencing psychological violence; 5.9%, physical; and 7.2%, sexual. Only one subject (0.5%) reported having denounced the partner's violence to the police; 5.4% of the respondents indicated that the subject of violence was addressed by health care professionals during treatment (data not shown).

IPV was associated with having more than one sexual partner in the last three months ( $p = 0.001$ ), extramarital relations ( $p = 0.000$ ), history of violence prior to diagnosis ( $p = 0.011$ ), fear of disclosing the diagnosis to the partner ( $p = 0.008$ ), extramarital relations by the partner ( $p = 0.001$ ), and alcohol consumption by the partner ( $p = 0.026$ ; Table 2).

Table 3 presents the analysis of individuals diagnosed with STD who had experienced IPV, stratified by gender, and the behavioral variables of the sexual partner. The variables extramarital relations by the partner ( $p = 0.001$ ) and alcohol consumption by the partner ( $p = 0.001$ ) presented statistical significance for men and women who suffered IPV.

The variables that remained statistically significant for IPV after the disclosure of the STD diagnosis, considering the raw and adjusted analyses, were as follows: STD carrier having had extramarital relations (OR = 3.72; 95%CI 1.91;7.26;  $p = 0.001$ ), history of violence prior to the STD diagnosis (OR = 2.87; 95%CI 1.44;5.69;  $p = 0.003$ ), fear of disclosing the diagnosis to

<sup>c</sup> World Health Organization. Putting Woman First: Ethical and Safety Recommendations for Research on Domestic Violence Against Women. Geneva; 2001.

<sup>d</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Programa Nacional de DST e AIDS. Implicações Éticas do Diagnóstico e da Triagem Sorológica do HIV. Brasília (DF); 2004.

**Table 2.** Behavioral variables associated with intimate partner violence in individuals diagnosed with sexually transmitted diseases. Fortaleza, CE, Northeastern Brazil, 2012. (N = 221)

Variable	n	%	Has suffered violence		
			n	%	p
Sexual orientation					0.548
Heterosexual	197	89.1	61	31.0	
Homosexual	24	10.9	6	25.0	
Age of first sexual intercourse (years)					0.586
≤ 15	98	44.5	28	28.6	
> 15	122	55.5	39	32.0	
Number of sexual partners (last three months)					0.001
1	172	77.8	42	24.4	
> 1	49	22.2	25	51.0	
Type of sexually transmitted disease					0.133
Genital wart	151	68.3	41	27.2	
Other	70	31.7	26	37.1	
Partner had extramarital relations					0.001
Yes	135	61.1	37	43.0	
No	86	38.9	30	22.2	
Had other partners during the current relationship					0.001
Yes	70	31.8	36	51.4	
No	150	68.2	30	20.0	
Alcohol consumption by the partner					0.026
Yes	127	57.5	46	36.2	
No	94	42.5	21	22.3	
Drug use by the partner					0.189
Yes	21	9.5	9	42.9	
No	200	90.5	58	29.0	
History of violence prior to the diagnosis of sexually transmitted disease					0.011
Yes	63	28.5	21	45.7	
No	158	71.5	46	26.3	
Fear of disclosing the diagnosis to the partner					0.008
Yes	65	29.4	28	43.1	
No	158	70.6	39	25.0	

the partner (OR = 2.66; 95%CI 1.32;5.32; p = 0.006), and partner's consumption of alcohol (OR = 2.16; 95%CI 1.08;4.33; p = 0.026) (Table 4).

## DISCUSSION

The prevalence of IPV after the disclosure of the diagnosis of STD was 30.3%. Only one individual reported the violence to the police. Among those who suffered physical violence, three believed that they needed medical care but none sought health care services. IPV victims claimed to experience shame for exposing their problems and fear of the partner's reaction as the main reasons for not seeking health care services.<sup>10</sup>

It has been observed that the disclosure of the STD diagnosis triggers violence in relationships, a condition that should be considered during counseling, especially considering the need to medically assess the sexual partners. Fear of the partner's reaction is one of the main reasons related to the difficulty in treating the sexual partners of individuals with STD. A survey of women at family planning clinics demonstrated that the partners of women who suffered IPV were less frequently screened and treated for STD.<sup>3</sup>

Gender issues may be related to the problem of STD transmission and can interfere in the treatment of sexual partners. A study conducted on men in Bangladesh demonstrated that 36.8% reported practicing physical

**Table 3.** Behavioral variables of sexual partners of individuals diagnosed with sexually transmitted diseases who experienced intimate partner violence, by gender. Fortaleza, CE, Northeastern Brazil, 2012.

Variable	Has suffered violence (n = 67)				p
	Men (n = 29)		Women (n = 38)		
	n	%	n	%	
Partner had symptoms of sexually transmitted disease					0.941
Yes	15	42.9	20	57.1	
No	14	43.8	18	56.3	
Partner received treatment					0.386
Yes/Under treatment	14	51.9	13	48.1	
No	15	37.5	25	62.5	
Had other partners during the current relationship					0.001
Yes	8	21.6	29	78.4	
No	21	70.0	9	30.0	
Alcohol consumption					0.001
Yes	13	28.3	33	71.7	
No	16	76.2	5	23.8	
Illicit drug use					0.067
Yes	1	11.1	8	88.9	
No	28	48.3	30	51.7	
Had been violent before the diagnosis of sexually transmitted disease					0.624
Yes	13	39.4	20	60.6	
No	16	47.1	18	52.9	

**Table 4.** Multivariate logistic regression analyses, raw and adjusted, between behavioral variables and having suffered intimate partner violence after disclosing the diagnosis of sexually transmitted disease. Fortaleza, CE, Northeastern Brazil, 2012.

Variable	Has suffered intimate partner violence							
			Raw			Adjusted		
	n/N	%	OR	IC95%	p	OR	IC95%	p
Drug user					0.036	-	-	-
Yes	6/10	60.0	1					
No	61/211	28.9	3.68	0.83;18.2				
Had extramarital relations					0.001	3.72	1.91;7.26	0.001
Yes	36/70	51.4	1					
No	30/150	20.0	4.23	2.18;8.21				
Alcohol consumption by the partner					0.026	2.17	1.08;4.33	0.028
Yes	46/127	36.2	1					
No	21/94	22.3	1.97	1.03;3.81				
History of violence prior to the STD					0.001	2.87	1.44;5.69	0.003
Yes	33/67	49.2	1					
No	34/154	22.8	3.42	1.77;6.60				
Fear of disclosing the diagnosis					0.007	2.66	1.32;5.32	0.006
Yes	28/65	43.1	1					
No	39/156	25.0	2.27	1.17;4.36				
Number of sexual partners in the last three months					0.001	-	-	-
1	42/172	24.4	1					
> 1	25/49	51.0	0.31	0.15;0.63				

STD: sexually transmitted diseases; n/N: of the total number (N) of people in the population studied, n had experienced intimate partner violence

and/or sexual violence to their wives; those who practiced violence had more extramarital relations and STD symptoms.<sup>20</sup> The possibility of extramarital affairs as one of the reasons for the emergence of STD can be a major cause of IPV, considering that the probability of suffering IPV was three times higher when the respondent had extramarital affairs.

In the present study, 68.3% of the respondents had human papilloma virus (HPV) infection, which was predominant among women (60.3%). This incidence was higher than the overall rate of 41.2% in HPV infection among people seeking STD services in Brazil.<sup>e</sup> Health care professionals should explain to the patient that some infections have a long incubation period and that this situation can minimize IPV. There is a possibility that the infection was contracted in a previous relationship, which could mitigate the conflicts generated by disclosure of the diagnosis to the partner.

The likelihood of suffering IPV after the disclosure of diagnosis was 2-fold higher (OR = 2.17) when the partner was an alcohol consumer. Alcohol reduces self-control and affects cognitive and physical functioning,<sup>15</sup> which may compromise an individual's ability to resolve relationship conflicts without resorting to violence. Alcohol consumption increases the occurrence and severity of domestic violence<sup>5</sup> and is a strong determinant of IPV.<sup>22</sup>

In this study, the incidence of sexual violence was higher than physical violence. In private, IPV may occur more subtly, in the form of psychological and/or sexual violence, and it may not be identified by the victim as a kind of violence. When associated with the diagnosis of STD, the situation tends to worsen because it limits the use of condoms.<sup>8,21</sup> Women attend health care services more often and have more opportunities to be diagnosed with STD. Men traditionally avoid seeking health care services that do not have appropriate receptiveness.<sup>7</sup> Services dedicated to male health have only recently been implemented.<sup>f</sup> Women coping with recurrent IPV present a higher frequency of the use of health care services and health-related complications; this greater use of health care services is related to the severity and repetition of the acts of violence.<sup>19</sup> It is important that health care professionals assess whether users of reference health care services for STD are experiencing violence. Individuals already living in a situation of violence prior to the diagnosis of STD. Accordingly, a study conducted in New York, United States, with economically disadvantaged women demonstrated that those who had experienced

IPV once in their lifetime were at a risk of experiencing repeated violence.<sup>12</sup>

In the present study, individuals who reported fear of disclosing the diagnosis of STD to their partners were twice as likely to experience IPV after the disclosure (OR = 2.66), a situation also observed in California, United States, where women who suffered IPV reported a fear of disclosing the diagnosis to their partners.<sup>3</sup>

The difficulty in treating the sexual partners of individuals with STD is a reality that has low resolution by traditional treatment methods by health care services.<sup>6</sup> Establishing an effective strategy is still a challenge for health care managers and professionals. There appears to be no single effective way to minimize this problem.<sup>4</sup> However, requesting the partner to attend a medical consultation is an extremely important measure because it provides an opportunity for clinical assessment and medical treatment, thereby limiting the spread of infection.

The low reporting of violence and low demand for medical care by victims reinforce the findings of a study conducted in women living in a city in the metropolitan region of Sao Paulo, Southeastern Brazil, which demonstrated that shame to expose the problem and fear of the partner's reaction were the main reasons reported for not seeking help.<sup>10</sup>

This study presented important data for the health care services that attend to individuals with STD; however, there are some limitations. Some measures employed to the minimize omission of information were adopted; however, as STD and IPV are two themes that are difficult to approach and are of intimate nature, respondents may have felt discomfort and not disclosed certain information. Nonetheless, the present results are relevant and emphasize the importance of considering the problem of violence as one of the aspects that can hamper treatment of the sexual partners of STD patients.

The majority (94.1%) of the individuals at reference health care services for STD reported that the topic of violence had not been addressed by health care professionals during the consultation, indicating the lack of opportunity to deal with sensitive issues. This difficulty is partially because of the lack of contact with the subject during medical school<sup>13</sup> or even in continuing education programs, as well as the lack of awareness of violence as a public health problem.<sup>23</sup>

The results of this study highlighted the need for intersectoral efforts and commitment of health care professionals and managers during counseling in order to identify and prevent IPV in individuals with STD.

<sup>e</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Programa Nacional de DST e AIDS. Prevalências e frequências relativas de Doenças Sexualmente Transmissíveis (DST) em populações selecionadas de seis capitais brasileiras, 2005. Brasília (DF); 2008.

<sup>f</sup> Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. *Política nacional de atenção integral à saúde do homem: princípios e diretrizes*. Brasília (DF): Ministério da Saúde; 2009.

Prevention and health care promotion guidelines should address the fears related to the disclosure of STD diagnosis to the partner, particularly among those who have experienced IPV. The potential threat of psychological, physical, and sexual violence in response to the

disclosure should also be considered. All STD patients should be advised by health care services about the possibility of IPV after the disclosure of the diagnosis of STD to the sexual partner in order to minimize the possible consequences.

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