



## ORIGINALES

### HIV as a means of materializing Gender Violence and violence in same-sex couples

El VIH como vía de materialización de la Violencia de Género e Intragénero

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#### ABSTRACT:

**Objective:** The general objective of this research is to identify the prevalence and characteristics of partner violence (perpetrator and recipient) in HIV positive patients enrolled in the Mexican Institute of Social Security (IMSS, in Spanish) in the state of Nuevo Leon, Mexico.

**Methodology:** A quantitative research was proposed, through a descriptive and transversal design, using as main instrument the Likert scale of violence in partner relationships of Cienfuegos and the Likert scale on the use of HIV as a means to materialize violence. We applied 265 self-administered questionnaires and obtained a statistic sample of 198 patients

**Results:** There is a prevalence of partner violence of 40.40% as a receiver and of 40.90% as a perpetrator, psychological violence is the most frequent form in both cases. The prevalence of the use of HIV as a means of materializing partner violence as a recipient is of 4.54% and of 2.52% as a perpetrator. There is a higher proportion of non-heterosexual female victims and aggressors, and of couples in which both members are HIV positive; as well as in patients with a higher level of secure attachment and satisfaction with life.

**Conclusions:** As in GBV (gender-based violence), there is evidence of the existence of violence in same-sex relationships in which one of the members is HIV positive. Likewise, it is possible to corroborate that HIV is used as a means to exercise partner violence.

**Key words:** partner violence; intra-gender violence; HIV

#### RESUMEN:

**Objetivo:** El objetivo general de esta investigación consiste en identificar la prevalencia y características de la violencia en pareja (perpetrador/a y receptor/a) en pacientes seropositivos adscritos al Instituto Mexicano del Seguro Social (IMSS) de Nuevo León (México).

**Método:** Se ha planteado una investigación cuantitativa, a través de un diseño descriptivo y transversal, utilizando como instrumento principal la escala Likert de violencia en la relación de pareja de Cienfuegos y la escala Likert sobre el uso del VIH como vía de materialización de la violencia. Se aplicaron 265 cuestionarios autoadministrados y se obtuvo una muestra de 198 pacientes

**Resultados:** Existe una prevalencia de la violencia en pareja como receptor/a del 40.40% y como perpetrador/a del 40.90%, siendo en ambas formas la violencia psicológica la más frecuente. La prevalencia del uso del VIH como vía de materialización de la violencia en pareja como receptor/a es del 4.54% y como perpetrador/a del 2.52%. Existe una mayor proporción de víctimas y agresores mujeres, no heterosexuales y de parejas en la que ambos miembros son seropositivos; así como en pacientes con mayor nivel de apego seguro y satisfacción con la vida.

**Conclusiones:** Al igual que en la VG, se constata la existencia de violencia en relaciones formas por personas del mismo sexo en la que alguno de sus miembros es seropositivo/a. Asimismo, se corrobora que el VIH se utiliza como medio para ejercer la violencia en pareja.

**Palabras claves:** violencia en pareja; violencia intragénero; VIH.

## INTRODUCTION

The scientific literature on gender-based violence (GBV) shows that women who are carriers of the human immunodeficiency virus (HIV) have a high incidence, with half of the women being victims of violence by their partners<sup>(1)</sup>; different studies place this incidence higher than the one of couples in which none of the members is seropositive<sup>(2)</sup>.

The social stigma attached to the virus contributes to the subjugation that patriarchal cultures reproduce around women<sup>(3,4)</sup>; this is produced through processes in which the lack of recognition is materialized through different forms of contempt. In this sense, in the affective sphere, recognition (love) and the principle of the attention of needs is achieved through self-confidence and makes use of abuse as a means of contempt<sup>(5)</sup>.

Alonso, Cerezo, Pagés, Ramos, and Torricelli point out that there are social determinants of HIV and GBV which function as determinant factors, among which these authors mention: (1) the social perception of violence, insecurity and impunity, (2) limited access to education and work, (3) restricted access to comprehensive and differentiated care in the health services, (4) macho social behaviors and patriarchy, (5) discrimination against people because of their sexual orientation, and (6) stigmatization and discrimination against women with HIV<sup>(6)</sup>. Likewise, regarding the specific forms in which HIV is used as a means of materializing GBV (in addition to physical, psychological, economic and sexual violence), different authors describe actions such as (1) preventing access to antiretroviral treatment, (2) prohibiting access to consultations, (3) discouraging medication/treatment, and (4) destroying antiretroviral medication<sup>(2,7)</sup>. This set of factors trigger a negative social impact and consequences for the physical and psychosocial health of women, including the decrease of CD4+ lymphocytes<sup>(8)</sup>.

One of the variables used to analyze partner relationships is attachment, which refers to a self-schema model that regulates relationships with others, based on patterns of social interaction related to affective ties<sup>(9)</sup>; there are four main types of attachment<sup>(10)</sup>: (1) secure attachment (high personal value, feeling comfortable with intimacy and autonomy), (2) concerned attachment (low personal value and positive evaluation of others), (3) fearful attachment (low personal value, fear of intimacy and social avoidance) and (4) avoidant attachment (high personal value, rejection of intimacy and dependence).

Taking into consideration the Latin American context, the studies on GBV and HIV are rather scarce; in Colombia, the quantitative study of Arevalo-Mora<sup>(8)</sup> identified that out

of 223 HIV positive women, 33.6% suffered from partner violence. Another study by the same author, based on a qualitative methodology, warns that this type of situations has the consequences of a low self-esteem in women, a damage in their self-image, high rates of depression and feelings of guilt <sup>(11)</sup>. On the other hand, in Brazil, one study indicates that victims have difficulty recognizing acts of sexual violence <sup>(12)</sup>, while another study shows that living in situations of GBV influences adherence to treatment<sup>(13)</sup>; likewise, in a study conducted in São Paulo with a sample of 2,780 women, 59.8% suffered from GBV <sup>(14)</sup>, while another study indicates that in a sample of 57 Brazilian women of color who are HIV-positive, 28% suffered from GBV <sup>(15)</sup>. In Argentina, a qualitative study analyzes the life stories of HIV-positive women who are victims of GBV and the public policies in this regard <sup>(16)</sup>; another qualitative study indicates that racial and gender oppression are factors that favor GBV <sup>(17)</sup>. Moreover, in Chile, a study with a sample of 100 HIV-positive women showed that 77% suffered from GBV; and psychological violence was the most frequent form <sup>(18)</sup>. Finally, in Mexico, a study with an indigenous population confirmed the existence of this type of violence and indicated that the trajectory of the disease exacerbates the forms of violence <sup>(19)</sup>. Another qualitative study indicates that migrant women have difficulty recognizing acts of sexual violence in their daily lives <sup>(18)</sup>.

In all these studies, GBV is analyzed from the perspective of the victims. Likewise, the quantitative studies allude to the forms of generalized violence (physical, psychological, economic and sexual) and do not include specific issues in which HIV is used as a form of materialization of violence. On the other hand, it should be noted that most studies on partner violence and HIV also exclude situations of intra-gender violence (IV); that is, violence that occurs within same-sex couples (gays, lesbians and bisexuals) or in couples where one of the members is transgender, transexual or intersexual <sup>(20)</sup>. In this sense, accounts of intra-gender violence (IV) such as those of Saldivia, Faúndez, Sotomayor and Cea <sup>(21)</sup> and Rodríguez, Rodríguez-Castro, Lameiras and Carrera <sup>(20)</sup>, show that in this type of relationship produce situations in which HIV is used as a means to materialize violence; either through outing, control, contagion or intimidation.

## OBJECTIVES

### General

To identify the prevalence and characteristics of partner violence (perpetrator and recipient) in seropositive patients enrolled in the Mexican Institute of Social Security (IMSS, in Spanish) in the state of Nuevo Leon, Mexico.

### Specific

To build and validate a scale to measure the use of HIV as a form of partner violence (perpetrator and recipient).

Analyze the prevalence of physical, psychological, economic, sexual and HIV-related violence in HIV-positive patients who are victims and perpetrators of GBV and IV.

To identify the relationship between partner violence, the type of attachment and the level of satisfaction with life of HIV patients. As well as to compare the results according to sex, sexual orientation and seroprevalence of the partners.

## METHODOLOGY AND MATERIALS

A descriptive, transversal and analytical study was carried out between December 2019 and February 2020 in the state of Nuevo León, Mexico.

### Participants

The department of infectious diseases of the northern area of the IMSS, has a census of 850 HIV-positive patients receiving antiretroviral treatment (universe). A simple random probability sampling with a margin of error of 5% and 95% confidence level was used to select a sample of 265 patients. Once the 265 questionnaires were applied, a selection process was carried out to include those that were complete, obtaining a final sample of 198 patients.

### Tools

For data collection, a self-administered anonymous questionnaire was applied, which included questions related to the socio-demographic information of the sample, as well as (a) Padilla and Díaz-Loving's Likert scale of attachment type (secure, concerned, fearful, and avoidant) with 18 questions and values from 1 to 5 <sup>(10)</sup>, (b) Pons, Atienza, Balaguer, and García-Merita's Likert scale of satisfaction with life <sup>(22)</sup>, with up of 5 questions and values from 1 to 5, (c) the Likert scale of violence in partner relationships (perpetrator and recipient) elaborated by Cienfuegos <sup>(23)</sup>, with 12 and 28 items respectively with values from 1 to 5 and, (d) the Likert scale of the use of HIV as a means of materializing violence (perpetrator and recipient) with values from 1 to 5 (see Appendix I).

### Procedure

The data collection was carried out in the vicinity of the hospital, so in each consultation the social worker assigned to the department presented our research to each patient and requested their participation on a voluntary basis. Once the questionnaires were collected, they were reviewed and those that were complete were included and codified in a database using SPSS software, for subsequent analysis.

### Data analysis

First, the Likert scale of the use of HIV as a means of materializing violence (perpetrator and recipient) was validated. To do this, the analysis proposed by Zamalloa <sup>(24)</sup> was carried out; it consists of calculating the indicator of homogeneity ( $>0.20$ ) of the items and analyzing its reliability by applying the methods of separation of halves and of covariance of the items (Cronbach's alpha). Next, a comparison of the statistical means and the t-student test for independent samples was made, with a 95% confidence interval percentage of the scales based on the variables of analysis (seropositive partner and sexual orientation). In addition, cross tables and chi-square test for each of the forms of violence were carried out. A Pearson correlation analysis was also performed at the level of 0.01 and 0.05 between the scales.

## Data treatment

For the realization of the study, the norm 2000-001-009 <sup>(25)</sup> which establishes the dispositions for health research in the Mexican Institute of Social Security (IMSS, in Spanish) was applied; as well as Mexico's General Law of Health on its chapter on Health Research (Ley General de Salud en Materia de Investigación para la Salud), which is based on the Declaration of Helsinki. Thus, the questionnaires were applied on a voluntary basis, after the explanation of our object of study and after offering a guarantee of anonymity.

## RESULTS

### Characteristics of the sample

The main socio-demographic characteristics of the population under study are presented in Table 1. As can be seen, the resulting final sample consists of 198 patients between the ages of 20 and 70 (mean=38.45 years), most of whom are men (86.4), Mexicans (99.0%), from the state of Nuevo León (67.2%), from an urban context (80.8%), single (72.7%), without children (81.8%), homosexuals (64.6%), with secondary education (47.0%), employed (87.9%), with a declared medium socioeconomic level (83.3%), non-drug users (94.4%), and whose main way of contracting HIV was sexual intercourse (75.3%); likewise, they are non-participants of HIV positive support groups (93.4%), have never abandoned treatment (78.3%) and have not had any difficulties in accessing treatment (66.7%).

### Validation of the Likert Scale on the use of HIV as a means of materializing violence (perpetrator and recipient)

The item-test analysis presented in Table 2, shows that for the homogeneity indicator on the Perpetrator Scale and the Recipient/Perpetrator of Partner Violence through the Use of HIV Scales, all items have a lower level of significance than allowed (<0.05). However, it should be noted that item 3 on the Scale of HIV Use as a Means of Materializing Violence as a Recipient (i.e. My partner has prevented me from going to the doctor or clinic), as well as item 4 on the Scale of Perpetrator (i.e. I have prevented my partner from taking medication), cannot be calculated because at least one variable is constant.

Also, as can be seen in Table 2, between the different dimensions of the Partner Violence Recipient Scale there are significant bilateral Pearson correlations at the level of 0.01 and a significance of less than 0.05 with the HIV Recipient Scale; as well as between the dimensions of the Partner Violence Perpetrator Scale and the HIV Perpetrator Scale.

On the other hand, in terms of reliability, the results of the method of separation of halves and covariance of items (Cronbach's Alpha), as shown in Table 2, reveal the existence of an acceptable level of reliability and internal consistency. For this reason, it is considered appropriate to include the five items from the Perpetrator and Recipient of Partner Violence through the Use of HIV Scales (see Appendix I) in the Cienfuegos' scales <sup>(23)</sup>.

**Table 1.** Sociodemographic Characteristics of the Sample

		<b>N</b>	<b>%</b>
<b>Sex</b>	Male	171	86.4
	Female	27	13.6
<b>Nationality</b>	Mexican	196	99.0
	Other	2	1.0
<b>Place of origin</b>	Nuevo León	133	67.2
	Other	65	32.8
<b>Environment</b>	Rural	38	19.2
	Urban	160	80.8
<b>Civil status</b>	Single	144	72.7
	Married	38	19.2
	Separated	2	1.0
	Divorced	3	1.5
	Widow	11	5.6
<b>Partner with VIH</b>	Yes	48	24.2
	No	85	42.9
	Did not answer	3	1.5
	Does not apply	62	31.3
<b>Multiple sexual partners</b>	Yes	21	10.6
	No	177	89.4
<b>Children (son/s or daughter/s)</b>	Yes	36	18.2
	No	162	81.8
<b>Sexual orientation</b>	Heterosexual	49	24.7
	Homosexual	128	64.6
	Bisexual	20	10.1
	Other	1	.5
<b>Level of studies concluded</b>	Primary	4	2.0
	Secondary	40	20.2
	High School	53	26.8
	University	89	44.9
	Other	12	6.1
<b>Employment situation</b>	Employed	174	87.9
	Student	6	3.0
	Retired	1	.5
	Unemployed	11	5.6
	Other	6	3.0
<b>Economic status</b>	Low	26	13.1
	Medium	165	83.3
	High	7	3.5
<b>HIV infection through...</b>	Sexual intercourse	149	75.3
	Drug use	3	1.5
	Maternal transmission	2	1.0
	Blood transfusion	3	1.5
	Does not know	41	20.7
<b>Drug use</b>	Yes	11	5.6
	No	187	94.4
<b>HIV positive Support Group</b>	Yes	13	6.6
	No	185	93.4
<b>Treatment abandonment</b>	Yes	43	21.7
	No	155	78.3
<b>Difficulties for accessing treatment</b>	Yes	66	33.3
	No	132	66.7

**Table 2.** Item-test correlations, Correlations between Scales and Dimensions, Reliability tests and Internal Consistency of both Scales.

Item-test Correlations	Use of HIV Recipient Scale		Item-test Correlations	Use of HIV Perpetrator Scale				
	Pearson Corr.	Sig. (2-tailed)		Pearson Corr.	Sig. (2-tailed)			
<b>Recipient 1</b>	.787(**)	.000	<b>Perpetrator 1</b>	.579(**)	.000			
<b>Recipient 2</b>	.486(**)	.000	<b>Perpetrator 2</b>	.563(**)	.000			
<b>Recipient 3</b>	.(a)	.	<b>Perpetrator 3</b>	.563(**)	.000			
<b>Recipient 4</b>	.228(**)	.001	<b>Perpetrator 4</b>	.(a)	.			
<b>Recipient 5</b>	.808(**)	.000	<b>Perpetrator 5</b>	.133(**)	.000			
Dimensions Correlations	Partner Violence Recipient Scale		Use of HIV Recipient Scale		Partner Violence Perpetrator Scale		Use of HIV Perpetrator Scale	
	Pearson Corr.	Sig. (2-tailed)	Pearson Corr.	Sig. (2-tailed)	Pearson Corr.	Sig. (2-tailed)	Pearson Corr.	Sig. (2-tailed)
<b>Psychological Violence</b>	.979(**)	.000	.491(**)	.000	.948(**)	.000	.344(**)	.000
<b>Physical Violence</b>	.721(**)	.000	.212(**)	.003	.558(**)	.000	.449(**)	.000
<b>Economic Violence</b>	.767(**)	.000	.336(**)	.000	.605(**)	.000	.430(**)	.000
<b>Sexual Violence</b>	.793(**)	.000	.424(**)	.000	.637(**)	.000	.391(**)	.000
<b>HIV-related Violence</b>	.479(**)	.000	1		.456(**)	.000	.391(**)	.000
<b>Partner Violence Recipient</b>	1		.479(**)	.000	.488(**)	.000	.190(**)	.007
<b>Partner Violence Perpetrator</b>	.488(**)	.000	.306(**)	.000	1		.456(**)	.000
					<b>Recipient + HIV Recipient</b>		<b>Perpetrator + HIV Perpetrator</b>	
<b>Reliability</b>	Cronbach's Alpha	Part 1		.921		.831		
		Part 2		.773		.753		
	Correlation between forms				.813		.579	
	Spearman-Brown Coefficient	Equal Length		.897		.733		
		Unequal Length		.897		.733		
Guttman's halves				.751		.582		
<b>Internal Consistency</b>	Cronbach's Alpha				.933		.853	
	Number of elements				33		17	

Note: \*\*Correlation is significant at the 0.01 level (bilateral); .(a) cannot be calculated because at least one variable is constant.

## **Analysis of the scale of violence in the partner relationship (perpetrator and recipient) and the scale of the use of HIV as a means of materializing violence**

The results obtained through the application of the Recipient of Violence Scale show that 80 participants (40.40%) manifest to have experienced situations of violence from their partner. Results also show that 75 patients report having been victims of psychological violence (37.87%), 41 of sexual violence (20.70%), 24 of physical violence (12.12%), 22 of economic violence (11.11%) and 9 of violence through the use of HIV (4.54%). In this sense, as can be seen in Appendix II, the most frequently referred expressions of violence are Item 6 (i.e. My partner watches everything I do) with 48 participants (24.21%), Item 8 (i.e. My partner does not take into account my sexual needs) and Item 22 (i.e. My partner gets jealous and suspicious of my friends) with 38 patients respectively, as well as Item 3 (i.e. My partner gets angry with me if I do not do what he wants) with 35 (17.7%). Likewise, it should be noted that after performing the chi-square test the result of the asymptotic significance for all items registered a value higher than 0.05. With regard to the issues related to the use of HIV as a means of materializing violence, it should be noted that the most reported form is Item 2 (i.e. My partner has hidden from me that he had HIV and has infected me); which was referred to by 2.5% of the sample.

On the other hand, in terms of the Scale of the Perpetrator of the Violence, 81 participants (40.90%) stated that they had used violence against their partner; of which 78 admitted having exercised psychological violence (39.39%), 31 sexual violence (15.65%), 15 economic violence (7.57%), 9 physical violence (4.54%) and 5 violence through the use of HIV (2.52%). In this sense, as shown in Appendix II, the most frequently referred to expressions of violence are Item 3 (i.e. I have become angry when she contradicts or disagrees with me) with 68 participants (34.30%), Item 2 (I have come to yell at my partner) with 62 patients (31.30%) and Item 4 (I have come to insult my partner) with 34 (17.20%). Likewise, it should be noted that after performing the chi-square test, the result of the asymptotic significance for all items registered a value higher than 0.05. Regarding the issues related to the use of HIV as a means of materializing violence, it should be noted that the most reported form is Item 1 (i.e. I have threatened my partner to tell others that I have HIV); which is referred to by 1.0% of the sample.

In Addition, the frequency of the forms of materialization of violence stated by 81 perpetrators corresponds to average values (mean=2.750; SD=1.109), which are higher with respect to sexual violence and violence involving HIV. Regarding the 80 victims the frequency is slightly less, although there are also average values (mean=2.693; SD=0.660), and higher values for sexual and psychological violence (see Table 3).

### **Analysis according to the variables of sex, sexual orientation and seropositivity status of the partners**

Taking into consideration the variables related to sex, sexual orientation and seropositivity status of the partners, the following peculiarities were identified:

- With respect to the variable related to sex, 70 men (30.03%) and 10 women (66.66%) stated that they have been victims of their partner, of which 6 men (3.05%) and 3 women (18.51%) suffered violence through the use of HIV. As



for the sample that indicates that one partner exercised violence against other partner(s), 69 men (40.35%) and 12 women (44.44%) were identified, of which 3 men (1.75%) and 2 women (7.70%) stated that they have used HIV as a means to exercise violence. On the other hand, the frequency of violence in male recipients (mean=2.63) is occasional and in women (mean=1.90) sporadic, as well as each of its forms of materialization; with the exception of economic violence, which is higher among women. The scale of violence perpetrator is more frequent among men (mean=2.68) than among women (mean=1.96), as well as each of its forms. Likewise, it is important to note that after the t-student test, the bilateral significance of each of the dimensions is greater than 0.05 (see Table 3).

- On the other hand, taking into consideration the seropositive status of the partners, it was observed that 32 participants with a seropositive partner (66.66%) and 43 with a serodiscordant partner (50.58%) declared that they have been victims of violence from their partner; of which 6 serodiscordant (6.25%) and 3 seropositive (5.88%) suffered violence through the use of HIV. As for the sample that shows violence towards their partners, 33 participants were identified as having a seropositive partner (68.75%) and 41 as having a serodiscordant partner (48.23%), of which 2 seropositive (4.16%) and 3 serodiscordant (3.52%) admitted that they had used HIV as a means of violence. On the other hand, the frequency of Violence Recipient among serodiscordant couples (mean=2.64) is occasional, as well as in seroprevalent couples (mean=2.37), although slightly higher in the former; as well as each of its forms of materialization. Regarding the Violence Perpetrator Scale, a greater frequency is observed among serodiscordant partners (mean=2.32) than in the seroprevalent ones (mean=2.02), as well as each of their forms of materialization. In each case, it is associated with occasional violence. Likewise, it should be noted that after the t-student test, the bilateral significance of each of the dimensions is greater than 0.05 (see Table 3).
- Finally, with respect to sexual orientation, 16 heterosexual participants (32.65%) and 64 non-heterosexual participants (49.95%) reported having been victimized by their partners; of which 2 heterosexuals (4.08%) and 7 non-heterosexuals (4.69%) suffered violence through the use of HIV. As for the sample that indicates violence against their partners, 16 heterosexual participants (32.65%) and 65 non-heterosexual participants (43.62%) were identified, of which 2 heterosexuals (4.08%) and 3 non-heterosexuals (2.01%) reported using HIV as a means of violence. On the other hand, the frequency of violence in heterosexual recipients (mean=2.65) is occasional, as well as in non-heterosexuals (mean=2.63) and slightly higher for the heterosexual sample; as well as each of its forms of materialization with the exception of violence through the use of HIV. As for the Violence Perpetrator Scale, there is a greater frequency in non-heterosexuals (mean=2.32) than in heterosexuals (mean=1.98), as well as each of its forms of materialization with the exception of psychological violence. Likewise, it should be noted that after the t-student test, the bilateral significance of each of the dimensions is greater than 0.05 (see Table 3).

Taking into consideration the results obtained for the attachment type and life satisfaction scales, as shown in Table 4, the results show that the sample of medium-

high level of life satisfaction (mean=3.54; SD=1.11); superior in men, non-heterosexual patients and participants with a seroprevalent partner. Likewise, it was identified that the type of attachment with the greatest value in the sample is the secure type (mean=2.58; DT=0.931); which is superior in women, non-heterosexual patients and among serodiscordant couples. Finally, it should be noted that the Perpetrator and Recipient Partner Violence Scales (including the items of the use of HIV as a means of materializing violence) are directly proportional to the scale of safe attachment (Pearson's Correlation Receiver=0.014 and Sig.=0.848; Pearson Perpetrator Correlation=0.011; Sig.=0.879) and inversely proportional to the life satisfaction scale (Pearson Receiver Correlation=-0.007 and Sig.=198; Pearson Perpetrator Correlation=0.826; Sig.=198); although there are no Pearson correlations between them at the level 0.01 and 0.05.

**Table 3.** Comparison of Violence Scale Statistical Means, by variables of analysis.

Scale	Total		Seropositive Partner				Sex				Sexual orientation				
			Yes (n=48)		No (n=85)		Male (n=171)		Female (n=27)		Hetero (n=49)		LGBQ (n=149)		
	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	
Recipient	Psychological	2.75	0.25	2.54	.32	2.81	.35	2.79	.27	2.03	.87	2.86	.55	2.75	.25
	Physical	2.53	0.21	2.24	.21	2.40	.40	2.71	.20	2.11	.19	3.11	.14	2.35	.32
	Economic	2.54	0.47	2.54	.73	2.33	.30	2.65	.54	2.33	.74	2.75	1.14	2.48	.38
	Sexual	2.97	0.01	1.89	1.64	2.60	1.21	2.99	.01	1.66	1.52	3.25	.68	2.90	.15
	HIV-related	2.63	1.66	2.00	2.73	2.10	2.13	1.90	2.60	1.00	1.29	1.00	1.41	2.48	2.32
	Total	2.69	0.66	2.37	1.14	2.64	.95	2.63	1.02	1.90	1.01	2.65	.97	2.63	.87
Perpetrator	Psychological	2.53	0.11	2.33	.32	2.29	.09	2.43	.21	2.41	.22	2.77	.35	2.14	.22
	Physical	2.44	0.20	2.00	.34	2.25	.20	2.50	.27	2.33	.28	2.00	.19	2.57	.40
	Economic	2.52	0.19	2.23	.13	2.75	.11	2.53	.24	2.50	0	2.50	0	2.53	.24
	Sexual	3.01	0.33	2.69	.43	3.22	.39	3.01	.32	1.33	1.88	1.62	2.29	2.97	.38

	HIV-related	3.10	2.13	1.40	2.19	1.40	2.19	3.00	2.73	1	1.09	1	1.09	3	2.73
	Total	2.75	1.10	2.07	1.21	2.32	1.28	2.68	1.40	1.96	1.57	1.98	1.20	2.69	1.40

Note:  $\bar{x}$  = statistical mean;  $\sigma$  = standard deviation.

**Table 4.** Comparison of Statistical Means of the Attachment and Life Satisfaction Scales, by variables of analysis.

Scales	Seropositive Partner						Sex				Sexual Orientation				
	Total		Si		No		Male		Female		Hetero		LGBQ		
	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	
<b>Life Satisfac.</b>	3.54	1.11	3.75	.931	3.53	1.150	3.59	1.122	3.24	1.033	3.42	1.153	3.58	1.103	
<b>Type of Attachment</b>	Secure	2.58	.931	2.48	.854	2.55	.906	2.56	.944	2.67	.855	2.41	1.000	2.63	.904
	Concerned	2.04	.770	1.91	.597	2.08	.787	2.03	.797	2.14	.569	1.93	.729	2.08	.781
	Fearful	2.02	.787	1.91	.615	2.08	.816	2.00	.817	2.17	.548	1.94	.717	2.05	.809

	Avoidant	1.82	.815	1.59	.554	1.91	.861	1.79	.838	1.97	.642	1.75	.740	1.84	.840
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Note:  $\bar{x}$  = mean;  $\sigma$  = standard deviation.

## DISCUSSION

Through the present investigation it has been verified that, in the context of the region, there is a prevalence of 40.40% of violence in couples in which one of the partners is seropositive. Comparing this result with other researches, it is observed that the prevalence is higher than studies contextualized in Colombia <sup>(8)</sup> and Brazil <sup>(15)</sup>; and lower than other studies contextualized in Chile <sup>(18)</sup> and Brazil <sup>(14)</sup>. However, it should be noted that in these studies the sample consisted only of women. It is also observed that psychological violence, as in the research on GBV conducted by Vidal, Carrasco and Pascal in Mexico <sup>(18)</sup>, is the main way of materializing (37.87%); followed by sexual violence (20.70%), physical violence (12.12%), economic violence (11.11%) and violence in which HIV is used as a means to materialize (4.54%). It has also been found that there is a higher proportion of female victims, non-heterosexual and couples in which both members are HIV positive. However, it is noted that there is a greater frequency over time when the victims are men, heterosexuals and in serodiscordant couples.

On the other hand, through the results obtained, a prevalence of partner violence aggressors has been registered among couples in which one of the members is HIV positive (40.90%). It is also observed that psychological violence is the main way of materialization (39.39%), followed by sexual violence (15.65%), economic violence (7.57%), physical violence (4.54%) and violence in which HIV is used as a means to materialize (2.52%). Also, it has been found that there is a higher proportion of female aggressors, non-heterosexual, and in couples in which both members are HIV positive. However, it is noted that there is a greater frequency over time when the aggressors are men, non-heterosexual who form serodiscordant couples. These results cannot be compared with other researches, as no studies have been identified that address the perspective of the perpetrator of violence in these types of couples. However, it should be noted that this prevalence is similar to that described above with respect to victims. This reveals that in several patients there is bidirectional violence; therefore, it would be ideal to take into account in future investigations the case when the figure of the perpetrator is manifested as a defense to an aggression or form of violence.

It should also be noted that the results show that in couples in which one of the members is seropositive, in addition to the existence of GBV (gender-based violence) as also presented in previous research <sup>(1, 2, 11-13, 16)</sup>, there is, as warned by the work of Rodríguez, Rodríguez-Castro, Lameiras and Carrera <sup>(20)</sup> and Saldivia, Faúndez, Sotomayor and Cea <sup>(21)</sup>, IV (intra-gender violence) in same-sex couples. In fact, the results obtained reveal that IV is more frequent in this type of relationship than VG. However, in the interpretation of the results, it would be convenient to take into

account that, as indicated by studies carried out in Brazil <sup>(12)</sup>, Argentina <sup>(17)</sup> and Mexico <sup>(18)</sup>, the victims present difficulty in recognizing the acts of violence (especially sexual violence). Likewise, it should be considered that, as warned by studies undertaken in Argentina, public policies <sup>(16)</sup>, racial and gender oppression represent factors that favor partner violence in this type of relationship <sup>(17)</sup>. On the other hand, it is observed that the prevalence of partner violence is higher (both in perpetrators and recipients) in couples where both members are HIV positive than in serodiscordant couples. This could be justified by the social stigma attached to the virus which, as different authors point out, contributes to the subjugation that patriarchal cultures reproduce around women <sup>(3, 4)</sup>; and also, of the identities that differ from the hegemonic model of masculinity.

Finally, it has been proven that there is a higher level of violence, both in the form of perpetration and reception of violence, among patients with a higher level of secure attachment (characterized by a high personal value, comfort with intimacy and a high level of autonomy) and a lower level of life satisfaction <sup>(10)</sup>. This data corroborates those obtained by another research carried out in Colombia <sup>(11)</sup>, which shows that this type of situations has the consequences in women of a low self-esteem, a damage to their self-image, depression and guilt. Nevertheless, it is important to point out that in the results obtained there are no Pearson correlations at the level of 0.01 and 0.05 between the different scales and subscales. It is also important to note that other factors must also be considered in these processes, such as public policies <sup>(16)</sup>, processes of racial discrimination <sup>(17)</sup>, and the stigma associated with HIV/AIDS <sup>(3-5)</sup>.

## CONCLUSIONS

The results obtained by our research show that, of the 198 seropositive patients of the Infectology Department of the General Zone Hospital of the IMSS in the state of Nuevo León (Mexico), 40.40% have suffered violence from their partners and 40.90% have exercised violence against their partners. It has also been found that psychological violence is the most frequent and that there is a greater prevalence of this type of violence in both forms (perpetrator and perpetrator) among women, non-heterosexual patients (LGB) and in couples where both members are HIV positive. It has also been found that the frequency of these profiles is sporadic.

As for the violence in which HIV is used as a means for its materialization, 4.54% of the sample indicates that they have been recipients of some of the forms of violence analyzed in the validated scale; and 2.52% declared having acted as a perpetrator. It is also noted that this type of violence is more frequent in women, non-heterosexuals and serodiscordant couples. It is important to take into consideration the social determinants that act as enabling factors such as: machismo, patriarchy, discrimination of people because of their sexual orientation and stigmatization and discrimination against people with HIV among others. It is also important to take into account that, as various authors have pointed out, these factors are the triggers of both social negative repercussions and consequences for the physical and psychosocial health of the victims, including the decrease in CD4+ lymphocytes and adherence to treatment.

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## APPENDIX I

**Table 6.** Items added to the Violence Recipient/Perpetrator Scale.

<b>Recipient/Perpetrator of Violence through the Use of HIV Scale</b>	
Item 1	29. My partner has threatened me to reveal to other people that I am HIV positive
Item 2	30. My partner has hidden from me that he/she is HIV positive, and I was infected
Item 3	31. My partner has kept me from going to the doctor or clinic
Item 4	32. My partner has kept me from taking my medication
Item 5	33. My partner has told me that if am not with him/her, given that he/she is HIV positive, nobody would want to be with me
<b>Recipient/Perpetrator of Violence through the Use of HIV Scale</b>	
Item 1	13. I have threatened my partner with telling other people that I am HIV positive
Item 2	14. I have hidden form my partner that I am HIV positive and I have infected him/her
Item 3	15. I have kept my partner from going to the doctor or clinic
Item 4	16. I have kept my partner form taking his/her medication
Item 5	17. I have told my partner that if he/she is not with me, given that I am HIV positive, nobody would want to be with him/her

Note: Values from 1 to 5, where 1=never, 2=rarely, 3=sometimes, 4= frequently and 5=very frequently.

## APPENDIX II:

**Table 7.** Totals and frequencies of the Violence Recipient Scales.

Recip.	$\bar{x}$	$\sigma$	Yes		No		Chi	Sig	Recip.	$\bar{x}$	$\sigma$	Yes		No		Chi	Sig
			n	%	n	%						n	%	n	%		
V1	1.197	.601	24	12.1	174	87.9	113.63	.000	V18	1.085	.480	8	4	190	96.0	167.29	.000
V2	1.191	.655	22	11.1	176	88.9	119.77	.000	V19	1.070	.433	8	4	190	96.0	167.29	.000
V3	1.343	.838	35	17.7	163	82.3	82.74	.000	V20	1.090	.417	12	6.1	186	93.9	152.90	.000
V4	1.176	.624	20	11.1	178	88.9	126.08	.000	V21	1.080	.381	11	5.6	187	94.4	156.44	.000
V5	1.257	.773	26	13.1	172	86.9	107.65	.000	V22	1.388	.937	38	19.2	160	80.8	75.17	.000
V6	1.459	.964	48	24.2	150	75.8	52.54	.000	V23	1.065	.403	7	3.7	191	96.3	170.99	.000
V7	1.111	.531	11	5.6	187	94.4	156.44	.000	V24	1.015	.122	3	1.5	195	98.5	186.18	.000
V8	1.378	.902	38	19.2	160	80.8	75.17	.000	V25	1.146	.465	23	11.6	175	88.4	116.68	.000
V9	1.323	.852	31	15.7	167	84.3	93.41	.000	V26	1.025	.186	4	2	194	98.0	182.32	.000
V10	1.096	.445	11	5.6	187	94.4	156.44	.000	V27	1.050	.241	9	4.5	189	95.5	163.63	.000
V11	1.096	.434	12	6.1	186	93.9	152.90	.000	V28	1.085	.436	10	5.1	188	94.9	160.02	.000
V12	1.232	.702	27	13.6	171	86.4	104.72	.000	V29	1.055	.429	4	2	194	98.0	182.32	.000
V13	1.090	.379	13	5.6	185	94.4	149.41	.000	V30	1.060	.423	5	2.5	193	97.5	178.50	.000
V14	1.050	.373	5	2.5	193	97.5	178.50	.000	V31	1.000	.000	0	0	198	100	a	a
V15	1.096	.478	11	5.6	187	94.4	156.44	.000	V32	1.005	.071	1	0.5	197	99.5	194.02	.000
V16	1.065	.350	10	5.1	188	94.9	160.02	.000	V33	1.045	.406	3	1.5	195	98.5	186.18	.000
V17	1.070	.433	6	3	192	97.0	174.72	.000									

Note:  $\bar{x}$  = mean;  $\sigma$  = standard deviation; Chi = chi square; Sig = bilateral significance; a = this variable is constant. It's not possible to apply the chi-square test.

**Table 8.** Totals and frequencies of the Violence Perpetrator Scales.

Perpetrator	$\bar{x}$	$\Sigma$	Yes		No		Chi	Sig
			n	%	n	%		
<b>A1</b>	1.156	.533	18	9.1	180	90.9	132.54	000
<b>A2</b>	1.474	.822	62	31.3	136	68.7	27.65	000
<b>A3</b>	1.545	.898	68	34.3	130	65.7	19.41	000
<b>A4</b>	1.242	.614	34	17.2	164	82.8	85.35	000
<b>A5</b>	1.232	.634	28	14.1	170	85.9	101.83	000
<b>A6</b>	1.050	.330	7	3.5	191	96.5	170.99	000
<b>A7</b>	1.277	.759	31	15.7	167	84.3	93.41	000
<b>A8</b>	1.131	.506	18	9.1	180	90.9	132.54	000
<b>A9</b>	1.065	.364	9	4.5	189	95.5	163.63	000
<b>A10</b>	1.075	.402	9	4.5	189	95.5	163.63	000
<b>A11</b>	1.090	.405	13	6.6	185	93.4	149.41	000
<b>A12</b>	1.045	.353	4	2	194	98.0	182.32	000
<b>A13</b>	1.025	.292	2	1	196	99.0	190.08	000
<b>A14</b>	1.020	.284	1	0.5	197	99.5	194.02	000
<b>A15</b>	1.020	.284	1	0.5	197	99.5	194.02	000
<b>A16</b>	1.000	.000	0	0	198	100	a	a
<b>A17</b>	1.005	.071	1	0.5	197	99.5	194.02	000

Note:  $\bar{x}$  = mean;  $\sigma$  = standard deviation; Chi = chi square; Sig = bilateral significance; a = this variable is constant. It's not possible to apply the chi-square test.

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