

Risk of Femicide and Quality of Life Assessment of Women Victims of Intimate Partner Violence in Campinas, São Paulo, Brazil

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Accepted: 7 March 2023 / Published online: 10 April 2023 © The Author(s), under exclusive licence to Springer Nature Switzerland AG 2023

Abstract

Background Violence against women is a public priority issue for epidemiological and public health sciences. Severe consequences of violence affect the quality of life of women victims. The objective of this study was to quantify the impact in the quality of life of the strengthening group in women victims of intimate partner violence who attend a reference violence center in Campinas, São Paulo, Brazil.

Method Quasi-experimental before and after the study was designed. The danger assessment and WHOQOL-BREF scales were applied at admission, after 3 and 6 months. Descriptive and statistical analysis of the variables was carried out to verify the difference between the measurements in the quality of life domains.

Results Seventy-eight victims of intimate partner violence participated in the study. The most prevalent violence was psychological (96.2%), physical (79.5%), and moral (67.7%). Three months after participating in the strengthening group, there was an improvement in the 4 domains of quality of life, significantly in the psychological (p = 0.032) and physical (p = 0.006) domains. More than half of the participants were classified at the extreme level of risk of femicide (51.3%). The study was stopped early because of the restrictions of the COVID-19 pandemic.

Conclusion With the available data collected, the strengthening group proved to be a strategy that positively impacts the quality of life of women victims of intimate partner violence.

Keywords Domestic violence · Violence against women · Intimate partner violence · Quality of life · Femicide · Risk assessment

Introduction

Violence against women is a public health problem and an issue of epidemiological interest around the world. Different forms of violence against women are historically related

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¹ Graduate Program of Public Health in the Epidemiology Research Area, School of Medical Sciences, State University of Campinas, Rua Tessália Vieira de Camargo, 126 Cidade to unequal power relationships and systemic discrimination against the female gender, and all these behaviors are supported by social, religious, and economic values, as well as cultural practices (Ellsberg et al., 2000). With that being said, violence against women is both a consequence and a

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cause of gender inequality. Violent acts are not a matter of family privacy, private choices, or facets of life. Violence against women is a fundamental social problem (World Health Organization, 2005).

Worldwide, 30% (95% CI: 27.8–32.2%) of women who have been in a relationship reported having experienced some form of physical and/or sexual violence by an intimate partner throughout their lives (United Nations, 2015; World Health Organization, 2013). Levels of violence vary considerably from one country to another; the prevalence of violence throughout life can range from 15 to 71% (World Health Organization, 2005). In Brazil, some studies have reported a prevalence between 27.4 and 57.6% (da Silva et al., 2010; Brazilian Public Security Forum, 2019; Lucena et al., 2017; Santos et al., 2020).

Women who suffer domestic violence experience multiple episodes. Usually, several types of abuse coexist. Domestic violence remains common and accepted in too many societies (World Health Organization, 2005).

Women do not passively accept violence; when they are in abusive relationships, they often make repeated efforts to end it and get out of the violent cycle. Some of them try to improve their living conditions and those of their dependents. However, ending a violent relationship is difficult without expert support such as government intervention or professionally-trained domestic abuse workers. Even afterward, this does not mean the violence she was previously suffering will completely end. Aggressions and threats still persist after termination, and the first year after separation is the period of greatest risk for the crime of femicide to occur (Campbell et al., 2003). Worldwide, between 38 and 50% of murdered women are killed by an intimate partner (World Health Organization, 2019).

There are many reasons that make the end of a violent relationship very difficult: women fear more severe abuse, lack of alternatives for economic support, concern for their children, emotional dependence, lack of support networks, the hope for change in an abusive partner, and prejudice associated with separation, among others (Ellsberg et al., 2000). Traditionalist and sexist attitudes about the role of women, attempts to discredit women denouncing violence, victim-blaming, or justification of the aggressor, as well as feelings of shame and guilt, might prevent women from calling attention to situations of violence and seeking help. The dichotomy between public and private ends up making women vulnerable, placing them in private environments, where their protection is more difficult.

Control and violence are mechanisms used to submit women to relationships and dynamics that are totally disadvantageous to them, which end up negatively affecting their quality of life. Quality of life is understood as a multidimensional measure that includes an assessment of the social, cultural, and environmental context in which the person lives. Studies of women victims of domestic violence have shown that, after separation, their levels in quality of life improve, especially mental health, but positive changes also occur in vitality and social function. However, this improvement depends on the severity of the violence; women who have experienced severe physical and psychological violence have lower gains in quality of life after the end of the relationship (Alsaker et al., 2008).

All forms of violence against women have severe consequences. Evidence shows that an abusive relationship has a profound impact on health, causing physical, sexual, reproductive, psychological, and behavioral damage, as well as problems with eating and sleeping. Violence perpetrated by an intimate partner is the biggest contributor to depression and suicide, also leading to maternal and neonatal health problems (World Health Organization, 2013). Multiple, increasing, and continuous violence can end in femicide or forced suicide.

The response to the abuse of women is still limited among society and in the legislation, but it is the responsibility and obligation of government entities to guarantee adequate living conditions, with a dignified and violence-free environment for their citizens. The analysis of the situations of violence must recognize the influence of cultural and social constructs for the roles and behaviors of men and women, as well as the power relations that limit women to access economic resources and create independence from the aggressor partners.

Protection and care institutions help vulnerable women to improve their psychological, material, and social condition. Thus, this study aims to measure the impact on the quality of life of women who attend the Reference and Support Center for Women in Campinas (Ceamo).

Method

Study Location

The Reference and Support Center for Women in Campinas (Ceamo) is a protection service of medium complexity. Its purpose is to welcome and provide psychological, social, and legal guidance to women in situations of gender violence in the domestic sphere. This center offers individual, family, and group care services by spaces for welcoming, listening, and exchanging experiences and knowledge about women's rights in the exercise of citizenship (Ceamo, 2020). Women victims of violence are directed to Ceamo from other social or medical care services or through delegations after making complaints of domestic violence.

Type of Study

This is a quasi-experimental before-after study. The study population consisted of women in situations of domestic violence who started the care process at Ceamo.

Procedure

When the women started to attend the service, an individual program was carried out with a professional who collects the most relevant information about the violence they were exposed to. Subsequently, the users were invited to be part of the strengthening group, according to the criteria mentioned below.

Inclusion Criteria

(1) Women using Ceamo services for the first time; (2) women in situations of domestic violence by their current or past intimate partner; (3) age \geq 18 years old; (4) understands the spoken Portuguese language; and (5) accepting participation in the study and signing the informed consent form. Domestic violence or intimate partner violence is defined as a pattern of behavior in any relationship that is used to gain or maintain power and control over an intimate partner. Abuse is physical, sexual, emotional, economic, or psychological actions or threats of actions that influence another person. This includes any behaviors that frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, or wound someone (United Nations, 2022).

Exclusion Criteria

Suffering violence by a family member other than an intimate partner.

Group Intervention

The strengthening group is a collective service that works by conversation circles based on culture circles. The culture circles are a pedagogical proposal by the renowned Brazilian author Paulo Freire. They are spaces where people participate in a collective teaching and learning process. Culture circles are based on the premise that knowledge is built on dialogue and the exchange of critical inter/multicultural experiences. In a culture circle, knowledge is learned and reconstructed based on the totality of the knowledge of the members, including, necessarily, the scientific knowledge historically accumulated. They are meeting spaces that allow the establishment of deeper human relationships (Freire, 1983, 1994).

A professional with experience in violence against women conducted weekly sessions lasting 2 h with approximately 25 women per session. The session covered gender issues and combating violence against women. Participants were invited to exchange experiences and discuss the impacts of domestic violence in their own lives. The conversations were aimed at reflecting on the cultural constructions, the importance of the role of women, and the mechanisms to get out of the violence cycle. Some meetings included social, leisure, and beauty activities; also, some items for their personal care and household use were donated.

Measurement Elements

Three formats were used for the collection of data.

1. Format of recollection of basic data

For sociodemographic data and information about the situation of violence (whether they lived with the perpetrator of the aggressions, types of violence they suffered a relationship).

2. Danger Assessment Scale (Campbell et al., 2009)

This instrument assesses the risk of homicide in an intimate relationship (femicide). It consists of 20 items of dichotomous responses: positive and negative; the positive ones are considered important because they indicate the risk of suffering femicide. At the end of the questionnaire, a level of risk obtained after counting the responses in items 1–19 (number 20 is related to suicide and is not included in the count) is defined, and additional points are added for specific responses. The assessment allows the risk to be classified into 4 levels: variable, increased, severe, and extreme. Specific information about the scale can be consulted in https://www.dangerassessment.org/DA.aspx. There is a recent experience of the use of the danger assessment scale in Brazilian women that show good results (Evans et al., 2022).

The results of the risk assessment were attached to the medical records of each user to support the actions of the professional who met the particular case and to guide the monitoring according to the level of risk. Women with a higher risk of violence were instructed to initiate protective legal actions by protective measures and to prepare a security plan.

3. WHOQOL-Bref (The WHOQOL Group, 1994)

The instrument developed by the World Health Organization, in an abbreviated version, aims to assess the quality of life, understood as "an individual's perception of their position in life in the context of the culture and value systems in which they live and its relation to their goals, expectations, standards, and concerns" (The WHOQOL Group, 1994). The assessment consists of 26 questions, 2 general and 24 that evaluate the four domains: physical domain (pain and discomfort, energy and fatigue, sleep and rest, mobility, activities of daily living, dependence on medication or treatments, and work capacity); psychological domain (positive and negative feelings, thinking, memory and concentration, self-esteem, body image and appearance, spirituality, and personal beliefs); Social relationships (personal relationships, social support, and sexual activity); and environment (physical security and protection, home environment, financial resources, opportunities to acquire new information and skills, participation and opportunities for recreation/leisure, physical environment, and transportation). WHOQOL-BREF uses a Likert-type scale with five response options ranging from nothing (1) to extremely (5). Quality of life is assessed based on the past two weeks.

The WHOQOL instrument has been used to assess the quality of life in women victims of domestic violence (Ross et al., 2017) and is widely used in Brazil with several groups of interest (Kluthcovsky & Kluthcovsky, 2009). Its Portuguese version was validated and presented satisfactory psychometric characteristics (Fleck et al., 2000).

The scores obtained for each domain were analyzed according to the scale, in addition to recoding the items with negative scores (World Health Organization, 1996). The quality of life scale was applied to users at the beginning, at three months, and at six months of participation in the strengthening group.

Statistical Analysis

A descriptive analysis of the numerical variables was performed using mean and standard deviation. Tables of absolute and relative frequencies were constructed for categorical variables. A comparative analysis with the paired *t*-test and the Mann–Whitney *U* test was performed to verify the difference between the measurements of the quality of life domains. A significance level of 0.05 was adopted. The analysis was performed in the Stata program, version 12 (StataCorp, 2011).

Results

During the eleven months of study (March 8, 2019, to February 6, 2020), 46 meetings were held, in which it was possible to invite 82 users to the survey, 4 of whom were excluded because the aggressors were not perpetrated by intimate partners, but by other male family members (father, siblings, and offspring). In total, 78 users took part in the study. Table 1 shows a description of the sociodemographic characteristics.

The average age of the study group was 38.7 years old (ranging from 19 to 70 years old). The women were mainly in a stable relationship (47.3%) or single (37.2%); most of them had one or more children (88.5%). They declared themselves as white (41.0%), brown (39.7%), and black (16.7%). In the studied group, 44.9% of women reported having completed their high school education and 19.2% reported having higher education. Most of them reported not performing an economically paid activity (65.4%).

Table 1 Sociodemographic characteristics and exposition to violence in the past year (n = 78)

Characteristics	n	%
Age (years old)		
18–24	7	9.0
25–34	24	30.8
35–44	23	29.5
45–59	21	26.9
≥ 60	3	3.8
Education level		
Elementary school	28	35.9
High school	35	44.9
Higher education (technical, undergraduate,	15	19.2
and others)		
Performs paid work		
No	51	65.4
Yes	27	34.6
Race/skin color (self-declared)		
White	32	41.0
Brown	31	39.7
Black	13	16.7
Indigenous and yellow	2	2.6
Marital status		
Married/Stable union	37	47.3
Single	29	37.2
Divorced	11	14.1
Widow	1	1.3
Lives with the aggressor		
No	51	65.4
Yes	27	34.6
Children		
0	9	11.5
1	17	21.8
2	22	28.2
3	17	21.8
≥4	13	16.7
Type of violence suffered		
Psychological	75	96.2
Physical	62	79.5
Moral	53	67.9
Sexual	27	34.6
Financial	25	32.1
Property	24	30.8
Different types of violence suffered		
1	7	2.6
2	18	13.5
3	19	21.4
≥4	34	62,4
Risk assessment of femicide		
Variable risk	7	9.0
Increased risk	16	20.5
Severe risk	15	19.2
Extreme risk	40	51.3

Regarding domestic violence, the most prevalent types were psychological and physical violence; however, most women reported suffering or having suffered more than one type of violence.

About the risk assessment of femicide, more than half of the women were classified at the highest level of risk (extreme risk), with only 7 women (9.0%) at the lowest risk level. Figure 1 shows the number of positive responses to each of the risk assessment questions. This shows that women have been exposed to high levels of violence.

To determine the level of risk, one must look at the total number of positive responses to the questionnaire and then add 1–4 points for specific questions. This means that some responses score more when it comes to exposures that can lead to death or are markers of violence. Among them, three questions stand out: (1) does he own a gun? For this item, there was a positive response in 20.5% of the cases. (2) Is he unemployed? There are positive answers from 33.3% of the interviewees. (3) Has she left him after living together during the past year? A total of 37.2% of the women answered positively to this question. It should be noted that only three women would report never having lived with the aggressor. Among the 48 women

who did not live at the time with the aggressors, there was a wide variability in the times since the separation: a median of 90 days, with a variation from 2 days to 11 years. At the time of the interview, 27 women (34.6%) still lived with their partners who had committed violence against them.

Among the questions with the greatest number of positive responses, the following stand out: believing that the partner is capable of killing her (76.9%), jealousy from the partner (75.6%), and controlling behavior on the part of the partner (73.1%).

Concerning the consumption of illegal substances, women reported in 43.6% of the cases that the partners used them and that 52.6% of the partners were alcoholics or had problems with drinking. Of the women interviewed, 30.8% reported that their partners had already threatened or tried to commit suicide, and in 44.9% of the cases, the women had threatened or tried to commit suicide themselves. Specific questions regarding violence were also positive in a large proportion, including suffering aggression while pregnant (38.5%, for this item, a woman commented that the partner had sat and jumped on her belly to induce an abortion), use of lethal weapons against the women (43.6%), sexual violence (50%), attempted strangulation (53.8%), and death threats (65.4%).

Does he own a gun?	79.5	20.5	
Has he ever threatened or tried to commit suicide?	69.2	30.8	
Does he threaten to harm your children?	67.9	32.1	
Is he unemployed?	66.7	33.3	
Have you ever been beaten by him while you were pregnant?	61.5	38.5	
Has he avoided being arrested for domestic violence?	57.7	42.3	
Does he use illegal drugs?	56.4	43.6	
Do you have a child that is not his?	56.4	43.6	
Has he ever used a weapon against you or threatened you with a lethal weapon?	56.4	43.6	
Have you ever threatened or tried to commit suicide?	55.1	44.9	
Has he ever forced you to have sex when you did not wish to do so?	50.0	50.0	
Is he an alcoholic or problem drinker?	47.4	52.6	
Does he ever try to choke/strangle you or cut off your breathing?	46.2	53.8	
Has the physical violence increased in severity or frequency over the past year?	41.0	59.0	
Have you left him after living together during the past year?	37.2	62.8	
Does he threaten to kill you?	34.6	65.4	
Does he follow or spy on you?	33.3	66.7	
Does he control most or all of your daily activities?	26.9 73.1		
Is he violently and constantly jealous of you?	24.4 75.6		
Do you believe he is capable of killing you?	23.1	76.9	

■ % Negative response ■ % Positive response

Fig. 1 Answers to individual questions in the danger assessment scale questionnaire (n = 78)

About children, 43.6% of women had children from previous relationships and, in 32.1% of cases, the abuser had threatened to hurt their children (whether or not they were their own).

Quality of Life

When the quality of life was measured, a highly vulnerable state was observed when the women joined the support center, with an average lower than 52/100% for all domains. The most affected domains were environment (average 40.7%) and psychological (41.1%), which could be explained by the precariousness of material conditions, financial dependence, and the psychological and emotional problems derived from the violence they suffer. The other domains were social relationships (46.4%) and physical domains (51.8%).

Three and six months after joining the strengthening group, a quality of life measurement was performed again (Fig. 2A and Table 2). A brief interview was also conducted asking the users about their experience in participating in the group and the lessons learned from the strengthening process. Eighteen users were interviewed, and 13 considered that participation in the group changed their lives in a positive way. In general, women reported feeling safer and happier, with more autonomy, freedom, and tranquility. Twelve of them reported feeling able to guide and help other women who were experiencing situations of domestic violence.

The measurements on the environment and the psychological domain were lower after the revaluation. During the observation period, it was possible to see how there is an increase in the perception of the quality of life itself. In users who only made the second assessment 3 months after joining the group, the biggest changes occurred in the psychological domain (mean difference of 16.0) and social relationships (mean difference of 12.5). Among the users for whom it was possible to carry out an assessment at 6 months, the domains with the greatest changes were the physical domain (difference = 18.4) and social relationships (difference = 16.7), as shown in Fig. 2B and Table 2.

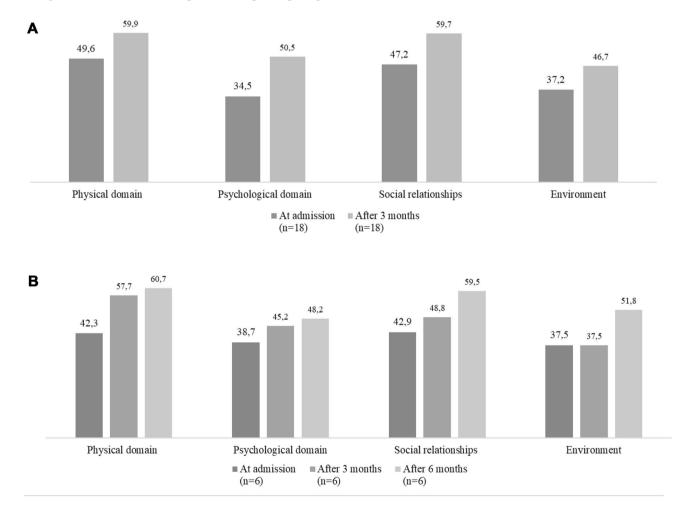


Fig. 2 Average score for quality of life by domains at the admission in the group and after 3 and 6 months. **A** At admission and after 3 months of participation in the strengthening group (n = 18 users). **B** At admission

sion, after 3 months and after 6 months of participation in the strengthening group (n=6 users)

Table 2 Comparison by quality of life domains at the admission in the group and after 3 and 6 months

Characteristics	n	Mean	95% CI lower	95% CI upper	S. Wilk	T-paired
At the admission in the gr	oup and after 3	months				
Physical domain						
At admission	18	49.6	38.9	60.3	0.884	0.032*
After 3 months	18	59.9	49.8	70.1	0.760	
Psychological domain						
At admission	18	34.5	26.8	42.2	0.999	0.006*
After 3 months	18	50.5	37.0	63.9	0.668	
Social relationships						
At admission	18	47.2	34.8	59.7	0.998	0.116
After 3 months	18	59.7	46.3	73.1	0.996	
Environment						
At admission	18	37.2	28.2	46.1	0.995	0.057
After 3 months	18	46.7	38.3	55.2	0.166	
At admission in the group	and after 6 mo	nths				
Characteristics	п	Mean	95% CI lower	95% CI upper	S. Wilk	U Mann– Whitney
Physical domain						
At admission	7	42.3	28.9	55.8	0.098	0.080
After 6 months	7	60.7	46.7	74.7	0.024	
Psychological domain						
At admission	7	38.7	28.8	48.6	0.838	0.219
After 6 months	7	48.2	26.8	69.7	0.474	
Social relationships						
At admission	7	42.9	26.0	59.8	0.788	0.358
After 6 months	7	59.5	42.0	77.0	0.074	
Environment						
At admission	7	37.5	25.2	49.9	0.756	0.069
After 6 months	7	51.8	35.9	67.7	0.851	

*p-value ≤ 0.05

Discussion

The group studied in general was composed of adult women, with white and brown skin, mainly married or in a stable relationship, with high school, and with children. They were exposed to multiple types of violence, notably psychological, physical, and moral. They had a severe and extreme risk of femicide and a highly deteriorated perception of quality of life.

The women that took part in the study were recruited from a specialized service of violence against women, so it is expected that the experiences of violence to which they were exposed are much more serious than those of the general population. Studies in the general population have shown that women exposed to violence are younger than those not exposed, less educated, less employed, and more commonly single (Hisasue et al., 2020). Young women are increasingly experiencing situations of intimate partner violence, suggesting that it all begins at an early stage of relationships (Brazilian Public Security Forum, 2019; World Health Organization, 2005).

Digital technologies and social networks are factors of exposure to violence and mechanisms for the control of the partner (Campeiz et al., 2020). Violence against women is increasingly frequent on the internet, with a study in Brazil reporting an increase from 1.2% in 2017 to 8.2% in 2019 (Brazilian Public Security Forum, 2019).

There is an inverse relationship between education and violence. Education has a protective effect when women attend studies after high school; women with higher education are more likely to choose their partners, decide whether to marry or not, and have greater autonomy and control over resources within marriage (World Health Organization, 2005; Santos et al., 2020). In the sample analyzed, only 19% of women reported having schooling after high school, which can contribute to their situation of violence.

Psychological Violence

This type of violence, even in the social imaginary, is considered as "less relevant" for not leaving any visible marks on the body, but it is as harmful as the physical one (Pico-Alfonso et al., 2006). Women consider psychological abuse more devastating than physical violence because it affects self-esteem, autonomy, and self-perception, and also incapacitates them to get out of the situation of violence. Psychological aggressions are usually the first to appear in the relationship and then escalate to other forms of violence. When the situation becomes unbearable, that is when women seek help.

In the findings of this research, most women experienced psychological violence (96.2%). A study carried out in Spain showed a higher incidence of symptoms of anxiety, post-traumatic stress syndrome, and suicidal thoughts in women victims of psychological violence (Pico-Alfonso et al., 2006). In controlled studies, women who are victims of domestic violence show depressive symptoms more often compared to other groups (Campbell & Lewandowski, 1997); some reports show depression is twice as likely in association to this type of violence (World Health Organization, 2013). In Brazil, a study with primary care users identified a higher prevalence of psychological violence among women with low education, those who profess evangelical religion, and those who were divorced (Santos et al., 2020).

Women who have suffered violence think about and make more suicide attempts than women without this exposure (World Health Organization, 2005). In our study, 30.8% of women reported that their partners had already threatened or attempted suicide, and in 44.9% of cases they themselves had threatened or attempted suicide. Previous studies have found an association between suicide and intimate partner violence (Pico-Alfonso et al., 2006).

Physical Violence

Physical assaults have direct effects on body and psychological health. Physical injuries can include pain, fractures, facial trauma, loss of consciousness, and neurological damage, as well as problems with vision, concentration, memory, and other consequences of blows to the head. Women who have experienced violence by their partner report more often having poor or very poor health compared to those who have not. The harmful effects can persist long after the end of the violent experience (World Health Organization, 2005).

Culturally, some women justify the use of physical violence. Situations such as not doing household chores correctly, refusing to have sex, disobeying a husband, and being unfaithful are some of the reasons why they believe they deserve physical punishment. In Brazil, women currently accept less physical punishment; however, among victims of domestic violence, the acceptance of physical aggressions is more frequent, which may indicate that they learn to accept violence when they are victims of it. Women who regard violence as normal are more likely to establish and tolerate violent relationships (World Health Organization, 2005).

Sexual Violence

In the initial assessment of this study, half of the women reported having been forced to have sex against their will. Forced sex increases the risk of pregnancy. gynecological problems such as pelvic inflammatory disease, sexually transmitted diseases, anal and vaginal pain, urinary infections, and sexual dysfunction (Campbell & Lewandowski, 1997). In Brazil, abortion is not legal, so women who get pregnant as a consequence of marital rape face serious difficulties when they want to voluntarily terminate the pregnancy. Being forced to seek unsafe practices.

In Brazil, a higher prevalence of sexual violence was identified among Evangelical women and those with a history of sexual violence during their childhood (Santos et al., 2020). In Brazil, among women who were victims of sexual violence, there was a high denial for condom use. Higher prevalence of use of sexual violence was found among men over older than 40 years old and unemployed (Leite et al., 2019).

During the strengthening group meetings, gynecology workshops were held to explain topics related to sexual violence, signs and symptoms of sexually transmitted diseases, and family planning methods. A high demand for gynecological services was identified.

Risk of Femicide

Violence behaves cyclically (de Lucena et al., 2016): periods of apparent calm, well-being, promises, and reconciliation alternate with stressful situations that trigger episodes of aggression. With the repetition of the stages of the cycle of violence, the aggressions become stronger and may end with the women's life. In the present study, half of the women were classified at the highest level of risk for femicide (extreme risk) and only 7 women (9%) were at the lowest level of risk.

A multicenter study by the World Health Organization with 10 countries, including Brazil, collected data on experiences of violence from 24,000 women and showed that when a woman has already been a victim of violence by her partner, it is very likely that at some point there was an act of serious violence. The majority of events are not isolated incidents, they follow a pattern of continued and severityincreasing episodes (World Health Organization, 2005).

Women use violence to defend themselves from violent behavior when it is serious and they rarely start physical attacks (World Health Organization, 2005). Women can believe in the change of behavior of the aggressors or in their ability to deal with stressors, usually remaining in the relationships until the situation becomes untenable. This partly explains why women who seek services come with more severe violence than women in the general population who do not report aggression. A national survey in Brazil showed that among women victims of serious aggression, 22.2% looked for help in women's police stations, military police, or telephone hotlines (Brazilian Public Security Forum, 2019).

Among the women studied, 65.4% reported death threats, 53.8% attempted strangulation, and 43.6% used lethal weapons against them. The possession of weapons by the aggressor is one of the questions with the highest score on the femicide risk scale. In Brazil, the Maria da Penha Law was recently modified by Law no. 13,880, of October 8, 2019, to provide for the discontinuation of firearms under the possession of an aggressor in cases of domestic violence (Brazil, Presidência da República, Secretaria-Geral, Subchefia para Assuntos Jurídicos, 2019).

Quality of Life

Previous studies have identified that women who seek help have worse assessments of quality of life than those who do not seek help and those who do not suffer domestic violence (Alsaker et al., 2018; Hisasue et al., 2020). A compilation of studies on health services and quality of care for victims of violence showed that those who live with abusive partners report worse health conditions, greater need for medical attention, and stay twice as long in bed due to illness compared to other women (Campbell & Lewandowski, 1997). In Finland, women with exposure to violence in intimate and family relationships reported significantly lower scores on quality of life and a great deal of psychological stress, with worse results among those exposed to more than one type of violence (Hisasue et al., 2020).

Brazilian data from João Pessoa estimated an average quality of life of 59.6 among women victims of domestic violence (de Lucena et al., 2017). In Campinas, the average was 56.2. The domains most affected in both samples were the environment (48.2 vs 40.7) and the psychological one (60.13 vs 41.1). However, the authors used a population sample, and this study was conducted in a specialized service, so it is expected that the quality of life data from Campinas are lower, since women who seek help have worse situations of violence than the general population.

In the measurement of quality of life, there was an improvement in the scores in all domains after the intervention, but the statistically significant changes were in the psychological and physical domains. In the assessment, the interviewees referred to a greater perception of security, happiness, and autonomy, which, in addition to the psychological impact, may also influence the perception of their own physical health.

In the psychological domain, the most important change in the 3-month assessment was present in aspects with the greatest difference between before and after intervention (from 42.3 to 60.7%): the feeling of enjoying life, satisfaction with oneself, finding meaning in life, the ability to concentrate, and the acceptance of one's physical appearance.

The physical domain on admission presented the highest score, with an average of 49.6/100%. In the 3-month assessment, the average rose to 59.9/100%. The questions with the greatest change were regarding the quality of sleep, the perception of having more energy, and satisfaction with one's own ability to perform daily activities. Women who are victims of violence report musculoskeletal pain and headaches with high frequency, as well as difficulties to sleep (Kelly, 2010). In our sample, there was a change in the quality of sleep, but not in the suffering of physical pain.

In the field of social relationships and environment, there was an improvement, but the differences were not statistically significant. Women who had social support networks suffered less domestic violence compared to those who did not have them (de Lucena et al., 2017). Men who engage in psychological violence also have patterns of controlling behavior. This behavior was reported frequently in the risk assessment (73.1%), along with jealousy of the partner (75.6%). It is part of the dominant behavior to prevent women from having contact with friends, relatives, and other men, with constant accusations of infidelity, constant questioning about the woman's location, and constant limitation of her access to health services (World Health Organization, 2005). This pattern of behavior limits the woman's interaction with possible sources of support. The controlling behavior of the partner was associated with the perpetration of violence in a previous study in Brazil (Leite et al., 2019).

Separation from the Partner

Women in situations of domestic violence usually make several attempts to get out of the violent relationship, but some end up coming back to their abusive partners because of the lack of economic and psychological resources to face this process. Women who leave violent relationships have to cross several phases, and one of those is returning to the relationship until it ends effectively; these returns, more than being failures, should be understood as opportunities to learn strategies for effective termination (Anderson et al., 2003).

The separation decision must be made by the woman but can be assisted by counselors and lawyers. Women usually do not have enough personal resources and need support services, as well as job training, help with the care of children, and transitional homes (Anderson & Saunders, 2003). The desire for separation or separation itself is a risk factor for suffering lethal violence by an intimate partner (Campbell et al., 2003). In fact, the first year after separation is the riskiest period for femicide (Campbell et al., 2003). Filing a complaint because of violence is fundamental for the defense and protection of women's rights, but the denunciation must be linked to support networks to ensure the effective protection of women and to help them deal with the emotional and psychological consequences of termination. In general, the quality of life in women who are abused improves after separation (Alsaker et al., 2008), but paradoxically some may face great psychological difficulties after the end of the relationship compared to those who remain in them (Anderson & Saunders, 2003).

In this study, 65.4% of women were not living with their partners; among them, the relationship had ended on average 1.8 years ago, ranging from 2 days to 11 years. A pilot study with 22 participants showed that the time these women remained in the relationship varies from one case to another, but on average is around 11 years (Alsaker et al., 2008).

Work and Financial Dependence

Most women in this study who entered the service did not have an economically paid activity (65.4%), which limits their financial independence. Of the women who do not perform an economically paid activity, 66.6% depend on their partner's income. This reveals the high financial dependence of them and their children on the aggressor's economic income. In the assessment of the quality of life at admission, 80.7% of women answered that they do not have or have very little money to meet their needs. Financial dependency is a very relevant issue for ending a violent relationship because women with better economic conditions are more likely to leave their abusive partner (Anderson & Saunders, 2003).

It is relevant to note that women in situations of violence have their energy spent on their own and their children's safety, and the situation of violence prevents them from dedicating themselves to work activities, bringing greater difficulties in keeping a job or looking for a new one, and those who have a job present high absenteeism. A study in Norway with 18 women victims of domestic violence showed that work, in addition to providing economic income, increases women's self-esteem and freedom. The same study showed that the violence against them made it difficult for women to concentrate on their work. They expressed feelings of shame and blame for the situation of violence, as well as the need to hide it (Alsaker et al., 2016).

At Ceamo, support is provided for the development of a curriculum, and job vacancies are posted so that they can apply. Partnerships are also established for their training and professionalization, such as a kitchen or computer course. Nevertheless, many of the women remain in violent relationships because they have difficulty accessing job vacancies or because job payments are not enough for them to support their children and themselves. In this respect, it is important to highlight the phenomena of feminization of poverty and wage inequality in Brazil.

Children

Most women in this study have one or more children (88.5%). The consequences of intimate partner violence also have an impact on the health of children, who may experience behavioral changes and emotional disorders, and this has also been associated with high rates of child morbidity and mortality (United Nations, 2015). Abused women reported their children being present during violent episodes quite often; in fact, having children increases the risk of physical violence, due to the increase in stress episodes that cause disagreements between the couple, and violence may be more present in very large families (Ellsberg et al., 2000).

Children of women who experience domestic violence are far more aware of the situation than their parents realize. Marital conflicts, family dysfunction, and maternal depression result in low social support for children. Experiences such as frequent relocation and interactions with the police and the judicial system are major stressors for children to deal with. These traumatic events can cause changes in behavior, such as anxiety, depression, sleeping problems, irritability, panic attacks, psychological changes, hyperactivity, lack of interest in activities, aggression, problems at school, crying or excessive shouting, and physical symptoms (headaches, vomiting, diarrhea, and enuresis) (Campbell & Lewandowski, 1997).

Studies have shown that it is a risk factor for an abusive partner to have grown up in a home where there was domestic violence (Campbell & Lewandowski, 1997). Violence has an intergenerational cycle that passes from parents to children, which means that kids who witnessed domestic violence against their mothers are at greater risk of being aggressors and women victims of violence as adults, even during periods of more importance such as pregnancy (Ludermir et al., 2017). Children begin to perceive violence as normal and acceptable and as a way to express feelings or solve conflicts (Campbell & Lewandowski, 1997; Ludermir et al., 2017), and they also have a lower chance of developing methods of listening, negotiation, and self-control or accepting violence in a passive way.

One way to maintain control over women by partners is to threaten to take their children away. Economically, many women lack the resources to support their children, making them feel vulnerable to losing them. The abusers also use children as an excuse to maintain contact and control over the woman even after the separation.

Strengths and Limitations of the Study

This study has several strengths: It is the first study that collects data on the risk of femicide and quality of life among users of Ceamo and in the city of Campinas, Brazil. It allowed us to observe the risk of femicide among users and to estimate the impact of participation in the strengthening group. Some limitations can also be pointed out. The most important one was that the study had to be stopped early due to the COVID-19 pandemic, which prevented continuing with group visits due to the risk of transmission and contagion of the virus, with the last data being collected in March 2020.

The difficulties for data collection included the low attendance of women in the sessions. Even though they recognize the group as a strengthening strategy that positively impacted their lives, few users maintained their weekly participation due to the lack of economic resources, time, and care of children and other dependents. In this matter, the service offers some users the value of bus fare for commuting to and from home, and two strengthening groups are also being planned at different times to favor the assistance of the participants. The service made several structural reforms to adapt the physical space for complete activities such as dancing, crocheting fabric, and writing classes, among others.

This study included only women new to the strengthening group to quantify the impact of the interventions; however, the adherence of these women is very low. For strengthening groups to be effective, it is necessary to ensure greater attendance at meetings and participation in a greater number of sessions. Adhesion improvement strategies can be implemented to decrease the dropout.

The applied femicide risk assessment scale did not include violence exercised by digital media and social networks (cyber violence), but with the development of communication technologies, this type of violence and its impacts should be considered by further studies.

There are limitations of the service itself, including the high demand for specialized knowledge in severe cases of violence, contrasted with the low number of professionals available to provide individual and group support services, as well as the lack of economic resources for the proper functioning of the service. One must increase the number of professionals and to invest more in state agencies for operating expenses that favor the retention of new users.

Talking to women about violence is a traumatic, painful, and complicated process, requiring knowledge, skill, and understanding on the part of the interlocutor. Some questions in the risk assessment questionnaire can be very straightforward, which is why it is important to establish a relationship of trust and honesty with the interviewee. The answers to the questions are dichotomous, which facilitates the conduct of the interview because it allows women to provide more details about violent events when they consider it pertinent or to limit themselves to respond positively or negatively.

For women, the strengthening group begins as a listening space, and little by little they are encouraged to share their reflections, questions, and statements from their own experience, so it is relevant to develop strategies for staying in the group and having periodic contact with the service to ensure the effectiveness of interventions.

Final Considerations

Knowledge about domestic violence and its consequences is necessary for the assessment and comprehensive care of women victims of it. Women seeking care services or reporting situations of violence require proper guidance, and it is also essential to carry out a femicide risk assessment to offer all the legal and social measures available to preserve their integrity, guarantee their safety, and improve their quality of life.

As seen in the results of this study, psychological violence was the most prevalent, and this was one of the most affected domains. That is why psychological violence should receive greater attention and be considered when physical or sexual abuse takes place. The community in general, health personnel, lawyers, and researchers should all design and implement public policies in this matter.

Reporting is an initial step toward ending the cycle of violence. However, actions cannot be limited to denunciation but must be accompanied by a whole structure of material, psychological, and security support for women and their dependents. If the women are not received and guided, they will return to situations of violence due to economic and/or emotional dependence or lack of social resources. It is important to change the social perception towards women who are in a situation of domestic violence, going from "she likes to be beaten up" to "she lacks the personal resources to get out of the situation of violence and one must help, support, and guide her so that she can achieve it." As widely discussed, state action is crucial to achieve fairer living conditions for women.

Acknowledgements The authors thank Espaço da Escrita–Pró-Reitoria de Pesquisa–UNICAMP for the language services provided.

Declarations

Ethics Approval All procedures were in accordance with the ethical standards of the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The research was approved by the Research Ethics Committee of the School of Medical Sciences at Unicamp, with the CEP number 13424419.5.0000.5404.

Conflict of Interest Monica Caicedo-Roa received a doctoral scholarship from CAPES (Coordination for the Improvement of Higher Education Personnel). No additional financial support was available for the research, authorship, and/or publication of this article.

References

- Alsaker, K., Moen, B. E., Baste, V., & Morken, T. (2016). How has living with intimate partner violence affected the work situation? A qualitative study among abused women in Norway. *Journal of Family Violence*, 31, 479–487. https://doi.org/10.1007/ s10896-016-9806-2
- Alsaker, K., Moen, B. E., & Kristoffersen, K. (2008). Health-related quality of life among abused women one year after leaving a violent partner. *Social Indicators Research*, 86(3), 497–509. http:// www.jstor.org/stable/27734636
- Alsaker, K., Moen, B. E., Morken, T., & Baste, V. (2018). Intimate partner violence associated with low quality of life - a cross-sectional study. *BMC Women's Health*, 18(1), 148. https://doi.org/10.1186/ s12905-018-0638-5
- Anderson, D. K., & Saunders, D. G. (2003). Leaving an abusive partner: An empirical review of predictors, the process of leaving, and psychological well-being. *Trauma, Violence & Abuse, 4*(2), 163–191. https://doi.org/10.1177/1524838002250769
- Brazilian Public Security Forum. (2019). Visível e Invisível: a vitimização de mulheres no Brasil. 2 Edição. Retrieved Fevereiro 19, 2021, from https://sinapse.gife.org.br/download/visivel-e-invisivel-avitimizacao-de-mulheres-no-brasil-2a-edicao
- Brazil, Presidência da República, Secretaria-Geral, Subchefia para Assuntos Jurídicos. (2019). Law Nº 13.880. Brasília. Retrieved de 8, de outubro de 2019, from https://www.planalto.gov.br/ccivil_ 03/_ato2019-2022/2019/lei/113880.htm
- Campbell, J. C., & Lewandowski, L. A. (1997). Mental and physical health effects of intimate partner violence on women and children. *The Psychiatric Clinics of North America*, 20(2), 353–374. https:// doi.org/10.1016/s0193-953x(05)70317-8
- Campbell, J. C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A., Gary, F., Glass, N., McFarlane, J., Sachs, C., Sharps, P., Ulrich, Y., Wilt, S. A., Manganello, J., Xu, X., Schollenberger, J., Frye, V., & Laughon, K. (2003). Risk factors for femicide in abusive relationships: Results from a multisite case control study. *American Journal of Public Health*, 93(7), 1089–1097. https://doi.org/10.2105/ajph.93.7.1089
- Campbell, J. C., Webster, D. W., & Glass, N. (2009). The danger assessment: Validation of a lethality risk assessment instrument for intimate partner femicide. *Journal of Interpersonal Violence*, 24(4), 653–674. https://doi.org/10.1177/0886260508317180
- Campeiz, A. B., Carlos, D. M., Campeiz, A. F., Silva, J., Freitas, L. A., & Ferriani, M. (2020). Violence in intimate relationships from the point of view of adolescents: Perspectives of the Complexity Paradigm. *Revista da Escola de Enfermagem da USP*, 54, e03575. https://doi.org/10.1590/s1980-220x2018029003575
- Ceamo. (2020). Centro de Referência e Apoio à Mulher. http://www. campinas.sp.gov.br/governo/direitos-pessoa-deficiencia-cidadania/ ceamociclodeviolencia.php
- da Silva, M. A., Falbo Neto, G. H., Figueiroa, J. N., & Cabral Filho, J. E. (2010). Violence against women: Prevalence and associated factors in patients attending a public healthcare service in the Northeast of Brazil. *Cadernos De Saude Publica*, 26(2), 264–272. https://doi.org/10.1590/s0102-311x2010000200006
- de Lucena, K. D. T., Deininger, L. D. S. C., Coelho, H. F. C., Monteiro, A. C. C., de Toledo Vianna, R. P., & do Nascimento, J. A. (2016). Analysis of the cycle of domestic violence against women. *Journal of Human Growth and Development*, 26, 139–146. http://dx. doi.org/10.7322/jhgd.119238
- Evans, D. P., Xavier Hall, C. D., da Rocha, R. W. G., et al. (2022). "These questions have everything that happens to me": Analysis of a femicide risk assessment tool for abused women in Brazil. *Journal of Family Violence*, 37, 547–557. https://doi.org/10.1007/ s10896-021-00313-1

- Ellsberg, M., Peña, R., Herrera, A., Liljestrand, J., & Winkvist, A. (2000). Candies in hell: Women's experiences of violence in Nicaragua. *Social Science & Medicine*, 51(11), 1595–1610. https://doi. org/10.1016/s0277-9536(00)00056-3
- Fleck, M. P., Louzada, S., Xavier, M., Chachamovich, E., Vieira, G., Santos, L., & Pinzon, V. (2000). Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref" [Application of the Portuguese version of the abbreviated instrument of quality life WHOQOL-bref]. *Revista De Saude Publica*, 34(2), 178–183. https://doi.org/10.1590/s0034-8910200000200012
- Freire, P. (1983). *Educação como prática da liberdade* (14th ed.). Paz e Terra.
- Freire, P. (1994). Pedagogia da Esperança. Um reencontro com a Pedagogia do oprimido. 3. ed. Rio de Janeiro: Paz e Terra.
- Hisasue, T., Kruse, M., Raitanen, J., Paavilainen, E., & Rissanen, P. (2020). Quality of life, psychological distress and violence among women in close relationships: A population-based study in Finland. *BMC Women's Health*, 20(1), 85. https://doi.org/10.1186/ s12905-020-00950-6
- Kelly, U. (2010). Intimate partner violence, physical health, posttraumatic stress disorder, depression, and quality of life in Latinas. *The Western Journal of Emergency Medicine*, 11(3), 247–251.
- Kluthcovsky, A. C. G. C., & Kluthcovsky, F. A. (2009). WHOQOLbref, an instrument for quality of life assessment: A systematic review. *Revista de Psiquiatria do Rio Grande do Sul*, 31(3). https:// doi.org/10.1590/S0101-81082009000400007
- Leite, F., Luis, M. A., Amorim, M., Maciel, E., & Gigante, D. P. (2019). Violence against women and its association with the intimate partner's profile: A study with primary care users. *Brazilian journal of epidemiology*, 22, e190056. https://doi.org/10.1590/ 1980-549720190056
- Lucena, K., Vianna, R., Nascimento, J., Campos, H., & Oliveira, E. (2017). Association between domestic violence and women's quality of life. *Revista latino-americana de enfermagem*, 25, e2901. https://doi.org/10.1590/1518-8345.1535.2901
- Ludermir, A. B., Araújo, T., Valongueiro, S. A., Muniz, M., & Silva, E. P. (2017). Previous experience of family violence and intimate partner violence in pregnancy. *Revista de saude publica*, 51, 85. https://doi.org/10.11606/S1518-8787.2017051006700
- Pico-Alfonso, M. A., Garcia-Linares, M. I., Celda-Navarro, N., Blasco-Ros, C., Echeburúa, E., & Martinez, M. (2006). The impact of physical, psychological, and sexual intimate male partner violence on women's mental health: Depressive symptoms, posttraumatic stress disorder, state anxiety, and suicide. *Journal of Women's Health*, 15(5), 599–611. https://doi.org/10.1089/jwh.2006.15.599
- Ross, R., Shahrour, G., Stidham, A. W., & Delahanty, D. (2017). The psychometric properties of the World Health Organization Quality of Life BREF among Thai women who have experienced intimate partner violence. *Journal of Nursing Measurement*, 25(3), 389–399. https://doi.org/10.1891/1061-3749.25.3.389
- Santos, I., Leite, F., Amorim, M., Maciel, P., & Gigante, D. P. (2020). Violence against women in life: Study among primary care users. Violência contra a mulher na vida: estudo entre usuárias da Atenção Primária. *Ciencia & Saude Coletiva*, 25(5), 1935–1946. https://doi.org/10.1590/1413-81232020255.19752018

StataCorp. (2011). Stata statistical software: Release 12. StataCorp LP.

- The WHOQOL Group. (1994). The development of the World Health Organization Quality of Life assessment instrument (the WHO-QOL). In K. W. e. Orley J. (Ed.), *Quality of Life Assessment: International Perspectives* (41–57). Berlin, Heidelberg: Springer.
- United Nations. (2015). The world's women 2015: Trends and statistics. New York (NY): United Nations, Department of Economic and Social Affairs. Statistics Division. https://unstats.un.org/unsd/ gender/downloads/worldswomen2015_report.pdf

- United Nations. (2022). What is domestic abuse? https://www.un.org/ en/coronavirus/what-is-domestic-abuse
- World Health Organization. (1996). WHOQOL-BREF: Introduction, administration, scoring and generic version of the assessment: Field trial version, December 1996: World Health Organization. https://apps.who.int/iris/handle/10665/63529
- World Health Organization. (2005). WHO multi-country study on women's health and domestic violence against women. https://apps. who.int/iris/handle/10665/43309
- World Health Organization. (2013). Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence: World Health Organization. https://www.who.int/publications/i/item/ 9789241564625
- World Health Organization. (2019). RESPECT women: Preventing violence against women. (WHO/RHR/18.19). Licence: CC BY-NC-SA 3.0 IGO. https://www.unodc.org/documents/justice-andprison-reform/WHO-RHR-18.19-eng.pdf

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