Intimate partner violence in reproductive-age and pregnant-postpartum women with autoimmune rheumatic diseases: a comparative cross-sectional study

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Key words: intimate partner violence, pregnancy, postpartum, reproductive health, autoimmune rheumatic diseases.

Summary

Objective. We aimed to describe the frequency of intimate partner violence (IPV) in reproductive-age women and pregnant-postpartum women with autoimmune rheumatic diseases (ARDs) and compare it with those without ARDs (controls).

Methods. A descriptive, cross-sectional, and comparative study was conducted among pregnant-postpartum patients and reproductive-age women (18-45 years) with and without ARDs who attended the Hospital Universitario in Monterrey, Mexico, and answered the survey Hurt-Insult-Threaten-Scream (HITS) scale in the validated Spanish version, from June 2023 to May 2024.

Results. A total of 120 women were included: 60 with ARDs and 60 controls. In both groups, 30 patients were reproductive-age women and 30 were pregnant-postpartum women. A total of 44 (36%) women reported being victims of IPV. No significant differences were found in reported IPV between the control group and the group of women with ARDs (n=21, 35% *vs*. n=23, 38%, p=0.85). There was no statistically significant difference between the ARD group compared to the control group in the HITS score (p=0.537), nor between the pregnant-postpartum subgroups (p=0.356) or the reproductive-age subgroups (p=0.972). These findings indicate that IPV rates did not significantly differ by ARD status or reproductive stage in this sample.

Conclusions. Nearly one in every three women experienced IPV, but our research showed that there was no difference in the frequency of IPV between the ARD group and the control group. Pregnant and postpartum women were more likely to report IPV than women of reproductive age. These findings highlight that IPV is a significant concern for all women in Mexico and the need for increased attention and support for them.

Introduction

Intimate partner violence (IPV) is defined as any aggression or coercion that includes physical violence, psychological aggression, and sexual violence, such as intimidation, threat, or stalking by a current or former intimate partner, including spouses, boyfriends, girlfriends, dating partners, or ongoing sexual partners (1). The lifetime IPV prevalence varies (15-71%) according to the assessment tool and the sociocultural characteristics of the population studied (2). In Mexico, approximately a third of women (39.9%) aged 15 years or over have experienced incidents of IPV throughout their current or past romantic relationships, and 20.7% of these occurred in the last year. The most frequent type of IPV reported was psychological violence (35.4%) (3).

IPV is not only a social and psychological issue but also a significant contributor to long-term health consequences. It increases the risk of chronic diseases, including asthma, arthritis, and cardiovascular conditions. Women who experience IPV have more stress-related symptoms, and acute and chronic stress may activate the immune system, which may increase the risk of autoimmune rheumatic diseases (ARDs) (4).

Psychological trauma and chronic stress from IPV are known to disrupt the hypothalamic-pituitary-adrenal axis, the immune and neuroendocrine systems, potentially triggering or worsening ARDs like systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) (4, 5). This dysregulation promotes cortisol resistance, persistent inflammation, and immune imbalance, creating conditions favorable to autoimmunity. Studies have linked emotional trauma and post-traumatic stress disorder with the onset of autoimmune diseases, and in SLE, trauma correlates with disease flares, poorer quality of life, and higher rates of mental health issues (6).

Women of all ages are vulnerable to any form of violence, including IPV, which is more frequent among women of reproductive age and overlaps with the peak incidence of ARDs (4, 7). The episodic and often invisible nature of ARD-related disabilities can increase dependence on partners and reduce social support, contributing to a higher risk of abuse. IPV may also manifest through symptoms such as fatigue, chronic pain, paresthesia, and cognitive disturbances, complicating the diagnosis and management of rheumatic diseases (8-10).

Despite the connection between IPV and ARDs, research on its prevalence and consequences in this population remains limited.

This study aims to describe the frequency of IPV in reproductive-age women and pregnant-postpartum women with ARDs and compare it with those without ARDs.

Materials and Methods

A descriptive, cross-sectional, and comparative study was conducted from June 2023 to May 2024 at the Hospital Universitario "Dr. José Eleuterio González" in Mexico. We included women from a cohort of pregnancy and reproductive health in the Rheumatology Service and categorized them into two groups: reproductive-age women and pregnant-postpartum women. We defined reproductive age as the age range of 18-45 years and postpartum up to 1 year after the birth of the patient's last child. The sociodemographic characteristics and ARD data were obtained from the medical record. For the control group, we invited women without ARDs (controls) from the waiting room of the outpatient clinic of gynecology and obstetrics. We matched them (1:1) by age, sex, and condition (reproductive age and postpartum-pregnant).

The Hurt-Insult-Threaten-Scream (HITS) scale is recommended by the U.S. Preventive Services Task Force to screen IPV in all women of reproductive age (5). A survey that included sociodemographic data and the validated Spanish version HITS scale was applied (5). The HITS scale is a brief 4-question validated instrument used to screen women for IPV, how often their partner physically hurt, insulted, threatened with harm, and screamed at them in the last year, using a 5-point Likert scale from never to frequently. The lowest possible score is 4 points, with a maximum of 20. Subjects with Spanish HITS scores ≥5 were identified as victims of IPV (11). The original version of the HITS scale demonstrated good internal consistency (Cronbach's α=0.80) (12), and in Hispanic patients, the scale also showed acceptable reliability, with a Cronbach's α of 0.61 (11).

Patients were consecutively enrolled during routine visits at the rheumatology and maternal care units of our institution. The ARDs considered in this study included: RA, SLE, antiphospholipid syndrome (APS), idiopathic inflammatory myopathies (IIM), diffuse systemic sclerosis (dSSc), and anti-neutrophil cytoplasmic antibody-associated vasculitis (AAV). In the pregnant-postpartum ARD group, diagnoses were distributed as follows: RA (n=16), SLE (n=6), APS (n=6), IIM (n=3), and among reproductive-age women with ARDs, diagnoses included RA (n=17), SLE (n=8), IIM (n=1), dSSc (n=2), and AAV (n=1).

Diagnoses were made according to established classification criteria: RA according to the American College of Rheumatology (ACR)/European League Against Rheumatism (EULAR) 2010 criteria (13), SLE based on the EULAR/ACR 2019 classification criteria (14), APS following the EULAR/ACR 2023 classification criteria (15), IIM based on the EULAR/ACR 2017 classification criteria (16), dSSc based on the EULAR/ACR 2013 classification criteria (17), and AAV based on the EULAR/ACR 2022 classification criteria (18).

The study adhered to the ethical standards outlined in the 1964 Declaration of Helsinki and its subsequent amendments. The research protocol was approved by the institutional research and ethics committee with registration number RE18-00008. All the participants were informed of the purpose of the survey and provided written consent before answering the questionnaires. The authors granted authorization for instrument use.

Table 1. Sociodemographic characteristics and Hurt-Insult-Threaten-Scream scale results.

Groups	Controls A	ARDs			p-value		
	Pregnant-postpartum controls (group 1) n= 30	Reproductive-age controls (group 2) n= 30	Pregnant-postpartum ARD women (group 3) n= 30	Reproductive-age ARD women (group 4) n= 30	Group 1 *vs.* group 3	Group 2 *vs.* group 4	ARDs *vs.* controls
Age, median, (IQR), years	26.00 (23.00-32.25)	26.00 (23.75-33.50)	28.50 (25.75-33.00)	32.50 (27.00-41.25)	0.144	0.015	0.006
Marital status, n (%)					0.358	0.449	0.254
Single	5 (16.7)	14 (46.7)	3 (10)	13 (43.3)			
Married	8 (26.7)	6 (20)	13 (43.3)	11 (36.7)			
Common law marriage	17 (56.7)	9 (30)	13 (43.3)	5 (16.7)			
Divorced	-	1 (3.3)	1 (3.3)	1 (3.3)			
Occupation, n (%)					0.227	0.035	0.041
Student	1 (3.3)	10 (33.3)	1 (3.3)	4 (13.3)			
Housewife	20 (66.7)	13 (43.3)	16 (53.3)	7 (23.3)			
Employee	6 (20)	6 (20)	11 (36.7)	14 (46.7)			
Own business	3 (10	1 (3.3)	1 (3.3)	4 (13.3)			
Unemployed	-	-	1 (3.3)	1 (3.3)			
Education, n (%)					0.321	0.177	0.052
Elementary school	2 (6.7)	6 (20)	1 (3.3)	1 (3.3)			
Middle school	15 (50)	7 (23.3)	8 (26.7)	6 (20)			
High school	5 (16.7)	5 (16.7)	7 (23.3)	10 (33.3)			
University	7 (23.3)	12 (40)	11 (36.7)	12 (40)			
Postgrad	1 (3.3)	-	3 (10)	1 (3.3)			
HITS scale							
Score, median, (IQR)	4 (1)	4 (2)	4 (2)	4 (2)	0.356	0.972	0.537
Victims of IPV, n (%)	10 (33.3)	11 (36.7)	13 (43.3)	10 (33.3)	0.426	0.787	0.85

ARDs, autoimmune rheumatic diseases; IQR, interquartile range; HITS, Hurt-Insult-Threaten-Scream; IPV, intimate partner violence.

Statistical analysis

The Kolmogorov-Smirnov test was employed to determine normality. Demographic characteristics are presented as frequencies and percentages for categorical variables, with median and interquartile range (IQR) for continuous variables. Mann-Whitney U test, Chi-square, or Kruskal-Wallis tests were employed to analyze the differences between groups. The statistical analysis was performed with the statistical program SPSS version 25 (IBM Corp., Armonk, NY). A p-value <0.05 was considered statistically significant.

Results

A total of 120 women were included: 60 with ARDs and 60 controls. In both groups, 30 patients were reproductive-age women and 30 were pregnant-postpartum women. The median age of the population was 28.00 (IQR 9). The sociodemographic characteristics and the HITS scale results, subclassified between reproductive-age, pregnant-postpartum women, and those with or without ARDs, are reported in Table 1.

Of the total population, 44 (36%) women reported being victims of IPV. No significant differences were found in reported IPV between the control group and the group of women with ARDs (n=21, 35% *vs*. n=23, 38%, p=0.85). Across both groups, the most reported item on the HITS scale was "insulting" with 39 (32.5%) women: 19 (31.6%) women from the control group and 20 (33.3%) women in ARDs; followed by "screaming" reported by 26 (21.6%) women: 10 (16.6%) in controls and 16 (26.6%) in ARDs; "threatened with harm" was reported by just 1 (1.6%) patient from the control group and 2 (3.3%) in the ARDs; "physically hurt" was reported by 2 (3.3%) in the control group and 6 (10%) in ARDs.

There was no statistically significant difference between the ARD group compared to the control group in the HITS score (p=0.537), nor between the pregnant-postpartum subgroups (p=0.356) or the reproductive-age subgroups (p=0.972). These findings indicate that IPV rates did not significantly differ by ARD status or reproductive stage in this sample.

Discussion

IPV is a preventable public health problem strongly associated with a higher risk of developing chronic diseases and poor quality of life (4, 19). According to our study, the general prevalence of women affected by IPV during the last year was 36%, which is higher than the 20.7% reported by the national survey on the dynamics of household relationships (3).

In our study, the comparison of control and ARD patients as IPV victims revealed no significant differences. These observations contrast with the results of Castro *et al*., where an increased prevalence of abuse was found in patients with fibromyalgia and other ARDs when compared to control subjects (48.1% *vs.* 15%) (20). Our findings highlight that IPV is a significant concern for all women in Mexico, regardless of the presence of rheumatic diseases.

We identified that psychological aggression, which is defined as verbal and nonverbal communication used to control or harm another individual mentally or emotionally, was the most prevalent form of IPV (2). Our findings were consistent with several global studies where psychological violence is estimated to be the most common subtype of IPV (21).

Violence is particularly likely to escalate in severity and frequency during pregnancy (2). Of interest, we also found pregnant and postpartum women more commonly reported IPV than women of reproductive age, although this difference was not statistically significant. In a systematic review and meta-analysis conducted among pregnant women, the worldwide prevalence of any IPV in pregnancy was 25.2% (22). IPV during pregnancy leads to very significant fetal consequences, including premature birth, miscarriage, and low birth weight, leading to long-term adverse child complications. These consequences are due to the prolonged stress experienced by the mother and the physical injuries suffered (23). In addition, ARDs by themselves have a high risk of suffering from obstetric comorbidity and neonatal pathologies (24, 25).

In other chronic diseases, IPV has been associated with more pain or worse outcomes. In gynecological neoplasms, IPV has been associated with late diagnosis and advanced stages, while in type 2 diabetes, it has been associated with its higher incidence (26-29). Fibromyalgia and chronic fatigue syndrome were almost twice as likely to occur in IPV women survivors and have been associated with chronic pain, different somatization disorders, higher use of drugs, depression, suicide attempts, chronic headaches, chronic pelvic pain, and gastrointestinal disorders (5). A previous study in women with SLE showed that the presence of IPV was associated with low quality of life, higher disease activity, and a worse physician's perception of disease control (6). Prospective studies are needed to detail the complex relationship between IPV in ARDs and their relationship to disease diagnosis, activity, and prognosis (30). Understanding the relationship between violence, stress, and its role in inflammation will help to determine the consequences of violence exposure on long-term health and health-related quality of life (31).

The strengths of this study lie in the evaluation of IPV in women of reproductive age, pregnant or postpartum, with the diagnoses of ARDs, including a control group with similar characteristics, with a validated questionnaire, the HITS scale. To our knowledge, this is the first study that compares the prevalence of IPV in this group of women. The main limitations of this study are the sample size, the lack of inclusion of disease duration/activity, disability status, and the cross-sectional design. Furthermore, we have limitations inherent in self-report studies, including a potential lack of insight into their situation or embarrassment about relying on sensitive information. Prospective studies are needed to detail the complex relationship between IPV in ARDs and their relationship to disease diagnosis, activity, and prognosis.

Conclusions

Close to one in every three women experienced IPV, but our research showed that there was no difference in the frequency of IPV between the ARD group and the control group. These findings highlight that IPV is a significant concern for all women in Mexico and the need for increased attention and support for them, especially those who are pregnant or postpartum. Determining the prevalence and subtypes of IPV and understanding the relationship between violence, stress, and its role in inflammation may help to determine the consequences of violence exposure on long-term health and health-related quality of life, and diminish adverse pregnancy outcomes, establishing guidelines for its screening.

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Contributions: all authors contributed to the conception and design of the study. LPB, CMST, JACD, MECT, DAGD, prepared the material.; MAPS, ACC, AMOR, performed the data collection, data analysis, and wrote the first draft. All authors commented on previous versions of the manuscript, read and approved the final version of the manuscript, and took full responsibility for the integrity and accuracy of all aspects of the work.

Conflict of interest: the authors declare no competing interests and funding directly or indirectly related to the work submitted for publication. This study did not receive benefits from commercial sources; all the authors in this paper declare no competing interests.

Ethics approval and consent to participate: the study adhered to the ethical standards outlined in the 1964 Declaration of Helsinki and its subsequent amendments. The research protocol was approved by the Research and Ethics Committee of the Hospital Universitario "Dr. José Eleuterio González" with registration number RE18-00008.

Informed consent: All the participants were informed of the purpose of the survey and provided written consent before administering the questionnaires.

Patient consent for publication: not applicable.

Availability of data and materials: the data for this study are not publicly available due to restrictions related to participant privacy and confidentiality, as approved by the Research and Ethics Committee of the Hospital Universitario "Dr. José Eleuterio González", registration number RE18-00008. Researchers who meet the criteria for access to confidential data may request access from the corresponding author.

Funding: the authors received no financial support for this article's research, authorship, and/or publication.

Acknowledgments: the authors thank Kevin-Sherin, MD, for granting permission to use the Hurt-Insult-Threaten-Scream (HITS) scale. We thank Pablo Gamez-Siller, MD, for his assistance in the first revision and editing for proper English language, grammar, punctuation, and manuscript spelling.

Received: 27 January 2025.
Accepted: 23 May 2025.
Early access: 12 June 2025.

Reumatismo 2025; 77:1850
doi:10.4081/reumatismo.2025.1850

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