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The role of resilience in the relationship between intimate partner violence severity and ICD-11 CPTSD severity

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ABSTRACT

Background: Resilience is a modulating factor in the development of PTSD and CPTSD after exposure to traumatic events. However, the relationship between resilience and ICD-11 CPTSD is not adequately understood in survivors of intimate partner violence (IPV).
Objective: The aim of this study is to determine whether resilience has a mediating role in the relationship between severity of violence and severity of CPTSD symptoms.
Method: A sample of 202 women IPV survivors completed self-rated questionnaires to assess CPTSD, severity of violence and resilience.
Results: Mediation analyses indicated that there was a direct relationship between the severity of violence and the severity of CPTSD symptoms ($\beta = .113$, $p < .001$) and that there was a significantly inverse relationship between levels of resilience and the severity of CPTSD symptoms ($\beta = -.248$, $p < .001$). At the same time, there was no significant relationship between the severity of violence and resilience ($\beta = -.061$, $p = .254$).
Conclusions: These findings suggest that resilience does not mediate the relationship between violence severity and CPTSD severity. Directions for future research are discussed.

El papel de la resiliencia en la relación entre la gravedad de la violencia de género y la severidad de TEPTC según CIE-11

Antecedentes: La resiliencia es un factor modulador en el desarrollo del TEPT y TEPTC después de la exposición a eventos traumáticos. Sin embargo, la relación entre resiliencia y TEPTC del CIE-11 no se comprende adecuadamente en supervivientes de violencia de género (IPV por sus siglas en inglés).
Objetivo: El objetivo de este estudio es determinar si la resiliencia tiene un rol mediador en la relación entre la gravedad de la violencia y la severidad de los síntomas de TEPTC.
Método: Una muestra de 202 mujeres supervivientes de IPV completó cuestionarios de autoinforme para evaluar TEPTC, gravedad de la violencia y resiliencia.
Resultados: Los análisis de mediación indicaron que hubo una relación directa entre la gravedad de la violencia y la severidad de los síntomas de TEPTC ($\beta = .113$, $p < .001$) y que hubo una relación inversa significativa entre los niveles de resiliencia y la severidad de los síntomas de TEPTC ($\beta = -.248$, $p < .001$). Al mismo tiempo, no hubo una relación significativa entre la gravedad de la violencia y la resiliencia ($\beta = -.061$, $p = .254$).
Conclusiones: Estos hallazgos sugieren que la resiliencia no media la relación entre la gravedad de la violencia y la severidad del TEPTC. Se discuten direcciones para futuras investigaciones.

HIGHLIGHTS
- The severity of intimate partner violence (physical, sexual and/or psychological violence together or in isolation) could lead to symptoms of complex post-traumatic stress disorder in women survivors of IPV in the present sample.
- Lower levels of resilience are associated with higher levels of symptoms of complex post-traumatic stress disorder.
- Resilience does not mediate the relationship between violence severity and CPTSD severity.

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1. Introduction

Intimate Partner Violence (IPV) refers to any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship (including slapping, hitting, kicking, beating, forced sex and other forms of coercion, insults, humiliation, threats of harm or taking away children, isolating, monitoring and restricting access to financial resources, education or health care) (WHO, 2012). In some countries, the definition of IPV is further refined in terms of gender. For example, in Spain, IPV by a partner or ex-partner has been defined through the Law on Comprehensive Protection Measures against Gender Violence (Ley de Medidas de Protección Integral contra la Violencia de Género) (Organic Law 1/2004 of 28 December) as the

> manifestation of discrimination, the situation of inequality and the power relations of men over women, which is exercised over women by those who are or have been their spouses or by those who are or have been linked to them by similar relationships of affection, even without cohabitation, and includes all acts of physical and psychological violence, including attacks on sexual freedom, threats, coercion or arbitrary deprivation of freedom.

One in three women worldwide suffers physical and/or sexual violence from an intimate partner, and in some regions, this figure can be as high as 38% (WHO, 2013). More recent statistics indicate that up to 307 million ever-married/partnered women aged 15 years and older have been subjected to recent physical and/or sexual violence from an intimate partner (WHO, 2021; WPP, 2019). In Spain, 32.4% of the Spanish women population has experienced IPV (Ministry of Health, Social Services and Equality, 2020). Therefore, the World Health Organisation (WHO, 2013) highlights this type of violence as an international health problem and a global priority that needs to be addressed.

One of the possible consequences of IPV is the development of complex posttraumatic stress disorder (CPTSD) (Fernández-Fillol et al., 2021) and protective factors such resilience, understood as an individual's capacity to successfully adapt or change in the face of adversity or trauma, could be a protective factor against mental disorders and mitigate the risk against traumatic stress (Horn & Feder, 2018; Kim-Cohen, 2007; López-Fuentes & Calvete, 2015; McLafferty et al., 2021; Rutter, 2006; Thompson et al., 2018). Thus, resilience would mediate both the direct negative effects of risk factors, such as stress, and the outcomes of adversity (Anyan & Hjemdal, 2016), allowing for the maintenance of an optimal trajectory after trauma (Southwick et al., 2014).

In this way, resilience is understood as a mechanism (Anyan & Hjemdal, 2016; Denckla et al., 2020)

with numerous studies having investigated resilience as a mediator of psychopathological phenotypes (Collazzoni et al., 2020). Some studies have shown that resilience has a mediating role between having lived through adverse experiences and the subsequent presence of symptoms of different psychopathologies. For example, Vieira et al. (2020) found that resilience mediated the indirect effect of childhood trauma on the severity of depression in young adults. Thus, they found that the lower the resilience, the greater the severity of depressive symptoms following childhood trauma. At the same time, Collazzoni et al. (2020) found that low resilience acted as a mediator between the interpersonal risk factors experienced (humiliation and family risk) and increased hopelessness in depression in patients in a psychiatric unit. In relation to PTSD, McLafferty et al. (2021) found that in the case of UK Armed Forces veterans, the effect of having suffered multi adversity, chaotic home or abuse on the later presence of anxiety, PTSD and depression, may be mediated by low resilience. Thus, it can be suggested that resilience may help build immunity to psychopathology following adverse experiences (Shastri, 2013). Hence, although there is research on the relationship between resilience and PTSD, the relationship between resilience and CPTSD has not yet been studied in the population of women IPV survivors. Therefore, in the present study we address this gap in the literature.

1.1. The consequences of IPV on the mental health of women survivors

Women IPV survivors may suffer mentally ill health as a result of this traumatic experience (Dillon et al., 2013). Traditionally, research has considered PTSD as one the most common mental disorders that IPV survivors develop, with a weighted mean prevalence of 63.8% (Golding, 1999; Kastello et al., 2016; Kelly, 2010; Nathanson et al., 2012; Nerøien & Schei, 2008; Pico-Alfonso et al., 2006). However, in the World Health Organisation's new version of the International Classification of Diseases (ICD-11; WHO, 2018), a distinction has been made between PTSD and CPTSD. PTSD includes symptoms of intrusion and re-experiencing, avoidance, and current sense of threat following a traumatic experience. In addition to the aforementioned PTSD symptoms, CPTSD contains a set of symptoms called disturbances of self-organisation (DSO), which include affective dysregulation, negative self-concept, and relationship disturbances (ICD-11; WHO, 2018). The risk of suffering CPTSD increases after exposure to interpersonal traumatic events (Hyland, Shevlin, et al., 2018). Considering the similarity between such characteristics and the type of violence suffered by women

exposed to IPV (interpersonal and difficult or impossible to escape), it is surprising that only one study has addressed CPTSD in women IPV survivors. Recently, Fernández-Fillol et al. (2021) observed a higher prevalence of CPTSD (39.5%) compared to PTSD (17.9%) in women IPV survivors. Nevertheless, little is known about risk and protective factors against CPTSD in this population group.

In terms of risk factors, the severity of violence may facilitate the onset or increase the severity of CPTSD symptoms (Hobfoll et al., 2011; Lagdon et al., 2014). This factor can be understood as the amount of violence received in a specific period of time from the violent ex-partner and includes specific experiences of physical, psychological, and sexual violence (Ford-Gilboe et al., 2016). A study by Ferrari et al. (2016) found that the majority of women IPV survivors who experienced high levels of violence showed PTSD scores above the clinical threshold. However, the relationship between the severity of violence and the severity of CPTSD symptoms has not yet been explored in IPV women survivors.

1.2. CPTSD and resilience

Recent studies show that CPTSD is related to low resilience in survivors and descendants of genocide (Shrira et al., 2019) and young survivors of sexual abuse (Alie-Poirier et al., 2020). In the same vein, sexually abused children and youth (Hébert & Amédée, 2020) and refugees (Hyland, Ceannt, et al., 2018) who were considered resilient had very low probability of meeting criteria for CPTSD. In the case of women survivors of IPV, Fernández-Fillol et al. (2021) found that low levels of resilience are related to the presence of all three DSO symptoms of CPTSD (affective dysregulation, negative self-concept and relationship disturbances).

In addition, several studies have found that chronic exposure to violence or exposure to severe violence may erode resilience (Howell et al., 2010; Klasen et al., 2010; Margolin & Gordis, 2004; Nishimi et al., 2020; Portnoy et al., 2018). The deterioration of resilience, in this case, may be explained by the fact that violence affects one's ability to manage or cut off negative reactions or consequences related to the traumatic experience. That is, violence can prevent effective problem solving or responding effectively to the support of others in the aftermath of violence (Margolin & Gordis, 2004). As a consequence, mechanisms that are dedicated to growth and development for learning are replaced by fight, flight or freeze responses that focus on survival when one's personal integrity is threatened (Van der Kolk, 2014). Again, this relationship has not been studied in women survivors of IPV and in terms of CPTSD symptoms.

In summary, although interpersonal violence has been shown to be associated with resilience, and resilience in turn is related to the presence or absence and severity of CPTSD symptoms, the relationships between these variables has not yet been studied collectively. Therefore, the present study attempts to fill this research gap by exploring the potential mediating role of resilience in the relationship between the severity of experienced IPV and the severity of subsequent CPTSD symptoms in women IPV survivors. This is essential to help us understand whether incorporating resilience enhancement in treatments for IPV survivors, this would contribute to minimising the severity of CPTSD symptoms (Giordano et al., 2019).

Thus, the main aim of our study was to determine whether resilience plays a mediating role in the relationship between severity of violence and severity of CPTSD symptoms in women survivors of IPV. Based on previous literature on CPTSD, we hypothesised that severity of violence would be positively related to CPTSD severity and negative related to levels of resilience, while resilience would be negatively related to CPTSD severity (Ferrari et al., 2016; Lagdon et al., 2014). Given that in the presence of violent interpersonal trauma, severity of violence is highly related to low resilience (Klasen et al., 2010; Margolin & Gordis, 2004; Nishimi et al., 2020; Portnoy et al., 2018), we hypothesised that resilience mediates the association between severity of violence and severity of CPTSD.

2. Method

2.1. Participants and procedures

Participants were 202 women survivors of IPV (physical, sexual and/or psychological) perpetrated by former partners. None of them were still in a relationship or lived with the perpetrator ($M = 33.41$ months from break up to assessment; $SD = 43.88$). The population sample was composed of participants recruited from women's battered centres from 30 localities in six different regions of Spain (Andalucía, Asturias, Castilla la Mancha, Castilla y León, Extremadura and Comunidad Valenciana). Participants were over 18 years old ($M = 41.41$ years old; $SD = 11.45$; age range: 20–75) and they spoke and wrote fluent Spanish. They had a $M = 14.48$ of academic years in education ($SD = 6.01$) and 68% shared children with their violent ex partners. Women under 18 years of age and those who could not read or understand and write Spanish were excluded from this study. The sample was composed entirely of women residents in Spain. Only one participant was unable to take part in the assessment due to severe symptoms of disorientation and memory loss. (Table 1 shows other socio-demographic and violence-related information).

The study was approved by the Ethics Committee of the University of Granada (933/CEIH/2019. Ethics

Table 1. Socio-demographic and violence data.

	N	%
University studies	155 (N = 199)	77.89%
No university studies	44 (N = 199)	22.11%
Currently studying	44 (N = 195)	22.56%
Intimate partner violence	202 (N = 202)	100%
Psychological violence	50 (N = 202)	24.8%
Psychological and physical violence	84 (N = 202)	41.6%
Psychological, physical and sexual violence	68 (N = 202)	33.7%
Other traumatic event	91 (N = 200)	45.7%
Other interpersonal trauma	51 (N = 200)	25.5%
Children witness of IPV	74 (N = 200)	37%
Current legal proceeding with perpetrator	121 (N = 200)	60.5%
Current perpetrator restraining order	77 (N = 200)	38.5%
Perpetrator currently in prison	11 (N = 201)	5.5%
Contact for minor children in common	43 (N = 197)	21.8%

Committee on Human Research, CEIH) and the data were collected after agreeing on a collaboration with the centres and associations where women attended. First, information about the study was given and collaboration was proposed. In the case of non-governmental associations, permission was given by the associations themselves. Centres dependent on regional or local governments needed permission from the authorities in order to be able to participate. From the different centres that were contacted, health care staff informed us of their acceptance to refer participants to the study. Health care staff of the women's centres made the first contact with participants and women who agreed to receive more information about the study were informed in detail about the study by members of our research team. Our team directly requested women's permission to participate by means of informed consent, previously approved by the ethics committee. Participants were invited to collaborate in the study on a voluntary and anonymous basis and they had the right to withdraw from the study at any time.

Assessment consisted of completing a brief interview and self-reporting questionnaires. Participants were assessed by one psychologist. That is, at the time of the assessment participants were always supported by a psychologist in person or via video call in cases where participants lived further away. All questionnaires were completed in individual sessions previously arranged with each participant and lasted approximately 90 min. The majority of assessments were completed via an electronic device (either face-to-face or remotely) but as some participants had resource problems to have a device or were not comfortable with technology, paper and pencil was used for the completion of the assessments. In the online format there was no missing data. However, among those who completed the paper version, 9 participants were excluded because they had not fully completed some of the questionnaires. Therefore, of the initial 211 participants, data from 202 were considered in our analysis.

The data collection period was from November 2019 to July 2021. Participants did not receive incentives or payments for their participation. Confidentiality was kept and guaranteed according to the Spanish legislation on personal data protection (Organic Law 3/2018, 5 December).

2.2. Measures

2.2.1. Socio-demographic and violence-related interview

A structured interview using a self-rated scale was developed for the purposes of this research. It was created by the research team in order to be able to collect consistently information regarding socio-demographic data, violence and current relationship/contact with the perpetrator (source of violence). It was completed by the participants themselves but always in the presence of one psychologist and the survey was never distributed outside the previously scheduled sessions. Socio-demographic (date of birth, information about children, school attendance, level of education, current education) and violent relationship data were also collected. For instance data on types of violence suffered, duration of the violence, previous trauma and its type, current relationship status and contact with perpetrator due to legal issues such as parenting custodies or restraining order or prison were collected (i.e. Are you currently in any kind of legal proceedings with your partner/ex-partner?; Do you and your partner/former partner have children in common?; Are your children under 18 years old?; Does he currently have a restraining order?; Has your partner/ex-partner been or is currently in prison?).

2.2.2. Resilience

The Spanish version of Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003; García-León et al., 2018), which presents with psychometric properties (Windle et al., 2011), was used to assess resilience in this study. The scale measures resilience with a set of items referring to control, commitment, and change seen as a challenge; development of a strategy with a clear goal, action orientation, strong self-esteem/confidence, adaptability to change, social problem-solving skills, humour in the face of stress, reinforcing effect of stress, taking responsibility for coping with stress, secure/stable emotional attachments, and previous experiences of achievement; the ability to withstand stress or pain; and a spiritual component (Connor & Davidson, 2003) (i.e. able to adapt to change; close and secure relationships; sometimes fate or God can help; see the humorous side of things; can handle unpleasant feelings; strong sense of purpose). This measure is a 25-item self-report with a Likert scale with a 5-point range of responses, as

follows: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). The scale is rated based on how the subject has felt over the past month. The total score ranges from 0–100, with higher scores reflecting greater resilience. CD-RISC has demonstrated good psychometric properties and was designed to be applicable to different population groups (Burns & Anstey, 2010; García-León et al., 2018; Gillespie et al., 2009; Karaırmak, 2010). Nevertheless, there is no consensus on its internal structure. Connor and Davidson (2003) defined five factors, other studies found one-dimensionality (Arias-González et al., 2015; García-León et al., 2018), two dimensions (Perera & Ganguly, 2018), three (Xie et al., 2016), four (Solano et al., 2016), five (Jung et al., 2012) and a second-order model (Yu et al., 2011). Cronbach's α to the original version scale is .86 and item-total correlations ranged from 0.30 to 0.70 (Connor & Davidson, 2003). In the present sample Cronbach's α = .91.

2.2.3. ICD-11 CPTSD and PTSD

The International Trauma Questionnaire (ITQ: Cloitre et al., 2018) is a brief measure of CPTSD developed according to ICD-11 (WHO) criteria. The ITQ Spanish adapted version (Fernández-Fillol et al., 2020; International Test Commission [ITC], 2018) was used to measure PTSD and CPTSD and includes 18 items; six PTSD symptoms, six DSO items and six items related to functional impairment of PTSD and DSO symptoms. Symptom severity is measured on a scale of 0–4 where 0 = Not at all, 1 = A little bit, 2 = Moderately, 3 = Quit a bit and 4 = Extremely. ITQ allows for a probable diagnosis of PTSD and CPTSD. PTSD diagnosis requires the endorsement of one of two symptoms (scores ≥ 2) from each PTSD cluster, plus endorsement of functional impairment associated with these symptoms. Diagnosis of CPTSD requires the endorsement of all the six PTSD and DSO clusters, plus endorsement of functional impairment associated with these symptoms. According to the ICD-11 taxonomic structure, ITQ only allows either the diagnosis of PTSD or CPTSD, but not both. The internal reliability for both scales was satisfactory, with Cronbach's α ≥ .79 in a community sample (Cloitre et al., 2018). In our sample the Cronbach's α = .87 for PTSD and .89 for DSO.

2.2.4. Severity of IPV

The Composite Abuse Scale Revised-Short Form (CASR-SF: Ford-Gilboe et al., 2016) was used to measure the severity of psychological, physical and sexual violence. This is a 15-item self-report measure that assesses the severity and intensity of IPV in the past 12 months. CASR-SF assesses the severity of each type of violence on a Likert scale of 0–5 where 0 = Not in the past 12 months/Never, 1 = Once, 2 =

A few times, 3 = Monthly, 4 = Weekly, 5 = Daily/Almost Daily, with a range of 0–75 (higher total score means a higher severity of violence). CASR-SF therefore measures the severity of IPV as a frequency indicator. The original CASR-SF has an internal consistency of α = .94 (Ford-Gilboe et al., 2016) and was translated and adapted into Spanish for the sample of this study following the International Test Commission Guidelines for Translating and Adapting Tests Second Edition by the members of Project Believe (ITC, 2018). The original CASR-SF (Ford-Gilboe et al., 2016) encompasses questions formulated to assess a frequency of recent abuse. In contrast, in the present study all participants were not in a violent relationship at the time of the assessment, many of them had experienced violence for many years, but not in the last year. Therefore, the original CASR-SF would not reflect the full story of violence. For this reason, we also considered using this measure for a period before the last 12 months and added it to the severity of violence in the last 12 months. In this way, we would have information on the full history of violence received by their ex-partners.

2.2.5. Data analysis

Given that the test used to measure resilience (CD-RISC) has a different factor structure depending on the population to which it is administered, we considered it necessary to carry out a prior factor analysis of the structure of CD-RISC in our sample.

The factorial structure of resilience in women survivors of IPV was explored using the R package 'MVN' (Korkmaz et al., 2014) and R package 'psych' (Revelle, 2021) in statistical environment R (R Development Core Team, 2021), for assessing multivariate normality and to test for the optimal number of factors to extract respectively. Bartlett's test of sphericity (Bartlett, 1954) and the Kaiser-Meyer-Olkin statistic (KMO: Kaiser, 1974) were used to ensure all the variables and model were suitable for factor analyses. For the factor analyses, we used an iterated principal component method (principal axes) to extract the factors (López-Aguado & Gutiérrez-Provecho, 2019). The number of factors to retain was based on the Kaiser–Guttman rule (Guttman, 1954; Kaiser, 1960; 1961) (eigenvalues > 1). If more than one factor was retained, an oblique rotation (Promax) was used, and no rotation would be employed if one factor was retained.

Once the number of factors of the CD-RISC in our sample were determined, we explored the role of resilience in the relationship between severity of violence and CPTSD severity, by using the Statistical Package for the Social Sciences, version 26.0 (SPSS; IBM Corp., 2019). We carried out a mediation analysis with Hayes PROCESS macro for SPSS and SAS (Hayes, 2013). The conditions were examined by the

Mediation Model
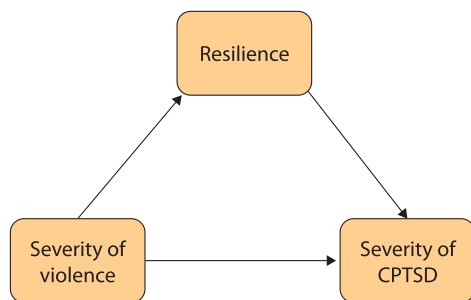
Figure 1. Proposed mediation model. CPTSD: Complex Post-traumatic Stress Disorder.

bias-corrected percentile bootstrap method with 95% bias-corrected confidence interval (CI) with 10,000 replacements. The indirect effect was determined if the 95% CI does not include zero. Model 4 of Hayes PROCESS macro was employed to estimate parameters for the mediation effect.

We conducted a mediation analysis taking the total severity of IPV as independent variable (IV), the total resilience score as mediator (M) and the severity of CPTSD (made up of the sum of the six CPTSD symptoms of re-experiencing in the here and now, avoidance, current sense of threat, negative self-concept, affective dysregulation and disturbances in relationships) as dependent variable (DV) (Figure 1).

3. Results

Of all women who completed the ITQ ($N = 199$), 74 (37.2%) met ICD-11 diagnostic criteria for CPTSD, 41 (20.6%) for a diagnosis of PTSD, while 84 (42.2%) did not meet the criteria for any of the diagnoses. All participants also completed the CD-RISC questionnaire ($N = 202$) and 190 completed CASR-SF referred to the sum of the severity of IPV (frequency) in the last 12 months and to the period from more than 12 months. Table 2 shows the mean scores and standard deviations for each measure.

3.1. Factorial structure of the CD-RISC in our sample

The results of the exploratory factor analysis describing the dimensional structure of the CD-RISC questionnaire in a sample of women survivors of IPV are

Table 2. Means and standard deviations of the measures used.

	N	M (SD)	Range
Total CD RISC	202	65.23 (16.72)	0–100
CASR-SF (Last 12 months)	192	29.87 (16.50)	0–75
CASR-SF (More than the last 12 months)	190	10.94 (14.62)	0–75
Total CAS-SF	190	40.51 (23.01)	0–150
ITQ PTSD	199	10.92 (6.39)	0–24
ITQ DSO	199	13.34 (6.19)	0–24
Total ITQ	199	24.26 (10.93)	0–48

Table 3. Eigenvalues of the factors and proportion of total variance that is explained by each factor.

Factor	Eigenvalue	% Variance
1	7.66	31
2	0.92	4
3	0.73	3

shown below. Bartlett's test of sphericity was found significant ($\chi^2(300) = 1920.08$, $p < .001$). Hence, the theoretical correlations between each pair of variables is not null and it is possible to proceed to factor analysis. At the same time, the value obtained for the KMO test was .90 which indicates that all the variables are accepted in the model for factorial analyses.

Using the iterated principal component extraction method, 3 factors and one component were suggested. However, only one factor had an eigenvalue greater than 1 and the other two factors showed much lower values, with the quotient between the first and second factor being very high (8.33). Table 3 presents the eigenvalues of the factors, as well as the proportion of total variance that is explained by each factor, and Figure 1 of the supplementary material presents factors' eigenvalues. Root mean squared error of approximation was (RMSEA) = .058, 90% CI = .049–.069. These results support the one-dimensional solution of CD-RISC in women IPV survivors.

3.2. The mediating effect of resilience in the relationship between severity of violence and CPTSD

It was hypothesised that the level of resilience would mediate the relationship between severity of violence and CPTSD.

In the present mediation model, covariates such as age or years of education have not been included, as we have performed previous correlation analyses and there are no correlations with the variables of interest in our sample. The correlations of resilience level with age and years of education were ($r(201) = .02$, $p = .768$; $r(191) = .08$, $p = .266$), the correlations between CPTSD severity symptoms with age and years of education were ($r(198) = .11$, $p = .131$; $r(189) = -.10$, $p = .156$). Finally, the correlations between severity of IPV and these two possible covariates were ($r(192) = -.02$, $p = .746$; $r(185) = -.04$, $p = .558$).

Severity of violence was related to CPTSD severity ($\beta = .113$, $p < .001$). Secondly, severity of violence was not associated with resilience ($\beta = -.061$, $p = .254$). Thirdly, resilience was associated with CPTSD symptoms ($\beta = -.248$, $p < .001$). Simultaneously, the direct effect of severity of violence on CPTSD symptoms in presence of the mediator of resilience was also found significant ($b = .113$, $p < .001$). The present mediation model explained 22.76% of the total variance of the

Mediation Model (*N* = 190)
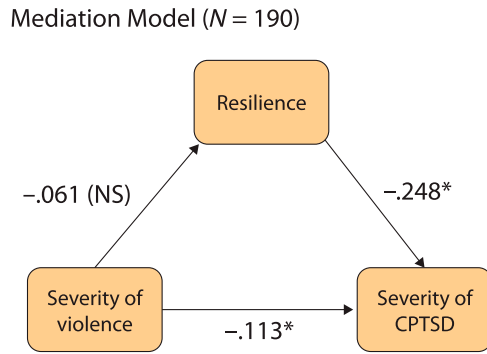
Figure 2. Results of mediation models. NS: No significant; CPTSD: Complex Posttraumatic Stress Disorder.

dependent variable. Finally, the indirect effect of severity of violence via resilience in CPTSD wasn't significant (*ab* = .015, *SE* = .030, 95% CI = [−.014, .045]) (Figure 2 shows mediation model A results). ANOVA results of mediation model are shown in Table 4.

4. Discussion

The main objective of this study was to explore the association between severity of IPV and the severity of ICD-11 CPTSD symptoms mediated by resilience in a sample of women IPV survivors. Our results showed that there was a direct relationship between the severity of violence and the severity of CPTSD symptoms, and that there was a significantly inverse relationship between levels of resilience and the severity of CPTSD symptoms. Simultaneously, there was no direct relationship between the severity of violence and resilience, suggesting resilience does not mediate the relationship between violence severity and CPTSD severity.

Regarding the direct relationship between the severity of violence and the severity of CPTSD symptoms, these results are in line with previous studies conducted with women survivors of IPV with PTSD diagnosis (Chandra et al., 2009; Ferrari et al., 2016; Varma et al., 2007) and other populations with CPTSD caused by severe traumas such as interpersonal and repeated violence, namely survivors of sex and labour trafficking and adults exposed to childhood abuse and neglect (Cloitre et al., 2019; Ho et al., 2021; Hopper & Gonzalez, 2018; Karatzias et al., 2017; Tian et al., 2022). As indicated above, there is only one study that explored the relationship between severity of violence and CPTSD in this population

(Fernández-Fillol et al., 2021). Specifically, in this study it was explored whether the severity of violence, understood as the level of physical, psychological and sexual violence received in two different periods, could be a risk factor for meeting criteria for the six symptoms of CPTSD. However, as noted above, in this study there was no association between the severity of violence and the presence or absence of CPTSD symptoms. This may be due to the fact that CPTSD was not measured in the same way in both studies. In the present study, CPTSD was treated as a continuous variable since the objective was to measure the variable in terms of severity, whereas in the previous study, CPTSD treated as a dichotomous variable (presence/absence) since the objective was to assess CPTSD in terms of diagnostic status.

In parallel, mediation analysis showed the significantly inverse relationship between resilience levels and CPTSD symptom severity. Therefore, lower levels of resilience are related to higher severity of CPTSD symptoms. These results are in agreement with previous literature regarding resilience in women IPV survivors with DSO symptoms (Fernández-Fillol et al., 2021) and other populations survivors of interpersonal trauma with complex traumatisation (Alie-Poirier et al., 2020; Hébert & Amédée, 2020; Hyland, Shevlin, et al., 2018; Shrira et al., 2019). This inverse relationship with CPTSD symptoms may occur because low resilience has been shown to relate not only to classic PTSD symptoms (Anderson et al., 2012), but also to emotional dysregulation, self-esteem problems and poor social relationships after trauma (Gao et al., 2019; Poole et al., 2017). Thus, these results would suggest that resilience could protect against the development of more severe CPTSD.

Our results also suggest that there is no direct relationship between severity of violence and resilience. These results are contrary to our hypothesis based on previous studies on resilience and severe trauma (Howell et al., 2010; Klasen et al., 2010; Margolin & Gordis, 2004; Nishimi et al., 2020; Portnoy et al., 2018). It might be the case that this inverse relationship between these two variables is not significant because in our study resilience is measured in the present whereas the severity of violence was assessed retrospectively. Therefore, it is possible that changes in resilience may have occurred between the trauma period and the moment of the assessment but these were not captured in our study. Other cross-sectional studies using similar mediation models but different populations (Collazzoni et al., 2020; McLafferty et al., 2021; Vieira et al., 2020), have demonstrated this direct effect indicating differences between the present and previous research may be due to the target population. In the case of women survivors of IPV, the changes and reconstruction in resilience after violence may happen as a result of, for example, physical

Table 4. ANOVA results of mediation model.

Model	Variable	*F*	*R*²	*df1*	*df2*	*p*
Mediation model	Resilience (CD-RISC)	1.30	.069	1	188	.254
	CPTSD	27.54	.227	2	187	<.001

activity, self-discovery, informal social support, and formal social support (López-Fuentes & Calvete, 2015). Most women survivors in our sample may also participate in therapy groups in the centres from which they were recruited. These support groups may have also helped them to learn about IPV, recognise the abuse, share their experiences, and advocate and support their peers, which could contribute to improving their resilience in this period (Crann & Barata, 2021).

Another secondary result of this study was the factor structure of the CD-RISC in a sample of Spanish women suffering IPV. The results of our study are consistent with other studies which have likewise found a one-dimensionality of CD-RISC in other populations, such as a census sample from several cities in Australia (Burns & Anstey, 2010), a post 9/11 US military population (Green et al., 2014) and general and non-clinical Spanish samples (Arias-González et al., 2015; García-León et al., 2018). This is supported by Green et al. (2014), who recommends not using CD-RISC factors as independent subscales. Thus, sub-dimensioning the CD-RISC is no more supported than separating different aspects of the same unidimensional operational construct (Arias-González et al., 2015; García-León et al., 2018). It was also quite interesting that the results in our sample are similar to those obtained in other samples in the Spanish population (Arias-González et al., 2015; García-León et al., 2018). However, this similarity does not occur in Chinese, Australian, or US samples (Burns & Anstey, 2010; Connor & Davidson, 2003; Mealer et al., 2016; Perera & Ganguly, 2018; Wu et al., 2017; Xie et al., 2016; Yu et al., 2011). Therefore, the results prior to this study and those obtained in the present work on the factor structure of this construct indicate that the number of resilience factors varies widely across developmental, social, cultural, and environmental contexts (Green et al., 2014). For this reason, it would be appropriate to consider and examine the role of cultural, contextual, and environmental factors in the factor structure of resilience. Hence, our results require replication in additional diverse samples of IPV.

5. Limitations and future directions

The sample size is the main limitation of this study. There is a need to replicate these findings in a larger sample of women survivors of IPV and in other interpersonal violence survivor populations. Another main limitation of the study is that is across-sectional research, which means that it does not allow for a causal interpretation; however, given that the study focuses on retrospective recall of violence occurring during an ended relationship and the CPTSD symptomatology consulted refers to the last month, a certain temporal ordering of the experiences could be inferred. In addition, in trauma studies, especially those involving prolonged interpersonal violence, the only method of data collection is post-trauma. It is not possible to collect information on the severity of the violence during the experience of the violence nor once the women denounce or report it to institutions. To increase the accuracy of our data we have involved a psychologist, either online or in person, during data completion.

At the same time, another limitation is the rather small effects of the mediation model and, consequently, the small-medium variance explained (Fairchild et al., 2009), not having included in the model the information referred to the other traumatic events experienced or the factor duration of violence that could have added information to the independent variable of the model. However, this last factor is very complicated to pinpoint in this population, given that the recognition of the beginning of IPV (above all the psychological violence) can be very diffuse and the end of violence may not coincide with the end of the violent relationship or may be less explicit and therefore more complex to identify and limit in time. Finally, in terms of resilience assessment, more longitudinal research is needed to explore how resilience develops over time, whether participants receive resilience-enhancing treatments, and how this may protect against CPTSD following traumatic life events.

6. Conclusion

In summary, our results suggest that severity of violence and resilience are directly and independently related to the severity of CPTSD symptoms. In our sample, there is no indirect effect of violence severity and CPTSD symptoms mediated by resilience. This would imply that, indeed, the severity of IPV (physical, sexual and/or psychological violence jointly or in isolation) leads to symptoms of CPTSD. At the same time that lower levels of resilience were related to higher levels of CPTSD symptoms. Future studies should explore other mediating or moderating variables in the relationship between severity of violence and resilience and investigate the role of resilience-focused treatments in enhancing resilience.

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Data availability statement

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