

Development and validation of the scale of psychological abuse in intimate partner violence (EAPA-P)

Clara Porrúa-García¹, Álvaro Rodríguez-Carballeira¹, Jordi Escartín¹, Juana Gómez-Benito¹,
Carmen Almendros² and Javier Martín-Peña³

¹ Universidad de Barcelona, ² Universidad Autónoma de Madrid and ³ Universidad de Zaragoza

Abstract

Background: In the context of intimate partner violence, psychological abuse (PA) has progressively gained scientific relevance. Even so, a greater effort is needed to define and evaluate psychological intimate partner abuse. A new exhaustive and operative taxonomy of PA strategies leads to the contribution of a new evaluation instrument. **Method:** Participants were 101 women between 24 and 82 years old, who were abused by their partners and attended to in different municipal Catalan services, specialized in the topic. **Results:** The analyses have shown the suitability of a 19-item instrument divided into two factors: (1) direct PA strategies and (2) indirect PA strategies. The former includes strategies that affect the emotional, cognitive and behavioral dimension of the victim. The latter includes items that measure the amount of control and domination over the victim's context. This scale has adequate psychometric properties in terms of score reliability and the validity of the relationship with other women's health variables. **Conclusions:** The EAPA-P, created based on a new definition and taxonomy of the forms of PA, is presented as a valid instrument to detect and measure intimate partner PA.

Keywords: Psychological abuse, scale, instrumental studies, validation, intimate partner violence.

Resumen

Desarrollo y validación de la Escala de Abuso Psicológico Aplicado en la Pareja (EAPA-P). **Antecedentes:** en el contexto de la violencia en la pareja, la de tipo psicológico ha ido ganando relevancia científica. Aun así, es preciso un mayor esfuerzo para delimitar y evaluar el abuso psicológico (AP) en la pareja. Una nueva taxonomía de estrategias de AP da pie a la aportación de un nuevo instrumento de evaluación. **Método:** han participado 101 mujeres maltratadas por su pareja, de entre 24 y 82 años, y atendidas en diferentes servicios municipales especializados en el tema. **Resultados:** los análisis han mostrado la idoneidad de un instrumento de 19 ítems distribuidos en dos factores: (1) estrategias directas de AP y (2) estrategias indirectas de AP. El primero agrupa las estrategias que inciden en la dimensión emocional, cognitiva y conductual de la víctima. El segundo recoge aquellas que persiguen el control y la dominación sobre el contexto de la misma. Dicha escala posee propiedades psicométricas adecuadas en lo que se refiere a la fiabilidad de las puntuaciones y la validez de relación con otras variables relacionadas con la salud. **Conclusiones:** la EAPA-P se presenta como herramienta válida para detectar y medir el AP en la pareja.

Palabras clave: abuso psicológico, escala, estudio instrumental, validación, violencia de pareja.

A Spanish survey on intimate partner violence against women showed that, among women over 17 years old, the prevalence of psychological abuse (PA) ranged between 40.3 and 44.7%, and reached 15.2% in the case of severe PA (Medina-Ariza & Berberet, 2003). In addition, the results of the study carried out by Amor, Echeburúa, de Corral, Sarasua, and Zubizarreta (2001) showed that 38% of the female victims of intimate partner violence stated that they had suffered PA exclusively. The rest (62%) reported that they had received physical abuse and PA simultaneously. The study by Matud (2004) reported that 46% of the abused women suffered physical abuse and PA; 33% suffered physical, psychological and sexual abuse; 16% indicated that they had only

experienced PA; and finally, 5% said they had experienced PA and sexual abuse.

Some studies state that PA has at least as much of an impact on the victim's mental health as physical aggression. The results of the study by Matud (2004) pointed out that women abused by their partners presented, among other health problems, more symptoms of depression (17.4%) and anxiety (15.8%) than women who had not experienced abuse. Moreover, in the case of depression, significant differences were obtained between the women who had been separated from their partners for some time and those who were involved in the separation process, with the former showing significantly lower depression levels than the latter.

Regarding the Post-traumatic Stress Disorder (PTSD), Jones, Hughes, and Unterstaller (2001) reported that this type of disorder usually appears in 33 to 84% of abused women. A greater presence of sexual or physical abuse is usually considered a distinctive trait in women with PTSD diagnostic criteria, although they can appear after experiencing any type of abuse (Calvete, Estévez, & Corral, 2007). In the study carried out by these authors, the results

showed that women with PTSD scored significantly higher on the other variables (e.g., physical aggression, sexual aggression, abandonment, failure and imperfection/guilt), but significant scores were not obtained in the case of PA or on the schemas of failure and emotional deprivation.

If the study of the conceptualization and definition of intimate partner PA has presented certain discrepancies, the study of the evaluation of this phenomenon confirms them. In spite of these difficulties, efforts have been made to develop scales that evaluate violence in general, including items to detect some form of PA (for an exhaustive review, see Almendros, Gámez-Guadix, Carrobes, Rodríguez-Carballeira, & Porrúa, 2009). An example is the Conflict Tactics Scale, original (CTS) and revised versions (CTS2) (Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), which have been the most widely used in the area of intimate partner violence (Rathus & Feindler, 2004). Another scale with a strong impact in the scientific context is the Index of Spouse Abuse (ISA) by Hudson and MacIntosh (1981), which evaluates intimate partner violence in general, and the magnitude and severity of PA in particular. In addition, it is necessary to add those created to measure PA exclusively, validated in English-speaking samples. Some of the most important are the *Psychological Maltreatment of Women Inventory* (PMWI) by Tolman (1989), the *Subtle and Overt Psychological Abuse of Women Scale* (SOPAS) by Marshall (1999), which was proposed to measure the presence of open or manifest PA and subtle or hidden PA, and the *Across Groups Psychological Abuse and Control Scale* (AGPAC) by Wolfson (2002), which was created for application to ex-members of cults and female victims of partner abuse in order to discriminate between the two groups and establish similarities and differences. Regarding the development of instruments that specifically measure PA in the Spanish setting, some stand out, such as the *Scale to Assess Women's Maltreatment by their Partners* [*Escala para Evaluar el Maltrato a la Mujer por parte de su Pareja – APCM*] (Matud, Carballeira, & Marrero, 2001) and the *Inventory of Psychological Abuse in Intimate Relationships* [*Inventario de Abuso Psicológico en las Relaciones de Pareja – IAPRP*] by Calvete, Corral, and Estévez (2005).

When reviewing the studies on classifications of the PA components, a notable divergence is observed in the spectrum of these classifications and the number and labeling of the strategies included in them. Some authors view this construct as *unifactorial* (e.g., Calvete et al., 2005). However, it has been considered a set of components or factors, and thus, a *multifactorial* construct (Kelly, 2004). In this sense, various studies have yielded different classifications that include the strategies that would supposedly define the field of action of PA, although there are still important discrepancies among them. One of the most recent classifications, which includes an exhaustive collection of PA strategies, from the most overt to the most subtle, was developed by Rodríguez-Carballeira, Porrúa-García, Escartín, Martín-Peña, and Almendros (2014). This taxonomy contributes the operative definitions for each PA category and sub-category, and it hierarchizes them according to their severity. The breadth and operativity of this taxonomy provides a solid base for the elaboration of a scale to measure PA, defined by the authors of this study as the continued application of strategies of pressure, control, manipulation and coercion with the purpose of dominating and subjugating the partner. This domination can be attempted with direct strategies, affecting the partner's emotions, cognitions and behaviors, or with indirect ones, by controlling the partner's immediate environment.

The aim of this study is to resolve some of the limitations shown by other intimate partner PA measurement instruments, basically stemming from the use of partial approaches that do not take into account the entire range of forms of abuse, from the most overt to the most subtle. To do so, it was necessary to elaborate and validate a new PA scale, mainly incorporating: (1) items that reflect all the PA strategies contemplated in the recent exhaustive taxonomy by Rodríguez-Carballeira et al., (2014); (2) items that clearly reflect the action of the abusive strategies applied, without confusing them with the consequences or other possible collateral effects on the victims.

As a result, this study proposes the following objectives: (a) develop and validate an instrument that offers a valid and reliable measure of the PA applied in the context of heterosexual intimate partner violence and in the Spanish-speaking population. In addition, the study aims to: (b) achieve a balance between the quality of the psychometric properties and the length of the instrument.

Method

Participants

The sample consisted of 101 women residing in Spain, 75% of them of Spanish origin and 25% from other places (15% are Spanish-speaking: Argentina, Bolivia, Colombia, Peru, Puerto Rico and Venezuela; 10% are non Spanish-speaking: Belgium, Morocco, Rumania and the Ukraine, but understand Spanish sufficiently). The latter was verified through a prior interview to find out whether the woman could hold a fluid conversation in Spanish. These experts in treating battered women had previously diagnosed the women as abused by their partners. The age of the participating women ranged from 24 to 82 years old, with a mean age of 51.29 years ($SD = 13.04$). When the abuse began, most of the women reported having a medium socioeconomic level (53%), followed by a medium-low level in 17%, a low level in 16%, and a medium-high level in 14%. Regarding the couple's situation and the beginning of the abuse, 39% were living together, 36% were married, and 25% were engaged but without living together. With regard to the self-perception of the abuse experienced, 76% of the total sample said they had suffered physical violence, 65% said they had been the victim of sexual aggression, and all of the women interviewed (100%) reported having experienced PA.

Instruments

The following battery of instruments was applied:

Ad hoc questionnaire on sociodemographic aspects and characteristics of the abuse and its context.

Scale of Psychological Abuse in Intimate Partner Violence [*Escala de Abuso Psicológico Aplicado en la pareja – EAPA-P*]. It originally consisted of 47 Likert-type items with a response range from 0 = *never* to 4 = *continually*. After performing different types of analyses, which are explained in this study, the instrument was reduced to 19 items. Cronbach's alpha was .92 for the complete scale.

Subtle and Overt Psychological Abuse Scale (SOPAS; Marshall, 1999), composed of 35 items that provide a measure of the subtle and overt forms of PA. The response range is from 0 = *never* to 4 = *continually*. The Spanish version by Almendros, Rodríguez-Carballeira, Porrúa, Carrobes, and Gámez-Guadix (2010) was used. The alpha coefficient for this sample was .97.

Hospital Anxiety and Depression Scale (HAD), consisting of 14 items that detect the existence of anxiety and depression. Each of these two subscales contains 7 items with a response range from 0 to 3. The Spanish adaptation by López-Roig et al. (2000) was used. Cronbach's alpha for the present sample was .94.

Davidson Trauma Scale (DTS), in its Spanish version, translated and validated by Bobes et al. (2000), and composed of 17 items with a response range from 0 to 3. Cronbach's alpha for the present sample was .97.

Procedure

To elaborate the preliminary version, the guidelines recommended by Abad, Olea, Ponsoda, and García (2011) were followed. First, the purpose of the instrument was defined, that is, to evaluate the frequency with which PA strategies are applied in intimate partner relationships. Second, the construct to be evaluated was specified, using the taxonomy of AP strategies created by Rodríguez-Carballeira et al., (2014). The next step was to create a set of items that would be capable of collecting the abusive behaviors that correspond to the abuse strategies contained in this taxonomy and could be adequately responded to by female victims of partner violence. An effort was made to present the content of the items as precisely and clearly as possible, avoiding any difficulties in comprehending the ideas they include, as recommended by various experts (e.g. Haladyna, Downing, & Rodríguez, 2002). The items were written based on the abuse strategy referred to, instead of using specific forms of abuse. The proposal was to write at least two items for each strategy. The result was a scale with 47 items (see Tables 1 and 2).

Once the item construction process had ended, the items were distributed to four professionals from the academic world, experts in partner violence, for review. The purpose was to detect the existence of redundant items. In this end, the professionals related each of the 47 items with the corresponding strategy, providing the scale with a form that was considered theoretically sound.

Later a pilot test was carried out by applying the scale to five women who were victims of partner violence. Afterwards, they were asked to explain whether they had found it difficult to respond to these items.

Contact with the women was made through the professionals responsible for the different municipal services that attend to these victims (women's associations, women's shelter, municipal centers for battered women, health clinics, private psychology clinics, and points of information and attention to women). The participating women gave their consent, knowing that their identities would remain confidential, with anonymity guaranteed at all times. The same person administered all the questionnaires. The specific time when each woman attended depended on her availability and the schedule of the service. None of the women received any type of incentive.

Data analysis

The responses collected were introduced in a database created with the SPSS 18 computer software, which was also used to perform the different statistical analyses.

Regarding the treatment of the missing values of the sample, as the total amount was less than 2% of the sample, these values were substituted by the mean of the scores obtained.

Item exclusion took place in the following way: based on the women's responses to the items on the first version of the EAPA-P, a descriptive analysis was performed. In addition, the corrected item-total correlation index between the items and the subscales to which they theoretically belonged was taken into account, based on the same criterion. The floor effect was considered, and those items to which more than 50% of the participants responded *not at all* were susceptible to being eliminated. Meanwhile, a qualitative analysis was carried out based on the information from the notes taken in the different applications about the questions and comments made by the women as they responded to the items and/or the comments they made after completing the battery of instruments. The purpose of the analyses was to find a balance among the items that make up the scale, maintaining those that best explain its dimensionality. Afterwards, a factorial analysis was performed, as well as an analysis of the wording and content of the remaining items to select those that would make up the definitive version of the instrument. Thus, in the first place, an initial approach was made to the internal structure of each of the dimensions through a series of exploratory factorial analyses

Table 1
Items of direct PA strategies of the EAPA-P

Strategies and items
EMOTIONAL ABUSE
11. My partner's demonstrations of love occurred when he wanted me to forgive him for some offensive behavior or for some other reason in his interest
12. If I didn't do what he wanted, my partner threatened me with hurting me or my loved ones
13. My partner did not take my feelings into account
18. To get what he wanted, my partner didn't hesitate to threaten to break up with me or hurt himself
19. My partner denigrated my initiatives or proposals *
21. My partner did not pay attention to the things I proposed
22. My partner treated me with scorn *
24. My partner blamed me for almost everything that went wrong between us
25. My partner addressed me with insults and mockery
30. My partner showed a lack of appreciation of my role as a mother and wife *
32. My partner was affectionate only when it was in his own interest *
34. When talking about my work, my partner referred to me in an offensive way *
37. My partner gave me different warnings to make me behave the way he wanted me to *
43. It bothered my partner when I expressed my feelings *
46. My partner invalidated me or made fun of me in front of other people
47. My partner blamed me for things I wasn't responsible *
IMPOSITION OF ONE'S OWN THINKING
3. My partner interpreted the things that affected us in his own way *
5. My partner insisted that in our relationship we should be above the pain and discomfort that each of us could feel *
10. If there was disagreement, my partner imposed his view of things
28. My partner rejected my way of thinking when it didn't coincide with his
31. My partner insisted that the two of us were one and that I couldn't live without him
38. My partner did not tolerate my disagreeing with him *
IMPOSITION OF A SUBSERVIENT ROLE
8. My partner treated me as if I were his private servant *
27. My partner made me do things that went against my values
44. My partner ruled my daily life without considering what I wanted
Note: *: item that forms part of the reduced version of the EAPA-P (19 items)

(EFA). The estimation method selected was Weighted Least Squares (WLS), which is preferable to other methods due to its robustness when there is a lack of normality or small sample sizes (Ferrando & Anguiano-Carrasco, 2010). Second, a pre-selection was made of the items in each dimension that would be included in the final version of the instrument, attending to the following qualitative criteria: (a) select the items that best reflect the core of the abuse strategy in question; (b) select the items with simpler wording; (c) maximize the representation of the theoretical sub-categories of each category, trying to select at least one item from each sub-category; and (d) avoid conceptual overlapping. One important aspect was the fact that the items selected presented the greatest factorial weights and higher corrected item-dimension correlations, especially when there was more than one item to be included in the definitive version and they had similar qualitative quality. By proceeding in this way, the intention was to maximize the validity of the instrument, while taking its reliability into account. Later, a confirmatory factorial analysis (CFA) was performed to validate one of the models proposed in this study. For this purpose, the LISREL program, version 8.8 (Jöreskog & Sörbom, 2006) was used. To carry out this CFA, the maximum verisimilitude method was used, as other authors have used it when the condition of data normality is not met (e.g., Savalei, 2008). In addition, Schermelleh-Engel, Moosbrugger, and Müller (2003) recommend taking into account the following

indices to determine which model presents the best fit: Satorra-Bentler Scaled Chi-Square (χ^2 , $p > .05$), Standardized Root Mean Square Residual (SRMR $< .08$), Root Mean Square Error of Approximation (RMSEA $< .08$), Non-Normed Fit Index (NNFI $> .90$) and Comparative Fit Index (CFI $> .95$). These fit indices are currently the most widely used, and the information they provide together seems to be sufficient to make a decision about model fit. (e.g., McDonald & Ho, 2002).

Results

Descriptive analysis of the items

The total item-scale and subscale correlation values were, in general, adequate. Only two items showed a coefficient slightly below .40, which was the minimum value established as suitable. These items were: Item 11 ($r^c = .38$) and Item 18 ($r^c = .39$). Regarding the corrected item-total correlations between the items and the subscales to which they theoretically belonged, only one item (18) also presented a lower value ($r^c = .35$) of item-total correlation with its theoretical subscale.

The EFA performed with the 47 items showed a consistent internal structure (alphas above .70 and explained variances (EV) also above 50% in all the factors. In the case of the direct PA strategies, thirteen (11, 12, 13, 18, 21, 24, 25, 46, 10, 28, 31, 27 and 44) of the twenty-five items that make up this block presented lower factorial weights. Regarding the items that refer to the indirect PA strategies, fifteen (15, 26, 36, 40, 1, 7, 39, 2, 4, 9, 14, 17, 20, 35 and 45) of the twenty-two in this sub-category also presented lower factorial weights.

As a final result of this first analysis, a scale was obtained that went from the initial 47-item scale to a 19-item reduced scale, with the latter being used to perform the confirmatory factorial analysis. Tables 1 and 2 show the items that are excluded and maintained. Tables 3 and 4 present the descriptive analysis of the 19 items and the other instruments.

Confirmatory factorial analysis

To obtain the structure of the reduced scale, a confirmatory factorial analysis was carried out (see Table 5). For this purpose, it was considered relevant to propose the following models: (a) a one-factor model, called PA; (b) a model composed of two factors called Direct PA strategies and Indirect PA strategies; (c) a model with three factors: Context, Emotion and Behavior-cognition; and finally (d) a model that defends the existence of factors called Isolation, Control, Emotion and Cognition. All of them coincide with the taxonomy of PA strategies proposed (see Table 6).

The resulting fit indices (see Table 6) indicated that the two-factor model fit the data well and was better than the other proposed models.

Below, information is presented about what type of item is included in each of the two factors of the chosen model.

- (1) Direct PA strategies: includes the items that focus more directly on the affected person. In this case, the actions are related to either emotional, cognitive or behavioral aspects of the victim.
- (2) Indirect PA strategies: includes the items that focus on the victim's context. In this case, the woman is controlled

Table 2
Items of indirect PA strategies of the EAPA-P

Strategies and items
ISOLATION
15. My partner made me grow apart from my friends
23. My partner kept me from freely leaving the house *
26. My partner pressured me to leave my studies or work
33. My partner kept me from establishing relationships with the people around me *
36. My partner tried to make us have as little contact with the family as possible
40. My partner required me to be home as much as possible
41. My partner kept me from doing activities I felt like doing *
42. My partner tried to keep me away from my family members *
CONTROL AND MANIPULATION OF INFORMATION
1. My partner manipulated the information he had to give me to suit his own interests
7. My partner did not allow me to talk to anyone about the abusive behaviors
29. My partner hid important information from me *
39. My partner did not allow me to seek help to deal with our problems
CONTROL OF PERSONAL LIFE
2. My partner did not allow me to participate in decisions about our money, debts or other assets
4. My partner made me perform or watch sexual practices against my wishes
6. My partner controlled everything I did *
9. My partner made it hard for me to go to the doctor when I didn't feel well
14. My partner made me do a lot of tiring activities and sleep fewer hours than normal
16. My partner controlled our money and restricted my use of it as much as possible *
17. My partner interrogated me and other people around me to find out what I did and who I was with at all times
20. My partner imposed his decisions about things that affected the lives of our children
35. My partner imposed his desires about when to have sexual relations
45. My partner had to have the last word about our children
Note: *: item that forms part of the reduced version of the EAPA-P (19 items)

Table 3
Descriptive analysis of the items on the final version of the EAPA-P

Items	M	SD	Skewness	Kurtosis
3. My partner interpreted the things that affected us in his own way	3.16	1.07	-1.13	.41
5. My partner insisted that in our relationship we should be above the pain and discomfort that each of us could feel	1.93	1.66	.10	-1.67
6. My partner controlled everything I did	3.10	1.26	-1.08	-.24
8. My partner treated me as if I were his private servant	2.78	1.39	-.79	-.74
16. My partner controlled our money and restricted my use of it as much as possible	2.11	1.60	.03	-1.62
19. My partner denigrated my initiatives or proposals	2.55	1.30	-.46	-.95
22. My partner treated me with scorn	2.58	1.20	-.45	-.70
23. My partner kept me from freely leaving the house	2.37	1.53	-.32	-1.43
29. My partner hid important information from me	2.31	1.54	-.23	-1.52
30. My partner showed a lack of appreciation of my role as a mother and wife	2.39	1.39	-.27	-1.24
32. My partner was affectionate only when it was in his own interest	2.46	1.38	-.33	-1.19
33. My partner kept me from establishing relationships with the people around me	2.37	1.38	-.23	-1.31
34. When talking about my work, my partner referred to me in an offensive way	2.04	1.46	.11	-1.39
37. My partner gave me various warnings to make me behave the way he wanted me to	2.54	1.38	-.36	-1.27
38. My partner did not tolerate my disagreeing with him	2.95	1.19	-.86	-.44
41. My partner kept me from doing activities I felt like doing	2.29	1.37	-.20	-1.25
42. My partner tried to keep me away from my family members	2.23	1.42	-.05	-1.40
43. It bothered my partner when I expressed my feelings	2.08	1.43	.03	-1.39
47. My partner blamed me for things I wasn't responsible	2.95	1.28	-.88	-.52

Table 4
Descriptive analysis of the items on the final version of the EAPA-P and the other instruments

Measurement instruments	Num. of items	Response interval	M	SD	Skewness	Kurtosis	Test of normality	Standard error of the mean
EAPA-P	19	0-4	2.48	.90	-.02	-1.12	.63	.09
SOPAS	35	0-4	2.68	.92	-.33	-1.13	.20	.09
DTS	17	0-4	1.84	1.01	.18	-.84	.63	.10
HAD	14	0-3	11.02	4.51	-.06	-.01	.91	.67

Table 5
Saturation matrix formed by the two-factor model

Items	Direct PA strategies	Indirect PA strategies
3. My partner interpreted the things that affected us in his own way	.56	
5. My partner insisted that in our relationship we should be above the pain and discomfort that each of us could feel	.52	
8. My partner treated me as if I were his private servant	.61	
19. My partner denigrated my initiatives or proposals	.71	
22. My partner treated me with scorn	.62	
30. My partner showed a lack of appreciation of my role as a mother and wife	.74	
32. My partner was affectionate only when it was in his own interest	.73	
34. When talking about my work, my partner referred to me in an offensive way	.68	
37. My partner gave me various warnings to make me behave the way he wanted me to	.74	
38. My partner did not tolerate my disagreeing with him	.73	
43. It bothered my partner when I expressed my feelings	.69	
47. My partner blamed me for things I wasn't responsible for	.70	
6. My partner controlled everything I did		.69
16. My partner controlled our money and restricted my use of it as much as possible		.51
23. My partner kept me from freely leaving the house		.69
29. My partner hid important information from me		.57
33. My partner kept me from establishing relationships with the people around me		.81
41. My partner kept me from doing activities I felt like doing		.73
42. My partner tried to keep me away from my family members		.79

Note: (3, 5, 8,...): numbering of the items on the preliminary version (47 items)

Table 6
Main psychometric data extracted from the confirmatory factorial analysis

Model	RMSEA	90% CI	SRMR	NNFI	CFI	AIC	χ^2	df	p
1 factor	.13	.12 - .15	.90	.92	.93	492.96	416.96	152	<.01
2 factors*	.08	.06 - .10	.80	.95	.96	334.85	269.75	151	<.01
3 factors	.09	.07 - .10	.80	.85	.87	338.47	256.47	149	<.01
4 factors	.09	.07 - .10	.80	.84	.87	343.51	255.51	146	<.01

Note: * Model that obtains better indices

and dominated through actions directed to third-parties or indirectly to her.

Score reliability

The reliability of the scores on the EAPA-P was examined by calculating their internal consistency by means of Cronbach's alpha coefficient. The values obtained showed good internal consistency for the whole scale ($\alpha = .93$).

Validity of the relationship with other variables

Given that the EAPA-P is designed to measure different types of intimate partner PA strategies, a high correlation was expected between this scale and another existing PA instrument: the SOPAS (Marshall, 1999). Table 7 presents the correlation values found between the SOPAS and the EAPA-P total scale. High significant correlation values were found with the whole scale ($r = .88$).

In addition, we examined to what degree the scores on the EAPA-P reflected the relationships found in other empirical studies with the scores on other variables. As evidence of internal structure, the relationship of the EAPA-P with other theoretically-related variables was examined: post-traumatic stress disorder, anxiety and depression (see Table 7). The global EAPA-P was significantly correlated with these variables.

Measurement instruments	2	3	4
EAPA-P	(.92) ¹	.88**	.45**
SOPAS		(.97) ¹	.43**
DTS			(.97) ¹
HAD			(.94) ¹

Note: (...) ¹ correspond to the Alpha; ** $p < .01$ (two-sided); * $p < .05$ (two-sided)

Discussion

The aim of this study was to develop and validate a new scale based on a recent taxonomy of intimate partner PA strategies, according to a new definition of this phenomenon. This taxonomy provides an exhaustive classification of the forms of PA and a new and precise definition of the phenomenon. The breadth and detail of this definition, including the operative definition of each abuse strategy, offers a good opportunity to create a new PA measurement instrument. The instrument created is composed of two factors

that include the direct and indirect PA strategies. The fact that the two factors, revealed by the CFA, are moderately correlated with each other suggests that aggressors usually use both direct and indirect abuse strategies, thus affecting the victim's context, emotion, cognition and behavior, making it easy to have complete control of the partner.

The Direct PA strategies factor obtained in this study includes dimensions identified by other authors, such as: emotional abuse (Wolfson, 2002), mental degradation (Sonkin, Martin, & Walker, 1985), minimizing/blaming and performance orientated (Ward, 2000), emotional abuse (Hegarty, Sheehon, & Shonfeld, 1999; Hegarty, Bush, & Sheehon, 2005; Borjesson, Aarons, & Dunn, 2003).

By contrast, the factor called Indirect PA strategies, which focuses on the victim's context, includes forms of PA related to overt acts carried out to supervise the woman's behavior (Marshall, 1999), and to the abuse of control the batterer has over his victim, a factor reflected in the study by Pitzner and Drummond (1997). It also includes abusive behaviors that coincide with those pointed out by other authors, such as the control factor by Vázquez, Estébanez, and Cantera, (2008), external control by Walker (1985), environment control by Ward (2000), and isolation control activity by Wolfson (2002). Likewise, there is agreement with the abuses mentioned in the isolation factor by Jones, Davidson, Bogat, Levendosky, and von Eye (2005), and in isolation and control by Kasian and Painter (1992), in isolating by Marshall (1999), in isolation by Sonkin et al., (1985), in domination/isolation by Tolman (1989), in isolation by Vázquez et al., (2008) and in social isolation by Walker (1979).

Regarding evidence about the internal structure, it can be stated that the EAPA-P was based on logical and empirical analyses of the adequacy with which the whole scale represents the content domain. In addition, after examining the relationships between the scores on the scale and the scores on the SOPAS scale, the results showed that the EAPA-P is highly correlated with the SOPAS scale, which shows that the items on the former are capable of evaluating PA strategies applied to the partner.

In the case of the relationships between PA evaluated with the EAPA-P and Post-traumatic Stress Disorder, anxiety and depression, the findings revealed that the correlations between the EAPA-P and the other scales are significant, which means that the scale created presents a series of psychometric characteristics that support its usefulness for evaluating this particular phenomenon.

The proposed PA scale can be useful as an instrument to evaluate the abuse experienced. With it, professionals from different disciplines can detect and evaluate which PA strategies victims have experienced and how often they have experienced

them. With this information, the professional can better judge the degree of psychological damage, depending on the type of PA strategy applied to the victim. This information is useful for proposing a good action plan to treat the people involved and help them to recover.

Study limitations and future lines of research

One limitation of this study has to do with the type of study used and the interpretation of the results. The results of the present study only provide information about the existence of a significant correlation between the EAPA-P and the variables of post-traumatic stress, anxiety and depression, but it is impossible to determine a cause-effect relationship between them. Second, in relation to the sample selection, it is important to mention that the sampling method used in this study contributed to having a small total sample. In turn, this limitation can be explained by the difficulty of contacting a large number of female abuse victims, mainly due to the fear they might have of being judged by third parties or of being punished by the abusive partner.

Various aspects came to light that require further study. We think it is necessary to more closely examine the different cultural, socioeconomic, family and ethnic aspects that influence the perception of the damage or degree of tolerance to certain abusive acts inflicted by the partner.

It would be relevant to complete these new studies with the development of a severity index of these behaviors. In addition, PA should be studied in same-sex couples, an area of study that has received little attention so far.

All of this has great relevance for the practice of professionals dedicated to detecting, caring for and treating people associated with this global social problem, whether victims, aggressors or people at risk of becoming one or the other.

Acknowledgements

The study was partially supported by Ministry of Economy and Competitiveness [*Ministerio de Educación y Competitividad*] (PSI2010-16098), and by Catalan Women's Institute [*Instituto Catalán de las Mujeres*] (U-103/10).

References

- Abad, F., Olea, J., Ponsoda, V., & García, C. (2011). *Medición en Ciencias Sociales y de la Salud [Measurement in social sciences and health]*. Madrid: Síntesis.
- Almendros, C., Gámez-Guadix, M., Carrobes, J.A., Rodríguez-Carballeira, A., & Porrúa, C. (2009). Abuso psicológico en la pareja: aportaciones recientes, concepto y medición [Psychological abuse in the couple: Recent contributions, concept and measurement]. *Psicología Conductual*, 17(3), 433-451.
- Almendros, C., Rodríguez-Carballeira, A., Porrúa, C., Carrobes, J.A., & Gámez-Guadix, M. (2010, July). *Evidencias psicométricas preliminares de la Escala de Abuso Psicológico Sutil y Manifiesto* [Preliminary psychometric evidence of the Scale of Psychological Abuse and Manifest Sutil]. Paper presented at the 7th Congreso Iberoamericano de Psicología, Oviedo, Spain].
- Amor, P.J., Echeburúa, E., Corral, P., Sarasua, B., & Zubizarreta, I. (2001). Maltrato físico y maltrato psicológico en mujeres víctimas de violencia en el hogar [Physical abuse and psychological abuse on women victims of domestic violence]. *Revista de Psicopatología y Psicología Clínica*, 6, 167-178.
- Bobes, J., Calcedo-Barba, A., García, M., François, M., Rico-Villademoros, F., González, M.,... Bousoño, M. (2000). Evaluation of the psychometric properties of the Spanish version of 5 questionnaires for the evaluation of post-traumatic stress syndrome. *Actas Españolas de Psiquiatría*, 28, 207-218.
- Borjesson, W.I., Aarons, G. A., & Dunn, M.E. (2003). Development and confirmatory factor analysis of the Abuse within Intimate Relationship Scale. *Journal of Interpersonal Violence*, 18, 295-309.
- Calvete, E., Corral, S., & Estévez, A. (2005). Desarrollo de un inventario para evaluar el abuso psicológico en las relaciones de pareja [Development of an inventory to assess psychological abuse in people living together]. *Clínica y Salud*, 16, 203-221.
- Calvete, E., Estévez, A., & Corral, S. (2007). Trastorno por estrés postraumático y su relación con esquemas cognitivos disfuncionales en mujeres maltratadas [Posttraumatic Stress Disorder and its relationship with negative cognitive schemas in battered women]. *Psicothema*, 19(3), 446-451.
- Ferrando, P.J., & Anguiano-Carrasco, C. (2010). El análisis factorial como técnica de investigación en Psicología [Factor analysis as a research technique in Psychology]. *Papeles del Psicólogo*, 31(1), 18-33.
- Haladyna, T.M., Downing, S.M., & Rodríguez, M. (2002). A review of multiple-choice item-writing guidelines for classroom assessment. *Applied Measurement in Education*, 15(3), 309-334.
- Hegarty, K., Bush, R., & Sheehan, M. (2005). The Composite Abuse Scale: Further development and assessment of reliability and validity of a multidimensional partner abuse measure in clinical settings. *Violence & Victims*, 20, 399-415.
- Hegarty, K., Sheehan, M., & Schonfeld, C. (1999). A multidimensional definition of partner abuse: Development and preliminary validation of the Composite Abuse Scale. *Journal of Family Violence*, 14, 399-415.
- Hudson, W. W., & McIntosh, S. R. (1981). The assessment of spouse abuse: Two quantifiable dimensions. *Journal of Marriage and the Family*, 43, 873-888.
- Jones, S., Davidson, W.S., Bogat, G.A., Levendosky, A.A., & von Eye, A. (2005). Validation of the Subtle and Overt Psychological Abuse Scale: An examination of construct validity. *Violence & Victims*, 20, 407-416.
- Jones, L., Hughes, M., & Unterstaller, U. (2001). Post-Traumatic Stress Disorder (PTSD) in Victim of Domestic Violence: A review of the research. *Trauma, Violence, and Abuse*, 2(2), 99-119.
- Jöreskog, K., & Sörbom, D. (2006). *LISREL 8.8 and PRELIS 2.8 [Computer Software]*. Scientific Software International, Inc.: Lincolnwood, IL.
- Kasian, M., & Painter, S.L. (1992). Frequency and severity of psychological abuse in a dating population. *Journal of Interpersonal Violence*, 7, 350-364.
- Kelly, V.A. (2004). Psychological abuse of women: A review of the literature. *The Family Journal*, 12, 383-388.
- López-Roig, S., Terol, M.C., Pastor, M.A., Neipp, M.C., Massutí, B., Rodríguez-Marín J.,... Sitges, E. (2000). Ansiedad y depresión. Validación de la escala HAD en pacientes oncológicos [Anxiety and depression. Validation of the HAD scale in cancer patients]. *Revista de Psicología de la Salud*, 12, 127-155.
- Marshall, L.L. (1999). Effects of men's subtle and overt psychological abuse on low-income women. *Violence & Victims*, 14, 69-88.
- Matud, M.P. (2004). Impacto de la violencia doméstica en la salud de la mujer maltratada [The Impact of Domestic Violence on the Health of Abused Women]. *Psicothema*, 16(3), 397-401.
- Matud, M.P., Carballeira, M., & Marrero, R.J. (2001). Validación de un inventario de evaluación del maltrato a la mujer por su pareja: el APCM [Validation of an inventory assessing intimate partner

- maltreatment against women: The APCM]. *Psicopatología Clínica, Legal y Forense*, 3(1), 5-17.
- McDonald, R. P., & Ho, M. H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7, 64-82.
- Medina-Ariza, J., & Berberet, M. (2003). Intimate Partner Violence in Spain. Findings from National Survey. *Violence Against Women*, 9, 302-322.
- Pitzner, J. K., & Drummond, P. D. (1997). The reliability and validity of empirically scaled measures of psychological/verbal control and physical/verbal abuse: Relationship between current negative mood and a history of abuse independent of other negative life events. *Journal of Psychosomatic Research*, 43, 125-142.
- Rathus, J. H., & Feindler, E.L. (2004). *Assessment of partner violence: A handbook for researchers and practitioners*. Washington, DC: American Psychological Association.
- Rodríguez-Carballeira, A., Porrúa-García, C., Escartín, J., Martín-Peña, J., & Almendros, C. (2014). Taxonomy and hierarchy of psychological abuse strategies in intimate partner relationships. *Anales de Psicología*, 30(3), 916-926.
- Savalei, V. (2008). Is the ML Chi-square ever robust to non-normality? A cautionary note with missing data. *Structural Equation Modeling*, 15(1), 1-22.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74.
- Sonkin, D. J., Martin, D., & Walker, L. E. A. (1985). *The male batterer: A treatment approach*. New York: Springer.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *Journal of Marriage and the Family*, 41, 75-88.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, 17, 283-316.
- Tolman, R. M. (1989). The development of a measure of psychological maltreatment of women by their male partners. *Violence & Victims*, 4, 159-177.
- Vázquez, N., Estébanez, I., & Cantera, I. (2008). *Violencia psicológica en las relaciones de noviazgo: ¿Qué dicen ellas?, ¿Lo perciben?, ¿Lo naturalizan?* [Psychological violence in dating relationships: What do women say? Do they notice it? Do they regard it as natural?]. Retrieved from: http://www.naroemakunde.com/media/contenidos/archivos/M%C3%B3duloPsicosocial%20de%20Deusto_Dossier_08.pdf
- Walker, L. E. A. (1979). *The battered woman*. New York: Harper & Row.
- Walker, L. E. A. (1985). *The battered woman syndrome*. New York: Springer.
- Ward, D. (2000). Domestic violence as a cultic system. *Cultic Studies Journal*, 17, 42-55.
- Wolfson, L. B. (2002). A study of the factors of psychological abuse and control in two relationships: domestic violence and cultic systems. *Dissertation Abstracts International*, 63(8A), 2794.