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Intimate partner violence offenders: Generating a data-based typology of batterers and implications for treatment

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ARTICLE INFORMATION

ABSTRACT

Different studies have proposed that batterers can be classified into distinct groups according to psychopathology, violence severity and frequency. The aim of the current study was to define a data-based batterer's typology and its implications for rehabilitation. Data were collected from 187 male sentenced for intimate partner violence –111 of them to prison and 76 to community service. A cluster analysis supported a three-cluster solution: non-pathological (NP, 40%), antisocial/violent (AV, 27%) and disturbed batterers (DB, 33%). Subsequent analysis showed that AV batterers were profiled through the perpetration of physical and psychological violence, antisocial behaviour, deviant lifestyle, criminal records, inter parental violence and drug abuse; DB batterers, were profiled through behaviours of psychological violence, physical aggression and hostility, clinical symptomatology (e.g., somatisation, depression, anxiety, paranoid ideation), criminal records, antisocial behaviour, and a deviant lifestyle; and NP batterers were not profiled through any of the variables related to criminality and recidivism. Multinomial logistic regression supported different logistic models for batterer types in terms of psychopathological, antisocial and perpetrated violence-type variables. Implications of batterer typology on treatment are discussed.

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La violencia de pareja: generación de una tipología de maltratadores basada en los datos e implicaciones para el tratamiento

RESUMEN

Diferentes estudios han propuesto que los maltratadores de género pueden ser clasificados en función de la psicopatología, la severidad de la violencia y la frecuencia. Se planteó un estudio de campo con el objetivo de definir una tipología del maltratadores basada en la evidencia y sus implicaciones para la rehabilitación y la reinserción. Para ello se evaluó a 187 varones condenados por violencia de género, de los que 111 cumplían condena en prisión y 76 en servicio a la comunidad. Los resultados de un análisis de clusters avalaron una solución de tres clusters: no-patológicos (NP, 40%), antisociales/violentos (AV, 27%) y maltratadores con psicopatología (MP, 33%). Análisis posteriores mostraron que los maltratadores AV se caracterizaban por ejercer violencia física y psicológica, comportamiento antisocial, estilo de vida desviado, antecedentes penales, violencia interparental y abuso de drogas. Los maltratadores MP mostraban comportamientos de violencia psicológica, agresión física y hostilidad, así como sintomatología clínica (v.gr., somatización, depresión, ansiedad, ideación paranoide), antecedentes penales, comportamiento antisocial y un estilo de vida socialmente desviado. Finalmente los maltratadores NP no se caracterizaban por ninguna de las variables relacionadas con la criminalidad y la reincidencia. Un análisis de regresión logística multinomial avaló diferentes modelos logísticos que diferenciaban entre los tipos de maltratadores en función de la psicopatología, el comportamiento antisocial y el tipo de violencia ejercida. Se discuten las implicaciones de la tipología de maltrato para el tratamiento.

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Domestic violence is transversal to all cultures, societies and social status and has a significant impact on many dimensions (Ansara & Hindin, 2011). An attempt to reduce the problems and consequences associated with domestic violence is the implementation of batterer treatment programmes (Connors, Mills, & Gray, 2012; Novo, Fariña, Seijo, & Arce, 2012). However, literature points out high attrition and recidivism rates in batterers who were treated (Babcock, Green, & Robie, 2004; Feder & Wilson, 2005). One possible explanation is that many treatment programmes for batterers are standardised and uniformly applied to all men and important differences in the interaction factors may not be taken into account by using that procedure (Coulter & VandeWeerd, 2009). An area of research that has been developed to study that question is batterer typologies (Lohr, Bonge, Witte, Hamberger, & Langhinrichsen-Rohling, 2005). Based on typologies' findings, interventions with batterers need to match the individuals' characteristics (Andrews & Bonta, 2010; Coulter & VanderWeerd, 2009) and risk level (Connors et al., 2012; Connors, Mills, & Gray, 2013), to better identify those men who may need intervention (Stoops, Bennett, & Vincent, 2010), develop a good treatment planning and achieve better outcomes. The batterers' categorisation provides a practical and successful method for planning and designing effective interventions with them (Coulter & VandeWeerd, 2009).

The theoretical basis for typological approach is that batterers are a heterogeneous group, varying along important theoretical dimensions (Holtzworth-Munroe & Stuart, 1994; Mauricio & Lopez, 2009). The most prominent typology of batterers was developed by Holtzworth-Munroe and Stuart (1994). These authors conducted a survey on 15 batterer typologies and their analysis revealed that men who are violent towards their partners showed heterogeneity in individual characteristics in what concerns three theoretical dimensions: a) severity and frequency of marital violence; b) generality of the violence (i.e., family-only or extra family violence); and c) psychopathology. Thus, Holtzworth-Munroe and Stuart (1994) identified three subtypes of male batterers: generally violent/antisocial (GVA), dysphoric/borderline (DB), and family-only (FO). In a later empirical test of their typology, four types were found: the three previously mentioned and an additional one, the antisocial low level group, which stands between the family-only and the generally violent/antisocial groups (Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000). FO batterers were involved uniquely in marital violence and showed the lowest levels of psychological and sexual abuse. Batterers in this group revealed absence of, or minor, psychopathology and correspond to 50% of the studied sample. DB men are engaged in moderate to severe marital violence, primarily directed towards their partner, but they are also engaged in some violent behaviours outside their homes. These batterers are also the most psychologically distressed, experience delusional jealousy and cannot tolerate separation from their partner, and constitute about 25% of the sample. GVA batterers are predicted to be the most violent subtype. They engage in moderate to severe levels of marital violence and extra-familiar violence and often possess criminal records. They are also most likely to present characteristics of antisocial personality disorder or psychopathy and constitute 25% of the sample. Finally, low level antisocial (LLA) had moderate scores on measures of antisocial behaviour, marital violence and general violence (Holtzworth-Munroe et al., 2000).

Several studies published since the Holtzworth-Munroe and Stuart's (1994) review supported their typology (Stoops et al., 2010; Thijssen & de Ruiter, 2011; Walsh et al., 2010). Nevertheless, in some studies support for two groups was found (Chase, O'Leary, & Heyman, 2001; Loinaz, Echeburúa, & Torrubia, 2010); other studies identified three groups (Fowler & Westen, 2011; Huss & Ralston, 2008; Stoops et al., 2010; Walsh et al., 2010); and still other studies mentioned four groups of batterers (Eckhardt, Holtzworth-Munroe, Norlander,

Sibley, & Cahill, 2008; Thijssen & de Ruiter, 2011) or even more (White & Gondolf, 2000).

Nevertheless, research on this area presents some limitations. First, it is mainly based on clinical (Fowler & Westen, 2011; Huss & Ralston, 2008; Walsh et al., 2010) and forensic samples (Stoops et al., 2010; Thijssen & de Ruiter, 2011; Waltz, Babcock, Jacobsen, & Gottman, 2000), with only a few investigations conducted with prison inmates (Loinaz et al., 2010; Loinaz, Ortiz-Tallo, Sánchez, & Ferragut, 2011). Second, researchers repeatedly try to empirically validate batterer typologies using the same measures and design (Huss & Ralston, 2008; Waltz et al., 2000). In previous studies, MCMI-III (Millon Clinical Multiaxial Inventory-III) was used to capture the psychopathological dimensions and CTS-2 (Conflict Tactic Scales-2) was used to represent the violence dimensions (Huss & Ralston, 2008; Loinaz, Echeburúa, et al., 2010; Loinaz, Ortiz-Tallo, et al., 2011).

In this context, a field research was designed, applying similar procedures from previous investigations (Holtzworth-Munroe & Stuart, 1994), to analyse if batterers' typologies may be extended to a mixed sample (batterers in prison in community) and to a different set of measures. Additionally, the data-based resulting typology will be contrasted in both predictive variables and those related to treatment and recidivism.

Method

Participants

Data was gathered from 187 convicted male batterers, 76 in community and 111 in prison. The community group was composed of 16 batterers (21.1%) sentenced to mandatory community orders because of intimate-partner violence, 40 (52.6%) under probation and 20 (26.3%) under social welfare services.

The participants' average age was 43.81 (SD = 11.23), ranging from 22 to 81 years old; the vast majority of them were Caucasians (n = 174, 93%) and with a low socio-economic status (n = 127, 67.9%). Nearly half of them (49.2%) had a history of family violence, 43.9% were alcohol abusers, 16.6% were drug abusers, and 50.3% had been convicted of other crimes besides intimate-partner violence.

Measurement instruments

Brief Symptom Inventory (BSI). The BSI (Derogatis, 1993) is a self-report measure that consists of 53 items assessing psychological symptoms. Items are rated on a five-point scale, ranged from 0 (*not at all*) to 4 (*extremely*), to reflect the level of distress an individual has experienced from each of the symptoms during the previous seven days. The inventory is composed of 9 dimensions: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism. It also has three global indices of distress: Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total. BSI has shown acceptable internal consistencies ranging from .71 (psychoticism) to .85 (depression) (Derogatis, 1993). In the present survey, the internal consistency ranged from .71 (psychoticism) to .80 (somatization).

Marital Violence Inventory (IVC). The IVC (Machado, Matos, & Gonçalves, 2004) is a 21-item inventory, reporting physically abusive behaviours, emotionally abusive behaviours and coercion/intimidation behaviours, scored in a three-point scale (0 = *never*, 1 = *once*, 2 = *more than once*). Items are grouped into two subscales: Physical Violence and Psychological Violence. In the present sample, the internal consistency was .81 for physical violence, .72 for psychological violence and .80 for the total scale.

Buss-Perry Aggression Questionnaire (AQ). AQ (Buss & Perry, 1992) is a self-report measure that consists of 29 items concerning behaviour and feelings, scored on a five-point Likert scale, ranging

from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*). There are four subscales: Physical Aggression (nine items), Verbal Aggression (five items), Anger (seven items), and Hostility (eight items), which can be summed up in a total aggression score. The internal consistency analysis evaluated by the alpha coefficient revealed .85 for Physical Aggression, .72 for Verbal Aggression, .83 for Anger, .77 for Hostility, and .89 for the total scale (Buss & Perry, 1992). In the current sample, internal consistency ranged from .72 (Verbal Aggression) to .81 (Hostility), and .86 for the total scale.

Hare Psychopathy Checklist-Revised (PCL-R). PCL-R (Hare, 1991, 2003) is a 20-item checklist that uses a semi-structured interview, case-history information, and specific scoring criteria to rate each item on a three-point scale (0 = *not applied*, 1 = *applied somewhat*, 2 = *fully applied*). The PCL-R has shown high levels of internal consistency and inter-rater reliability (Hare & Neumann, 2005). An early exploratory factor analysis indicated two correlated dimensions: factor 1 and factor 2. In a recent formulation, Hare and Neumann (2005) advocated that at least four latent variable dimensions are needed to represent PCL-R construct of psychopathy: interpersonal, affective, lifestyle and antisocial dimension. The pattern of correlation among the four factors is consistent with the presence of two first order factors, one that is related to the interpersonal and affective facets and the other to lifestyle and antisocial facets (Hare & Neumann, 2005). In the current sample, the internal consistency for factor 1 was .84 and .77 for factor 2, and the four-factor model ranged from .73 (Lifestyle) to .80 (Interpersonal and Affective). Cohen's Kappa coefficient was used to measure the degree of inter-rater reliability, ranging from .74 to .92.

Socio-demographic Questionnaire. A brief socio-demographic questionnaire, developed to serve the purposes of the present study, was used to assess the participants' age, marital status and socioeconomic status. Information about childhood victimisation, criminal record and drug and alcohol abuse were assessed using PCL-R semi-structured interview.

Procedure

Before gathering data, the institutions where the sample was recruited stated their formal consent, i.e., prisons, victims' services and children and family services, as well as the participants (i.e., men involved in a current or previous abusive intimate relationship). All the participants completed a two-part intake process. The first part of the intake consisted of a semi-structured interview, which is an element of the PCL-R assessment, and socio-demographic information. In the second part, the participants took a set of psychological tests that assessed the three dimensions used to create batterer types (i.e., psychopathy and psychopathology, severity of marital violence and general violence). This assessment was carried out during the year 2011, by the first author of this survey.

Data analysis

Following the guidelines of previous research strategies (Holtzworth-Munroe et al., 2000; Huss & Langhinrichsen-Rohling, 2000, 2006; Huss & Ralston, 2008; Johnson et al., 2006; Langhinrichsen-Rohling, Huss, & Ramsey, 2000; Loinaz et al., 2010), the dimensions measured in this study were subjected to a hierarchical cluster analysis using Ward's method in order to obtain the empirical subtypes. Ward's method was selected because it has a better performance than other clustering methods when the goal is to provide a solution based on minimal within-cluster variability (Blashfield & Aldenderfer, 1988). Accordingly, the following variables for cluster analysis were used: depression and paranoid ideation dimensions (BSI), antisocial and affective factors (PCL-R), physical and psychological violence scales (IVC), and physical aggression and hostility scales (AQ). Such variables allow the analysis of the three

key dimensions in typology construction: psychopathology, marital violence and generalised violence (Holtzworth-Munroe & Stuart, 1994).

In view of the estimation of the number of clusters, Huss and Ralston's (2008) solution was adopted: firstly, the dendogram for the overall solution was analysed; secondly, the number of participants in each cluster was considered; and thirdly, the previous literature and empirical research on batterers' typologies was examined. For the *k*-means cluster analysis, *z*-transformations for all variables were performed to standardise the measurement ranges. To validate the initial findings, a MANOVA was performed to analyse the differences among batterer clusters. Finally, post-hoc comparisons with Bonferroni correction were carried out.

Additional analyses were performed to compare the batterers' types in criminological and personal variables. For this purpose, Kruskal-Wallis tests for non-parametric variables and ANOVAs tests for parametric variables were conducted. Post-hoc comparisons with Bonferroni correction were performed. Finally, multinomial logistic regression analysis was done to contrast if the batterers' types were adjusted to different explanatory models (psychopathology, antisocial disorder, and degree of perpetrated violence).

Results

Batterers' typology

In order to create the empirically derived batterer subgroups, a hierarchical cluster analysis, using Ward's method, was carried out on the eight selected variables, displaying a three-cluster solution. Then, to validate the initial findings a *k*-means cluster analysis was conducted in the cluster centres produced by the initial analysis. Based on a glance at the means of the groups related to the variables studied (see Figure 1), 51 (27%) subjects were grouped in Cluster 1 and were labelled as antisocial/violent batterers (AV); 74 (40%) were grouped in Cluster 2 and were named non-pathological batterers (NP); and 62 (33%) were grouped in Cluster 3 and were called disturbed batterers (DB). The representation of batterers between clusters was similar, $\chi^2(2) = 4.22$, *ns*. As a whole, these results resemble the typology proposed by Holtzworth-Munroe and Stuart (1994).

A MANOVA was conducted, entering the variables used to create the clusters to evaluate differences mediated by the batterer type factor (AV, NP, or DB). The analysis revealed a significant multivariate batterer type factor effect, Pillai's trace = 1.22, $F(16, 356) = 34.93$, $p < .001$, $\eta_p^2 = .611$, $1-\beta = 1.00$. Moreover, the effect size, $f = .44$, was large, explaining 61.1% of the variance.
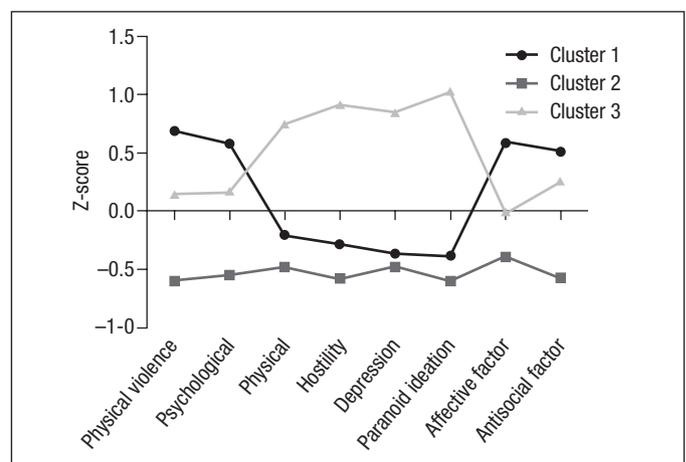

Figure 1. Average *z*-score for the cluster solution

Table 1
Univariate between-subjects effects

	AV (*n* = 51)		NP (*n* = 74)		DB (*n* = 62)		*F*	η_p^2	1-β
	M	*SD*	*M*	*SD*	*M*	*SD*			
ICV Physical violence	6.73	2.52	3.01	2.21	5.18	2.65	36.25***	0.283	1.0
ICV Psychological violence	4.43	1.57	2.67	1.24	3.79	1.41	26.09***	0.221	1.0
AQ Physical aggression	15.96	4.71	14.29	4.17	21.42	5.73	37.89***	0.292	1.0
AQ hostility scale	17.22	4.28	15.43	3.97	24.23	4.93	72.49***	0.441	1.0
BSI Depression	0.74	0.58	0.65	0.56	1.71	0.79	52.33***	0.363	1.0
BSI Paranoid ideation	1.03	0.56	0.86	0.49	2.12	0.53	107.41***	0.539	1.0
PCL-R Affective facet	5.39	1.89	3.21	2.05	4.05	2.21	16.97***	0.156	1.0
PCL-R Antisocial facet	3.61	1.97	1.50	1.14	3.13	2.06	26.65***	0.225	1.0

Note. *df*(2, 184); *** *p* < .001; IVC = Marital Violence Inventory; AQ = Buss-Perry Aggression Questionnaire; BSI = Brief Symptom Inventory; PCL-R = Psychopathy Checklist Revised; AV = Antisocial/violent; NP = Non pathological; DB = Disturbed batterers.

Univariate analysis (see Table 1) revealed a significant difference mediated by the batterer type factor for physical violence, explaining 28.3% of the variance. Moreover, the effect size was large, *f* = .63. Post-hoc comparisons, with Bonferroni correction (.05/3 = .017), showed that AV batterers reported significantly more physically violent behaviours than NP and DB batterers; and DB more than NP batterers. The analysis also showed a significant difference in the batterer types for psychological violence. Furthermore, the effect size was large, *f* = .53, explaining 22.1% of the variance. Post-hoc tests, with Bonferroni correction, revealed significantly more psychological violent behaviours (i.e., emotional abuse, coercion, intimidation behaviours) for DB and AV batterers than for NP batterers. A significant difference concerning the batterer types was found for physical aggression, explaining 29.2% of the variance, with a large effect size, *f* = .64. Post-hoc tests, with Bonferroni correction, showed that DB batterers are significantly more physically aggressive than NP and AV batterers. As for hostility, results also exhibited significant differences obtained by the batterer typology. Furthermore, hostility explained 44.1% of the variance, with a large effect size, *f* = .89. Post-hoc comparisons, with Bonferroni correction, showed significantly higher scores in hostility for DB in comparison to AV and NP batterers. Additionally, a significant difference in the batterer types was also found for depression and paranoid ideation. Moreover, the effect sizes for depression, *f* = .75, and paranoid ideation, *f* = 1.08, were large, explaining 36.3% and 53.9% of the variance, respectively. Post-hoc tests, with Bonferroni correction, showed that DB batterers had significantly higher scores in both dimensions, when compared with AV and NP batterers. As for the affective factor, results also showed a significant difference in the batterer types, explaining 15.6% of the variance. Besides, the effect size was large, *f* = .43. Post-hoc tests, with Bonferroni correction, revealed that AV batterers had significantly higher scores than DB and NP batterers. Lastly, meaningful differences were found for PCL antisocial facet. Moreover, the effect size was large, *f* = .43, explaining 22.5% of the variance. Post-hoc tests, with Bonferroni correction, showed that DB and AV batterers were characterised through more antisocial behaviours (i.e., poor behavioural controls, early behavioural problems, juvenile delinquency, revocation of conditional release, and criminal versatility), when compared with NP batterers.

Batterer types and criminological and personal variables

Criminal records
As for the criminal records, the batterers diverged in previous convictions, χ²(2) = 12.47, *p* < .01, with a moderate effect size, *V* = .26. Post-hoc comparisons, with Bonferroni correction, established that AV batterers (.647) reported more previous convictions, χ²(2) = 8.90,

p < .01, than NP batterers (.378); and DB batterers (.629), χ²(2) = 9.12, *p* < .01, more than NP batterers.

History of victimisation
The results exhibited a significant association between the batterer type and physical abuse during childhood, χ²(2) = 7.072, *p* < .05, with a small-moderate effect size, *V* = .20. Post-hoc comparisons, with Bonferroni correction, revealed that AV (.644) showed more victimisation through physical abuse, χ²(2) = 6.892, *p* < .01, than NP batterers (.406). Furthermore, a significant association was found between the batterer type and inter parental violence, χ²(2) = 9.103, *p* < .05; the effect size was between small and moderate, *V* = .23. Post-hoc comparisons, with Bonferoni correction, indicated that AV batterers (.667) reported more exposure to inter parental violence, χ²(2) = 8.17, *p* < .01, than NP batterers (.394).

Substances and alcohol abuse
No differences were highlighted, χ²(2) = 5.12, *ns,* among the three-resulting batterer types on what concerns alcohol abuse. However, there was a significant association, χ²(2) = 9.92, *p* < .01, between drug abuse and the batterer type; there was an effect size between small and moderate, *V* = .23. Post-hoc tests, with Bonferroni correction, revealed that AV (.294) reported higher rates of drug abuse, χ²(2) = 9.80, *p* < .01, than NP batterers (.081).

Personality traits
The results revealed a significant effect of the lifestyle facet on the batterer type (see Table 2). Moreover, the effect size was moderate, *f* = .35, explaining 11.1% of the variance. Post-hoc tests, with Bonferroni correction, showed that AV and DB batterers groups scored significantly higher in the lifestyle facet (impulsivity, boredom proneness, irresponsibility, parasitic lifestyle, lack of long-term goals), when compared with NP batterers. No differences were observed for the batterer typology factor in the interpersonal facet.

Psychopathology
As for the psychopathology features, measured by the BSI dimensions, which were not included in the cluster analysis, results (see Table 3) underlined significant differences obtained by the batterer type factor on somatisation with a moderate, *f* = .35, effect size; on obsession-compulsion with a moderate, *f* = .47, effect size; on interpersonal sensitivity with a large, *f* = .73, effect size; on anxiety with a large, *f* = .63, effect size; on hostility with a large, *f* = .59, effect size; on phobic anxiety with a large, *f* = .66, effect size; and on psychoticism with a large, *f* = .74, effect size. Post-hoc comparisons, with Bonferroni correction, revealed substantial differences, in all the clinical dimensions, between DB batterers and NP and AV groups.

Table 2
ANOVAs for Personality Traits by Batterer Type Factor

	AV		NP		DB		F	η_p^2	1-β
	(n = 51)		(n = 74)		(n = 62)				
PCL rating	M	SD	M	SD	M	SD			
Interpersonal facet	2.92	2.42	2.18	1.90	2.11	2.11	2.485	.026	.494
Lifestyle facet	1.73	1.20	0.85	1.04	1.97	1.97	11.489***	.111	.993

Note. $df(2, 184)$; *** $p < .001$; AV = Antisocial/violent batterers; NP = Non pathological batterers; DB = Disturbed batterers.

Table 3
ANOVAs for Psychopathology by the Batterer Type Factor

	AV		NP		DB		F	η_p^2	1-β
	(n = 51)		(n = 74)		(n = 62)				
Dimension	M	SD	M	SD	M	SD			
Somatisation	0.38	0.51	0.30	0.44	0.75	0.75	11.075***	0.107	0.991
Obsession-compulsion	0.68	0.55	0.41	0.50	1.03	0.64	20.298***	0.181	1.00
Interpersonal sensitivity	0.51	0.40	0.39	0.47	1.31	0.78	48.601***	0.346	1.00
Anxiety	0.58	0.51	0.43	0.42	1.24	0.74	36.691**	0.285	1.00
Hostility	0.41	0.54	0.21	0.31	0.91	0.66	32.228***	0.259	1.00
Phobic anxiety	0.19	0.33	0.15	0.24	0.76	0.63	40.233***	0.304	1.00
Psychoticism	0.56	0.50	0.42	0.43	1.34	0.72	49.815***	0.351	1.00

Note. $df(2, 184)$; *** $p < .001$; AV = Antisocial/violent batterers; NP = Non pathological batterers; DB = Disturbed batterers.

Concisely, DB batterers manifested more clinical symptoms of somatization, obsession-compulsion, interpersonal sensitivity, generalised and phobic anxiety, and psychoticism, when compared with NP and AV batterers.

Logistic models of batterer types

As a consequence of the results above, that revealed a tripartite batterer typology, a potential discriminative value of the variables and their potential implications to batterer treatment, multinomial logistic regressions were performed to analyse if the batterer types were based on different explanatory variables: psychopathological, antisocial and type of perpetrated violence.

In the first model, BSI psychopathological dimensions (i.e., somatisation, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic ideation, paranoid ideation, and psychoticism), which literature relates to delinquency and recidivism in general, and also with batterers (Binswanger et al., 2010; Corvo & Johnson, 2013; Maruna, 2004; Novo et al., 2012; Puffet & Gavin, 2004; Shorey, Febres, Brasfield, & Stuart, 2012), were introduced as covariates, while the batterer typology (AV, NP, and DB) as dependent variable. Results showed a significant logistic model, -2 log likelihood = 219.76, χ^2 = 184.09, $p < .001$, with a good fit to data, χ^2 = 258.14, p = 1, Nagelkerke R^2 = .707, Cox and Snell R^2 = .626. This model classified correctly 90.3% of DB batterers, 83.8% of NP batterers and only 33.3% of AV batterers. Results (see Table 4) revealed that NP and AV batterers were clinically similar. The logistic model between DB and AV batterers showed that DB batterers were positively related with depression (OR = 3.78), hostility (OR = 2.75), phobic anxiety (OR = 2.99), and paranoid ideation (OR = 9.15). Moreover, the logistic model between NP and DB batterers exhibited that DB batterers were characterized for a positive relation with depression (OR = 9.52), hostility (OR = 6.29), and paranoid ideation (OR = 25.15).

A second multinomial logistic regression was performed in order to test the antisocial disorder model, entering the two facets of PCL-R social deviance factor (facet 1: lifestyle and facet 2: antisocial) both related to antisocial personality (Kennealy, Skeem, Walters, & Camp, 2010), criminal records (Rodríguez et al., 2011; Khosravipour et al., 2011), child physical abuse victimisation and inter parental violence (Abramsky et al., 2011; Roberts, McLaughlin, Conron, & Koenen, 2011; Wareham, Boots, & Chavez, 2009), and drug abuse (Shorey et al., 2012; Jennings, Reingle, Staras, & Maldonado-Molina, 2012) as covariates, and the batterer typology (AV, NP, and DB) as dependent variable. Results highlighted a logistic model, -2 log likelihood = 251.66, χ^2 = 71.85, $p < .001$, with a good fit to the data, χ^2 = 213.83, p = .529, Nagelkerke R^2 = .380, Cox and Snell R^2 = .337. The model correctly classifies 81.7% of NP batterers and only 40.7% of DB batterers and 44.4% of AV batterers. Results supported that antisocial personality variables only classified NP batterers who, according to previous results, did not fulfill the criteria of antisocial personality, i.e., do not share with other offenders the typical characteristics of antisocial disorder, such as antisocial behaviours, criminal record, inter parental violence, child abuse victimisation, and drug abuse.

A final multinomial logistic regression was performed for the batterer and violence types, taking as covariates physical violence, psychological violence, physical aggression and hostility, and the batterer typology (AV, NP, and DB) as the dependent variable. Results underlined a logistic model, -2 log likelihood = 174.87, χ^2 = 228.98, p < .001, with a good fit to the data, χ^2 = 213.83, p = .529, Nagelkerke R^2 = .797, Cox and Snell R^2 = .706. The model correctly classified 89.2% of NP, 80.6% of DB and 70.6% of AV batterers. Results (see Table 5) established as for NP and AV batterers that AV batterers were more positively related to physical violence (OR = 12.42), psychological violence (OR = 13.48), physical aggression (OR = 2.58), and hostility (OR = 4.70). The logistic model between AV and DB batterers revealed that AV batterers were more positively related to physical violence (OR = 1.98) and less to physical aggression (OR = 0.34) and hostility (OR = 0.12). Additionally, a model distinguishes NP and DB batterers, showing that NP batterers were typified for less physical (OR = 0.26) and psychological violence (OR = 0.18), physical aggression (OR = 0.14), and hostility (OR = 0.03).

Table 4
Multinomial Logistic Regression for Psychopathology

	B[a]	SE	Wald	p	Exp(B)	95% CI for EXP (B)	
						L	U
AV vs. NP							
Somatisation	0.17	0.33	0.26	.607	1.18	0.62	2.25
Obsessive-compulsive	-0.54	0.31	2.94	.086	0.58	0.32	1.08
Interpersonal sensitivity	0.04	0.38	0.01	.922	1.04	0.49	2.19
Depression	-0.03	0.36	0.01	.935	0.97	0.48	1.96
Anxiety	-0.07	0.39	0.03	.859	0.93	0.44	1.99
Hostility	-0.50	0.34	2.15	.142	0.61	0.31	1.18
Phobic anxiety	0.15	0.38	0.16	.691	1.16	0.55	2.45
Paranoid ideation	-0.40	0.31	1.67	.197	0.67	0.36	1.23
Psychoticism	0.04	0.34	0.01	.917	1.04	0.53	2.03
AV vs. DB							
Somatisation	-0.30	0.48	0.37	.541	0.74	0.29	1.92
Obsessive-compulsive	-0.31	0.43	0.51	.477	0.74	0.32	1.71
Interpersonal sensitivity	0.03	0.50	0.00	.952	1.03	0.39	2.74
Depression	1.33	0.56	5.70	.017	3.78	1.27	11.29
Anxiety	-0.49	0.58	0.71	.400	0.61	0.20	1.92
Hostility	1.01	0.44	5.27	.022	2.75	1.16	6.52
Phobic anxiety	1.09	0.44	6.09	.014	2.99	1.25	7.13
Paranoid ideation	2.21	0.56	15.89	.000	9.15	3.08	27.17
Psychoticism	0.50	0.47	1.11	.292	1.65	0.65	4.16
NP vs. DB							
Somatisation	-0.60	0.65	0.87	.351	0.55	0.16	1.94
Obsessive-compulsive	0.44	0.560	0.55	.460	1.55	0.48	4.98
Interpersonal sensitivity	-0.89	0.76	1.36	.244	0.41	0.09	1.83
Depression	2.25	0.91	6.08	.014	9.52	1.59	57.05
Anxiety	-0.59	0.82	0.52	.473	0.55	0.11	2.78
Hostility	1.84	0.83	4.90	.027	6.29	1.23	32.02
Phobic anxiety	1.13	0.62	3.33	.068	3.10	0.92	10.42
Paranoid ideation	3.23	0.89	13.02	.000	25.15	4.36	144.96
Psychoticism	0.07	0.62	0.01	.908	1.07	0.32	3.61

Note. $df(1)$; [a]Covariates were standardised, thus B may be interpreted as beta.

Discussion

As expected, using cluster analysis three subtypes of batterers were identified from empirical data: non-pathological, disturbed and antisocial/violent batterers. These results provided support for the heterogeneity among men who perpetrate intimate partner violence (Dixon & Browne, 2003; Holtzworth-Munroe & Stuart, 1994) and consistency in what concerns typology studies in a cross-cultural perspective (Fowler & Westen, 2011; Holtzworth-Munroe & Stuart, 1994; Huss & Ralston, 2008; Langhinrichsen-Rohling et al., 2000; Lohr et al., 2005; Stoops et al., 2010; Thijssen & de Ruiter, 2011; Walsh et al., 2010).

The antisocial/violent group (27%) of batterers had high scores of antisocial features and high levels of physical and psychological marital violence. This subtype did not exhibit clinical elevations in depression and paranoid ideation or in physical aggression and hostility, but showed higher scores in the affective facet. They also presented a history of exposure to interparental violence and reported more physical abuse in childhood. These findings are supported by previous studies (e.g., Holtzworth-Munroe & Stuart,

1994; Loinaz, Echeburúa, et al., 2010; Loinaz, Ortiz-Tallo, et al., 2011; Thijssen & de Ruiter, 2011; Waltz et al., 2000). Antisocial/violent batterers revealed psychopathic traits, characterised by manipulation, lack of empathy in interpersonal relationships, and lack of guilt, which could lead to more violent acts against their partners (Holtzworth-Munroe & Stuart, 1994; Huss & Langhichsen-Rohling, 2006). The high scores in affective and antisocial facets suggest some traits of histrionic and antisocial personality, which lead to an increase in risk of violence, both general and marital (Holtzworth-Munroe & Stuart, 1994). AV batterers also reported more drug abuse, an issue that has been largely associated to violence (Caetano, Vaeth, & Ramisetty-Mikler, 2008). This group resembles the antisocial/violent subtype (Eckhardt et al., 2008; Holtzworth-Munroe & Stuart, 1994; Huss & Ralston, 2008; Langhinrichsen-Rohling et al., 2000; Loinaz, Echeburúa, et al., 2010; Loinaz, Otiz-Tallo, et al., 2011; Thijssen & de Ruiter, 2011; Walsh et al., 2010), the antisocial subtype (Johnson et al., 2006; White & Gondolf, 2000) or the instrumental type (Tweed & Dutton, 1998).

The disturbed batterers (33%) emerge due to psychological distress, connected with persistent offending (Binswanger et al.,

Table 5
Multinomial Logistic Regression for Violence

	B[a]	SE	Wald	p	Exp(B)	95% CI for EXP (B)	
						L	U
AV vs. NP							
Physical violence	2.52	.54	21.60	.000	12.43	4.29	35.96
Psychological violence	2.61	.60	19.14	.000	13.48	4.20	43.21
Physical aggression	0.95	.46	4.22	.040	2.58	1.04	6.39
Hostility	1.55	.57	7.33	.007	4.70	1.53	14.41
AV vs. DB							
Physical violence	0.68	.30	5.38	.020	1.98	1.11	3.53
Psychological violence	0.26	.30	0.75	.388	1.30	0.72	2.35
Physical aggression	-1.08	.34	10.14	.001	0.34	0.18	0.66
Hostility	-2.15	.48	20.02	.000	0.12	0.05	0.30
NP vs. DB							
Physical violence	-1.35	.43	9.78	.002	0.26	0.11	0.60
Psychological violence	-1.73	.45	14.93	.000	0.18	0.07	0.43
Physical aggression	-1.96	.45	18.84	.000	0.14	0.06	0.34
Hostility	-3.46	.61	32.25	.000	0.03	0.01	0.10

Note. df(1); [a]Covariates were standardised, thus B may be interpreted as beta.

2010; Corvo & Johnson, 2013; Maruna, 2004; Novo et al., 2012; Puffet & Gavin, 2004; Shorey et al., 2012) and to the perpetration of psychological and physical violence towards the partner, physical aggression and hostility. Furthermore, these batterers assume a deviant lifestyle and antisocial behaviour and, taking into account the prognosis of persistent offending related to psychological distress, they consequently have more criminal records. This revealed that disturbed batterers were more impulsive (Echeburúa & Amor, 2010), suggesting the use of violence in their relationships as a response to a specific situation that causes discomfort or as an inadequate problem-solving strategy (Norlander & Eckhardt, 2005). This kind of response is usually called anger aggression or expressive violence. Subjects in this subgroup are similar to the dysphoric/ borderline type (Eckhardt et al., 2008; Fowler & Westen, 2011; Holtzworth-Munroe & Stuart, 1994; Holtzworth-Munroe et al., 2000; Huss & Ralston, 2008; Langhinrichsen-Rohling et al., 2000; Stoops et al., 2010; Thijssen & de Ruiter, 2011; Walsh et al., 2010), the pathological type (Greene, Lynch, & Decker, 1997; Waltz et al., 2000), the impulsive type (Tweed & Dutton, 1998) or the moderate anger inexpressive type (Eckhardt, Samper, & Murphy, 2008), identified by the literature on the subject.

The non-pathological group (40%), in comparison with the other intimate partner violence perpetrators, reported less acts of violence, both physical and psychological, aggression and hostility. Essentially, non-pathological batterers seem to express violent acts against their partner though outside their homes they adopt a proper social conduct (Echeburúa, Amor, & Corral, 2009). Furthermore, NP batterers have no significant elevations in clinical dimensions and do not share antisocial traits (i.e., deviant lifestyle, antisocial behaviours, drug abuse, criminal records) with the other types, nor antisocial facilitating circumstances (child abuse victimisation, exposition to interparental violence), variables related to criminality and recidivism (Binswanger et al., 2010; Corvo & Johnson, 2013; Maruna, 2004; Novo et al., 2012; Puffet & Gavin, 2004; Shorey et al., 2012). Thus, this typology resembles the family-only type (Eckhardt et al., 2008; Holtzworth-Munroe & Stuart, 1994; Huss & Ralston, 2008; Langhinrichsen-Rohling et al., 2000; Loinaz, Echeburúa, et al., 2010; Loinaz, Ortiz-Tallo, et al., 2011; Thijssen & de Ruiter, 2011; Walsh et

al., 2010), the non-pathological type (Fowler & Westen, 2011; Greene et al., 1997; Johnson et al., 2006) or the low anger type (Eckhardt et al., 2008), previously described by the literature on the subject.

This study proves that, even with a different set of measures, a different sample of batterers, including a prison and a community sample, and batterers with different levels of violence (domestic violence, murder, attempted murder), a similar pattern of batterer types can be found (Fowler & Westen, 2011; Holtzworth-Munroe et al., 2000; Stoops et al., 2010; Thijssen & de Ruiter, 2011; Walsh et al., 2010; Waltz et al., 2000). Accordingly, these results support a relative consistency among batterer types, both in terms of general and specific characteristics. Secondly, findings reveal that even with a cultural gap from previous studies (Fowler & Westen, 2011; Holtzworth-Munroe et al., 2000; Huss & Ralston, 2008; Thijssen & de Ruiter, 2011), similar patterns of batterer types can be found. Thirdly, the results suggest that batterers sentenced to prison or community share a common set of characteristics that must be evoked when different judicial decisions are taken. In fact, no differences appeared among the three empirical obtained batterer types according to context variable (i.e., community or prison). To conclude, these findings show that even if the use of a mixed sample allows covering a broader number of cases and a more comprehensive understanding of the phenomenon, they may nevertheless lead to mixed results.

In addition, three explanatory variable groups, psychopathological-, antisocial- and type-of-perpetrated-violence group, were tested to make a distinction between the batterer types. The different models revealed being suitable for the data and, along with the batterer typology, underlined some practical and clinical implications. Batterer typologies assumed that since batterers are a heterogeneous group, rehabilitation programmes should be adapted to the type of batterer and to the needs and deficits of the individual offender (Novo et al., 2012). Moreover, a rigorous assessment of each batterer is imperious to identify all the deficits that facilitate the treatment efficiency and to adapt the intervention design to each batterer's needs and characteristics (Arce & Fariña, 2010). In fact, a study conducted by Huss and Ralston (2008), pointed out that there are differences in what concerns treatment, relating variables according

to the batterers subtypes, thus suggesting that different batterers respond differently to the same treatment.

Results concerning DB batterers revealed that they had a strong differential psychopathological component (i.e., depression, hostility, phobic anxiety, and paranoid ideation) and require a specific clinical intervention. As a matter of fact, Waltz et al. (2000) suggested that short-term or psycho-educational treatments are unlikely to be efficient in individuals with psychological distress, since they are focused on skills acquisition or attitude changes. Because psychopathology is considered an important risk factor of violence in general (Binswanger et al., 2010; Corvo & Johnson, 2013; Novo et al., 2012; Puffet & Gavin, 2004; Shorey et al., 2012), batterers with psychopathological disorders should integrate batterer rehabilitation programmes, but they should also undergo clinical therapy for clinical disorders in order to improve the probability of relapse/recidivism (Novo et al., 2012; Sartin, Hansen, & Huss, 2006).

Similar conclusions may be extended to the antisocial/violent group. This group was labelled in the literature as a "high risk group" (Cavanaugh & Gelles, 2005), as antisocial behaviour is connected with intimate partner violence (Hilton, Harris, Rice, Houghton, & Eke, 2008; Harris, Hilton, & Rice, 2011). Consequently, some authors argue that antisocial batterers may benefit from an integral intervention with a multimodal focus, i.e., a cognitive and behavioural approach, and a multilevel focus, i.e., directed to the batterer and to the other areas related to intimate partner violence in which there are deficits (e.g., family, social network, community, job training) (Arce & Fariña, 2010).

Finally, since they do not share antisocial features with other offenders, NP batterers are more prone to rehabilitation (Maruna, 2004) and probably they have a more positive treatment prognosis. Thus, our results suggest that NP batterers should be considered separately for rehabilitation, not only because their treatment's needs are different and do not require an intervention targeting antisocial variables, but also because of the contamination that other offenders with antisocial personality deficits could cause in their treatment outcomes and prognosis.

Thus, a batterer would be better served if the treatment programme focuses its attention on the needs of each individual, regarding its criminogenic needs and risk level. Additionally, the identification of batterer typologies may lead to more accurate detection, risk assessment, and interventions in order to reduce partner violence and thereby providing a better protection for victims of domestic violence (Cavanaugh & Gelles, 2005).

Lastly, the current research presents some gaps. Our survey did not conduct a comparison with a non-violent group. There are also some restrictions concerning the typological analysis. Indeed, typology studies used a limited set of measures in order to obtain groups, essentially based on an intra-individual model (Capaldi & Kim, 2007). Moreover, different *clustering* methods could lead to different solutions and only provide plausible rules for creating groups; cluster analysis is a "structure seeking" method that previously imposes some structure (Aldenderfer & Blashfield, 1984). Nevertheless, the results indicate that researchers need to continue to pay attention to the practical significance of their empirically derived results and that further research is needed to assess the accuracy of batterer profiles.

Conflicts of interest

The authors of this article declare no conflicts of interest.

Acknowledgements

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