psicología

The UB Journal of Psychology

Volumen 43
Número 2
Septiembre 2013

facultad de psicología
universidad de barcelona

Spanish/Catalan version of the Juvenile Victimization Questionnaire (JVQ): Psychometric properties[*]

Maria Forns
Teresa Kirchner
Laia Soler
Claudia Paretilla
Universitat de Barcelona

The experience of multiple victimizing life events is known to be particularly harmful and to have an accumulative effect on mental health. Therefore, instruments that measure the whole range of victimizations a person is exposed to are widely needed. The main objective of this study was to confirm the structure of the Juvenile Victimization Questionnaire (JVQ screening version) proposed by Finkelhor and to explore its psychometric properties in a sample of school-attending adolescents. A total of 553 adolescents aged 13 to 18 years (60.4% girls) were recruited. The pattern of item endorsement was examined and a confirmatory factor analysis was conducted to determine the fit of the conceptual model. The psychometric properties analysed were internal consistency (Cronbach's alpha) for the entire JVQ and for each of its five areas, the inter-correlations between these areas, and the instrument's criterion and concurrent validity. The pattern of JVQ item endorsement was very good. The conceptual model proposed by Finkelhor was confirmed empirically for preceding-year victimization data. The total JVQ achieved a good Cronbach's alpha for both the preceding-year (.82) and lifetime (.84) measures. Cronbach's alpha for the different areas of victimization ranged from .49 to .70. Kendall's tau inter-correlations between areas were positive and nearly all of them were significant. Criterion validity, based on correlations between JVQ areas and YSR DSM-oriented scales, was low, indicating a weak association between victimization and psychopathological symptoms in community adolescents. The results indicate that the JVQ, in its total version more than in its areas of

concern, is a useful instrument for screening purposes, especially for analysing victimization during the preceding year.

  Key Words: *Victimization, Spanish/Catalan Juvenile Victimization Questionnaire, screening, validation, adolescence or youth, psychometric properties.*

Versión castellana/catalana del Cuestionario de Victimización Juvenil (JVQ): propiedades psicométricas

  La vivencia de múltiples acontecimientos de victimización es considerada especialmente dañina y posee un efecto acumulativo negativo sobre la salud mental. Se precisan instrumentos que midan el amplio rango de victimizaciones a los puede estar expuesta una persona. El principal objetivo de este estudio es confirmar la estructura del Juvenile Victimization Questionnaire *(JVQ) de Finkelhor y explorar sus cualidades psicométricas en una muestra de adolescentes escolarizados en secundaria. La muestra comprende un total de 553 adolescentes de edades comprendidas en 13 y 18 años (60.4% chicas). Se ha examinado el patrón de respuesta, y se ha realizado un análisis factorial confirmatorio de la estructura del JVQ. Se ha analizado la consistencia interna, mediante Alfa de Cronbach, para el conjunto del JVQ y para las cinco áreas que lo configuran. También se ha calculado las inter-correlaciones entre las áreas, y la validez criterial y concurrente. Se obtuvo un patrón de respuesta aceptable. El modelo conceptual propuesto por Finkelhor se confirma empíricamente para los datos referidos a las victimizaciones ocurridas en el último año. El conjunto del JVQ obtiene buenos índices Cronbach para los datos referidos al último año (.82) y a lo largo de la vida (.84). Los índices para las diferentes áreas de victimización se sitúan entre .49 y .70. Las inter-correlaciones Kendall-Tau entre las áreas son positivas y en su mayoría significativas. La validez de criterio, basada en las correlaciones entre las áreas del JVQ y las escalas YSR-DSM han sido bajas, indicando una débil asociación entre victimización y síntomas psicopatológicos en adolescentes de secundaria. Los resultados indican que el JVQ, en su versión global más que en sus áreas de victimización es un instrumento útil para funciones de cribado, especialmente para las victimizaciones ocurridas en el último año.*

  Palabras clave: victimización, versión española/catalana del Juvenile Victimization Questionnaire, *cribado, adolescencia, propiedades psicométricas.*

Introducción

  The field of developmental victimization has widely documented the damaging effects of victimization on children (Margolin & Gordis, 2000; Romano, Bell, & Billete, 2011). Indeed, victimization has been shown to be detrimental to children's health, causing not only developmental effects such as learned helplessness, distorted cognitions or low self-esteem (Soler, Paretilla, Kirchner, & Forns, 2013), but also psychopathological effects such as depression, post-traumatic stress symptoms or self-injurious behaviour (Finkelhor, 1995; Soler, Segura, Kirchner, & Forns, 2013).

Exposure to multiple forms of victimization is a common phenomenon among the child and adolescent population (Finkelhor, Ormrod, & Turner, 2007; Turner, Finkelhor, & Ormrod, 2010). In fact, interpersonal victimizations tend to co-occur (Finkelhor, Ormrod, & Turner, 2009; Gustafsson, Nilson, & Göran-Svedin, 2009), and consequently the traumatic and negative effects of specific types of victimization are overestimated when only exposure to a single type of victimization is considered. Studying multiple victimizations would therefore seem to be the best way to appreciate, disentangle and predict the partial and global effects of victimization on mental health (Finkelhor *et al*., 2007).

Child and adolescent victims of multiple victimizations are usually referred to as polyvictims (Finkelhor, Ormrod, Turner, & Hamby, 2005). This term draws particular attention to the group of children for whom victimization is more a life condition than a life event. Such polyvictimization has been associated with more detrimental effects on mental health and a greater severity of symptoms than is the case for repeated exposure to the same kind of –or chronic– victimization (Rutter, 1993; Finkelhor *et al*., 2007).

The Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004a; 2004b) can be used to study polyvictimization since it explores different kinds of interpersonal violence, some of them coming from different sources (e.g. known or unknown adults, family members or peers). The JVQ gathers these types of victimization into five different areas of concern: Conventional Crime, Child Maltreatment, Peer and Sibling Victimization, Sexual Abuse, and Witnessing and Indirect Violence. In addition to these five areas the questionnaire allows items to be grouped into specific subsets, referred to as composite or aggregate scales (e.g. exposure to community violence, witnessing family violence, or property victimization). These aggregate scales will not be taken into account in the present paper.

Although the authors of the JVQ carried out a validation process in the USA (Finkelhor, Hamby, Ormrod, & Turner, 2005), very few psychometric studies have been conducted with other populations or in other countries. Indeed, to the best of our knowledge, outside the USA the JVQ has only been validated in a Chinese population (Chan, Fong, Yan, Chow, & Ip, 2011; Cheng, Cao, Liu, & Chen, 2010). The US validation was conducted through a telephone survey of 992 adolescents (Finkelhor *et al.,* 2005). The construct validity of the JVQ for this sample was analysed through its correlation with the Trauma Symptoms Checklist for Children (TSCC; Briere, 1996). The JVQ areas showed significant and moderate correlations with three symptom scales from the TSCC: anxiety (from .14 to .30), depression (from .16 to .35) and anger (from .21 to .35). Test-retest reliability was examined in a sample of 100 youth with a 3-4 week re-administration, yielding a mean K of .59 (range .22-1.00) and a percentage of agreement ranging between 79% and 99%. The internal consistency, as measured by Cronbach's alpha, was very good (.80) for the instrument as a whole. However, in the analysis

by areas only Conventional Crime yielded an acceptable alpha value. Despite obtaining some non-acceptable indexes the authors did not discourage use of the JVQ, arguing that the notion of internal consistency is not truly relevant to a victimization event; they also pointed out that low alpha values could be attributed to the small number of items that make up the areas (Finkelhor *et al.*, 2005).

Cheng *et al.* (2010) explored the reliability and validity of the JVQ in a Chinese sample of 2419 middle-school students. Criterion validity was assessed in relation to measures of anxiety (Screen for Child Anxiety Related Emotional Disorders, SCARED; Birmaher *et al.*, 1997) and depression (Depression Self-rating Scale for Children, DSRSC; Birleson, 1981). The authors obtained a Cronbach's alpha for the total scale of 0.75, test-retest reliability of .82, and correlations between the JVQ and the SCARED and DSRSC of .33 and .23, respectively. The study by Chan *et al.* (2011) was conducted with a sample of 415 Chinese students aged 15 to 17 years old. The pattern of item endorsement was acceptable, with very few non-responses. Cronbach's alpha indexes were very good, higher than the original ones, reaching .70 for almost all the areas and .89 for the total scale. Construct validity was examined by correlating the JVQ areas with psychosocial variables, specifically depression (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and health-related quality of life (SF-12 Health Survey; Ware, Kosinski, & Keller, 1996). Correlations between JVQ areas and the BDI ranged from .22 to .29. Correlations between JVQ areas and the Physical Component Score of the SF-12 ranged from -.17 to -.06, while those with respect to the Mental Component Score ranged from -.23 to -.06. Both these studies concluded that the JVQ was a reliable and valid instrument for assessing victimization in Chinese middle-school students.

To date there have been no psychometric studies of the JVQ screening version in a Spanish/Catalan adolescent population. Given the importance of having an instrument which accounts for the whole range of victimizations that adolescents may be exposed to, the principal aim of this study was to analyse the psychometric properties of the JVQ in a sample of Spanish/Catalan adolescents. More specifically, we sought 1) to examine the pattern of item endorsement, 2) to provide descriptive data for items, 3) to conduct a confirmatory factor analysis of the conceptual model underlying the areas of concern, 4) to determine the internal consistency (Cronbach's alpha) of the entire JVQ and each of its areas, 5) to calculate the inter-correlations between JVQ areas, and 6) to assess the instrument's criterion and concurrent validity.

Method

Participants

Participants were 553 adolescents (60.4% girls) aged 13 to 18 years (M=15.62, *SD*=1.34) who were recruited from five different schools in the metropolitan area

of Barcelona (Catalonia, Spain). In terms of nationality, 85.6% of the sample was Spanish, 1.6% came from other European countries, 1.6% from Africa (mainly Morocco), 9.6% from Central and South America, and 1.6% from Asia. The majority of these adolescents (85.2%) attended public (state-run) schools, while the remainder (14.8%) studied in state-subsidized schools. In terms of academic year, 54.2% of them were in their final or penultimate year of compulsory education, 39.2% were studying for A-levels, and 5.2% were in their first year of vocational training. A total of 80.2% lived with their biological parents, 8.6% lived with their biological mother, 2.9% with their biological father, 6.4% with their biological father or mother and his or her partner, 1.1% with adoptive parents, and 0.7% with legal guardians.

Based on the Hollingshead Four-Factor Index (Hollingshead, 1957) the participants' families corresponded to the following categories: 11.2% unskilled, 24.8% semi-skilled, 33.4% clerical and sales, and 30.6% medium-sized business owners. The age and ethnic background of the sample, as well as the types of schools they attended, corresponded to standards indicated by the Catalan Bureau of Statistics (IDESCAT, 2010-2011), although students in vocational training were under-represented.

The rate of participation was 44.7%. The adolescents who declined to participate did not differ from participants in relation to age, socio-economic status or school year, but they did differ in terms of gender, there being a higher participation rate among girls. The low rate of participation is probably due to the demanding inclusion requirements, which consisted of two filters (willingness of parents and willingness of adolescents themselves). At all events, the participation rate is similar to that reported in other studies (Turner *et al*., 2010) that also required two steps to be completed prior to inclusion: consent from parents and consent from adolescents.

Measures

Four measures were administered:

1. *Socio-demographic data*. An ad hoc socio-demographic data sheet was used to gather information regarding age, gender, academic year, number of siblings, country of birth of adolescents and their parents, and the marital status, occupational status and educational level of parents.

2. *Juvenile Victimization Questionnaire* (JVQ-screening version). The JVQ (Hamby *et al*., 2004a; 2004b) is a self-report measure designed to assess a comprehensive range of childhood victimizations. It focuses on 34 major offences against children and youth that are classified into five general areas of concern (Conventional Crime, Child Maltreatment, Peer and Sibling Victimization, Sexual Victimization, and Witnessing and Indirect Victimization). Table 1 shows the

content of JVQ items. In the present study, youth were asked to indicate how many of these events they had experienced both during the preceding year (last 12 months) and earlier (previous to the last 12 months). Clear instructions were given to help them identify these two time periods. Items are rated on a six-point Likert scale (0 = never; 1= once; 2 = twice; 3 = 3 times; 4 = 4 times, 5 = 5 or more times). The content validity of the scale is based on the legal punishable status of each of the items included in the questionnaire. The original item referring to 'statutory rape and sexual misconduct' was not included in the protocol as this offence is not considered within Spanish criminal law. Cronbach's alpha (reliability) for the entire instrument is reported to be .80 (Finkelhor *et al.*, 2005).

3. Youth Self-Report (YSR). The YSR (Achenbach & Rescorla, 2001; 2007) is a self-report instrument that measures social competences and psychological distress in children and adolescents aged between 11 and 18 years old. Psychological distress is evaluated through 112 items that refer to thoughts, feelings and behaviours occurring during the last six months. These items are rated on a Likert scale that ranges from 0 ('not true') to 2 ('very true or often true'), and they can be grouped into two broad-band scales (Internalization and Externalization) and eight narrow-band scales. The instrument also offers the possibility of analysing six DSM-oriented scales (Affective, Anxiety, Somatic, Attention-Hyperactivity, Oppositional-Defiant and Conduct Problems) and two complementary scales (Obsessive-Compulsive and Post-Traumatic Stress). Achenbach's model has been validated in 23 countries, including Spain. Spanish normative data provided by Achenbach and Rescorla (2007) were derived in part from the Spanish adaptation developed by Abad, Forns, and Gómez (2002). Cronbach's alpha coefficients for the Internalizing and Externalizing scales were .83 and .91, respectively (Abad *et al.*, 2002). In the present study all the DSM-oriented and complementary scales were used (Achenbach & Rescorla, 2007). Cronbach's alpha for these scales ranged between .56 (Anxiety) and .76 (Conduct Problems).

4. Lifetime Incidence of Traumatic Events-Student scale (LITE-S). The LITE-S (Greenwald & Rubin, 1999) is a self-report instrument that measures the personal history of exposure to potentially traumatic life events (e.g. accidents, natural disasters, etc.) and to interpersonal violence (witnessing domestic violence, being threatened, etc.). The scale comprises 16 items: items 1 to 8 refer to non-interpersonal violence and items 9 to 16 refer to interpersonal violence (IPV). The stability of the total LITE-S, measured in terms of test-retest reliability, has been reported to be .76 (Gustafsson *et al.*, 2009). Given that the corresponding objective in the present study was to determine the concurrent validity of the JVQ, only the events referring to interpersonal violence (LITE-S-IPV) were considered. The mean number of offences, calculated as the presence or absence of IPV items, was .87 (*SD* = 1.20, range 0 - 8), with a low Cronbach's alpha value (.55).

Procedure

Translations of the JVQ and the LITE-S

These questionnaires were translated from English into both Spanish and Catalan. The JVQ translation was carried out by the GREVIA Research Group (Group for Research on Child and Adolescent Victimization) at the University of Barcelona. The LITE-S was translated into Spanish and Catalan by one of the authors of this paper. The regular criteria of translation and back-translation were followed, with any semantic concerns being resolved by consensus of experts. Cognitive interviews were also conducted among professionals in order to analyse the acceptability, comprehensibility and relevance of each item statement. Conceptual equivalence was likewise ensured among the three versions (English, Catalan and Spanish). The final self-administration questionnaires have a bilingual format. This is: each item is written simultaneously in both languages (Catalan and Spanish). The adolescents, when they read the item, can choose the language they prefer. This system, in case of difficulties to understand the meaning of a statement, allows adolescents to clarify the semantic meaning of the utterances, by contrasting both languages.

Ethical requirements and consent

Ethical approval was granted by the Bioethics Committee of the University of Barcelona. Permission was then obtained from the head of each participating school, subsequent to which the students were asked to participate via in-class announcements. A short leaflet explaining the main objective of the study and an informed consent form for parents was given to each student. In order to participate, students had to return the consent form signed by their parents or legal guardians.

Questionnaire administration

Questionnaires were administered in groups of 15-30 students during a single 60-minute session. Students were reminded that there were no right or wrong answers and were instructed to respond to each item statement according to their own experience. In order to avoid random responses, special attention was paid to protecting privacy and ensuring the confidentiality of data. Two project staff members were present at all times to clarify any doubts arising during the administration. Since students were asked for sensitive clinical and legal data, they were given the opportunity at the end of the administration session to write down their email should they wish to be offered subsequent psychological guidance by a staff member. Any student who requested such guidance was seen within two weeks of completing the questionnaires.

Data analysis

The first step involved analysing the pattern of item endorsement for both the preceding year and lifetime victimization. The rate of non-responses to each item of the JVQ was calculated in order to identify specific refusals or missing responses. Descriptive data were then obtained for each item and the five areas. Mean differences between areas were calculated using paired-samples T test for both the preceding year and lifetime victimization. A confirmatory factor analysis (CFA) of Finkelhor's JVQ model was then carried out using the EQS-6 structural equation program (Bentler, 2004). Elliptical reweighted least squares analysis was used as a parameter estimation method, due to the ordinal nature of the item-measurement scale and the biased distribution of responses to some items (Bentler & Dijkstra, 1985). The factor variance was set to 1 so as to establish its metric, and it was assumed that factors were correlated. Two CFA were conducted: the first referred to victimization suffered during the preceding year, while the second referred to lifetime victimization. To obtain the lifetime measure the score for each item in the 'preceding year' and 'earlier' variables were added together.

The internal reliability for the total JVQ and for each of its areas was calculated using Cronbach's alpha as a measure of coherence of the underlying construct. The inter-dependence between areas was analysed using Kendall's tau for non-parametric data, since the distribution of scores did not follow the standard norms. Differences between correlations for the preceding-year and lifetime measures were calculated using contrasts for two dependent correlations.

Criterion validity was analysed by correlating the JVQ (both total and area scores) with the DSM-oriented scales and complementary scales of the YSR. Non-parametric Kendall's tau correlations were again used here. Concurrent validity was analysed by calculating Kendall's tau correlations between the JVQ (both total and area scores) and the LITE-S-IPV.

Results

Pattern of endorsement of JVQ items and descriptive data for items and areas, for both preceding-year and lifetime victimization

Most of the adolescents responded to all the JVQ items. The rate of non-responses ranged from 0.5% to 1.6% for the preceding-year measure and from 3.3% to 5.2% for lifetime victimization. Table 1 shows the descriptive value and response rate for each item for the two time periods analysed.

TABLE 1. DESCRIPTIVE (MEAN AND SD) AND PERCENTAGES OF OCCURRENCE FOR EACH AREA AND ITEMS OF THE JUVENILE VICTIMIZATION QUESTIONNAIRE (JVQ), BOTH FOR PRECEDING-YEAR (RANGES FROM 0 TO 5) AND LIFETIME VICTIMIZATION (RANGES FROM 0 TO 10).

	Preceding-year		Lifetime	
	M (SD)	%	M (SD)	%
Conventional Crime (CC)	.21 (.38)	53.1	.49 (.72)	76.0
1. Robbery	.23 (.75)	12.3	.51 (1.42)	21.4
2. Personal theft	.46 (.95)	27.4	1.04 (1.72)	45.2
3. Vandalism	.22 (.65)	14.1	.62 (1.25)	29.3
4. Assault with weapon	.13 (.56)	7.7	.31 (1.08)	14.3
5. Assault without weapon	.32 (.88)	17.9	.77 (1.70)	30.2
6. Attempted Assault	.13 (.46)	10.2	.34 (.82)	22.5
7. Threatened Assault	.24 (.71)	15.5	.54 (1.22)	29.0
8. Kidnapping	.04(.32)	2.7	.10 (.50)	5.7
9. Bias Attack	.09 (.53)	4.4	.23 (1.02)	8.13
Child Maltreatment (CM)	***.23 (.49)***	30.7	.54 (1.06)	40.3
1. Physical abuse by caregiver	.25 (.86)	11.5	.71 (1.90)	19.5
2. Psychological/emotional abuse	.53 (1.19)	24.4	1.04 (2.24)	31.2
3. Neglect	.06 (.45)	2.6	.12 (.82)	3.4
4. Custodial interference	.09 (.54)	4.6	.26 (1.18)	8.7
Peer and Sibling Victimization (PSV)	.27 (.47)	44.5	.68 (.97)	6.29
1. Gang or group assault	.12 (.44)	8.7	.25 (.86)	15.0
2. Peer or sibling assault	.66 (1.38)	26.5	1.44 (2.77)	33.6
3. Nonsexual genital assault	.18 (.73)	8.6	.44 (1.47)	14.6
4. Physical intimidation by peer	.32 (.95)	14.8	.78 (2.04)	21.6
5. Relational aggression by peers	.30 (.97)	12.8	1.06 (2.08)	35.7
6. Dating violence	.07 (.43)	4.2	.12 (.64)	6.3
Sexual Victimization (SV)	.05 (.18)	14.9	.12 (.34)	26.0
1. Sexual assault by known adult	.04 (.26)	2.2	.07 (.46)	4.2
2. Sexual assault by unknown adult	.02 (.17)	1.5	.04 (.25)	3.4
3. Sexual assault by peer/sibling	.03 (.19)	2.2	.05 (.28)	4.2
4. Forced sex (including attempts)	.04 (.22)	3.3	.06 (.29)	4.4
5. Flashing/sexual exposure	.09 (.41)	6.6	.22 (.78)	11.7
6. Verbal sexual harassment	.11 (.50)	7.1	.30 (1.07)	13.9
Witnessing/Indirect Victimization (WIV)	.23 (.33)	61.5	.50 (.63)	74.4
1. Witness to domestic violence	.05 (.38)	2.9	.16 (.82)	7.2
2. Witness to parent assault /sibling	.13 (.66)	5.5	.33 (1.38)	8.4
3. Witness to assault with weapon	.57 (1.1)	30.4	1.08 (2.05)	40.2
4. Witness to assault w/out weapon	1.03(1.47)	47.1	2.13 (2.83)	58.3
5. Burglary of family household	.10 (.41)	7.2	.28 (.82)	17.0
6. Murder of family member/friend	.04 (.27)	3.3	.07 (.48)	5.2
7. Witness to murder	.05 (.30)	3.5	.09 (.46)	6.1
8. Exposure to shootings/terrorism/riots	.14 (.51)	9.2	.31 (1.04)	14.5
9. Exposure to war or ethnic conflict	.01 (.19)	0.7	.04 (.33)	1.7

The highest occurrence rates for preceding-year victimization (>20%) corresponded to 'witness to assault without weapon' (47.1%), 'witness to assault with weapon' (30.4%), 'personal theft' (27.4%), 'peer or sibling assault' (26.5%) and 'psychological emotional abuse' (24.4%). The area with the highest mean score was Peer and Sibling Victimization (M=.27, SD=.47), while that with the lowest was Sexual Victimization (M=.05, SD=.18). There were significant differences between all pairs of victimization areas (all $p < .002$), except for CC/CM, CC/WIV, CM/PSV, CM/WIV and PSV/WIV.

With respect to lifetime victimization the highest occurrence rates (>25%) were found for 'witness to assault without weapon' (58.3%), 'personal theft' (45.2%), 'witness to assault with weapon' (40.2%), 'relational aggression by peers' (35.7%), 'peer or sibling assault' (33.6%), 'psychological/emotional abuse' (31.2%), 'assault without weapon' (30.2%), 'vandalism' (29.3) , 'threatened assault' (29.0%). The area with the highest mean score Peer and Sibling Victimization (M = .68, SD = .97), while that with the lowest was Sexual Victimization (M = .12, SD = .34). There were significant differences between all pairs of victimization areas (all $p < .003$), except for CC/CM, CC/WIV and CM/WIV.

Confirmatory factor analysis (CFA)

Table 2 shows the results of the confirmatory analysis of the five areas of concern analysed by the JVQ, for both preceding-year and lifetime victimization data. For the preceding year the results indicated an acceptable fit of the model to the data [$\chi^2 = 690.20$; *d.f.* = 517; *p* < .001; ratio $\chi^2/$ *d.f.* = 1.21; Bentler-Bonett non-normed fit index (BBNNFI), comparative fit index (CFI) and incremental fit index (IFI) all > .90]. Although the goodness-of-fit index (GFI) did not meet the criterion for an acceptable fit, the standardized root mean square residual (SRMR) was < .08 and the root mean square error of approximation (RMSEA) was below .08, which according to Browne and Cudeck (1993) can be considered as indicative of an adequate fit. However, the results for lifetime victimization indicated a non-acceptable model fit. The GFI, CFI and IFI were not > .90, the Bentler-Bonett normed and non-normed fit indices (BBNFI and BBNNFI) were not > .95, and the SRMR was not < .08.

Internal consistency for the total JVQ and the five areas of concern

It can be seen in Table 3 that Cronbach's alpha values for the total JVQ were good (α = .82 for the preceding year and α = .84 for lifetime victimization). However, the analysis by area showed that alpha values for the preceding year were questionable ($.60 \leq \alpha < 0.70$) for Conventional Crime and Sexual Victimization, and weak ($\alpha < .60$) for the other areas. For lifetime victimization the analysis by area yielded slightly better results: alpha values were acceptable ($\alpha > .70$) for

Conventional Crime, questionable ($0.60 \leq \alpha < 0.70$) for Sexual Victimization and weak ($\alpha < .60$) for the other areas.

TABLE 2. CONFIRMATORY FACTORIAL ANALYSIS: FIT INDEXES FOR JVQ SPANISH/CATALAN VERSION, FOR PRECEDING YEAR AND LIFETIME VICTIMIZATION MEASURES.

	χ^2 Df p χ^2/df	BBNFI	BBNNFI	CFI	IFI	GFI	SRMR	(RMSEA) 90% CI
Preceding year	690.20 517 <.001 1.21	.767	.922	.928	.929	.788	.077	.025 (.020 - .033)
Lifetime	999.1 517 <.001 1.93	.699	.810	.825	.828	.744	.090	.043 (.039 - .046)

Note.—χ^2= chi square; df= degrees of freedom; BBNFI= Bentler-Bonett normed fit index; BBNNFI= Bentler-Bonett non-normed fit index; CFI= comparative fit index; IFI= Bollen fit index; GFI= Lisrel fit index; SRMR= standardized root mean squared residual; and RMSEA= root mean square error of approximation.

Table 3 also shows the Kendall's tau correlations between JVQ areas. All the areas were positively and significantly inter-correlated. Peer and Sibling Victimization and Conventional Crime showed a moderate correlation for both the preceding-year and lifetime measures, with a shared variance of 15% and 19%, respectively. The inter-correlations between the other victimization areas indicated lower percentages of shared variance. No significant differences were found between the Kendall's tau correlations for the preceding-year and lifetime measures.

Criterion validity

Table 4 shows Kendall's tau correlations between the JVQ (total and areas) and the YSR DSM-oriented and complementary scales for both the preceding-year and lifetime measures. All the correlations were positive and nearly all of them were also significant. However, the associations obtained explain only a low percentage of the variance in the relationship. Consequently, only correlations >.25, explaining at least 6.25% of the variance, will be noted here. For the preceding-year measure the total JVQ score mainly correlated (.28) with Conduct Problems. Child Maltreatment mainly correlated with the Affective (.27), Obsessive-Compulsive (.26) and Post-Traumatic Stress (.28) scales. All remaining correlations were lower than .25. For the lifetime measure, and in addition to a pattern of correlations similar to that described above, it should be noted that the total JVQ correlated with the Obsessive-Compulsive (.26) and Post-Traumatic Stress (.26) scales, and that Witnessing or Indirect Victimization correlated with Conduct Problems (.25).

TABLE 3. CRONBACH'S ALPHA VALUES FOR THE JVQ, TOTAL AND AREAS. INTER-CORRELATIONS BETWEEN AREAS, FOR BOTH THE PRECEDING-YEAR AND LIFETIME MEASURES.

	Cronbach's alpha		Kendall's tau inter-correlations				
	Preceding year	Lifetime	CC	CM	PSV	SV	WIV
JVQ Total	.82	.84	--	--	--	--	--
CC Conventional Crime	.64	.70	---	.27*	.39*	.24*	.25*
CM Child Maltreatment	.49	.57	*.33**	---	.29*	.28*	.23*
PSV Peer and Sibling Victimization	.51	.56	*.44**	*.30**	---	.25*	.22*
SV Sexual Victimization	.64	.62	*.27**	*.32**	*.26**	---	.24*
WIV Witnessing or Indirect Victimization	.50	.53	*.32**	*.30**	*.30**	*.29**	---

*Nota: * p <. 01*
In the inter-correlations column, inter-correlations between JVQ modules for the preceding year are shown in the top right, while those for the lifetime measure are shown in bold in the bottom left.

TABLE 4. KENDALL'S TAU CORRELATIONS BETWEEN SCORES OF JVQ (TOTAL AND AREAS) AND YSR DSM-ORIENTED AND COMPLEMENTARY SCALES, FOR PRECEDING-YEAR AND LIFETIME VICTIMIZATION.

YSR DSM Scales	Total JVQ	JVQ areas				
		CC	CM	PSV	SV	WIV
Preceding-year						
Affective	.23*	.19*	.27*	.17*	.20*	.09
Anxiety	.15*	.12*	.22*	.13*	.13*	.02
Somatization	.23*	.19*	.20*	.18*	.17*	.10*
Attention- Hyperactivity	.20*	.16*	.17*	.19*	.13*	.10*
Oppositional Defiant	.22*	.19*	.15*	.20*	.12*	.11*
Conduct Problems	.28*	.21*	.18*	.24*	.20*	.23*
Obsessive- Compulsive	.21*	.15*	.26*	.17*	.18*	.10*
Post-Traumatic Stress	.22*	.19*	.28*	.16*	.16*	.08
Lifetime						
Affective	.23*	.19*	.27*	.18*	.24*	.12*
Anxiety	.16*	.14*	.22*	.15*	.14*	.04
Somatization	.21*	.19*	.16	.17*	.18*	.12*
Attention- Hyperactivity	.19*	.18*	.15*	.14*	.13*	.12*
Oppositional Defiant	.21*	.18*	.14*	.18*	.15*	.10*
Conduct Problems	.29*	.23*	.18*	.22*	.21*	.25*
Obsessive- Compulsive	.26*	.19*	.26*	.23*	.22*	.13*
Post-Traumatic Stress	.26*	.23*	.26*	.20*	.22*	.12*

*Nota: * p < .01*
CC: Conventional crime; CM: Child maltreatment; PSV: Peer and sibling victimization; SV: Sexual victimization; WIV: Witness and indirect victimization.

Concurrent validity

Kendall's tau coefficients revealed a very low but significant correlation between the total JVQ and the LITE-S-IPV scale ($r = .21$, $p < .001$). The correlations between JVQ areas and the LITE-S-IPV indicated a weak association, ranging between $r = .08$ ($p < .02$) for Sexual Victimization and $r = .16$ ($p < .001$) for Conventional Crime.

Discussion

The objectives of this study, conducted with a sample of Spanish/Catalan adolescents, were to analyse the pattern of item endorsement for the Juvenile Victimization Questionnaire (JVQ), to provide descriptive data for each item according to areas, to examine the fit of the underlying JVQ model to the data obtained, and to test the psychometric properties of this version of the JVQ.

The pattern of endorsement suggests that all the JVQ items were acceptable to most participants in the study, with not one item eliciting a high refusal rate or missing responses for either of the two established time periods. The highest occurrence rates for these two time periods corresponded to witness to assault with and without a weapon, personal theft, and peer or sibling assault. In terms of the areas of concern, adolescents reported high rates of victimization for Conventional Crime (53% and 76% for the preceding-year and lifetime measures, respectively) and Sexual Victimization (14.9% and 26.0% for preceding year and lifetime, respectively). These results indicate that adolescents are exposed to high levels of interpersonal violence, and highlight the need not only for a screening instrument to detect this, but also for clinical, social and educational programmes that can help young people deal with their experiences in this regard.

The model underlying the five areas of concern established by the JVQ was confirmed for preceding-year data but not for the lifetime measure. Internal consistency of the total JVQ was good. These results are similar to those obtained by Finkelhor *et al*. (2005) for the original scale, and by Cheng *et al*. (2010) and Chan *et al*. (2011) for Chinese adolescents. Although the Cronbach's alphas for the Spanish JVQ areas were questionable, they were not too different from those reported by Finkelhor *et al*. (2005), which ranged between moderate and weak, an aspect that these authors attributed to the small number of items in each area. By contrast, the alpha values for JVQ areas in the Chinese validation (Chan *et al*., 2011) were all >.70, much higher than those obtained in the present study and by Finkelhor *et al*. (2005).

As Finkelhor *et al*. (2005) point out, adolescents who experience one type of victimization are more likely to be exposed to other kinds of victimization. For our data, the greatest covariability was that between the areas Conventional Crime and Peer and Sibling Victimization, where the common variance explained was

15.2% for the preceding-year measure and 19.36% for lifetime. This relationship could be due to the fact that conventional crime offences may sometimes be committed by peers and siblings.

The construct validity of this Spanish/Catalan adaptation was analysed by testing the association between victimization and psychopathological symptoms. The total JVQ score, especially for the lifetime measure, was mainly associated with conduct problems, obsessive-compulsive problems and post-traumatic stress symptoms, while for the preceding-year measure victimization was mainly associated with conduct problems. The area labelled Child Maltreatment was related to affective, obsessive-compulsive and post-traumatic stress symptoms for both the preceding-year and lifetime measures. All these data highlight the clinical consequences that victimization can have on the mental health of adolescents. However, although all the correlations between victimization and psychological problems were positive, they only explained a small proportion of the variability (never higher than 8%). The association observed in the present study was of similar intensity to that found by Finkelhor *et al*. (2005) in relation to depression, anxiety and anger symptoms, by Chan *et al*. (2011) with respect to depression and physical/mental health, and by Cheng *et al*. (2010) in relation to anxiety and depression.

The extent to which victimization may act according to the principles of equifinality or multifinality in relation to psychosocial adjustment is currently a matter of debate (Cicchetti & Rogosh, 1996). As regards the present data, victimization was positively related to a wide variety of psychological symptoms, consistent with the idea of multifinality. However, the relationship between victimization and mental health was rather weak, due perhaps to the fact that the participants were recruited from a community setting. In a clinical sample, one would likely find a stronger relationship between interpersonal violence and mental health problems.

It is debatable whether the LITE-S, and specifically its items referring to interpersonal violence (LITE-S-IPV), provided a suitable basis on which to assess the concurrent validity of the JVQ, since the reliability of the former instrument has been shown to be low. This low reliability could be due to the small number of items that make up this scale. In addition, the different format of the two questionnaires (i.e. the number of questions regarding each victimization type or the different level of accuracy in the item statements) could also explain the low concurrent validity obtained. More detailed studies are therefore needed to assess the concurrent validity between the two questionnaires. It is also necessary to explore the reliability of the JVQ with measures other than the LITE-S-IPE.

Strengths and limitations

This study has a number of strengths that should be acknowledged. It is the first study to provide confirmatory data and to assess the reliability and validity of

the JVQ screening version in Spanish/Catalan adolescents. Furthermore, the criterion validity of the JVQ has been examined with reference to the DSM-oriented and complementary scales of the YSR, thereby providing a wide range of information about different psychopathological problems based on DSM criteria. However, the study also has certain limitations that should be noted. Firstly, it is known that a single episode of violence may involve multiple kinds of victimization (Finkelhor *et al.*, 2005; Saunders, 2003), and this is why Finkelhor *et al.* (2005) recommended disentangling the overlap of this co-occurrence by conducting an extended interview or using follow-up questions after administration of the JVQ screening version. As our study did not include such follow-up questions the data may overestimate the occurrence of victimization. Indeed, and as indicated by Clum *et al.* (2012), caution should always be exercised when interpreting such results as a reflection of victimization events when a follow-up interview has not been conducted. A second limitation concerns the lack of an analysis of test-retest reliability, even though this was deliberately omitted so as avoid heightening the negative feelings that questions related to interpersonal violence may evoke in participants who are re-tested about stressful interpersonal events (Ybarra *et al.*, 2009). The third limitation concerns the reliance on self-report questionnaires to gather information about the adolescents' problems, as this means that their exposure to victimization was not externally validated. This aspect may have introduced some bias into the data. Although we believe that self-report is an appropriate way of collecting information on victimization experiences, our data should nonetheless be re-analysed and compared with other studies that used more than one informant. Finally, another limitation concern to the sample that is composed only by urban adolescents, thus data obtained has to be restricted to this group of adolescents.

Conclusion

These data allow us to conclude that both the underlying model of the JVQ (in preceding-year measure) and its psychometric properties are strong enough to render the instrument suitable for use as a screening tool. This Spanish/Catalan version of the JVQ has been shown to be valid for analysing victimization occurring in the last 12 months, and to a lesser extent for assessing lifetime experiences of victimization. The results for construct validity show that the instrument is able to detect psychopathological problems linked to victimization. However, its concurrent validity needs to be re-analysed in further studies with other instruments. Nonetheless, this Spanish/Catalan JVQ screening version offers a comprehensive measure of victimization in youth that will allow Spanish researchers to study not only the different victimization experiences which children and adolescents may be exposed to, but also the frequency of occurrence of such experiences. The

availability of such an instrument for the Spanish population will ultimately help professionals in the clinical and social fields to determine the extent of victimization among adolescents and to study its detrimental effects on mental health.

REFERENCES

Abad, J., Forns, M., & Gómez, J. (2002). Emotional and behavioral problems as measured by YSR: Gender and age differences in Spanish adolescents. *European Journal of Psychological Assessment, 18*, 149-157.

Achenbach, T. & Rescola, L.A. (2001). *Manual for the School-Age. Forms & Profiles*. VT: University of Vermont. Research Center for Children, Youth and Families.

Achenbach, T. & Rescola, L.A. (2007). *Multicultural supplement to the manual for the ASEBA School-Age Forms & Profiles.* EEUU: Library of the Control.

Bentler, P.M. (2004). EQS 6 Structural equations Program Manual. Encino, CA: Multivariate Software. Inc.

Bentler, P.M., & Dijkstra, T. (1985). Efficient estimation via linearization in structural models. In P. R. Krishnaiah (Ed.). *Multivariate Analysis VI* (pp. 9-42). Amsterdam: North-Holland.

Beck A.T., Ward C.H., Mendelson, M., Mock, J., Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*(6), 561-571.

Birleson, P. (1981). The validity of depressive disorders in childhood and the development of a self-rating scale: A research report. *Journal of Child Psychology and Psychiatry, 22,* 73-88.

Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., & McKemzie-Neer (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(4), 545-553.

Briere, J. (1996). *Trauma Symptoms Checklist for Children (TSCC): Professional manual*. Odessa, FL: Psychological Assessment Resources.

Browne, M.W, & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. In: Bollen K, Long J. (Ed.), Testing structural equation models (pp 136-162). Sage: Newbury Park, CA.

Chan, K.L., Fong, D.Y.T., Yan, E., Chow, C.B., & Ip. P. (2011). Validation of Chinese Juvenile Victimization Questionnaire. *H. K. J. Paediatric, 16*, 17-24.

Cheng, P., Cao, F-L, Liu, J., Chen, Q. (2010). Reliability and validity of Chinese self-report version of Juvenile Victimization Questionnaire in middle school students. *Chinese Journal of Clinical Psychology,* 18(4), 460-462.

Cicccheti, D. & Rogosch, F (1996). Equifinality and multifinality in developmental psychopathology. *Development and Psychopathology, 8* (4), 597-600.

Clum, G.A., Chung, S., Ellen, J.M., Perez, L.V., Murphy, D.A., Harper, G.W., & Hamvas, L. (2012). Victimization and sexual risk behavior in young, HIV positive women: Exploratory of mediators. *AIDS Behavior, 16*, 999-1010.

Finkelhor, D. (1995). The victimization of children: A developmental perspective. *American Journal of Orthopsychiatry*, *65*(2), 177-193.

Finkelhor, D., Hamby, S.L., Ormrod, R., & Turner, H. (2005). The Juvenile Victimization Questionnaire: Reliability, validity and national norms. *Child Abuse & Neglect*, *29*, 383-412.

Finkelhor, D., Ormrod, R.K., & Turner, H.A. (2007). Poly-victimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19*(1), 149-166.

Finkelhor, D., Ormrod, R.K., & Turner, H.A. (2009). Lifetime assessment of poly- victimization in a national sample of children and youth. *Child Abuse & Neglect, 33*(7), 403-411.

Finkelhor, D., Ormrod, R.K., Turner, H.A., & Hamby, S.L. (2005). Measuring poly-victimization using the Juvenile Victimization Questionnaire. *Child Abuse & Neglect*, *29*(11), 1297-1323.

Greenwald, R., & Rubin, A. (1999). Assessment of posttraumatic symptoms in children: Development and preliminary validation of parent and child scales. *Research on Social Work Practice, 9*(1), 61-75.

Gustafsson, E., Nilson, D., & Göran-Svedin, C. (2009). Poly-traumatization and psychological symptoms in children and adolescents. *European Child and Adolescent Psychiatry*, *18*(5)*,* 274-283.

Hamby, S.L., Finkelhor, D., Ormrod, R.K., & Turner, H.A. (2004a). *The Juvenile Victimization Questionnaire (JVQ): Child Self-Report Version*. Durham, NH: Crimes against Children Research Center.

Hamby, S.L., Finkelhor, D., Ormrod, R.K., & Turner, H.A. (2004b). *The Juvenile Victimization Questionnaire (JVQ): Administration & Scoring Manual*. Durham, NH: Crimes against Children Research Center.

Hollingshead, A.B. (1957). *Two factor index of social position*. Unpublished manuscript. (Available from 1965. Yale Station, New Haven, Connecticut).

IDESCAT (2010-2011). Informació estadística 2012-2011 (Statistical information of Generalitat of Catalonia). http://www20.gencat.cat/docs/Educacio/Home/Departament/Estadistiques/Estadis tiques_anuals/Curs_2010_2011/Dades_rellev_10_11 (1 June 2012).

Margolin, G. & Gordis, E.B. (2000). The effects of family and community violence on children. *Annual Review of Psychology*, *51*, 445-479.

Romano, E., Bell, T., & Billete, J.-M. (2011). Prevalence and correlates of multiple victimization in a nation-wide adolescent sample. *Child Abuse & Neglect*, *35*, 468-479.

Rutter, M. (1993). Psychosocial resilience and protective mechanisms. In J. Rolf, A.N. Masten, D. Cichetti, K.H. Nuechterlein & S. Weintraub (Eds), *Risk and protective factors in development of psychopathology* (pp.179-304). Cambridge. University Press.

Saunders, B. E. (2003). Understanding children exposed to violence. Towards an integration of overlapping fields. *Journal of interpersonal violence, 18,* 356-376.

Soler, L., Paretilla, C., Kirchner, T., & Forns, M. (2013). Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents. *European Child and Adolescent Psychiatry, 21*(11), 645-653.

Soler, L., Segura, A., Kirchner, T. & Forns, M. (2013). Polyvictimization and risk for suicidal phenomena in a community sample of Spanish adolescents. *Violence and Victims* (in press)

Turner, H.A., Finkelhor, D., & Ormrod, R. (2010). Poly-victimization in a national sample of children and youth. *American Journal of Preventive Medicine*, *38*(3), 323-330

Ware, J., Kosinski, M., & Keller, S.D. (1996). A 12-items Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*(3), 220-233.

Ybarra, M., Langhinrichsen-Rohling, J., Friend, J., & Diener-West, M. (2009). Impact of asking sensitive questions about violence to children and adolescents. *Journal of Adolescent Health, 45*(5), 499-507.

anuario de psicología / The UB Journal of Psychology

Artículos

Anna Isabel García-Díaz, Bárbara Segura, Hugo Baggio y Carme Junqué
Visuospatial and visuoperceptual impairment in relation to global atrophy in Parkinson's disease

Vanessa Renau Ruiz, Ursula Oberst y Xavier Carbonell-Sánchez
Construcción de la identidad a través de las redes sociales *online*: una mirada desde el construccionismo social

Maria Forns, Teresa Kirchner, Laia Soler y Claudia Paretilla
Spanish/Catalan version of the Juvenile Victimization Questionnaire (JVQ): Psychometric properties

Viviana Lemos
La operacionalización de constructos psicológicos en la infancia: dificultades y propuestas de superación

Marina Romeo, Montserrat Yepes-Baldó, Tomeu Vidal y Joan Guàrdia-Olmos
Why do they separate it or not? Attitudes and behaviors towards organic waste separation

Pilar Monreal-Bosch, Arantza del Valle y Santiago Perera
Activando municipios para la promoción de la salud: un estudio de caso en comunidades rurales

Eva Aguilar Mediavilla
Comparative analysis of the acquisition of syllabic structure and errors in preschool children with SLI

Alicia Martínez-Ramos, Maribel Peró-Cebollero, Teresita Villaseñor-Cabrera y Joan Guàrdia-Olmos
Adaptación y validación del test Torre de Londres en mexicanos adultos mayores de 60 años

P.V.P.: 14€ (I.V.A. incluido)