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The Ability of Multi-Type Maltreatment and Poly-Victimization Approaches to Reflect Psychopathological Impairment of Victimization in Spanish Community Adolescents

Maria Forns[1]*, Teresa Kirchner[1], Emilia Lucio Gómez-Maqueo[2], Paulina Landgrave[2],Laia Soler[1], Caterina Calderón[1] and Ernesto Magallón-Neri[1]

[1]*Department of Personality, Assessment and Psychological Treatment, Faculty of Psychology, University of Barcelona, Spain*
[2]*Faculty of Psychology, National Autonomous University of Mexico-UNAM, México*

Abstract

This paper examined the ability of two different approaches (the multi-type maltreatment approach, and the poly-victimization approach) to reflect the psychopathological aftermath of victimization. It also analyzed gender-related differences in psychopathological symptoms at varying levels of exposure to violence. The study was conducted in 923 Spanish community adolescents (aged from 14 to 18 years; 62.4% girls; 87.4% born in Spain), recruited for screening purposes from eight secondary schools in Barcelona and its metropolitan area (Spain). The study was based on cross-sectional data. The Juvenile Victimization Questionnaire and the Youth Self Report (DSM scales) were used to analyze victimization and psychopathological impairment respectively. The results showed that the two approaches present a similar ability to reflect psychopathological outcomes. The use of mean T scores to analyze psychopathological impairments conceals the high percentages of adolescents who are at risk in several psychopathological scales. Gender-related differences, analyzed under the multi-type approach, showed that girls presented slightly higher levels of symptomatology in reaction to their first experiences of victimization, whereas boys presented strong emotional reactions after the accumulation of a high number of victimized areas. Adolescents victimized in up to three areas showed evidence of resiliency to interpersonal victimization events and displayed non-clinical psychopathological profiles. Obsessive-compulsive symptoms had to be considered in high victimized groups, conjointly with affective, somatic and post-traumatic stress as psychopathological symptoms related to victimization.

Keywords: Poly-victimization; Muti-type maltreatment; Psychopathology; Gender; Adolescence

Introduction

In the area of victimization there are two dominating approaches, the multi-type maltreatment and poly-victimization [1]. Both approaches hold that the increase in victimization is associated with a greater psychological maladjustment [2-4]. The concept of "multi-type maltreatment" was coined by Higgins and McCabe's team [3,4] in Australia to account for the overlap in occurrence of more than one of five types of child maltreatment (sexual abuse, physical abuse, psychological maltreatment, neglect, and witnessing family violence), and for the explainable variation in psychosocial outcomes associated with maltreatment. Studies using this approach found that two-thirds of Herzegovina Canton adolescents were exposed to multi-type maltreatment [5], and North Vietnamese adolescents were classified as having zero (32.6 %), one (25.9 %), two (20.7 %), three (14.5 %) or all four (6.3 %) of the maltreatment types defined by Higgins and McCabe, excluding "witnessing family violence" [6]. For its part, the concept of "poly-victimization" was coined by Finkelhor's team in the US [7,8]. It was developed to explain the overlap in victimization experiences, including maltreatment, together with a broad array of other adverse experiences such as witnessing community violence, peer bullying, and property crime. It accounts for a substantial amount of explainable variation in traumatic symptoms."Poly-victims" are defined as individuals who experience extremely high levels of victimization [9]. Studies applying this approach underline that poly-victimization is associated with high trauma symptomatology, re-victimization in the following years, internalizing and externalizing symptoms and social behavior problems.

Usually, poly-victim groups have been identified using several arbitrary cutoff points: (a) as the group experiencing four or more different types of offense (all children with victimization levels above the mean) within the past year on the Juvenile Victimization Questionnaire [8,9];(b) as the 20 % of individuals with the highest scores [7], (c) as two sub-groups of poly-victimization: one low-level, from four to six offenses (about 15 % of the full sample), and one high-level, with seven or more offenses (about 7 % of the full sample) [7]; (d) as five or more different victimizations [10]; (e) as the top 10 % of the individuals in the total distribution of offenses [11]. Poly-victim groups have also been identified using cutoff points derived empirically as (f) using cluster analysis, taking the top 13 % of the most victimized sample [12], and (g) using latent class analysis [13]. The threshold delimiting all these groups has the disadvantage of being dependent on the basic statistical data of a particular analyzed group (age, distribution, etc.), meaning that the term "high poly-victim group" may be applied to groups with different numbers of victimizations. This variation may bias the results of the research, specifically with regard to psychopathological outcomes. When the total number of offenses (Screener Sum Version)

***Corresponding author:** Maria Forns, Universitat de Barcelona, Facultat de Psicologia, Departament de Personalitat, Avaluació i Tractaments Psicològics. Passeig de la Vallď Hebron, 171, Barcelona, 08035, Spain, Tel: 34 93 3305159; E-mail: mforns@ub.edu

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is used as a measure of poly-victimization, as is usually done using JVQ, the areas of victimization are not specifically accounted for: it may be that adolescents with an equal number of offenses but linked to different areas of victimization are identified as belonging to the same poly-victim group. For example, an adolescent A who reports eight offenses, all of them within the same area of concern, and an adolescent B who reports eight offenses but spread over four or more areas are very likely to be included in the same poly-victim group when the highest part of the distribution is used to define the poly-victim group (for example, the top 10% of victims). A reverse phenomenon may occur when using the multi-type approach: two individuals may have the same number of areas of victimization but vary in the number of offenses suffered in each area. In both cases one may wonder whether the individuals exhibit the same level of psychopathological symptoms.

Few detailed comparisons have been carried out of these two approaches and of their sensitivity for capturing the detrimental effects of victimization on mental health. The study by Price-Robertson et al. [1] concluded that both approaches have specific value for understanding child victimization and its effects on mental health, and that the use of one or other approach depends on the aims of the particular research study. Moreover, Finkelhor's research group adopts certain aspects of a multi-type maltreatment approach when they analyze the "aggregates" or domains of victimization, grouping offenses by categories. In this case they found that 96% of poly-victims had victimizations across three or more of the aggregates (sexual, physical assault property, child maltreatment, peer/sibling, or witnessing/indirect victimization) and 37% across five or more domains.

The current study compared the ability of the multi-type maltreatment approach (based on the number of affected areas or number of co-occurrences between areas), and the poly-victimization approach (based on the total number of specific offenses) to reflect the psychopathological aftermath of victimization, in both cases using the Juvenile Victimization Questionnaire, JVQ [14]. Stress theories postulate that individuals exposed to the cumulative effect of stressors are increasingly vulnerable to negative health outcomes [15,16]. However, we stated that adolescents who report four or five different victimized areas would show a greater psychopathological impairment than adolescents in the poly-victim group, given that in the former the stress is spread across several domains (conventional crime, child maltreatment, peer and sibling victimization, etc.), and in the latter the number of victimized areas is not well known and may vary widely from one subject to another.

Gender has been associated with certain types of victimization. Girls are approximately twice as likely to report child maltreatment and sexual victimization as boys [17]. Girls are more involved in relational victimization than boys [18]. More male than females are involved in bullying behaviors [19], and males are at a higher risk of being exposed to violence as victims and witnesses [20]. Developmental gender-related differences have also been associated with general psychopathological impairment. In fact, scaled norm scores for many scales assessing psychopathology differ according to gender, a practice that presupposes the existence of gender-related responses to psychopathological symptoms. If types of victimization, and sensitivity to psychopathological response, are gender-related, then gender-related differences in psychopathological symptoms would to be expected according to levels of exposure to violence. This topic should be analyzed in detail, since the data currently available in the literature are controversial [21,22].

The following were the specific goals of this research: a) to identify victimization groups according to the number of affected areas (multi-type approach) and to provide descriptive data for these groups; b) to explore psychopathological impairment and percentages of adolescents at risk according victimization groups and gender; c) to identify the "poly-victim" group (poly-victimization approach) and to provide descriptive data for this group; d) to contrast multi-type and poly-victim group, and to delineate the psychopathological profile according to groups and gender.

Methods

Participants

Participants were 923 adolescents (37.1% boys and 62.4% girls: 0.5% did not identify their gender) aged 14 to 18 years (M=15.70, SD =1.28) from eight different schools in the metropolitan area of Barcelona (Catalonia, Spain). Out of 923 participants, 48.5%were in secondary school, 47.5% in further education, and 4.0% in vocational training. Two-thirds (61.8%) were studying in state schools, and 38.2% in state-subsidized privately-run schools. The majority was born in Spain (87.5%), with 1.2% coming from other European countries, 6.2% from South America, 1.4% Central America, 1.2% Asia, and 2.0% Africa; 0.6% did not provide their country of birth. The age, ethnic group composition and types of schools matched the educational standards as indicated by Catalan Statistical Institute [23]. According to the Hollingshead four factor index [24] the participants' families corresponded to the following socio-economic levels: 11.8% unskilled, 22.4% semiskilled workers, 25.0% clerical staff and sales, 35.1% medium business families and 5.7% major business and professional families.

Procedure

The Bioethics Committee of the University of Barcelona approved the study. Subsequent to a full explanation of the study procedures to the principal of the school, and directly to students in their classrooms, adolescents were invited to participate. Students were provided with informed consent forms to be signed by their parents or legal guardians. These forms had to be returned, signed, on the day of the data collection. Participation was voluntary and responses to the questionnaires were anonymous; over half of the students contacted (55.3%) agreed to take part. Those who declined to participate did not differ inage, socioeconomic status, orgrade level fromthose who participated, but girls showed a higher rate of voluntary participation than boys. The low participation rate is due to the different filters applied, and is similar to that recorded in studies which require different steps for participation: parental consent, and consent from adolescents [25].

The questionnaires were applied collectively in groups of 15-30 teenagers over a one-hour session in their classrooms. Clear instructions were given to help participants to identify a one-year interval by giving them a reference point in time (e.g., *'think about what has happened to you since last summer'*). Two members of the research team were present in the classroom to clarify doubts, provide help if necessary, ensure the privacy and confidentiality of the data, and to avoid random answers. Since these questionnaires asked about sensitive, private issues,at the end of the questionnaires a clear written message was given to adolescents offering them counseling or professional advice if they wished; in this case, they were instructed to write down their e-mail address or phone number on the questionnaire and told that the research staff would contact them. Professional help was offered to adolescents who requested it within the following two weeks, and clinical cases were referred to mental health centers.

Measures

Socio-demographic measure

A socio-demographic data sheet provided information about age, gender, school grade, country of birth and socioeconomic status.

The Juvenile Victimization Questionnaire (JVQ)

The Juvenile Victimization Questionnaire [14] was designed to assess a comprehensive range of childhood victimization. In the self-administered format it can be used with juveniles twelve years and older. It provides a continuous measure of poly-victimization based on the number of separate screener items or offenses endorsed by participants. Each item verifies whether the adolescent experienced a specifically described victimized event. The exposures are categorized in five areas. Conventional crime (CC): robbery, vandalism, assault; Child maltreatment (CM): physical, psychological and emotional abuse, custodial interference; Peer and sibling victimization (PSV): gang or group assault, peer or sibling assault, bullying; Sexual victimization (SV): sexual assault by a known adult, or by a peer, attempted or completed rape; and Witnessing and indirect victimization (WIV): as a witness to domestic violence, murder, or parent assault of a sibling. Youths are asked to indicate the number of times each of the aforementioned events occurred to them within the last year, on a six-point scale from 0 (never) to 5 (≥ 5 times).Cronbach's alpha internal consistency for the 34 items reached .80 in the original US sample [9]. The present study used the Spanish/Catalan version of the JVQ [26]. In the present sample, Cronbach's alpha was .84 for the total scale.

The Youth Self Report (YSR)

Youth Self Report [27,28] measures social competences (competence scales) and psychological distress in adolescents between 11 and 18 years old. Psychological distress was assessed by a list of 112 items representing thoughts, feelings and behaviors. Adolescents were asked to indicate how often each of the item statements happened to them within the last six months. Items were rated on a Likert scale ranging from 0 (not at all) to 2 (very often). Items of the scale may be grouped on different subscales. In the present study we used the DSM-oriented problem scales (Affective, Anxiety, Somatic, Attention Deficit/Hyperactivity, Oppositional-Defiant, Conduct Problems) and the complementary scales (Obsessive-Compulsive and Post-traumatic Stress). The YSR has been validated in 23 countries, including Spain. Multicultural Group 3 is the normative group for Spanish adolescents [28-29]. The Cronbach alpha internal consistency for the scales used in the present study ranged from .56 (for Anxiety) to .76 (for Conduct Problems).

Data analysis plan

To identify the groups according to the number of victimized areas (multi-type approach), the JVQ items were recoded to dichotomous form where "present" reflected the endorsement of the item (=1), whereas "absent" reflected a response of "no/never" (=0) to the item. Then, the number of reports of the items composing each area of concern was calculated. The area of concern was considered as affected if the score in this area was ≥ 1. Adolescents were then assigned to different groups according to the number of areas in which victimization was present (see table 1). Group G0 had absence of victimization in all five areas; groups G1 to G5 showed presence of victimization in one, two, three, four or five areas respectively. These groups (G0 to G5) are referred to hereafter as victimization groups. Groups G2, G3 and G4 comprise different subgroups that combine different affected areas of concern. The respondents with missing responses formed the group GM. The frequencies and percentages of participants in the groups and subgroups, and the descriptive statistics of number of offenses (*M* and *SD* in raw scores, ranging from 0 to 34) were calculated.

To identify the poly-victim group (PVG) the total raw score of present offenses was calculated (poly-victimization approach). In present study participants reporting ≥8 offenses accounted for the top

Groups and Subgroups		Victimization areas					Frequencies and % of subjects for			
							Subgroups		Groups	
		CC	MT	PSV	SV	WIV	n	%	n	%
G0		-	-	-	-	-	--	--	128	13.87
G1									211	22.86
	1a	-	-	-	-	X	95	10.29		
	1b	-	-	-	X	-	5	0.54		
	1c	-	-	X	-	-	34	3.7		
	1d	-	X	-	-	-	17	1.84		
	1e	X	-	-	-	-	60	6.50		
G2									205	22.21
	2a	-	-	-	X	X	6	0.65		
	2b	-	-	X	-	X	39	4.22		
	2c	-	-	X	X	-	1	0.1		
	2d	-	X	-	-	X	21	2.27		
	2e	-	X	X	-	-	8	0.87		
	2f	X	-	-	-	X	75	8.13		
	2g	X	-	-	X	-	5	0.54		
	2h	X	-	X	-	-	35	3.80		
	2i	X	X	-	-	-	15	1.62		
G3									184	19.93
	3a	-	-	X	X	X	10	1.08		
	3b	-	X	-	X	X	2	0.22		
	3c	-	X	X	-	X	16	1.73		
	3d	-	X	X	X	-	2	0.22		
	3e	X	-	-	X	X	5	0.73		
	3f	X	-	X	-	X	95	10.29		
	3g	X	-	X	X	-	5	0.54		
	3h	X	X	-	-	X	32	3.47		
	3i	X	X	X	-	-	14	1.52		
	3j	X	X	-	X	-	3	0.32		
G4									107	11.60
	4a	-	X	X	X	X	3	0.32		
	4b	X	-	X	X	X	18	1.95		
	4c	X	X	-	X	X	14	1.52		
	4d	X	X	X	-	X	63	6.83		
	4e	X	X	X	X	-	9	0.98		
G5									62	6.72
	5a	X	X	X	X	X	62	6.72		
GM									26	2.82
Total							923	100	923	100
%		55.3	30.4	44.8	16.3	60.2				

Areas of victimization: CC= Conventional crime, MT = Child Maltreatment, PSV = Peer and sibling victimization, SV = Sexual victimization, WIV = Witnessing and indirect victimization.

G0, G1, G2, G3, G4, G5 = Victimized groups defined by the number of areas of victimization; GM= Group with missing responses.

Table 1: Victimization groups and subgroups according to the number of victimization areas (indicated by an X), frequencies and percentages of individuals by groups and subgroups.

12.3% of the total group, and those reporting ≥ 9 offenses accounted for the top 8.7%. This latter group was considered as the poly-victim group (PVG).

To analyze the psychopathological impairment for the victimization groups the mean T scores and the percentage of subjects at risk for the psychopathological problem scales on the YSR-DSM [28] was calculated according to gender. A MANCOVA was conducted (eight psychopathological problem scales as dependent variables, six victimization groups (except GM) as fixed factors, and gender and age as covariates). Then, the univariate analyses were conducted with each psychopathological problem scale as dependent variable by victimization groups separately by each gender. Age was excluded from these univariate analyses due to its non-significant main effect. Polynomial contrasts (linear, quadratic or cubic) were also conducted to analyze the growing trend for each psychopathological symptom scale according to victimization group and separately by gender. The weighted solution was used, as the groups had different sizes.

To obtain the percentage of adolescents at risk (AtR) of psychopathological problems for each victimization group by gender, a cutoff score was established according to multicultural norms for group 3 [28], for both boys and girls, at the T value ≥ 65 (percentile ≥ 93th). This cutoff is set at the lowest point of the "borderline" zone, thus including the borderline and clinical zones and comprising a normative 7% of the sample.

Descriptive data for the poly-victim group (PVG) were recorded and a Student t test was calculated to compare the number of offenses reported in the PVG and the higher victimization groups (G4 and G5). Finally, to establish which measurement system (high victimization groups versus PVG) was more sensitive for capturing psychopathological impairment, profiles for G4, G5 and PVG on YSR-DSM-scales were drawn.

Results

Multi-type approach: identification of victimization groups and descriptive statistics

Table 1 showsthe victimization groups identified. The affected areas are indicated by a letter "X". Group G0, with no victimization of any kind, comprised 13.87% of participants. Group G1 included 22.86% ($M_{offenses}$=1.37; SD=.72). Within this group, adolescents reporting witnessing and indirect victimization represented the largest proportion, followed by the conventional crime subgroup. Group G2 comprised 22.21%of participants ($M_{offenses}$=2.87; SD=1.10). In G2, the largest subgroup comprised adolescents reporting both conventional crime and witnessing or indirect victimization. Group G3 comprised 19.93%of participants ($M_{offenses}$=4.88; SD=1.86). Within this group, the largest subgroup comprised victims simultaneously suffering conventional crime, peer victimization and witnessing or indirect victimization. Group G4 comprised 11.60% of adolescents ($M_{offenses}$=7.38; SD=2.77). The largest subgroup presented all the affected areas except sexual victimization. Group G5 comprised 6.72 % of adolescents ($M_{offenses}$=11.53; SD=5.82), and group GM 2.82%.G1, G2 and G3 comprised around 20% of adolescents each, and all together, they included 65% of the total group. G4 and G5 together made up for nearly one-fifth of the total group (18.32 %).

Psychopathological impairment: descriptive data and percentages of adolescents at risk according to victimization group and gender

Table 2 shows descriptive statistics (n, mean T and SD) and percentages of adolescents at risk (atR) for victimization groups on the psychopathological problems scales as measured by Youth Self-Report DSM-oriented and complementary scales [28]. MANCOVA results

Problems scales by gender		Victimization groups						ANOVAs	Growing trend
		G0	G1	G2	*G3*	G4	G5	Group effects	Linear (L) or Quadratic (Q)
								F; *p*	*F*; *p*
AFF									
Boys	N	48	89	72	70	24	15	17.01***	Q
	M T (SD)	44.05 *(7.50)*	44.50 *(7.14)*	44.99 *(8.40)*	47.83*(7.85)*	50.02*(8.05)*	63.33*(12.50)*	η_p^2= .21	F = 23.19***
	AtR	2.10%	1.10%	4.20%	4.30%	8.30%	46.8%**		
Girls	N	79	111	128	111	81	45	17.71***	L
	M T(SD)	44.83*(8.29)*	46.83 *(8.29)*	48.72 *(8.34)*	50.68*(10.54)*	53.68 *(10.54)*	57.96*(11.68)*	η_p^2= .14	*F*=84.53***
	AtR	3.80%	3.60%	6.30%	9.00%	6.10%	37.6%**		
ANX									
Boys	N	47	92	73	70	22	15	4.38***	L
	M T (SD)	44.95*(9.48)*	46.13*(8.65)*	46.59*(8.54)*	48.29*(9.22)*	51.34*(6.63)*	54.76*(8.78)*	η_p^2= .06	*F*=18.94***
	AtR	2.10%	2,2%	2.80%	4.30%	0%	6.70%		
Girls	N	77	110	128	110	80	46	8.32***	L
	M T (SD)	44.15*(8.29)*	45.62*(8.99)*	47.35*(8.47)*	49.42*(7.95)*	48.63*(9.23)*	52.98*(9.77)*	η_p^2= .07	*F*=37.23***
	AtR	0%	3.60%	2.30%	0.90%	7.50%	8.70%		
SOM									
Boys	N	45	91	70	67	24	15	12.09***	Q
	M T (SD)	46.91*(7.29)*	48.87*(6.89)*	48.65*(8.33)*	50.76*(7.75)*	52.63*(9.73)*	64.44*(13.92)*	η_p^2= .16	*F*=13.01***
	AtR	2.20%	5.50%	8.60%	7.50%	16.70%	60.1%**		
Girls	N	77	106	121	108	79	42	10.67***	L
	M T (SD)	47.93*(9.29)*	50.26*(8.65)*	51.40*(10.02)*	54.73*(10.34)*	56.70*(12.56)*	58.91*(14.08)*	η_p^2= .09	*F*=52.51***
	AtR	6.50%	5.60%	8.30%	14.80%	25.3%**	28.6%**		
AT-HYP									

Boys	N	47	93	72	69	22	15	3.47**	L
	M T (SD)	46.26*(9.44)*	47.76*(9.96)*	48.87*(8.93)*	50.86*(9.09)*	51.46*(8.70)*	55.48*(7.53)*	η_p^2=.05	*F=16.60***
	AtR	2.10%	6.50%	2.84%	8.70%	9.10%	20.00%		
Girls	N	80	110	128	110	79	44	9.65***	L
	M T (SD)	45.91*(8.77)*	47.36*(8.85)*	50.65*(9.86)*	51.45*(8.73)*	53.52*(9.75)*	54.16*(9.34)*	η_p^2=.08	*F=46.00****
	AtR	5.10%	4.50%	10.10%	8.10%	11.40%	16.00%		
OP-DEF									
Boys	N	48	93	72	71	24	15	6.70***	L
	M T (SD)	44.18(8.78)	45.23(8.70)	47.98(7.83)	50.28(9.97)	52.02(8.46)	53.65(9.32)	η_p^2 = .09	*F*=32.84***
	AtR	2.10%	4.30%	1.40%	5.60%	4.20%	20.00%		
Girls	N	79	114	127	112	81	43	7.26***	L
	M T (SD)	47.07*(8.97)*	48.23*(8.57)*	49.89*(9.83)*	52.69*(8.34)*	52.23*(8.89)*	54.25*(9.37)*	η_p^2=.06	*F*=33.62***
	AtR	2.50%	5.30%	9.40%	10.70%	6.10%	18.6%**		
CP									
Boys	N	48	89	72	68	26	14	9.49***	L
	M T (SD)	44.23*(6.39)*	44.56*(5.36)*	46.22*(6.35)*	47.95*(7.41)*	50.66*(8.41)*	54.31*(6.68)*	η_p^2=.13	*F*=43.24***
	AtR	2.10%	0%	1.40%	4.50%	11.40%	14.20%		
Girls	N	77	111	125	110	78	43	13.40***	L
	M T (SD)	44.87*(4.97)*	46.38*(5.92)*	48.51*(7.17)*	49.27*(7.19)*	52.05*(10.46)*	54.13*(11.15)*	η_p^2=.11	*F*=65.45***
	AtR	0%	2.70%	5.60%	5.40%	9.10%	13.90%		
OBS-COM									
Boys	N	47	90	73	70	24	15	8.91***	L
	M T (SD)	47.37*(8.89)*	48.56*(8.36)*	50.01*(8.42)*	51.64*(10.84)*	55.61*(8.79)*	62.71*(10.72)*	η_p^2=.12	*F=37.03****
	AtR	4.30%	4.40%	5.50%	7.20%	16.70%	46.7%**		
Girls	N	77	110	128	109	79	46	15.65***	L
	M T (SD)	48.06*(9.42)*	50.09*(9.14)*	51.86*(9.73)*	53.45*(9.04)*	56.21*(9.47)*	61.15*(8.83)*	η_p^2=.12	*F*=73.99***
	AtR	5.20%	7.20%	7.80%	10.90%	20.3%**	30.4%**		
PTSS									
Boys	N	46	91	71	70	20	14	10.21***	L
	M T (SD)	43.12*(9.55)*	44.62*(8.23)*	46.06*(8.88)*	48.57*(9.13)*	51.54*(8.99)*	59.48*(8.78)*	η_p^2=.14	*F*=44.25***
	AtR	0%	1.10%	2.80%	4.20%	15.00%	28.5%**		
Girls	N	78	108	128	110	80	44	13.12***	L
	M T (SD)	44.03*(8.41)*	46.34*(9.18)*	48.10*(9.09)*	50.08*(8.4)*	51.73*(9.90)*	*55.50*(9.01)	η_p^2=.11	*F*=64.48***
	AtR	1.30%	2.80%	6.30%	7.20%	15.10%	13.70%		

Note: (a) YSR-DSM scales: AFF = Affective symptoms; ANX = Anxiety symptoms; SOM = Somatic symptoms; AT-HY = Attention Hyperactivity symptoms; OP-DEF = Oppositional-Defiant symptoms; CP = Conduct Problems; OBS-COM = Obsessive-Compulsive symptoms; PTSS = Post-Traumatic Stress Symptoms.

(b) p = * < .05; ** < .01; *** < .001; ns = non-significant. (c) The at-risk (AtR) cut-off point was established at T > 64 for each one of the psychopathological problem scales, and it includes the borderline and clinical zones.

Table 2: Frequencies, descriptive T scores (M and SD) and percentages of subjects at risk (AtR) for psychopathological problem scales, by gender and for victimization groups.

indicated significant differences in psycho-pathological problems according to groups (Wilks Lambda=6.04, p<.001, ηp2=.06) and gender (Wilks Lambda=4.26, p< .001,ηp2=.04), but non-significant effects for age (Wilks Lambda=1.15, p=.35). Univariate analyses were conducted for each psychopathological scale problem as dependent variable and victimization groups as fixed factor, separately for gender (see F-ratio, p, and ηp2 values on Table 2). Significant group differences were found for all the psychopathological problems analyzed. The ηp2values suggest that the proportion of variance associated with the effects were small to medium in magnitude.

Significant gender differences were found on affective [for G1 (*t*=2.09, *p*=.038) and G2 (*t*= 3.02,*p*=.003)], somatic [for G2 (*t*=2.04, *p*=.043) and G3 (*t*=2.89, *p*=.004)], oppositional-defiant (for G1, *t*=2.49, *p*=.014), and conduct problems [for G1 (*t*=2.25, *p*=.026) and G2 (*t*=2.25, *p*=.026)], with girls obtaining higher *T* scores in all cases. No gender difference was found on psychopathological scales in G4 and G5 (Figure 1).

Since the *T* scores of psychopathological problems scales increased with the number of victimized areas, a polynomial contrast was conducted for each of the scales, according to gender. As shown in table 2 and figure 1, for girls a linear increasing trend was found for all psychopathological problems scales (all *p*< .001). For boys the results lent support to the linear increasing trend in the relationship between groups and psychopathological impairment for anxiety, attention-hyperactivity, oppositional-defiant, conduct problems, and post-traumatic stress problems (all *p*< .001), but also it is supported a linear trend for affective, somatic and obsessive-compulsive scales, compatible with quadratic trend for these scales that expressed a sharp growth from G4 to G5.

Table 2 also shows the percentages of adolescents at risk (AtR) in the groups G0 to G5, according to gender. The contrasts of the percentages for sample proportion versus the hypothesized normative value (7 % of teens in borderline and clinical zones) were calculated. Significantly higher than expected percentages (p < .001) were found in boys, on G5,

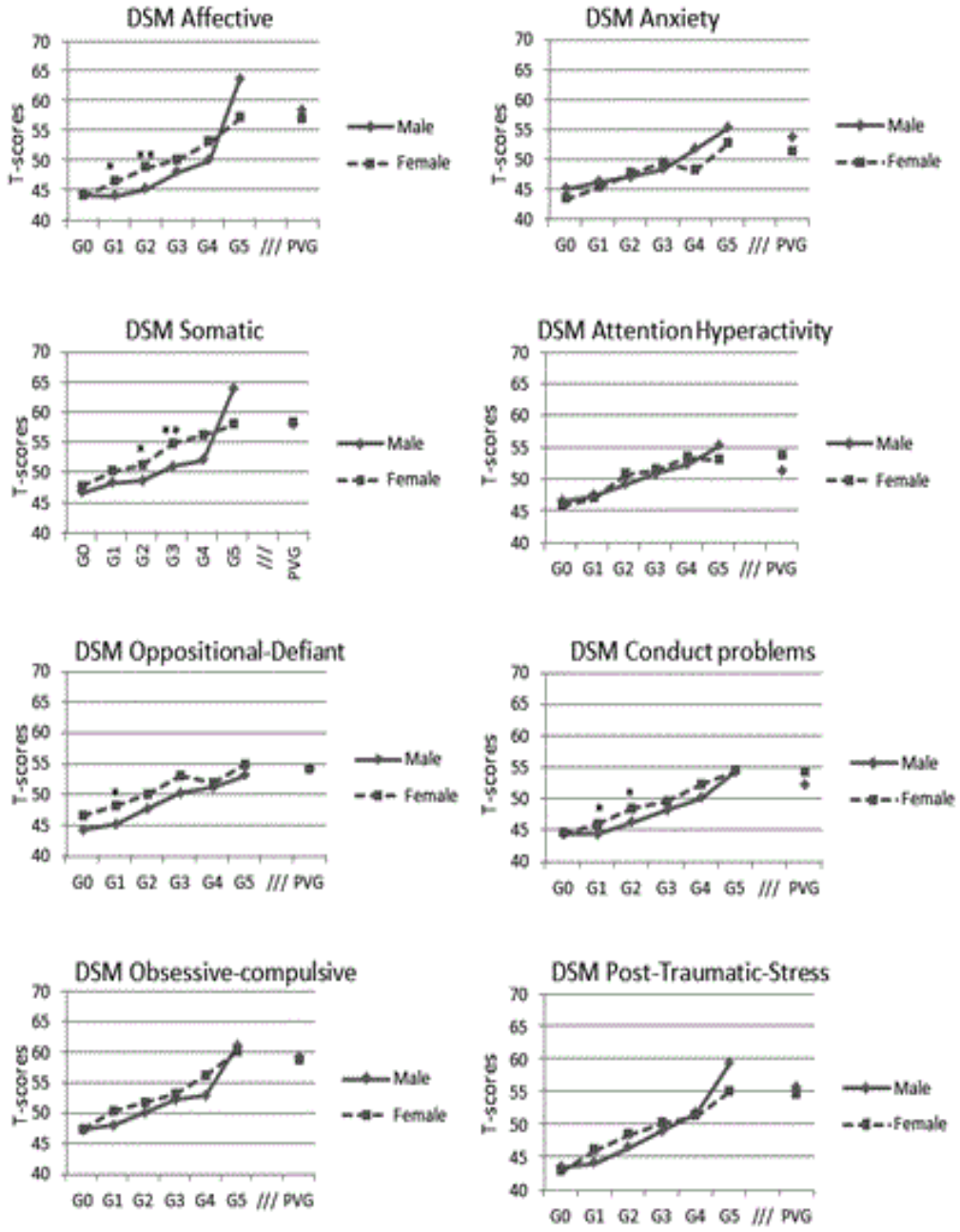

Figure 1: Growing trends and profiles of psychopathological outcomes on YSR-DSM-oriented and complementary scales according to gender, victimization groups (G0 to G5), and Poly-victim group (PVG), on Juvenile Victimization Questionnaire.

on affective (46.8%), somatic (60.1 %), obsessive-compulsive (46.7%) and post-traumatic stress (28.5%) problem scales.In girls were found significant higher than expected percentages on affective (G5: 37.6%), somatic (G4: 25.3%; G5: 28.6 %), opposition-defiant (G5: 18.6%) and obsessive-compulsive (G4: 20.3%; G5: 30.4%) problem scales.

Poly-victimization approach: descriptive statistics for the poly-victim group (PVG).

The PVG was set at ≥9 offenses and comprised 78 adolescents ($M_{offenses}$=12.37; SD=4.82; 75 girls=65.4 %) and included the top 8.7% of the total group. No gender differences were found in the mean number of offenses reported (t=1.79; p=.13). This was a heterogeneous group, since 51.30%belonged to G5 ($M_{offenses}$=13.95, SD=5.95), 37.20%to G4 ($M_{offenses}$=10.79, SD=2.59), and 11.50% to G3 ($M_{offenses}$=10.44, SD=1.42).

Contrast between the higher multi-type groups and poly-victim group: profile of psychopathological impairment according to groups and gender.

The groups G4 and G5, as the groups with higher number of victimized areas, and the poly-victim group (PVG) as the group with

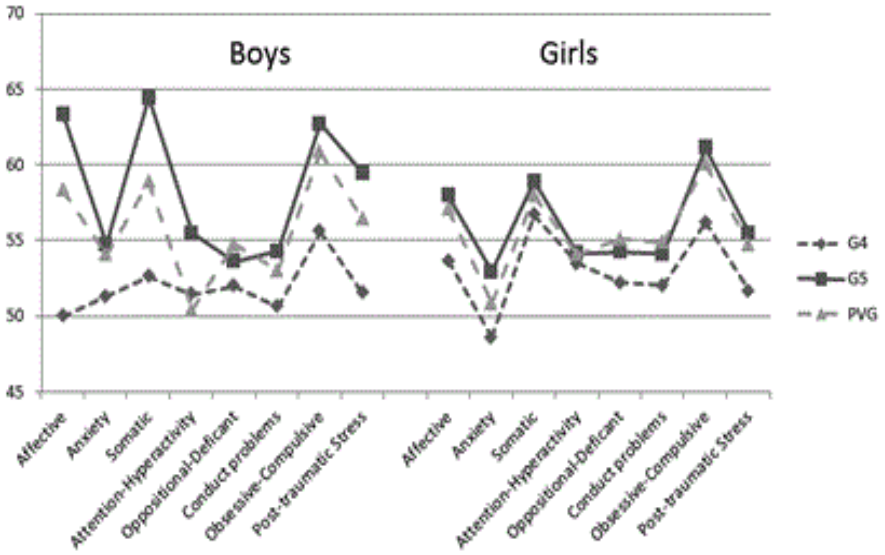

Figure 2: Profiles of psychopathological outcomes as analyzed by YSR-DSM-oriented and complementary scales according to gender, for victimized group with 4 (G4) and 5 (G5) victimized areas, and for the Poly-victim group (PVG, as the top 8.7 % of the distribution of total victimizations) on Juvenile Victimization Questionnaire.

higher number of offenses, were compared. The mean number of offenses on the PVG ($M_{offenses}$=12.37; SD=4.82) was significantly higher than the mean for G4 ($M_{offenses}$=7.38; SD=2.77; t=8.19, p< .001), but did not differ significantly from G5 ($M_{offenses}$=11.53; SD=5.82; t =.91, p< .81).

Figure 2 shows the profile of mean T scores for each of the YSR-DSM psychopathological scales, according to groups and gender. The profiles for multi-type approach groups G0 to G3 are not drawn, as their mean T scores are quite normative (under T 55). For boys, the G5 profile displayed the highest psychopathological levels ($53.6 \leq T \geq 64.4$). The highest mean T scores were shown on somatic, affective and obsessive-compulsive scales (all T > 60), followed by post-traumatic stress scale (T=59). The G4 profile ranged between $50.0 \leq T \geq 55.6$. For girls, the G5 profile also displayed the highest psychopathological level, ranging between $52.9 \leq T \geq 61.1$, with highest mean T score on the obsessive-compulsive scale (T=61.1). The G4 profile ranged between $48.6 \leq T \geq 56.7$.

The PVG profile for boys was situated between the G4 and G5 profiles, ranging between $50.4 \leq T \geq 60.8$, and showed the highest mean T scores on the obsessive-compulsive, somatic, and affective scales. No significant difference in mean T scores was found on psychopathological scales between PVG and G4; only a significant difference on attention-hyperactive scale was found, which lower levels was for PVG than for G5. The female PVG profile was situated between G5 and G4 profiles ($50.9 \leq T \geq 60.7$), overlapping in several G5 scales, and showing the highest mean T score on the obsessive-compulsive scale. No significant differences were found in mean T scores on psychopathological scales between PVG and G4, or between PVG and G5.

Discussion

This paper discusses whether the psychopathological impact in victimized adolescents is captured better by considering the number of areas of victimization (multi-type approach) or the number of offenses (poly-victimization approach), using the JVQ [14] and analyses gender-related differences in patterns of psychopathological response to victimization. To compare the two approaches it was first necessary to identify groups of victimization according to the number of affected areas, as shown in Table 1.

The data obtained added evidence that victimization is a very common phenomenon among teenagers [2,7-9,11,29,30]. Sixty-five per cent of the Spanish teenagers recruited had suffered offenses in one, two or three areas of concern in the last 12 months; around one fifth had suffered offenses in four or five areas and, in all, 83% had been victimized in at least one area. This shows that Spanish teenagers in secondary education are involved in a sizeable amount of stressful interpersonal victimizing situations which have the potential to disrupt their psychological development. Not having undergone any type of victimization in the last year can be considered as exceptionally low; only 14% of adolescents had reported no victimization. These data agree with those of Lila et al. [31] who found that a minority of Spanish adolescents (10.8%) were not victimized in any context, and supports other reports that have indicated that the large majority of adolescents had experienced at least one type of victimization [5,6,8].

The combination of areas of victimization shown in Table 1 illustrates the artificiality of isolating a particular type of victimization, since all types appear more commonly in combination with other areas than in isolation. As indicated by Rossman and Rosenberg [32], Saunders [33], and Álvarez-Lister et al. [12], victimizations tend to cluster, and adverse child experiences are more likely to be interrelated than to occur independently [34].

As expected, an increase in psychopathological symptoms was found with the increase of the number of victimized areas. Several aspects of the current study's findings merit discussion: the percentage of at-risk teens in groups with higher victimized areas, the mean *T* scores on the YSR-DSM scales, and the linear or quadratic increase in psychopathological symptoms according to victimization group. A history of reporting offenses in the five areas of concern was associated with a higher percentage of adolescents at-risk of psychopathological

problems. Both boys and girls were mainly at risk for affective, somatic and obsessive-compulsive symptoms. Boys were also at risk for post-traumatic stress symptoms, and, although to a lesser extent, girls were also at risk for oppositional-defiant symptoms. The non-significant percentage of girls at risk for post-traumatic stress symptoms in the highly victimized groups was an unexpected finding, since poly-victimization is considered to be highly predictive of trauma symptoms [8]. Indeed the current findings contrast with those of Sabina and Strauss [35] and Tolin and Foa [21] who reported that poly-victimization was the strongest predictor of PTS symptoms in both men and women. Future studies should seek to confirm data found in the current study in other community samples.

All types of offense are reprehensible and objectionable. However, from a psychopathological perspective it is worth noting that groups with two victimized areas or fewer showed scarce psychopathological impairment, as reflected by their relatively normative mean *T* scores on YSR-DSM scales, and because percentages of at-risk adolescents were not higher than expected according to the norms.This suggests that exposure to a low amount of interpersonal violence is unfortunately a common experience in community adolescents and that in general it does not disrupt their mental health. Similarly, Crick et al. [18] contend that a certain degree of exposure to victimization (specifically relational victimization) is likely to be normative for most children and is unlikely to be detrimental for most individuals.

The psychopathological impairment in the victimized group with three affected areas and with a mean number of offenses of 4.88 was not well reflected by the mean *T* scores of the YSR scales. Instead, the psychopathological impairment was best captured by the percentages of at-risk adolescents in each scale. All this suggests that the use of mean *T* scores to study the effects of victimization on mental health overlooks the relevant information provided by the analysis of at-risk percentages, and that both perspectives should be embraced when analyzing effects of victimization.

Victimized groups with four and especially five affected areas showed greater psychopathological impairment. The wide *T* score span in these groups ranging in some scales from 41 to 87 shows their extreme heterogeneity. This suggests that the teenagers' psychopathological reaction to the accumulation of areas of concern was very uneven. These groups may include resilient teens with a balanced reaction to victimization, non-resilient teens expressing a high impairment in multiple symptoms, and severely affected adolescents using defensive strategies such as dissociation or avoidant coping in order to disconnect from reality [36] thus influencing their inclination to report victimization experiences [37,38]. These topics deserve further attention, given their implications for clinical management.

Differences in patterns of psychopathological response to victimization were found related to gender. Girls and boys displayed linear increasing trends for all the psychopathological problems analyzed, but boys also displayed a quadratic trend for affective, somatic and obsessive-compulsive scales. This suggests that girls develop their psychological distress progressively, according to the increase in the number of victimized areas, irrespective of internalized or externalized domains. Boys, for their part, develop their psychopathological distress progressively in some domains, but show a sharp increase on affective, somatic, and obsessive-compulsive symptoms when the number of areas of victimization is very high (five areas). These findings confirm the hypothesis of gender-related differences in the psychopathological response to stressors. Girls tend to react to stress from their very first experiences of victimization and show a slightly higher psychopathological impairment than boys, although the psychopathological profiles they display do not reach borderline or clinical level. Accordingly, boys generally maintained a slightly lower level of impairment than girls; however, when they are victimized in five areas they increase the levels of affective, somatic and obsessive-compulsive.

The discussion so far highlights that the detrimental outcomes of victimization should be studied by covering a broad range of psychopathological problems. As Van der Kolk, Roth, Pelcovitz, Sunday and Spinazzola [39] and Ford, Wasser and Connor [40] state, it is necessary to extend the study of outcomes of trauma and poly-victimization beyond PTSD, and to focus on the full range of disordered psychological domains. The current study observed a high percentage of at-risk adolescents for obsessive-compulsive symptoms (OCS) among highly victimized adolescents. This aspect requires particular attention in the future in order to establish whether victimization is partially related to the onset of OCS [41], to its development and/or maintenance [42,43], whether it acts as a risk factor for victimization [44], whether obsessive-compulsive and PTS symptoms co-occurred highly following to exposure to traumatic interpersonal victimization [45], or whether items on the OCS scale on the YSR-DSM include behaviors of fear, confusion, worries, guilt and strange ideas which are frequently considered to be anxious responses to victimization.

As to the main question of which measurement approach captures the psychopathological impact of victimization better, the current study showed that the two approaches analyzed provide a similar picture of the psychopathological impairment. However, figure 2 shows some signs that the multi-type approach provides a better reflection of psychopathological outcomes, especially in the affective and somatic domains, in boys. However, the small number of subjects and the high standard deviation in these groups (G4, G5 and PVG) may have prevented us from finding significant differences. More studies should explore this topic with a larger number of subjects in the highly victimized group.

Some limitations of this study should be acknowledged. First, the study was conducted in community adolescents, and data were collected preserving confidentiality and anonymity: this screening procedure does not allow follow-up questions for sensitive victimizations, as has been recommended elsewhere [7,9,33]. The second limitation is the reliance on self-report questionnaires to gather information, which means that the instruments used share method variance. However, in data referring to victimization it is the victim who holds key information about these events which often remain hidden to other informants, may be underestimated by parents [46], or do not appear in administrative data [47]. Our direct approach enabled us to capture data that may not have been available via other sources and may help to increase rates of disclosure for sensitive topics. However, in the future, it would be desirable to gain input from additional informant sources to embrace a multi-informant perspective. The third limitation is that the participants came from an urban environment, and so the interpretation of the data must be restricted to this context. Finally, the fourth limitation is the fact that victimization was analyzed on the basis of occurrences of offenses without considering contextual factors (onset, duration, disclosure and perpetrator); the participant's own appraisal of the severity of these victimizations and the persistence of their impact were not taken into account. All these aspects should be addressed in future studies.

This study also has a number of strengths that should be mentioned. First, it is one of the few studies to address the differential effect of the

two approaches to studying victimization on mental health. Second, it includes a high number of adolescent participants, and the schools in the sample adequately representthe proportion of state and subsidized schools that characterize the educational system in the Barcelona area (Spain). A large number of adolescent extracted from a community context helps to reduce the biases that can arise from the use of clinical or selected samples [1]. Third, the present study offers an original and detailed way to present the co-occurrences among the five types of victimization studied. Thus, the scheme devised for the purpose of this research made it possible to identify victimization groups according to the number of affected areas, and allowed also to identify many subgroups with specific affected areas. Future studies should compare subgroups that differ only in one type of victimization, which will allow the analysis of the weight of a particular area of victimization on psychopathological outcomes. Four, it has highlighted a gender-related psychopathological course associated with the number of areas of victimization.

Conclusion

The two ways of analyzing multiple victimization (multi-type maltreatment and poly-victimization approach) offered a similar capability to grasp the psychopathological impairment of victimized adolescents. However, there were some indications favoring the multi-type approach as better identifying affective and somatic outcomes. The use of the multi-type approach and of a broad-ranging instrument to examine psychopathology has underlined the importance of centering future studies on obsessive-compulsive symptomatology in addition to the more classical domains (affective, somatic, depression, and post-traumatic stress). Many adolescents in the group that reported offenses in five domains were at risk of displaying obsessive-compulsive symptoms.

The results of the study also indicate that: a) multiple victimization is a widespread social phenomenon which is also observed in Spanish community adolescents; b) the overlap between areas of victimization confirms the complexity of the phenomenon and illustrates the artificiality of isolating particular types; c)the exclusive use of descriptive *T* scores to analyze psychopathological profiles darkens the high percentage of adolescents who are at-risk on several different scales, d) the highest percentages of at-risk teens in high victimization groups were recorded for affective, somatic and obsessive-compulsive symptoms (especially in boys), rather than for post-traumatic stress; e) gender-related differences regarding victimization were detected: girls react to stress showing slightly higher levels of symptomatology than boys from their first experiences of victimization onwards, whereas boys react in a sharply emotional form, with increases in affective, somatic, obsessive-compulsive symptoms and post-traumatic stress only after an accumulation of experiences.

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References

1. Price-Robertson R, Higgins D, Vassallo S (2013) Multi-type maltreatment and poly-victimization: a comparison of two research frameworks. Australian Institute of Family Studies. 95: 84-98.
2. Finkelhor D1, Ormrod RK, Turner HA (2007) Poly-victimization: a neglected component in child victimization. 31: 7-26.
3. Higgins DJ, McCabe MP (2000) Multi-type maltreatment and the long-term adjustment of adults. Child Abuse Review .9 : 6-18.
4. Higgins DJ, McCabe MP (2001) Multiple forms of child abuse and neglect: adult retrospective reports. Aggress Violent Beh .6: 547-578.
5. Sesar K, Živcic-Becirevic I, Sesar D (2008) Multi-type maltreatment in childhood and Psychological adjustment in adolescence: questionnaire study among adolescents in Western Herzegovina Canton. Croat Med J 49: 243-256.
6. Nguyen HT, Dunne MP, Le AV (2010) Multiple types of child maltreatment and adolescent mental health in Viet Nam. Bull World Health Organ 88: 22-30.
7. Finkelhor D, Ormrod RK, Turner HA, Hamby SL (2005) Measuring poly-victimization using the Juvenile Victimization Questionnaire. 29: 1297-1312.
8. Finkelhor D, Ormrod RK, Turner HA (2007) Polyvictimization and trauma in a national longitudinal cohort. 19: 149-166.
9. Finkelhor D, Hamby SL, Ormrod R, Turner H (2005) The Juvenile Victimization Questionnaire: reliability, validity, and national norms .29: 383-412.
10. Dong F, Cao F, Cheng P, Cui N, Li Y (2013) Prevalence and associated factors of poly-victimization in Chinese adolescents. 54: 415-422.
11. Finkelhor D, Shattuck A, Turner HA, Ormrod R, Hamby SL (2011) Poyvictimization in developmental context. J Child Adolesc Trauma 4 : 291-300.
12. Alvarez-Lister MS, Pereda N, Abad J, Guilera G; GReVIA (2014) Polyvictimization and its relationship to symptoms of psychopathology in a southern European sample of adolescent outpatients. 38: 747-756.
13. Ford JD, Elhai JD, Connor DF, Frueh BC (2010) Poly-victimization and risk of posttraumatic, depressive, and substance use disorders and involvement in delinquency in a national sample of adolescents. 46: 545-552.
14. Hamby SL, Finkelhor D, Ormrod RK, Turner HA (2004) The Juvenile Victimization Questionnaire (JVQ): Administration and Scoring Manual. Durham, NH Crimes against Children Research Center.
15. Martin CG, Cromer LD, Deprince AP, Freyd JJ (2013) The Role of Cumulative Trauma, Betrayal, and Appraisals in Understanding Trauma Symptomatology. 52: 110-118.
16. Myers HF (2009) Ethnicity- and socio-economic status-related stresses in context: an integrative review and conceptual model. J Behav Med 32: 9-19.
17. Soler L, Paretilla C, Kirchner T, Forns M (2012) Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents. Eur Child Adolesc Psychiatry 21: 645-653.
18. Crick NR, Casas JF, Nelson DA (2002) Toward a more comprehensive understanding of peer maltreatment: studies of relational victimization. CurrDirPsycholSci11 : 98-101.
19. Seals D, Young J (2003) Bullying and victimization: prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. Adolescence 38: 735-747.
20. Schwab-Stone M, Koposov R, Vermeiren R, Ruchkin V (2012) Cross-cultural findings on Community violence exposure and Internalizing Psychopathology: comparing adolescents in the United States, Russia and Belgium. Child Psychiat Hum D 44: 516-524.
21. Tolin DF, Foa EB (2006) Sex differences in trauma and posttraumatic stress disorder: a quantitative review of 25 years of research. Psychol Bull 132: 959-992.
22. Zona K, Milan S (2011) Gender differences in the longitudinal impact of exposure to violence on mental health in urban youth. J Youth Adolesc 40: 1674-1690.
23. GENCAT (2010-2011). Informacióestadística 2010-2011 (Statistical information 2010-2011. Generalitat de Catalunya. Department d'Ensenyament.
24. Hollingshead AB (1975) Four factor index of social status. Working Paper. New Haven, Yale University.
25. Turner HA, Finkelhor D, Ormrod R (2010) Poly-victimization in a national sample of children and youth. Am J Prev Med 38: 323-330.
26. Forns M, Kirchner T, Soler L, Paretilla C (2013) Spanish/Catalan version of the Juvenile Victimization Questionnaire (JVQ): Psychometric properties. Anuario de Psicologia/The UB Journal of Psychology 43:171-187.

27. Roskam I, Stievenart M, Tessier R, Muntean A, Escobar MJ, et al. (2014) Another way of thinking about ADHD: the predictive role of early attachment deprivation in adolescents' level of symptoms. Soc Psychiatry PsychiatrEpidemiol 49: 133-144.

28. Roskam I, Stievenart M, Tessier R, Muntean A, Escobar MJ, et al. (2014) Another way of thinking about ADHD: the predictive role of early attachment deprivation in adolescents' level of symptoms. Soc Psychiatry PsychiatrEpidemiol 49: 133-144.

29. Ivanova MY, Achenbach TM, Rescorla LA, Dumenci L, Almqvist F, et al. (2007) The generalizability of the Youth Self-Report syndrome structure in 23 societies. J Consult ClinPsychol 75: 729-738.

30. Nilsson D, Gustafsson PE, Svedin CG (2010) Self-reported potentially traumatic life events and symptoms of post-traumatic stress and dissociation. Nord J Psychiatry 64: 19-26.

31. Lila M, Herrero J, Gracia E (2008) Multiple victimization of Spanish adolescents: a multilevel analysis. Adolescence 43: 333-350.

32. Rossman BBR, Rosenberg M (1998) Multiple victimization of children: Conceptual, developmental, research, and treatment issues. Binghamton, NY: Haworth Press.

33. Saunders BE (2003) Understanding children exposed to violence: Towards an integration of overlapping fields. J Interpers Violence 18: 356-376.

34. Dong M, Anda RF, Felitti VJ, Dube SR, Williamson DF, et al. (2004) The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. Child Abuse Negl 28: 771-784.

35. Sabina C, Straus MA (2008) Polyvictimization by dating partners and mental health among U.S. college students. Violence Vict 23: 667-682.

36. Martínez-Taboas A, Canino G, Wang MQ, García P, Bravo M (2006) Prevalence and victimization correlates of pathological dissociation in a community sample of youths. J Trauma Stress 19: 439-448.

37. Elzy M, Clark C, Dollard N, Hummer V (2013) Adolescent Girls' use of avoidant and approach coping as moderators between trauma exposure and trauma symptoms. J Fam Violence 28: 763-770.

38. Sandberg DA, Matorin AI, Lynn SJ (1999) Dissociation, posttraumatic symptomatology, and sexual revictimization: a prospective examination of mediator and moderator effects. J Trauma Stress 12: 127-138.

39. van der Kolk BA, Roth S, Pelcovitz D, Sunday S, Spinazzola J (2005) Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. J Trauma Stress 18: 389-399.

40. Ford JD, Wasser T, Connor DF (2011) Identifying and determining the symptom severity associated with polyvictimization among psychiatrically impaired children in the outpatient setting. Child Maltreat 16: 216-226.

41. Stasik SM, Naragon-Gainey K, Chmielewski M, Watson D (2012) Core OCD symptoms: exploration of specificity and relations with psychopathology. J Anxiety Disord 26: 859-870.

42. Storch EA, Heidgerken AD, Adkins JW, Cole M, Murphy TK, et al. (2005) Peer victimization and the development of obsessive-compulsive disorder in adolescence. Depress Anxiety 21: 41-44.

43. Storch EA, Ledley DR, Lewin AB, Murphy TK, Johns NB, et al. (2006) Peer victimization in children with obsessive-compulsive disorder: relations with symptoms of psychopathology. J Clin Child AdolescPsychol 35: 446-455.

44. Turner HA, Finkelhor D, Ormrod R (2010) Child mental health problems as risk factors for victimization. Child Maltreat 15: 132-143.

45. BadourChL, Brown S, Adams Th, Bunaciu L, Feldner MT (2012) Specificity of Fear and Disgust Experienced During Traumatic Interpersonal Victimization in Predicting Posttraumatic Stress and Contamination-Based Obsessive-Compulsive Symptoms. J Anxiety Disord 26: 590-598.

46. Zimmerman GM, Farrell AS (2013) Gender differences in the effects of parental underestimation of youths' secondary exposure to community violence. J Youth Adolesc 42: 1512-1527.

47. Gilbert R, Fluke J, O'Donnell M, Gonzalez-Izquierdo A, Brownell M, et al. (2012) Child maltreatment: variation in trends and policies in six developed countries. Lancet 379: 758-772.