

Lifetime Poly-Victimization and Psychopathological Symptoms in Mexican Adolescents

Abstract

Background: There is a lack of research on the impact of poly-victimization in mental health in Mexico. Objective: The purpose of this study was to analyze the relationship between poly-victimization and both internalizing and externalizing symptoms, in a community sample of Mexican adolescents. Participants and settings: The sample comprised 1,068 adolescents from public schools in Morelia city (Western Mexico). Adolescents completed the Mexican version of the Juvenile Victimization Questionnaire and the Latino version of the Youth Self Report. Methods: Hierarchical regression analyses were conducted to determine the contributions of victimization and poly-victimization in predicting internalizing and externalizing symptomatology. Results: Poly-victimization accounted for more variability in scores of externalizing and internalizing symptoms than a single type of victimization. Even when poly-victimization was considered, conventional crimes contributed to predicting both internalizing and externalizing symptoms. Being a girl and a victim of caregiver victimization were predictors of internalizing symptoms. Conclusions: This is the first study in Mexico analyzing the impact of being a poly-victim. Our results should be taken into consideration by clinicians and those who design public policies. Conventional crimes need to be specifically addressed when assessing Mexican adolescents.

Keywords: poly-victimization, victimization, internalizing symptoms, externalizing symptoms, adolescence.

Lifetime Poly-Victimization and Psychopathological Symptoms in Mexican Adolescents

Although child victimization has been internationally recognized as a serious concern due to the negative consequences on the victim's mental health (see, for example, Cecil et al., 2017), it has been difficult to understand the true scope of being a victim of interpersonal violence. This is in part because the different types of experience in this field have been studied individually and independently (Finkelhor et al., 2007).

For example, multiple studies have analyzed the negative consequences of child sexual abuse (Chen et al., 2010; Hillberg et al., 2011), and have related this experience to depression (Maniglio, 2010), anxiety (Maniglio, 2013), suicidal behavior (Devries et al., 2014; Maniglio, 2011b; Ng et al., 2018), substance-related disorders (Maniglio, 2011a), and borderline personality disorders (de Aquino Ferreira et al., 2018), among others. There have also been several reviews assessing the effects of physical abuse (Sousa et al., 2018; Sugaya et al., 2012; van der Put et al., 2015), neglect (Mills et al., 2013; Pignatelli et al., 2017), emotional abuse (Kwok et al., 2019), exposure to domestic violence (Evans et al., 2008), exposure to community violence (Cuartas & Roy, 2019; Fausiah et al., 2019) and peer victimization (Maniglio, 2017; Reijntjes et al., 2011). Other studies have assessed several forms of sexual, physical, and emotional abuse and witnessing domestic violence and have shown the relation of these experiences to psychosis (Bonoldi et al., 2013), dissociation (Vonderlin et al., 2018), schizophrenia (Matheson et al., 2013), bipolar affective disorder (Palmier-Claus et al., 2016), depression and anxiety (Gallo et al., 2018; Lindert et al., 2014), suicidal behavior (Zatti et al., 2017), eating disorders (Caslini et al., 2016), and obesity (Danese & Tan, 2014).

However, analyzing the effects of specific types of victimization individually does not show the real consequences of multiple violent experiences (Finkelhor et al., 2007). Exposure to

multiple forms of victimization has been called poly-victimization by Finkelhor and colleagues (Finkelhor et al., 2007), who demonstrated that for some children violence is not a specific event but a chronic condition. It has been shown that poly-victimization is linked with worse mental health outcomes than a single kind of victimization, and even more so than a single kind of victimization suffered during repeated episodes (Finkelhor et al., 2007, 2011; Turner et al., 2006). Several studies carried out with community samples around the world have found that poly-victimization is a better predictor of psychopathology than a single category of victimization. For instance, Finkelhor et al. (2007) in the United States and Cyr et al. (2014) in Canada found that poly-victimization was the best predictor of trauma symptoms (anger, depression and anxiety), eclipsing the influence of individual victimization types. Richmond et al. (2009) in the United States found that poly-victimization is a better predictor of psychological distress than individual victimization types. In Sweden, Aho et al. (2016) found that poly-victimization was the best predictor for trauma symptoms except for child maltreatment in males and sexual victimization in females. Ellonen & Salmi (2011) in Finland reported that poly-victimization predicted internalizing and externalizing behavior better than victimization did. In China, Chan (2013) found that being a poly-victim predicted PTSD, depression and suicidal ideation better than being a victim of less than three types of victimization.

Poly-Victimization and Mental Health in Mexico

Some studies of Mexican samples have described the impact of child victimization on mental health, both on internalizing and externalizing syndromes. For example, Leiner et al. (2015) studied a sample of 316 children between 18 months and 5 years old from the city of Ciudad Juárez and found that being exposed to conventional crimes and community violence attributed to organized crime increased the risk of emotional and behavioral problems. Other

studies have shown that family violence is associated with risk of substance use in adolescents (Caballero et al., 2010), impulsivity (Cortés & Sierra, 2011) and posttraumatic stress disorder (Erolin et al., 2014). Martínez et al. (2018) reported that female adolescents who suffered child maltreatment presented a higher risk of developing PTSD, depression and anxiety. In another study a relationship was found between childhood sexual abuse and abnormal eating behavior (Unikel-Santoncini et al., 2011). Vanega-Romero et al. (2018) reported that victims of bullying presented significantly more depressive symptomatology and anger. Teen dating violence has also been associated with internalizing symptoms in victims (Ludin et al., 2018).

However, despite a growing body of literature showing the importance of assessing the co-occurrence of victimization experiences and their relationship with negative mental health outcomes, as mentioned above, studies in Mexico have focused on individual categories of victimization, or a combination of a few categories, and there has been a lack of research on the impact of poly-victimization.

The current study

The high prevalence of victimization in Mexican children and adolescents (see the national study by Frías & Finkelhor, 2017) and the lack of attention to the study of poly-victimization in Central and South America [with the exception of various studies carried out in Chile (see, for example, Guerra et al., 2017; Pinto Cortez et al., 2019)] are important needs that should be addressed. In this context, the main objective of the present study was to analyze the relationship between poly-victimization and symptoms of psychopathology, both internalizing and externalizing, in a community sample of Mexican adolescents. Following previous international studies (e.g., Cyr et al., 2017, 2014; Ellonen & Salmi, 2011; Richmond et al., 2009) the key hypothesis of this study was that poly-victimization would be a better predictor of internalizing

and externalizing symptoms than individual categories of victimization, opening new lines of intervention for child and adolescent victims in Mexico.

Method

Sample

Participants were recruited from six public middle-high schools and high schools in Morelia city (Western Mexico) with two inclusion criteria: they had to be between 12–17 years old and they had to have enough cognitive skills to understand the questionnaires. In total, the convenience sample comprised 1,068 students (506 females and 564 males) with a mean age of 14.45 years ($SD = 1.54$). Table 1 shows the main characteristics of the sample.

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Measures

Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005). The Spanish version of the questionnaire (Pereda et al., 2018) was adapted to the Mexican culture with the authors' permission. Two new items were added to the survey because of the high frequency of kidnapping in Mexico (Instituto Nacional de Estadística y Geografía, 2016), one to the conventional crime domain and the other to the witnessing or indirect victimization domain. This version of the JVQ described 38 forms of victimization divided into six areas: (a) conventional crime (10 items), (b) caregiver victimization (4 items), (c) peer and sibling victimization (6 items), (d) sexual victimization (6 items), (e) witnessing and indirect victimization (10 items), and (f) electronic victimization (2 items). Previous research in the JVQ and its Spanish version has demonstrated that the instrument has good reliability and validity in assessing the experiences of violence in children and adolescents (Finkelhor et al., 2005; Pereda et al., 2018).

Youth Self Report (YSR; Achenbach & Rescorla, 2001). The YSR is a questionnaire that assesses social competence, adaptive functioning and psychological distress in adolescents from 11–18 years old. It consists of 119 items rated on a Likert scale (*not true or infrequent, anyway or sometimes, very true or frequently true*). The YSR items are grouped in order to specify measures of: a) a score for internalizing problems (which includes three sub-scales depression/anxiety, depression/introversion and somatic problems); a score for externalizing problems (which is formed by two sub-scales: transgression of norms and aggressive behavior); and c) a total problems score (which includes internalizing and externalizing scales). The Latin Spanish translation provided by the Achenbach system of empirically based assessment (ASEBA) was used. The psychometric qualities of the instrument are widely recognized internationally and it has been shown that its structure is applicable in different societies (Ivanova et al., 2007; Rescorla et al., 2012).

Procedure

This cross-sectional study was guided by the Mexican General Law for Children and Adolescents (Ley General de Niños, Niñas y Adolescentes, approved in 2014) and was approved by the research department of the Universidad Latina de América (located in Morelia, Mexico). We sent an invitation to take part in the study to 10 schools in different neighborhoods in Morelia City. We asked the directors of schools who agreed to participate to choose two groups from each school year to apply the instruments. The participants' parents were informed about the research aims and signed an informed consent allowing the adolescents to answer the questionnaires. The participants were informed about the research aims and were told that their participation was anonymous and voluntary; they then gave oral assent to take part in the study.

The instruments were applied by the main researcher and two senior college psychology students in the adolescents' school classes in early 2016.

Data analysis

The dependent variables corresponded to raw scores of YSR internalizing and externalizing symptoms and YSR total problems. Regarding the independent variables, poly-victimization was determined by summing the total number of victimization types experienced by each participant (38). In order to avoid overlap among items (see Finkelhor, Hamby, Ormrod, & Turner, 2005), we decided to use a dichotomous scoring system to construct an aggregate domain for each individual victimization, scoring 1 for adolescents who answered *yes* in at least one of the screening items in each domain and 0 for participants who answered *no* to all questions in each aggregate domain. In order to determine the prevalence of several forms of victimization descriptive analyses were carried out. Odds ratios were conducted with the purpose of determining whether there were differences between gender and age, when the 95% confidence interval did not include the value "1" ($p < .05$). Following the procedure previously used by Finkelhor et al. (2007), Richmond et al. (2009) and Cyr et al. (2014), hierarchical regression analyses were performed to determine the contributions of each individual victimization type (*conventional crimes, caregiver victimization, peer and sibling victimization, sexual victimization, witnessing victimization and electronic victimization*) and poly-victimization (number of victimizations experienced by adolescents during their lifetime) in predicting internalizing and externalizing symptomatology. We conducted separate regression analyses, controlling for age and gender variables. First, each individual victimization type in turn was entered in the equation, followed by poly-victimization. Then we reversed the analyses, introducing poly-victimization as the first variable and adding the individual victimization

category. We also conducted another set of hierarchical regression analyses, including all six victimization categories in the second step, after controlling for sex and gender. Poly-victimization was entered as a third step. Standardized regression coefficients (beta) are presented. All regression analyses are based on cases with no missing values.

Results

Experiences of Victimization

Most of the adolescents (85.5%) reported at least one experience of victimization during their lives. There were no statistically significant differences between boys and girls (85.3% of males and 85.7% of females, $OR = 1.03$, 95% CI [0.73, 1.45]). The number of victimizations ranged from 1 to 21, the mean was 4.51 ($SD = 3.14$) and 40% of the sample had an above average number of victimizations. The top 10% of the sample with the highest level of victimization were identified as lifetime poly-victims. The 90th percentile was 11 or more victimizations. Table 2 shows the prevalence of lifetime victimization classified in the JQV categories, as well as the differences between gender and age groups.

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Hierarchical Regression Analysis

The relative contribution of individual types of victimization and poly-victimization in predicting YSR externalizing and internalizing symptoms and YSR total problems is presented in Table 3.

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When individual victimizations were introduced in the second step, after controlling for age and gender variables, all individual categories of victimization predicted psychopathological symptoms. The variance explained by the models ranged from 3% to 8% for YSR externalizing

symptoms, from 8% to 14% for internalizing symptoms and from 5% to 13% for total problems. Adding poly-victimization as a third step in the regression models increased the explained variance in predicting symptoms of psychopathology by 3% to 11%.

When the equation was reversed by introducing poly-victimization in the second step, after controlling for age and gender variables, poly-victimization accounted for a significant proportion of variability, beyond the contribution of any single victimization. Poly-victimization accounted for 10% of the variation in externalizing symptoms, 18% for internalizing symptoms and 18% for total problems across the models. After poly-victimization was taken into account only *conventional crimes* made a significant contribution to variability in all measures of psychopathological symptoms, *witnessing victimization* contributed significantly to internalizing symptoms and total problems, and *caregiver victimization* accounted for internalizing symptoms. However, the contribution was less than 1%.

Table 4 shows the results of the effects of individual victimizations and poly-victimization on psychopathological symptoms. In the first equation only gender and age variables were included. Results from multiple hierarchical regression analysis indicated a significant positive association between the sociodemographic variables age and gender, and YSR internalizing symptoms and YSR total problems. Older adolescents and girls presented more psychopathological symptoms than younger adolescents and boys.

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When all six individual victimizations were entered as a second step, the association between age and psychopathological symptoms was not significant. Nevertheless, girls maintained their predictive value for internalizing symptoms and total problems. The second model shows that all of the individual victimizations were significant predictors of YSR total

problems, except *witnessing victimization*. Externalizing symptoms presented a similar pattern, with only *sexual victimization* and *witnessing victimization* having no predictive power.

Regarding internalizing symptoms, these were predicted by almost all aggregate categories of victimization excluding *peer and sibling victimization* and *witnessing victimization*.

Conventional crimes were a strong predictor of all the psychopathological symptoms in equation 2.

Adding poly-victimization in equation 3 reduced to non-significance the predictive power of almost all aggregate categories of victimization, and made it the strongest predictor of psychopathological symptoms. *Conventional crimes* maintained its predictive power in the three measures of psychopathology. *Gender* and *caregiver victimization* also continued being predictors of internalizing symptoms and total problems. When poly-victimization was added to the model, *witnessing victimization* became a predictor of fewer internalizing symptoms and total problems.

Discussion

The main objective of this study was to analyze the relationship between poly-victimization and symptoms of psychopathology in adolescents, making it the first study about the impact of poly-victimization in Mexico. This issue has received little attention in Latin America and is highly relevant for planning effective future interventions with the most victimized youth.

At a descriptive level, most of the adolescents assessed reported experiencing at least one type of victimization during their lifetime. Being a victim of conventional crimes and indirect victimization were the most reported victimizations. This pattern has been reported previously (Méndez-López & Pereda, 2019) and can be framed in the context of community violence

experienced in Mexico, attributed mainly to problems with organized crime (Shirk & Wallman, 2015).

The results of the hierarchical regression analyses confirmed what previous international research has demonstrated, that is that poly-victimization predicts psychopathology better than single categories of victimization (Turner et al., 2006). Thus, every single victimization was significantly associated with externalizing symptoms, but when poly-victimization was considered, only *conventional crimes* maintained a significant relationship, although the strength of the association dropped. Previous studies have shown a direct relationship between externalizing behaviors and poly-victimization among adolescents in community samples (Cudmore et al., 2017). Regarding internalizing symptoms and total problems, most of the categories were eclipsed by poly-victimization and for those which maintained a relationship, i.e. *conventional crimes*, *caregiver victimization* and *witnessing victimization*, the strength of the relationship was substantially reduced. These results are consistent with previous international findings using community samples and the same instrument of victimization, assessing internalizing symptoms (Játiva & Cerezo, 2014), and specific internalizing problems such as depression and anxiety (Cyr et al., 2014; Finkelhor et al., 2007), social anxiety disorder (Gren-Landell et al., 2011), suicidal ideation and suicidal behavior (Soler et al., 2013; Turner et al., 2012).

The current study shows that poly-victimization has an effect on internalizing and externalizing symptoms; thus, the evaluation of poly-victimization should be considered in adolescents showing these types of symptoms. As Cuevas et al. (2009) has shown, the relationship between victimization and psychopathology is complex, since psychopathology could be a risk factor for victimization or a consequence of it. Our findings also confirm the

importance of not focusing on just one kind of victimization, in order to avoid attributing the worst mental health outcomes to a particular type of victimization when, in fact, the worst consequences in mental health are associated with cumulated victimization experiences.

In our sample, *conventional crimes* were predictive of externalizing and internalizing symptoms, and of total problems when poly-victimization and all victimizations assessed were taken into account. These results are consistent with those obtained in previous international studies (see for example, the effect of conventional crimes on girls in the study by Soler et al., 2015 in Spain), and should be interpreted in the context of the serious community violence that Mexico has been experiencing for more than the last 10 years (Leiner et al., 2012, 2015; Quiroga et al., 2015). Based on our results, Mexican adolescents who experience conventional crimes might have more risk of psychopathology than adolescent victims of other forms of violence.

As other authors have reported (Boyd et al., 2015; du Plessis et al., 2015), our results showed that girls are most likely to present internalizing symptoms. Also, and in line with previous Latin American studies (Pinto-Cortez et al., 2017), girls reported more experiences of caregiver victimization than boys, and this kind of victimization was predictive of internalizing symptoms and total problems when poly-victimization and all types of victimization were considered. Victims of caregiver victimization have been found to be between 1.3 and 2.5 times more likely to experience internalizing problems (Sternberg et al., 2006). Research has repeatedly shown that child abuse and neglect lead to internalizing psychiatric symptoms and disorders linked to depression and anxiety, including posttraumatic stress (with a 1.5- to 3-fold increase in risk), and a 2- to 3.5-fold higher risk of suicidal ideation and attempted suicide among young people (Norman et al., 2012). Thus, our findings are consistent with previous research

about the negative effects of caregiver victimization on the psychological adjustment of children and youth (Pérez-González et al., 2017), especially in girls.

Being an indirect victim or exposed to community/family violence was a protective factor for internalizing problems and total problems. This was previously demonstrated by Cyr et al. (2014), using the same victimization instrument in Canada. The authors attribute this surprising result to the possibility that in indirect victims there is no change in their assumptions about the benevolence of the world and their own worth, as in direct victimization. Therefore, in this case, adolescents' self-esteem could be a mediator variable in the relationship between witnessing victimization and internalizing symptoms. Nevertheless, this finding needs more research to support any explanation related to it.

Practical Implications

The current study has several practical implications. Being the first study in Mexico on the impact of poly-victimization on adolescents' mental health, it lays the foundation for subsequent research on this subject in the country. Our research also highlights the importance of expanding the types of victimization evaluated by treatment providers. In addition, treatment planning should take into account the complex relationship between poly-victimization and psychopathology mentioned above. Our results also show the high levels of victimization and poly-victimization experienced by adolescents and the serious consequences of it for their wellbeing. The fact that poly-victimization was the best predictor of externalizing and internalizing symptoms also suggests the need to design strategies to prevent it from occurring. We found important features of victimization for Mexican adolescents that should be considered when designing public policies. Thus, despite the high levels of community violence documented in the country (Instituto Nacional de Estadística y Geografía, 2018), little is known about

adolescents' experiences of conventional crimes. Our findings showed the serious consequences of this type of victimization in our sample and that it should not be overlooked. Future research and national criminological surveys need to include adolescents' responses to this type of experience.

Limitations

There are several limitations that need to be recognized in the interpretation of these results. The sample included only schooled adolescents from a particular city in Mexico, and therefore, even though our results are similar to those obtained with a representative sample of Mexican youth (Frías & Finkelhor, 2017), our results cannot be generalized to the entire Mexican adolescent population. As this investigation had a cross-sectional design, we cannot determine a causal relationship between poly-victimization and psychopathology.

Psychopathological symptoms could be both the result of poly-victimization or a risk factor (Cuevas et al., 2009). Another limitation is the lack of information on the sequence of victimizations and the possible mediators that could have an effect on the association between poly-victimization and mental health. Cyr et al. (2014) warned that not much is known about the mechanism underlying the relationship between poly-victimization and psychological symptoms or about the factors that could play a protective role in this relationship. Since our study was unable to distinguish those variables, we may not be able to completely measure both the relative importance of unique victimization against poly-victimization and the association between poly-victimization and mental health.

Conclusion

Despite its limitations, the present study demonstrates the need to increase research in Mexico, and Latin America in general, on the co-occurrence of multiple victimizations and its

consequences for children's and adolescents' mental health, paying attention to gender differences. The relationship found between being a poly-victim and internalizing and externalizing symptoms should be taken into consideration by clinicians and those who design public policies. Children and youth should be comprehensively assessed regarding their victimization experiences, identifying those youth at higher risk of psychological problems and the need for intervention. The use of a gold-standard instrument, such as the JVQ, allowed us to contextualize the problem by comparing our results with other studies that used the same questionnaire. As a consequence of this, cultural differences have been shown to be important, and our results highlight the fact that conventional crimes need to be specifically addressed when assessing Mexican adolescents.

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Table 1.

Sample characteristics

Variable	Total	
	<i>n</i>	%
Age		
12–14	519	48.6
15–17	549	51.4
Family composition		
Two parents	716	67.5
Single parent (mother)	226	21.3
Single parent (father)	20	1.9
Mother and stepfather	56	5.3
Father and stepmother	11	1.0
Other	22	6.0
Refuse to answer	7	0.7
Parent's education		
Father		
No education or unfinished primary school	62	7.5
Primary school	158	19.1
Middle high school	331	40.0
High school	187	22.6
University	85	10.3
Above university	4	0.5
Currently working	878	92.0
Mother		
No education or unfinished primary school	52	5.7
Primary school	151	16.7
Middle high school	388	42.9
High school	228	25.2
University	81	9.0
Above university	5	0.6
Currently working	457	44.2

Table 2.

Lifetime victimization in Mexican adolescents

Victimization	Lifetime victimization									
	Victimized		Age group (%)				Gender (%)			
	<i>n</i>	%	12–14	15–17	OR	95% C.I.	<i>M</i>	<i>F</i>	<i>OR</i>	95% C.I.
C. Conventional crimes	701	65.6	63.6	67.6	1.19	0.92-1.53	67.2	63.9	0.86	0.67-1.11
Property victimization	574	53.7	54.5	53.0	0.94	0.73-1.19	54.4	53.0	0.94	0.71-1.20
C1. Robbery	146	13.7	14.9	12.6	0.82	0.58-1.16	15.7	11.5	0.69*	0.49-0.99
C2. Personal theft	343	32.3	30.9	33.3	1.12	0.87-1.45	29.9	34.9	1.25	0.97-1.62
C3. Vandalism	334	31.4	34.2	28.7	0.77	0.59-1.00	32.5	30.2	0.89	0.69-1.16
Crimes against persons	453	42.4	35.5	49.0	1.74*	1.36-2.23	45.6	38.9	0.76*	0.59-0.97
C4. Assault with a weapon	128	12.1	6.8	17.0	2.81*	1.87-4.24	16.8	6.8	0.36*	0.23-0.54
C5. Assault without a weapon	151	14.2	8.5	19.6	2.60*	1.79-3.79	16.5	11.7	0.67*	0.47-0.95
C6. Attempted assault	115	10.8	9.9	11.7	1.20	0.81-1.78	10.9	10.7	0.98	0.66-1.44
C7. Threatened assault	228	21.5	17.8	24.9	1.52*	1.13-2.05	23.4	19.3	0.78	0.58-1.04
C8. Attempted kidnapping	31	2.9	2.7	3.1	1.15	0.56-2.36	2.3	3.6	1.55	0.75-3.21
C9. Kidnapping	6	0.6	0.8	0.4	0.47	0.86-2.57	0.5	0.6	1.11	0.22-5.54
C10. Bias attack	76	7.1	5.8	8.4	1.48	0.92-2.39	6.2	8.2	1.33	0.83-2.12
M. Caregiver victimization	361	33.8	27.9	39.3	1.67*	1.29-2.16	29.1	39.1	1.56*	1.21-2.02
M1. Physical abuse	223	21.0	17.8	23.9	1.45*	1.07-1.95	20.2	21.9	1.10	.082-1.48
M2. Psychological/emotional abuse	219	20.7	15.7	25.4	1.82*	1.34-2.47	14	28.3	2.42*	1.78-3.30
M3. Neglect	22	2.1	1.4	2.8	2.05	0.83-5.08	1.4	2.8	1.97	0-82-4.75
M4. Custodial interference/family abduction	51	4.8	4.7	5.0	1.06	0.60-1.87	3.0	6.8	2.32*	1.28-4.20

P. Peer and sibling victimization	522	48.9	44.1	53.4	1.44*	1.13-1.84	51.4	46.0	0.80	0.63-1.02
P1. Gang or group assault	97	9.1	5.4	12.7	2.52*	1.60-3.99	12.9	5.0	0.35*	0.22-0.56
P2. Peer or sibling assault	282	26.7	26.4	26.9	1.02	0.78-1.35	25.7	27.8	1.11	0.84-1.46
P3. Non-sexual genital assault	122	11.5	9.7	13.2	1.41	0.96-2.07	17.7	4.6	0.22*	0.13-0.35
P4. Physical intimidation	84	7.9	7.6	8.2	1.09	0.70-1.71	5.9	10.1	1.81*	1.14-2.85
P5. Verbal/relational aggression	171	16.1	13.2	18.9	1.53*	1.09-2.13	12.3	20.3	1.80*	1.29-2.52
P6. Dating violence	48	4.5	3.7	5.3	1.46	0.81-2.64	6.4	2.4	0.35*	0.18-0.69
S. Sexual victimization	161	15.1	11.9	18	1.62*	1.15-2.28	9.8	21.0	2.46*	1.73-3.50
With physical contact	107	10.0	7.3	12.6	1.82*	1.20-2.75	5.7	14.9	2.90*	1.88-4.48
S1. Sexual abuse/assault by a known adult	56	5.3	3.5	7.0	2.07*	1.16-3.68	1.8	9.2	5.56*	2.77-11.14
S2. Sexual abuse/assault by an unknown adult	24	2.3	1.9	2.6	1.32	0.58-3.01	0.9	3.8	4.37*	1.62-11.80
S3. Sexual abuse/assault by a peer /sibling	30	2.8	1.9	3.7	1.92	0.89-4.15	2.7	3.0	1.11	.541-2.31
S4. Forced sex (including attempts)	29	2.7	1.4	4.0	3.04*	1.29-7.19	1.6	4.0	2.54*	1.14-5.64
Without physical contact	84	7.9	6.7	8.9	1.35	0.86-2.12	6.4	9.5	1.54	0.98-2.42
S5. Flashing/sexual exposure	54	5.1	4.1	6.0	1.51	0.86-2.65	5.0	5.2	1.03	0.59-1.79
S6. Verbal sexual harassment	38	3.6	3.3	3.8	1.17	0.61-2.24	2.0	5.4	2.83*	1.38-5.76
W. Witnessing and indirect victimization	652	61.0	54.5	67.2	1.71*	1.33-2.19	59.6	62.7	1.14	0.89-1.46
Family violence	201	18.8	16.2	21.3	1.40*	1.02-1.91	14.9	23.2	1.72*	1.26-2.35
W1. Witness to domestic violence	139	13.1	11.4	14.6	1.32	0.92-1.90	11.1	15.3	1.45*	1.01-2.07

W2. Witness to parent assault to sibling	93	8.8	7.4	10.1	1.40	0.91-2.17	6.1	11.7	2.05*	1.32-3.18
Community violence	602	56.4	50.1	62.3	1.64*	1.29-2.10	55.9	56.9	1.04	0.82-1.33
W3. Witness to assault with a weapon	268	25.3	19.2	31.0	1.88*	1.41-2.50	27.8	22.5	0.75*	0.57-0.99
W4. Witness to assault without a weapon	224	21.1	23.1	19.0	1.28	0.95-1.72	21.3	20.9	0.97	0.72-1.31
W5. Burglary of family house	158	14.9	14.7	15.0	1.02	0.72-1.43	12.5	17.5	1.48*	1.05-2.08
W6. Murder of family member or friend	170	16.0	13.6	18.3	1.42*	1.02-1.99	13.1	19.3	1.59*	1.14-2.21
W7. Witness to a murder	88	8.3	6.8	9.7	1.47	0.94-2.30	9.5	7.0	0.71	0.45-1.11
W8. Exposure to random shootings, etc.	244	23.0	21.3	24.5	1.19	0.89-1.59	24.1	21.7	0.87	0.65-1.16
W9. Exposure to war or ethnic conflict	33	3.1	1.7	4.4	2.58*	1.19-5.61	3.6	2.6	0.71	0.35-1.45
W10. Witness to a kidnapping	28	2.6	2.3	2.9	1.26	0.59-2.70	2.7	2.6	0.96	0.45-2.04
INT. Electronic victimization	208	19.5	13.7	25.0	2.09*	1.52-2.87	15.1	24.4	1.81*	1.33-2.47
INT1. Harassment	113	10.6	7.9	13.2	1.76*	1.17-2.63	8.1	13.5	1.78*	1.20-2.65
INT2. Sexual solicitations	150	14.1	10.1	17.9	1.94*	1.35-2.79	10.2	18.5	2.00*	1.40-2.85

Table 3.

Contribution of individual victimization and poly-victimization to predicting externalizing and internalizing symptoms.

Conventional Crimes		Adding Poly-victimization	Poly-victimization	Adding Conventional Crimes	
	R ²	R ² Change	R ²	R ² Change	Total Variance
Externalizing problems YSR	.08**	.03**	.10**	.012**	.11**
Internalizing problems YSR	.14**	.04**	.18**	.008*	.18**
Total problems YSR	.13**	.06**	.18**	.013**	.19**
Caregiver victimization		Adding Poly-victimization	Poly-victimization	Adding Caregiver Victimization	
	R ²	R ² Change	R ²	R ² Change	Total Variance
Externalizing problems YSR	.04**	.06**	.10**	.00	.10**
Internalizing problems YSR	.13**	.05**	.18*	.006*	.18**
Total problems YSR	.10**	.09**	.18**	.003	.18**
Peer and Sibling Victimization		Adding Poly-victimization	Poly-victimization	Adding Peer and Sibling Victimization	
	R ²	R ² Change	R ²	R ² Change	Total Variance
Externalizing problems YSR	.06**	.04**	.10**	.002	.10**
Internalizing problems YSR	.10**	.07**	.18**	.001	.18**
Total problems YSR	.10**	.08**	.18**	.00	.18**

Sexual Victimization		Adding Poly- victimization		Poly- victimization		Adding Sexual Victimization		Total Variance
	R ²	R ² Change		R ²		R ² Change		
Externalizing problems YSR	.03*	.07**		.10**		.00		.10**
Internalizing problems YSR	.11**	.07**		.18**		.001		.18**
Total problems YSR	.08**	.10**		.18**		.001		.18**
Witnessing Victimization		Adding Poly- victimization		Poly- victimization		Adding Witnessing Victimization		Total Variance
	R ²	R ² Change		R ²		R ² Change		
Externalizing problems YSR	.03**	.07**		.10**		.001		.10**
Internalizing problems YSR	.08*	.11**		.18**		.01**		.19**
Total problems YSR	.05**	.14**		.19**		.01**		.19**
Electronic Victimization		Adding Poly- victimization		Poly- victimization		Adding Electronic Victimization		Total Variance
	R ²	R ² Change		R ²		R ² Change		
Externalizing problems YSR	.04**	.06**		.10**		.001		.10**
Internalizing problems YSR	.10**	.07**		.18**		.001		.18**
Total problems YSR	.08**	.10**		.18**		.001		.18**

* $p < .05$. ** $p < .001$.

Table 4.

Effects of poly-victimization and victimization on psychopathological symptoms.

	Equation (1)	Equation (2)	Equation (3)
Externalizing symptoms			
Gender (female =1)	.015	-.011	-.007
Age	.110***	.039	.036
Conventional crimes		.173***	.134***
Caregiver victimization		.073*	.029
Peer and sibling victimization		.104**	.057
Sexual victimization		.059	.023
Witnessing and indirect victimization		.015	-.027
Electronic victimization		.087**	.054
Poly-victimization			.169**
Adjusted R ²	.010**	.111***	.117**
Internalizing symptoms			
Gender (female =1)	.276***	.236***	.242***
Age	.093**	.025	.020
Conventional crimes		.179***	.109**
Caregiver victimization		.157***	.087*
Peer and sibling victimization		.051	-.024
Sexual victimization		.091**	.034
Witnessing and indirect victimization		-.050	-.118**
Electronic victimization		.082**	.030
Poly-victimization			.271***
Adjusted R ²	.077***	.185***	.201***
Total problems			
Gender (female =1)	.161***	.122***	.128***
Age	.140***	.055	.050
Conventional crimes		.204***	.141***
Caregiver victimization		.140***	.068*
Peer and sibling victimization		.104**	.026
Sexual victimization		.091**	.032
Witnessing and indirect victimization		-.032	-.102**
Electronic victimization		.105**	.051
Poly-victimization			.282***
Adjusted R ²	.038***	.191***	.209***

Standardized regression coefficients (beta) are presented.

* $p < .05$, ** $p < .001$, *** $p < .000$.