Poly-victimization and its association with protective and vulnerability variables in adolescence: The mediating role of self-esteem

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POLY-VICTIMIZATION AND ITS ASSOCIATION WITH PROTECTIVE AND VULNERABILITY VARIABLES IN ADOLESCENCE: THE MEDIATING ROLE OF SELF-ESTEEM

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"Ella está en el horizonte. Me acerco dos pasos, ella se aleja dos pasos. Camino diez pasos y el horizonte se corre diez pasos más allá. Por mucho que yo camine, nunca la alcanzaré. ¿Para qué sirve la utopía? Para eso sirve: para caminar"

Eduardo Galeano

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Preface

While I was studying for my Master's degree in Clinical and Health Psychology at the University of Barcelona, I was lucky enough to meet Dr. Maria Forns and Dr. Teresa Kirchner, who were looking for a research fellow for their project called "Poly-victimization and Resilience in Adolescence". This project was funded by the Spanish Ministry of Science and Innovation (PSI2009-11542), and since I was very interested in the topic of child maltreatment I immediately applied for a scholarship to be able to take part in the project. In 2010 I was awarded the "Formación de Profesional Investigador (FPI)/Training of Research Professionals" scholarship (BES-2010-032381) by the Spanish Ministry of Science and Innovation, which would cover my PhD training as a member of Dr. Forns and Dr. Kirchner's project.

I consider that these four years of the fellowship have helped me to grow in many aspects of my life, especially in the research field. First, being a fellow in such an active research group at the University of Barcelona has allowed me to write a number of articles and book chapters, and to participate in many national and international conferences organized all over the world. Moreover, while I was writing my PhD I was awarded a short PhD stay grant (EEBB-I-13-06618) by the Spanish Ministry of Economy and Competitiveness. This enabled me to visit a foreign university, the University of Monash in Melbourne (Australia), where I learnt an enormous amount from two internationally recognized clinicians and researchers, Dr. Neerosh Mudaly and Dr. Christopher Goddard.

During my fellowship I also studied a postgraduate course in Child Maltreatment at the Universidad Nacional de Educación a Distancia (UNED) and a Master's degree in Early Child Intervention at the Universitat Ramon Llull (URL), which I believe were the ideal complement to my PhD. These studies have allowed me to expand my skills in the field of child psychology, and more specifically in the area of child protection. I also had the chance to teach classes on the course of Psychological Assessment at the University of Barcelona. I was able to continue my clinical training doing an internship in several centres both in Barcelona and in Melbourne: the Child and Juvenile Mental Health Centre Sant Pere Claver (CSMIJ Sant Pere Claver, Barcelona) the *Rella* Centre

of Child Development and Early Attention (CDIAP Rella, Barcelona), the Australian Childhood Foundation (Melbourne, Australia), and the WAYSS - Southern Women's Integrated Support Services (Melbourne, Australia).

In a nutshell, my participation in the "Poly-victimization and Resilience in Adolescence" project has represented a great opportunity to learn from excellent academic people and clinicians, and to develop my research, my teaching, and my clinical skills.

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Summary

Interpersonal victimization is widely acknowledged to be a significant stressor and psychologically damaging factor for both children and adolescents. Despite the large number of studies that report a clear association between specific kinds of victimization and psychiatric disorders, little research to date has accounted for the full spectrum of victimization to which adolescents can be exposed.

The current thesis aims to analyse the mental health aftermath of victimization, taking into account the wide range of victimizations to which adolescents are exposed, and highlighting the higher vulnerability of those who can be considered "poly-victims". It also aims to study the role that variables like self-esteem may play in buffering the negative effects of victimization. This thesis is based on four studies (Soler, Paretilla, Kirchner, & Forns, 2012; Soler, Kirchner, Paretilla & Forns, 2013; Soler, Segura, Kirchner, & Forns, 2013; Soler, Forns, Kirchner, & Segura, 2014).

Overall, the results highlight the high burden of victimization to which Spanish adolescents are exposed, and show that youth rarely suffer single victimizing events but are more likely to endure multiple victimization experiences. Similarly, very few adolescents reported victimization in only one area (e.g., only sexual victimization); rather, they tend to report a combination of different areas. Moreover, it was found that the impact of individual areas of victimization on mental health tends to decrease and even become irrelevant when the combination of different areas is taken into account, showing that it is probably the combination of victimization areas, and not single areas, that is truly important for adolescents' mental health.

Overall, girls at adolescent ages showed higher psychological distress than boys. Moreover, although in general boys and girls reported equivalent amounts of victimization (i.e., total kinds of victimization), girls reported twice as much child maltreatment and sexual victimization as boys.

Boys and girls in the poly-victim condition were the ones that reported the most psychopathological symptoms (e.g., PTSS, suicidal behaviours) and lower self-esteem,

highlighting the cumulative effect of increasing stressors (Cloitre et al., 2009). A gender-specific psychopathologic response linked to the cumulative pattern of interpersonal victimization was found, with boys showing increased distress in the poly-victim condition and girls showing increased distress even in mild levels of victimization. This signals that victimization may play an important role in producing the gender differences in mental health that are found in the general population, and highlights females' greater vulnerability to victimization.

Experiencing multiple kinds of victimization or poly-victimization was found to affect adolescents' self-evaluation as worthy social beings (i.e., self-liking), but it did not seem to make them question their self-efficacy (i.e., self-competence). Also, self-liking was found to be a partial mediator of the relationship between victimization and certain mental health variables (e.g., internalizing symptoms) in both boys and girls, whereas self-competence was found to be a mediator of this relationship only in girls. These findings may be of help to clinicians and health practitioners since they suggest that working on adolescents' sense of personal value (self-liking) and girls' sense of ability to meet personal goals (self-competence) may help them to build up resilience in the face of adversity.

Resumen

La victimización interpersonal ha sido ampliamente considerada una importante fuente de estrés y de malestar psicológico tanto para niños como para adolescentes. A pesar de que la literatura contiene numerosos estudios que demuestran una clara asociación entre distintos tipos de victimización y algunos trastornos psiquiátricos, pocos son los que han tenido en cuenta el amplio abanico de victimizaciones al que niños y adolescentes pueden verse expuestos.

La presente tesis pretende analizar las consecuencias del sufrimiento de victimización interpersonal en términos de salud mental, considerando el amplio rango de victimización que sufren los adolescentes y subrayando la mayor vulnerabilidad de aquellos considerados poli-víctimas. También pretende estudiar el rol que variables como la autoestima pueden ejercer para contribuir a paliar los efectos negativos de la victimización. En total, la tesis está configurada por cuatro estudios (Soler, Paretilla, Kirchner, & Forns, 2012; Soler, Kirchner, Paretilla & Forns, 2013; Soler, Segura, Kirchner, & Forns, 2013; Soler, Forns, Kirchner, & Segura, 2014).

En general, los resultados subrayan la importante carga de victimización a la que los adolescentes españoles se ven sometidos y muestran que rara vez los jóvenes experimentan un único episodio de victimización de forma aislada, sino más bien distintas experiencias de victimización. Del mismo modo, muy pocos adolescentes reportaron victimización en una única área (p.ej. solamente victimización sexual) sino que tendieron a reportar una combinación de varias áreas. Por otro lado, los resultados señalaron que el impacto individual de un área de victimización sobre la salud mental tiende a disminuir e incluso perder significación cuando se tiene en cuenta su combinación con otras áreas. Por lo tanto, más que un área de victimización en concreto, lo que probablemente sea más importante para la salud mental de los adolescentes es la combinación de distintas áreas.

En general, las chicas adolescentes presentaron más malestar psicológico que los chicos. Además, a pesar de que en general chicos y chicas informaron de cantidades similares de victimización total, las chicas reportaron el doble de maltrato infantil y de victimización sexual.

Los adolescentes en la condición de poli-víctimas fueron los que presentaron más síntomas psicopatológicos (p.ej. síntomas de estrés postraumático o comportamiento suicida) y menos autoestima, señalando el impacto de la acumulación de estresores (Cloitre et al., 2009), que resultó ser diferente según el género. Mientras que los chicos mostraron significativamente más malestar únicamente en la condición de poli-victimas, las chicas lo mostraron incluso en la condición de víctimas. Esto subraya la mayor vulnerabilidad de las chicas ante la victimización e indica que ésta puede estar jugando un papel importante sobre las diferencias de género que se encuentran en salud mental en la población general.

Por último, los resultados mostraron que el hecho de experimentar múltiples tipos de victimización o poli-victimización afecta más la autovaloración que los adolescentes hacen de su propia valía como seres sociales (self-liking) que su percepción de auto-eficacia (self-competence). Además, se puso en evidencia que el componente de self-liking actúa como mediador parcial de la relación entre victimización y salud mental (p.ej. síntomas internalizantes) tanto en chicos como en chicas, mientras que el componente de self-competence actúa así únicamente en el caso de las chicas. Estos resultados pueden ser útiles para clínicos y otros profesionales de la salud mental, ya que indican que el hecho de trabajar sobre la visión que los adolescentes tienen de su propia valía (self-liking), así como también de su habilidad para cumplir objetivos (self-competence) en el caso de chicas, puede ayudarles a desarrollar su resiliencia frente a la adversidad.

Acronyms

CC: Conventional Crime area

CM: Child Maltreatment

ES: Externalizing Symptoms

IS: Internalizing Symptoms

JVQ: Juvenile Victimization Questionnaire

OR: Odds Ratio

PSV: Peer and Sibling Victimization

PTSD: Post-Traumatic Stress Disorders

PTSS: Post-Traumatic Stress Symptoms

RR: Relative Risk

RSES: Rosenberg Self-Esteem Scale

SBI: Suicidal Behavior Interview

SC: Self-Competence

SIQ-JR: Suicide Ideation Questionnaire

SIV: Separate Incident Version

SL: Self-Liking

SSV: Screener Sum Version

SV: Sexual Victimization

TPTSS: Total Post-Traumatic Stress Symptoms

TSCC: Trauma Symptom Checklist for Children

UCLA PTSD: UCLA Symptoms of Post-traumatic Stress Disorder Index

WIV: Witnessing and Indirect Victimization

YSR: Youth Self Report

Introduction

Interpersonal victimization is broadly considered to be a significant stressor and psychologically damaging factor for both children and adolescents. Despite the large number of studies that report a clear association between specific kinds of victimization and several psychiatric disorders (e.g. post-traumatic stress, internalizing and externalizing symptoms, and even suicidal behaviour), little research to date has accounted for the full spectrum of victimization to which adolescents are exposed. However, recent research on victimization estimates that over the course of a year a victimized child suffers a mean number of three different kinds of victimization (Finkelhor, Ormrod, & Turner, 2007a; Finkelhor, Ormrod, Turner, & Hamby, 2005a). Therefore, focusing on the effects of just one kind of victimization can overestimate its influence, which may instead be due to the hidden impact of other types of victimization that are not taken into account (Turner, Finkelhor, & Ormrod, 2010a).

Recent studies state that children who are exposed to many different kinds of victimization are those that experience the worst psychological adjustment (Arata, Langhinrichsen-Rohling, Bowers, & O'Farrill-Swails, 2005; Greenfield & Marks, 2010; Higgins & McCabe, 2000), even worse than those who suffer repeated episodes of the same kind (Finkelhor et al., 2007a). This highlights the potential damage of experiencing multiple kinds of victimization. Even so, some individuals experience high amounts of different kinds of interpersonal victimization and do not become psychologically maladjusted. In other words, some individuals show positive developmental outcomes in spite of the adversity. These individuals are referred to as resilient (Rutter, 2006). Unfortunately, the psychosocial processes that might prevent multiple-victimized adolescents from suffering psychological distress, namely the mechanisms that may contribute to resilience, are still widely unknown.

This thesis aims to analyse the mental health aftermath of multiple victimization in a sample of Catalan adolescents in the community, emphasizing the importance of considering the full range of victimization to which adolescents are exposed and highlighting the higher vulnerability of those who can be considered as poly-victims. It also aims to study the role that variables like self-esteem can play in buffering the negative effects of victimization.

This thesis is based on four studies published in peer-reviewed journals:

1. Soler, L., Paretilla, C., Kirchner, T., & Forns, M. (2012).Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents. European Child and Adolescent Psychiatry, 21(11), 645-653.

   DOI: 10.1007/s00787-012-0301-x
   ISI FI = 3.699

   * This article was chosen as the article of the month of February 2014 by the Institute of Research in Brain, Cognition and Behaviour (IR3C) of the University of Barcelona.

2. Soler, L., Paretilla, C., Kirchner, T., & Forns, M. (2013). Impact of poly-victimization on mental health: The mediator and/or moderator Role of Self-Esteem. Journal of Interpersonal Violence, 28(13), 2695-2712.

   DOI: 10.1177/0886260513487989
   ISI FI = 1.355

3. Soler, L., Segura, A., Kirchner, T., & Forns, M. (2013). Poly-victimization and Risk for Suicidal Phenomena in a Community sample of Spanish Adolescents. Violence and Victims, 28 (5), 899 – 911.

   DOI: 10.1891/0886-6708.VV-D-12-00103
   ISI FI = 0.981

4. Soler, L., Forns, M., Kirchner, T., & Segura, A. (2014). Relationship between particular areas of victimization and mental health in the context of multiple victimizations. European Child and Adolescent Psychiatry.

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CHAPTER 1. INTERPERSONAL VICTIMIZATION

Interpersonal victimization has been defined as the "harm that occurs to individuals because of other human actors behaving in ways that violate social norms" (Finkelhor, 2007, p.10). Both the human factor and the norm violation components give interpersonal victimization a special potential for traumatic impact. Interpersonal violence involves issues like betrayal, injustice and morality, and it engages a whole set of institutions and social responses (e.g., the police, the courts, and so on) which are less likely to be present in the case of other kinds of victimizations such as accidents, diseases or natural disasters (Finkelhor, 2007).

The study of childhood victimization has focused on a variety of topics such as child abuse and neglect (Palesh, Classen, Field, Kraemer, & Spiegel, 2007; Shenk, Noll & Cassarly, 2010), bullying or peer victimization (Bailey, 2009; Crosby, Oehler, & Capaccioli, 2010; Fox & Farrow, 2009; Guerra, Williams, & Sadek, 2011; Grills & Ollendick, 2002; Isaacs, Hodges, & Salmivalli, 2008; Lodge & Feldman, 2007; Lopez & DuBois, 2005; McMahon, Reulbach, Keeley, Perry, & Arensman, 2010; Seals & Young, 2003; Turner et al., 2010a), sexual victimization (Cantón-Cortés & Cantón, 2010; Palesh et al., 2007; Ullman, Najdowski, & Filipas, 2009), experienced and vicarious violent victimization (Chan, Brownridge, Yan, Fong, & Tiwari, 2011; Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004; Johansen, Wahl, Eilertsen, & Weisaeth, 2007; Kort-Butler, 2010; Luo, Fu, Zhu, & Tan, 2008; O'Donnell, Roberts, & Schwab-Stone, 2011; Pflieger & Vazsonyi, 2006), conventional crime (Belleville, Marchand, St-Hilaire, Martin, & Cidalia, 2012; Hurt, Malmud, Brodsky, & Giannetta, 2001; Stein et al., 2001), and internet victimization (Dreßing, Bailer, Anders, Wagner,

& Gallas, 2014; Lyndon, Bonds-Raacke, & Cratty, 2011). However, "there have been few attempts to assess victimization risk in an integrated, systematic, and comparative way" (Finkelhor, Ormrod, & Turner, 2009b, p. 712). That is to say, general studies which document the frequency of child victimization and its association with adverse outcomes focus on only one or a few forms of victimization out of the large spectrum of victimizations that young people experience (Finkelhor, Ormrod, Turner, & Hamby, 2005b). The possible influence of this trend on our scientific knowledge in this area is discussed in the following chapter.

The field of developmental victimology emerged precisely "to help promote interest in and understanding of the broad range of victimizations that children suffer from and to suggest some specific lines of inquiry that such an interest should take" (Finkelhor, 2007, p. 9). From this perspective, Finkelhor (2007) warned that while children and adolescents may experience all the kinds of victimization which affect adults (e.g., robberies, sexual assault and so on), they also suffer from some that are specific to their condition of dependency and lack of maturity (e.g., child abuse, and neglect). It is this dependent status that gives children and youth a broader spectrum of vulnerability (Finkelhor, 2007; Finkelhor & Hashima, 2001) and makes them "particularly susceptible to the power and control of abusers" (Mudaly & Goddard, 2001, p. 432). Therefore, the study of victimization in younger individuals needs to differ conceptually from that involving adults.

In light of the above, Finkelhor (2007) proposed that in order to gain a better understanding of the victimization of children and youth, the concept should be seen as including three different categories: a) conventional crimes in which young people are victims but which are also common in adults (e.g., robbery or assault); b) acts that violate child welfare statutes (e.g., neglect or child abuse), and c) acts that are not of concern to the criminal justice system when they occur among children but are clearly crimes if committed by adults (e.g., sibling assaults or bullying).

Moreover, Finkelhor (1995) suggested that when exploring the consequences of victimization in children and adolescents two different kinds of effects should be considered: developmental effects and localized effects. Developmental effects refer to deep and generalized impacts on development and are linked to the sensitive period

through which children and adolescents are living, one in which developmental tasks or processes are particularly vulnerable (Finkelhor & Hashima, 2001). Examples of the developmental effects of victimization include impaired attachment (expressed as dazed behavior or avoidance of parents and caregivers) and reduced self-esteem (Grills & Ollendick, 2002; Overbeek, Zeevalkink, Vermulst, & Scholte, 2010; Turner, Finkelhor, & Ormrod, 2010b). Localized effects refer to common post-traumatic stress symptoms (PTSS), such as increased levels of fear and vigilance or nightmares (Cantón-Cortés & Cantón, 2010; Crosby et al., 2010; Finkelhor, 1995; O'Donnell et al., 2011; Ullman et al., 2009), externalizing symptoms such as substance use disorders or delinquent behavior (Ford, Elhai, Connor, & Frueh, 2010; Sullivan, Farrel, & Kliewer, 2006), and internalizing symptoms such as depression or suicide thoughts and behaviors (Bifulco, Moran, Jacobs, & Bunn, 2009; Bosacki, Dane, Marini, & YLC-CURA, 2007; Brunstein-Klomek, Sourander, & Gould, 2010; Marini, Dane, Bosacki, & YLC-CURA, 2006; Paolucci, Genuis, & Violato, 2001; Wagman Borowsky, Resnick, Ireland, & Blum, 1999).

Furthermore, according to Finkelhor (2007, p. 25), in order to successfully map the patterns of victimization in childhood, the field of "developmental victimology needs to consider gender as well as age". This is because boys' and girls' individual characteristics may put them at different risk of suffering certain kinds of victimization (e.g., girls may be more attractive to sexual offenders), and because the nature, quantity, and impact of victimization is expected to "vary across childhood with the different capabilities, activities and environments that are characteristic of different stages of development" (Finkelhor, 2007, p. 21).

Though gender differences in exposure to victimization have been the subject of many studies (Finkelhor, 2007; Finkelhor & Hashima, 2001; Finkelhor, Ormrod, et al., 2009b), research in this field has produced somewhat inconsistent results. For example, whereas Finkelhor (2007) highlights that males report higher levels of victimization for all types of victimization except sexual abuse, Perrin et al. (2014) overall reported no significant gender differences in exposure to trauma, although they also found more exposure to sexual abuse among females. An explanation for these slight inconsistencies might be related to the different ages of the participants in each study. As Finkelhor and Hashima (2001) point out, at younger ages the pattern of victimization is likely to be

less gender specific, since gender differentiation increases with age. For this reason, when trying to account for gender differences in victimization during childhood and youth, age should always be considered.

With regard to age, studies tend to agree that younger children (under 12 years old) suffer more from dependency-related victimizations such as physical neglect or family abduction, whereas teenagers are more likely to suffer kinds of victimization that are not so dependency-related (Finkelhor, 2007). Moreover, according to Finkelhor (2007), the proportion of young people victimized by family offenders declines from nearly 70% during childhood to below 20% after age 12. At the same time, rates of youths victimized by acquaintances have been shown to rise during childhood until adolescence. However, in general, research has produced a mixed array of findings regarding age differences in certain types of victimization and in its influences on mental health, especially concerning child maltreatment (Finkelhor, Ormrod, et al., 2005b; Sedlak & Broadhurst, 1996) and sexual abuse (Finkelhor, 2007).

From all the above, it appears clear that our knowledge in the field of child and adolescent victimization should be built using a "rigorously empirical approach to developmental issues" (Finkelhor, 2007, p. 21). An approach of this kind should understand children's risk of victimization according to their different developmental level and "differentiate how children at different stages react to and cope with the challenges posed by victimization" (Finkelhor, 2007, p. 31-32). In this regard, more studies using a developmental perspective are needed.

Prevalence of Child Victimization

Unfortunately, as Finkelhor (2007, p. 15) points out, "there is no single source for statistics on child victimizations". Although several studies have offered estimates on rates of specific victimization categories, they have shown widely divergent results (Finkelhor, 2007). For example, in Spain, a study conducted by the Reina Sofía Center (CRS, 2002) reported that seven out of 10,000 children and youth have been victims of child maltreatment, whereas another study conducted with children and youth of the same ages stipulated this rate to be in 15 out of 1,000 (Palacios, 2002). Other authors like Martín (2010) have warned that these statistics may represent just the tip of the

iceberg. Still, in a sample from the United States, Finkelhor, Ormrod, et al. (2005b) found that child maltreatment had occurred to a little more than one in seven youths in the past year.

The differences between studies stem from a variety of factors. One of them may be the kind of samples used. Some studies base their rates on cases known to authorities or professionals and are therefore more likely to count fewer cases than other studies that obtain information directly from children and youth or their families (Finkelhor, 2007). Other factors might be related to the definition of victimization used and the methods employed to assess it (Pereda, Guilera, & Abad, 2014). However, what appears clear from all these divergences is that we are still far from reaching a consensus about the epidemiology of child victimization.

Authors like Finkelhor (2007) and Finkelhor & Hashima (2001) warn that overall the victimization of children is very common. In fact, victimization rates for children and youth are estimated to be at least three to four times higher than what is known to police, and two to three times higher than the victimization rates for adults. The need for better statistics to document the scope, nature and trends of child victimization is beyond any doubt.

CHAPTER 2. POLY-VICTIMIZATION

As briefly mentioned in the first chapter, although a large number of studies have analysed the frequency and effects of certain kinds of child victimization, little attention has been paid to the whole array of different kinds of victimization to which children and adolescents may be exposed (Finkelhor, Ormrod, et al., 2005b).

Only in the last years has research begun to contemplate different kinds of victimization conjointly (Finkelhor, Ormrod, et al. 2005b), and some evidence has accumulated highlighting the fact that victimizations tend to cluster (Finkelhor et al., 2007a). Since then, the literature on child victimization has painted a much more complete picture, showing that many children do not suffer single victimizing events but rather multiple victimization experiences (Clausen & Crittenden, 1991). Thus, children who have been exposed to one kind of victimization have been shown to be at greater risk for having other types of exposure (Finkelhor, Turner, Ormrod & Hamby, 2009).

Current research in the field has estimated that the mean number of different kinds of victimization a victimized child suffers during a one-year period is 3 (Finkelhor et al., 2007a; Finkelhor, Ormrod, et al., 2005a). This means that studies which focus on just one kind of victimization (e.g., sexual victimization) may overestimate its influence on mental health, which may instead be due to the hidden effects of some other kind of victimization suffered simultaneously (e.g., child maltreatment along with sexual victimization) or even multiple victimization (Turner et al., 2010b).

Acknowledging this possibility, Finkelhor et al. (2007a) and Gustafsson, Nilsson and Svedin (2009) studied the changes in the strength of the relationship between particular kinds of victimization and mental health symptoms (post-traumatic stress and total psychological symptoms, respectively) when other kinds of victimizations were considered. Overall, they concluded that the relationship between each kind of victimization and psychological symptoms diminished significantly when a more comprehensive picture of victimizations was considered, because said relationship was more dependent on the combined effect of different kinds of victimization than on the individual effect of a specific kind. These results highlight that studies which do not account for the whole range of victimization children may suffer not only underestimate the scope and variety of child victimization, but also do not make it possible to "delineate the interrelationships among victimizations and the contribution of these interrelationships to mental health problems" (Finkelhor et al., 2007a, p. 8).

Moreover, this fragmented approach often fails "to identify within victimized samples certain groups of chronically or multiply victimized children who may be at particular risk" for both psychopathological outcomes and further victimization (Finkelhor et al., 2007a, p. 8). At a clinical level, this means that "clinicians might be targeting a problem that is not necessarily the most important one, or at least missing a considerable part of the full clinical picture" (Finkelhor, Ormrod, et al., 2005b, p. 6). For example, a child who suffers bullying at school and who is also abused at home may be poorly served by a clinician who only intervenes with the bullying. Thus, the incomplete approach that most clinicians and researchers have used to date hampers a full understanding of victimization vulnerability (Finkelhor, Ormrod, et al, 2005b).

This is the context in which the concept of **poly-victimization** was born (Finkelhor, Ormrod, et al., 2005a). During the last decade, several studies (Arata et al., 2005; Greenfield & Marks, 2010; Higgins & McCabe, 2000) have shown that children who are exposed to multiple different kinds of victimization are the ones that experience the worst psychological adjustment, worse even than those who suffer repeated episodes of the same kind (Finkelhor et al., 2007a). The reasons for this may be multiple and very diverse. Finkelhor et al. (2007a, p. 9) propose a few. According to these authors, one possible explanation is that the experience of "multiple victimizations may mean that more people and more environments in a child's life are associated with traumatic

reminders that interfere with their normal coping". Another possible explanation is that "children may have a much harder time resisting […] negative self-attributions when they experience victimization from multiple sources". Yet another possibility is that "because victimization is fairly common in childhood, children do not see themselves as deviant or disadvantaged on this dimension until they are experiencing multiple sorts of victimization". Whatever the case, the observation that children exposed to multiple different kinds of victimization show worse psychological adjustment than those exposed to a single or a few victimization experiences led Finkelhor, Ormrod, et al. (2005a) to propose the concept of poly-victimization. These authors suggested that the group of children with extremely high levels of victimization be called poly-victims.

One salient feature of poly-victimized children is not only the frequency of their victimizations, but also their vulnerability across multiple contexts (Finkelhor, Ormrod, Turner, & Holt, 2009). According to Finkelhor, Ormrod, et al. (2009b), poly-victims have been shown to be victimized by different perpetrators and in several contexts simultaneously. Therefore, the especially damaging effects of poly-victimization may be related to the fact that for poly-victims victimization has become more a life condition than an event (Finkelhor et al., 2007a). In fact, once children become poly-victims, their risk of additional victimization tends to remain very high (Finkelhor, Ormrod, & Turner, 2007c). Moreover, poly-victimization tends to persist over time (Finkelhor, Ormrod, et al., 2009b).

Because poly-victimization has been linked to both greater negative psychological outcomes and further victimization (Finkelhor et al., 2007a; Greenfield & Marks, 2010) the need for effective identification of children and adolescents at risk of becoming poly-victims is beyond any doubt. Once properly identified, researchers and practitioners "might be able to direct prevention resources to forestall the lengthy victimization careers and other negative mental health outcomes that confront these children" (Finkelhor, Ormrod, Turner, & Holt, 2009, p.316). The Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod & Turner, 2004) emerged as an instrument to help identify these at-risk children and adolescents by providing a complete victimization profile. This instrument has become the gold standard for assessing multiple victimization in young people, and it is the one used to assess interpersonal victimization in our studies.

Operationalization and definition of Multiple Victimization or Poly-victimization

As the interest in poly-victimization has grown, questions about the best way to operationalize and define the concept have inevitably arisen. In fact, the operationalization of poly-victimization is the focus of the latest studies in the area of developmental victimization (Finkelhor, Ormrod, et al., 2005a).

To date, several studies have provided valuable data to help identify the best way to operationalize poly-victimization. According to Finkelhor, Hamby et al. (2005), the count of different types of victimization (i.e., different occurrences) is a better predictor of various psychological symptoms than the total count of victimization episodes (i.e., number of occurrences). Therefore, it is considered that the best operationalization for a multiple victimization measure (i.e., the poly-victimization measure) should consist in the sum of all the endorsed items (Finkelhor, Ormrod, & Turner, 2009a). That is, it should involve the sum of the presence/absence of victimization in each screener as opposed to the sum of the number of occurrences in each screener. Finkelhor, Ormrod et al. (2005a, p. 1301) referred to this method of operationalizing the poly-victimization measure as "the Screener Sum Version (SSV)". According to Finkelhor (2007), the finding that suffering different kinds of victimization seems to be more harmful than experiencing repeated episodes of the same type (Finkelhor, Ormrod et al. 2005a) justifies the adoption of this rather conservative approach.

However, as mentioned above, the procedure used to obtain the poly-victimization measure has not been the same across different studies. Some researchers (e.g., Finkelhor, 2007a) have only considered the different kinds of victimization that occurred in different episodes. This means that different instances of assault and robbery, even if committed by the same perpetrator, would be counted as multiple victimizations, but two assaults on the same occasion (e.g., robbery involving aggression) would not. This distinction can only be made using the follow-up questions. In these studies, the continuous measure of multiple victimization, referred to here as the poly-victimization measure (Finkelhor, 2007a), is also based on the number of different JVQ screener items endorsed, except when different types of victimization occurred as part of the same episode. This method of operationalizing poly-

victimization is known as “the Separate Incident Version (SIV)” (Finkelhor, Ormrod, et al. 2005a, p. 1301). Although the SIV seems to provide the most clear-cut definition from a conceptual point of view, with each victimization representing a separate event or experience, according to Finkelhor, Ormrod, et al. (2005a), there is an operational drawback to this scoring method: it requires the use of the long form of the JVQ (with follow-up questions) and a somewhat complex process of identifying and removing the duplication of incidents identified by more than one screener endorsement. Since many researchers may not have the time that this procedure requires at their disposal, a poly-victimization measure constructed based only on the screeners may be a more effective option (Finkelhor, Ormrod, et al. 2005a).

While a sum of different victimizations seems to be a powerful predictor of trauma symptoms, “such a measure of poly-victimization might nonetheless be criticized for treating victimizations too homogeneously” (Finkelhor, Ormrod, et al., 2005a, p. 1304). Indeed, most researchers assume that some victimizations are more consequential than others and that a measure of poly-victimization that takes this into account might be desirable. For this reason, Finkelhor, Ormrod, et al (2005a) were interested in whether the poly-victimization measure should be enhanced by giving greater weight to those kinds of victimization found to be more traumatizing (i.e., experiencing assault by a known adult, and emotional bullying). Although they found that this slightly improved the prediction of psychological symptoms like depression and anxiety, they considered that the enhancement was limited and concluded that the relative gains were not worth the added methodological complexity. Other studies (Finkelhor et al., 2007a, p.13) have concurred and have argued that whereas a simple sum of different types of victimization “does not take into account potential differences in seriousness among victimization types, it is a practice widely used in life event measures and social stress research, and seems appropriate” in exploratory stages of work on multiple victimization measurement.

Similarly, over time, poly-victim youths have been defined (mostly through JVQ scores) using different criteria. Below we present a few of these different methods (see table 1 for a schematized overview):

a) Finkelhor, Ormrod, et al., (2005a) first identified as poly-victims those youth who reported four or more different types of victimization in different incidents (using

the Separate Incident Version) in a given year (i.e., all children with victimization levels above the mean). This corresponded to 22% of the sample.

b) From the above classification, Finkelhor, Ormrod, et al., (2005a) made a further distinction between children with low poly-victimization (reporting four to six victimizations and representing 15% of the sample), and children with high poly-victimization (reporting seven or more victimizations and comprising 7% of the sample).

c) The same authors (Finkelhor, Ormrod, et al., 2005a) even considered a third identification of poly-victims using the Screener Sum Version (SSV) instead of the Separate Incident Version (SIV). In this case, they defined as poly-victims those youth who reported five or more different types of victimization in a given year, corresponding to 20% of the sample. As the authors warn (Finkelhor, Ormrod, et al. 2005a, p. 1310), the SSV "gives a somewhat more conservative estimate for the number of poly-victims" (20% of the sample at a cut-off of 5 or more using the SSV vs. 22% at a cut-off of 4 or more with SIV).

d) Chan (2013), following Finkelhor, Ormrod, et al. (2005a), considered as poly-victims respondents who reported four types of victimization or more. This cut-off point classified as poly-victims 14% of the sample using the life-time scores, and 9.5% of the sample using the preceding year score.

e) Finkelhor, Shattuck, Turner, Ormrod, and Hamby (2011) considered as poly-victims the 10% of respondents exposed to larger numbers of different kinds of victimizations. These authors considered that, since the total number of victimization types that children are exposed to tends to increase with age, the threshold for poly-victimization should vary by age group. Thus, the top 10% cut-off point classified as poly-victims those children with five or more different kinds of victimization in the past year for the group of 2 to 5 years old; six or more for the group of 6 to 9 years old; seven or more for the group of 10 to 13 years old; and eight or more for the group of 14 to 17 years old. Many other recent studies have also used this top 10% cut-off point to identify poly-victims (e.g., Cyr et al., 2013; Finkelhor et al., 2011; Kirchner, Forns, Soler, & Planellas, 2014; Radford, Corral, Bradley, & Fisher, 2013; Turner et al., 2010a). Unfortunately, however, this cut-off point frequently leads to differences

regarding the number of victimizations required to consider someone as a poly-victim. This is because the basic distribution of each study sample may be different.

Table 1. Methods for operationalizing poly-victimization used in different studies

Study	Instrument	Operationalizing Poly-victimization	Definitions of poly-victim groups
Finkelhor, Ormrod, et al., (2005a)	JVQ	**Separate Incident Version**; one-year period (a & b) **Screener Sum Version**; one-year period (c)	a) **Poly-victims** as the top 22% of the sample (suffering 4 or more types of victimization) b) **Low poly-victims**, corresponding to the top 15% of the sample (suffering 4 to 6 types of victimization), and **High-poly-victims**, comprising 7% of the sample (reporting 7 or more types of victimization). c) **Poly-victims**, as the top 20% of the sample (reporting 5 or more different types of victimization).
Chan (2013)	JVQ	**Screener Sum Version**; life-time period (a) **Screener Sum Version**; one-year period (b)	a) **Poly-victims** as the top 14% of the sample (suffering 4 or more types of victimization) b) **Poly-victims** as the top 9.5% of the sample (suffering 4 or more types of victimization)
Finkelhor et al. (2011)	JVQ	**Screener Sum Version**; one-year period	**Poly-victims** as approximately the top 10% of the sample of each age group (the threshold then varied according to age group: 5 or more different kinds of victimization for 2 to 5 year-olds; 6 or more for 6 to 9 year-olds; 7 or more for 10 to 13 year-olds; and 8 or more for the 14 to 17 year-olds).
Ford et al. (2010)	24 behaviourally specific items for victimization	–	**Poly-victims** as 32.5% of the sample, who can be classified into four different groups with distinct victimization histories (found through latent class analysis): Sexual abuse/assault poly-victimization (4%), Physical abuse/assault poly-victimization (4%), Community Violence Poly-victimization (15.5%), and Assault poly-victimization (9%).
Álvarez-Lister et al. (2013)	JVQ	**Screener Sum Version**; life-time period	**Poly-victims** as the top 12.9% of the sample, found through latent class analysis using (with a mean of 13.65 victimization experiences; SD = 2.34).

Note: JVQ = Juvenile Victimization Questionnaire

f) Ford et al. (2010) included different types of interpersonal victimization in the definition of poly-victims (i.e., sexual assault, physical assault, abuse, witnessing violence, and threat of actual serious injury) as well as exposure to disaster/accidental trauma (i.e., direct exposure to disaster and serious accident). These authors used an

empirical approach (latent class analysis) to define poly-victimization, and concluded that 32.5% of their sample could be considered as poly-victims.

g) Similarly, Álvarez-Lister, Pereda, Abad, & Guilera (2013) empirically defined poly-victims by means of hierarchical cluster analysis from the JVQ scores. They concluded that the poly-victim group represented the most victimized 12.9% of the sample.

Prevalence of multiple victimization and poly-victimization

The epidemiology of poly-victimization has been the subject of recent research on victimization. However, no clear data are available as yet. Rates of poly-victimization in children and adolescents have been shown to vary depending on the methods used to assess it and on the approaches used to define it (Pereda et al., 2014). For example, one-year rates of poly-victimization range from 9% (Cyr et al., 2013) to 22% (Finkelhor, Ormrod, et al., 2005a). Some studies also define a high-polyvictim group using seven types of victimization as the cut-off point, which has yielded one-year rates of high poly-victimization that range between 1% (Cyr et al., 2013) and 7% (Finkelhor, Ormrod, et al., 2005b). According to Pereda et al. (2014), these results highlight the importance of confirming the epidemiology of child victimization and the extent of poly-victimization in different sociocultural contexts. However, there is also a clear need to standardize the criteria to define poly-victimization, and in this regard a great deal of work remains.

The scope and diversity of child exposure to different kinds of victimization, it has not been acknowledged to date (Finkelhor, Turner, et al., 2009). Unfortunately, the "comprehensive epidemiology about this exposure has lagged behind other pediatric public health threads and lacked nationally representative samples" (Finkelhor, Turner, et al. 2009, p. 1412). Nevertheless, some data are available. Studies conducted in the last decade (Finkelhor, Ormrod, et al., 2005b; Finkelhor, Turner, et al., 2009) have found that nearly one half of young people report more than one type of victimization during the course of a year, and that victimized children report on average three different kinds. Moreover, "children who had had one kind of victimization were at increased likelihood to have other victimizations as well" (Finkelhor, 2007, p. 19).

CHAPTER 3. VICTIMIZATION AND MENTAL HEALTH

The experience of victimization has been shown to be a major stressor and an important etiological factor in several psychiatric disorders, such as depression (Bifulco et al., 2009; Bosacki et al., 2007; Marini et al., 2006), anxiety (Bifulco et al., 2009; Marini et al., 2006), post-traumatic stress symptoms (Cantón-Cortés & Cantón, 2010; Crosby et al., 2010; O'Donnell et al., 2011; Ullman et al., 2009), substance use disorders (Ford et al., 2010; Sullivan et al., 2006), and delinquent behaviour (Ford et al., 2010; Sullivan et al., 2006).

Along the same lines, and despite the research gap in the identification and study of multiple victimization mentioned above, a few research studies have shown the multiple and adverse consequences of poly-victimization (Álvarez-Lister et al., 2013; Finkelhor, Hamby, et al. 2005; Finkelhor, Ormrod, et al., 2005a; Finkelhor Ormrod, & Turner, 2007b; Ford et al., 2010; Kirchner et al., 2014; Pereda et al., 2014; Radford et al., 2013; Turner, Finkelhor, & Ormrod, 2006; Turner et al., 2010a). Studies have highlighted not only that poly-victims are at an increased risk for both internalizing (e.g., posttraumatic stress symptoms, suicidal behaviours, depression) and externalizing symptoms (e.g., behaviour problems, substance abuse) than non-victims (Finkelhor, Ormrod, et al., 2005a), but also that they present more of these symptoms than children and youth exposed to chronic and severe victimization (Finkelhor et al., 2007b; Turner et al., 2006).

Some of the most studied mental health correlates of victimization are presented in the lines that follow. Among others, they include decreases in self-esteem and

increases in posttraumatic stress symptoms or suicidal thoughts/behaviours. The present thesis revolves around these mental health issues.

Victimization and self-esteem

The link between certain kinds of victimization and low levels of self-esteem has been widely studied. For example, Chan et al. (2011), Donovan (2009) and Kim and Cicchetti (2006) found that children who have suffered maltreatment (i.e., abuse or neglect) show lower levels of self-esteem than children who have not. A possible explanation for this can be inferred from Bowlby's attachment theory. According to Bowlby (1982), children develop both a sense of the world as trustworthy and a sense of themselves as competent and lovable through positive interactions with caregivers (usually parents). Therefore, if children are neglected or punished excessively (either physically or psychologically) by their caregivers, they are more likely to develop negative attitudes towards the world and towards themselves (Kim & Cicchetti, 2006).

The relationship between child sexual abuse and low levels of self-esteem has also been reported by several studies (Lacasse & Mendelson, 2007; Sahay, Piran, & Maddocks, 2000; Small & Kerns, 1993). According to Turner et al. (2010b, p. 77), a reason for this may be that sexual abuse "disrupts cognitive components of the self, leading to a proliferation of negative self-evaluations and negative core beliefs."

Although most studies have focused on these two types of victimization (i.e., child maltreatment and sexual abuse) other kinds of victimization such as bullying or peer victimization (Bailey, 2009; Fox & Farrow, 2009; Guerra, Williams, & Sadek, 2011; Grills & Ollendick, 2002, Isaacs et al., 2008; Lodge & Feldman, 2007; Lopez & DuBois, 2005; McMahon, Reulbach, Keeley, Perry, & Arensman, 2010; Seals & Young, 2003; Turner et al., 2010a), and experienced and vicarious violent victimization (Chan et al., 2011; Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004; Kort-Butler, 2010; Luo, Fu, Zhu, & Tan, 2008; Pflieger & Vazsonyi, 2006) have also been related to impairments in the proper development of self-esteem. Therefore, it appears that in childhood, almost any kind of victimization is likely to have a negative impact on self-esteem. However, research has yet to examine the effects of multiple forms of victimization on self-esteem.

Studies that have assessed **gender differences** in self-esteem differ widely (Garaigordobil, Durá & Pérez, 2005). In general, studies of gender differences tend to report lower self-esteem in females (Garaigordobil et al., 2005; Amezcua & Pichardo, 2000). For example, a study by Giletta, Scholte, Engels, and Larsen (2010) that took account of two self-esteem components (i.e., self-liking and self-competence) found that both were lower in females. However, other studies have found no gender differences (Lameiras & Rodríguez, 2003), adding to the controversy in this regard.

To date, among the different instruments that have been developed to measure self-esteem, the **Rosenberg Self-Esteem Scale** (RSES, Rosenberg, 1965) has been the most frequently and universally used, and therefore it is the one used in the current thesis. The RSES assesses subjects' own evaluations of themselves across ten different items (five are positively worded and the other five are negatively worded). According to the author, self-esteem can be defined as a set of thoughts and feelings about one's own worth and importance, that is, a global positive or negative attitude toward oneself (Rosenberg, 1965). Throughout his career, Rosenberg argued for a simple, unitary conception of self-esteem as "the feeling that one is good enough" (Rosenberg, 1965, p.31). The RSES was then elaborated from this conception (i.e., a one-dimensional point of view) and designed to capture individuals' global perception of their own worth.

The popularity of this scale has nonetheless been accompanied by several controversies and criticisms arising from the difficulty of reaching an agreement on the definition of the self-esteem construct (Mourão & Novo, 2008). Although the RSES was in the first place designed to measure self-esteem as a one-dimensional construct, some studies have questioned this property and have claimed that self-esteem is in fact a multidimensional construct (Tafarodi & Milne, 2002; Tafarodi & Swan, 1995, 2001). This is so because factorial analyses of the RSES often show a two-factor solution: usually the positive-worded items saturate in one factor and the negatively-worded items saturate in the other (Pastor, Navarro, Tomás, & Oliver, 1997). Those who defend a one-dimensional structure claim that, in spite of finding a two-factor solution, a single response of a similar nature can be identified since it needs to be considered that items are worded differently (Martín-Albo, Nuñez, Navarro, & Grijalvo, 2007; Schmitt & Allik, 2005). Therefore, they argue that the finding of a two-dimensional structure may

be considered a method artefact. However, others argue that finding a two-factor solution rather reflects that global self-esteem is composed of two interdependent but distinct concepts (Owens, 1994; Sinclair et al., 2010; Supple & Plunkett, 2011; Tafarodi & Milne, 2002; Tafarodi & Swann, 1995, 2001). These two subdimensions have been given different names in different studies. Tafarodi and Swann (1995, 2001) proposed to name them as Self-Liking (SL) and Self-Competence (SC), and consider that they are constitutive dimensions of global self-esteem.

According to these authors, SL is the valuative experience of oneself as a social object, as a good or bad person according to internalized criteria of worth (Tafarodi & Swann, 1995). By "social", Tafarodi and Swann don't mean to suggest that SL is mainly our perception of the value that others attribute to us (although it is one continuing source of it). Rather, they argue that mature SL is the moral significance of one's characteristics and actions: the intrinsic side of value and worth (Tafarodi & Swann, 2001).

In contrast, SC is defined as the valuative experience of oneself as a causal agent, as an intentional being that can bring about desired outcomes through his/her own ability. In general, it refers to the positive or negative orientation toward oneself as a source of efficacy and power. According to Tafarodi and Swann (2001), SC is closely related, but not equivalent, to Bandura's (1989) self-efficacy, which is defined as "people's beliefs about their capabilities to exercise control over events that control their lives" (Bandura, 1989, p.1175). It is one's personal history of success and failure that gives rise to a generalized attitude towards the self as agent: the more successful one has been at achieving personal goals, the stronger one feels (Tafarodi & Swann, 2001). Unlike SL, SC is experienced as a positive or negative value irrespective of any secondary, moral meaning that attaches to it.

Although the existence of two related but distinct factors remains a controversial issue, an additional argument for two-dimensionality posits that if differential patterns of association are observed between the RSES subdimensions and other theoretically related factors, there is evidence that they represent substantively different constructs rather than method effects (Schmitt & Allik, 2005; Supple & Plunkett, 2011). In this regard, Supple and Plunkett (2011) found that the factor comprised by negatively

worded items (which they called self-deprecation) was more strongly related to psychological control by mothers, adolescents' age and generational status than the other factor (which they called the positive self-esteem factor). Similarly, Owens (1994, p.403) found that "a bidimensional model exposes nuances previously overlooked in the unidimensional self-esteem construct, particularly in terms of how the subscales relate to depression and school grades".

Moreover, in favour of the conception of self-esteem as being comprised by two distinct yet related constructs, Tafarodi and Milne (2002) found that individualistic cultures score higher in SC than collectivistic cultures, whereas collectivistic cultures score higher in SL than individualistic cultures. These authors proposed the trade-off hypothesis as an explanation for this (Tafarodi & Milne, 2002), which states that in individualistic cultures (e.g., the United States), self-competence and independence are the most important values, whereas in collectivistic cultures (e.g., China) self-confidence and efficacy are subordinate to the social needs of others, resulting in overall higher SL but lower SC.

Given that child victimization inevitably influences an individual's experience of success or failure, that is, SC (e.g., "I am not able to defend myself"), as well as their perception of how they are viewed by others and hence by themselves, that is, SL (e.g., "I am bullied because I deserve it"), exposure to victimization is likely to damage both aspects (the individual and social components) of self-esteem (Turner et al., 2010b). In this context, the finding that one component of self-esteem has a different relation to victimization from the other would add evidence in favour of the two-dimensional structure of self-esteem. The present thesis, which uses the RSES as the main self-esteem measure, will shed some light on this matter.

Victimization and Post-Traumatic Stress Symptoms

Post-traumatic stress symptoms (PTSS) have also been related to child victimization. The essential prerequisite for trauma-related symptoms (e.g., Post-traumatic stress symptoms) is the existence of an unusually stressful event (Frommberger, Angenendt, & Berger, 2014). Although ordinarily the word "trauma" is used to describe a wide variety of events, the concept of "trauma" as used for the

diagnostic of Post-traumatic Stress Disorders (PTSD) only comprises “exceptional, life-threatening or potentially life-threatening external events and those associated with serious injury, which can cause a psychological shock in practically any individual to a greater or lesser extent” (Frommberger, et al., 2014, p.60). If the event is of an interpersonal kind, that is, if the trauma is deliberately inflicted by another individual or individuals, the risk of PTSS is higher than if it is caused by natural catastrophes or accidents (Frommberger, et al., 2014).

Several studies have found an increase in PTSS in cases of victimization such as bullying or peer victimization (Crosby et al., 2010), sexual victimization (Cantón-Cortés & Cantón, 2010; Palesh et al., 2007; Ullman et al., 2009), child abuse and neglect (Palesh et al., 2007; Shenk et al., 2010), and both experienced and vicarious violent victimization (Johansen et al., 2007; O'Donnell et al., 2011). Only a few recent studies have studied the relationship between poly-victimization and trauma symptoms (Finkelhor, Ormrod & Turner, 2007; Ford et al., 2010; Gustafsson et al., 2009; Kirchner et al., 2014; Turner et al., 2010a). Moreover, the literature contains few studies (e.g., Kirchner et al., 2014) analysing gender differences in PTSS according to the status of victimization (i.e., non-victims, victims and poly-victims).

In general terms, with regard to **gender differences**, studies show that girls tend to present more posttraumatic stress symptoms than boys (Gustafsson et al., 2009). After exposure to traumatic events, females are also at a highest risk of suffering a PTSD, although this greater vulnerability is still poorly understood (Breslau, 2009). According to Perrin et al. (2014) some reasons for it might be: a) the sex-specific distribution of traumatic exposures, with fewer males than females reporting sexual abuse; b) women’s higher tendency to exhibit neuroticism and anxiety; and c) gender differences in coping styles.

Today, discussion continues on the uniqueness of youth Post-Traumatic Stress Symptoms (PTSS) in the field of paediatric trauma. Although research suggests that youth manifest PTSS differently than adults, and even though the DSM-IV-TR (American Psychiatric Association, 2000) captures some of these differences by introducing additional criteria for children (such as disorganized or agitated behaviour, repetitive play or frightening dreams), few measures of youth PTSD have been created

specifically for this population (Hawkins & Radcliffe, 2006). Instead, historically many measures and interviews designed for adults have been used for youth, with simplified language and concepts.

Some of the most used instruments developed to assess post-traumatic stress symptoms (PTSS) in children are the *Trauma Symptom Checklist for Children* (TSCC, Briere, 1996), a self-report measure that assesses the impact of trauma in children between ages 8 and 16, and the UCLA Symptoms of Posttraumatic Stress Disorder Index (UCLA PTSD, Rodriguez, Steinberg, & Pynoos, 1999), which allows the assessment of both trauma exposure and trauma symptoms in children aged 7 and older. Another instrument that allows measurement of PTSS in adolescents is the **Youth Self Report** (YSR, Achenbach & Rescorla, 2007), which is the one used in the present study. Through a scale called DSM-Post-traumatic Stress Problems, based on the DSM criteria for PTSS, the YSR allows assessment of trauma symptoms in adolescents aged between 11 and 18. Moreover, it allows the categorization of the levels of PTSS as 'normal,' 'borderline' or 'clinical', according to multicultural standards (Achenbach & Rescorla, 2007). For the purpose of the current thesis, the use of this scale was deemed the most adequate to assess PTSS, given that it also allows the assessment of other variables (e.g., externalizing symptoms or suicide thoughts and behaviours) which were also considered important.

Victimization and Internalizing and Externalizing symptoms

Child victimization has also shown to be highly related to internalizing (IS) and externalizing symptoms (ES). The Internalizing and Externalizing Problems framework was first conceptualized by Achenbach (1966), and is still used today in the study of adolescent psychology and psychiatry (Levesque, 2012). As conceived by Achenbach (1991), IS include symptoms of withdrawal, somatic complaints, and symptoms of anxiety/depression, whereas ES symptoms include delinquent and aggressive behaviour.

The link between certain kinds of victimization and symptoms like depression or anxiety (Bifulco et al., 2009; Marini et al., 2006), and substance use disorders or delinquent behaviour (Ford et al., 2010; Sullivan et al., 2006) has been demonstrated by a wide variety of studies. A possible explanation for this link is that when undergoing

victimization adolescents tend to develop a negative view of themselves (Turner et al., 2010b), increasing the chances of suffering IS, and/or a negative view of the world (Grills & Ollendick, 2002), thus increasing the chances of suffering ES.

Only a few studies have taken into consideration the relationship between multiple victimization and IS and ES. Efforts should be made to understand the contexts that heighten the risk of psychological symptoms, or protect against them, in order to improve our knowledge and develop better prevention and intervention policies.

As regards **gender differences** in IS and ES, in general, girls at adolescent ages have been considered to show more psychological distress than boys (Abad, Forns, & Gómez, 2002). Indeed, several studies have found that boys tend to report lower levels of internalizing and externalizing symptoms (Abad et al., 2002; Giletta et al., 2010; Lewinsohn & Clarke, 1994; Kessler et al., 1994). For example, the prevalence of depression among females has been estimated to be twice as high as in males (Lewinsohn & Clarke, 1994; Kessler et al. 1994). However, as Canals, Marti-Henneberg, Fernandez-Ballart and Domènech (1995) and Hankin et al. (1998) highlight, these differences are not detected during childhood, but only during pubertal ages. This might be related to a number of factors such as pubertal hormonal changes (Angold, Costello, Erkanli & Worthman, 1999) or even adolescent gender-specific coping styles (Compas, Orosan, & Grant, 1993), with adolescent boys "preferring emotional distraction methods and girls turning their attention more to their emotional experience" (Abad et al., 2002, p.150). Therefore, to obtain a clearer picture of how internalizing and externalizing symptoms are distributed among the population, it is important to consider gender along with age.

Although research shows that boys are less likely to experience psychological distress than girls in the general population, studies have not consistently demonstrated whether girls are more likely to develop a psychological problem after a victimization experience (Coohley, 2010). While some studies have found more psychological symptoms among adolescent girls after being victimized (Darves-Bornoz, Choquet, Ledoux, Gasquet, & Manfredi, 1998), others have found either no differences or even more symptoms among adolescent boys (Bagley, Bolitho, & Bertrand, 1995; Garnefski & Arends, 1998).

The most widely used instrument to assess IS and ES is the **YSR** (Achenbach & Rescorla, 2001), which is the one used in the present study. The YSR is a self-report that measures psychological distress in children and adolescents aged between 11 and 18 through a list of 112 items that represent thoughts, feelings and behaviours. It classifies psychological distress into two broad-band syndromes: the Internalizing Syndrome and the Externalizing Syndrome. The Internalizing band Syndrome is defined by the narrow-band syndromes of "Withdrawn", "Somatic Complaints" and "Anxious/Depressed". The Externalizing band Syndrome is composed by "Delinquent Behaviour" and "Aggressive Behaviour" syndromes.

Victimization and suicide phenomena

Just as child and adolescent victimization has been shown to increase adolescents' IS and ES, it has also been identified as an important social risk factor for suicide phenomena (Beautrais, Joyce, & Mulder, 1996; Mina & Gallop, 1998; Young, Twomey, & Kaslow, 2000). According to Frommberger, et al. (2014), an explanation for this is that interpersonal victimization tends to generate deep despair in the victims, which, combined with feelings of guilt and shame, increase the risk of committing self-harming and suicide acts. In this regard, several studies have found a relationship between suicide phenomena and certain kinds of victimization such as child maltreatment (Beautrais et al., 1996; Straus & Kantor, 1994; Wagman Borowsky et al., 1999), sexual abuse (Fergusson, Horwood, & Lynskey, 1996a; Paolucci et al., 2001; Wagman Borowsky et al., 1999), and bullying or peer victimization (Brunstein-Klomek, Marrocco, Kleinman, Schonfeld, & Gloud, 2007; Brunstein-Klomek at al., 2010).

Given that suicide is the fourth leading cause of death in young adolescents aged 10 to 14 years and the third leading cause of death in the 15 - 19 year age group (Ali, Dwyer, & Rizzo, 2011; Olfson, Shaffer, Marcus, & Greenberg, 2003; Range, 2009), it is not surprising that the study of risk factors for suicide has captured the attention of many researchers in recent years. However, according to Nahapetyan, Orpinas, Song and Holland (2014, p. 630), to date "there are no comprehensive theories that explain suicidal behaviours in adolescents". There is, therefore, a clear need for studies that contribute to increasing the scientific knowledge in this area.

There is some controversy concerning **gender differences** in the rates of suicidal phenomena. Whereas some studies find that girls report more suicidal ideation (García-Resa et al., 2002) and commit more self-injurious behaviours than boys (Hawton, & Harris, 2008; Hawton, Rodham, Evans, & Weatherall, 2002; Laye-Gindhu, & Schonert-Reichl, 2005; Madge et al., 2008), others observe no significant differences (Beautrais et al., 1996; Bjärehed & Lundh, 2008; Cerutti, Manca, Presaghi, & Gratz, 2011; Hilt, Nock, Lloyd-Richardson, & Prinstein, 2008; Kirchner, Ferrer, Forns & Zanini, 2011).

Moreover, some studies find that while female adolescents have higher rates of suicide attempts than their male counterparts, males are more successful at killing themselves (Canetto, & Lester, 1995; García-Resa et al., 2002; Lewinsohn, Rohde, Seeley, & Baldwin, 2001; Ruiz-Pérez, & Olry, 2006). More research is clearly needed in order to clarify gender differences in this field.

Several instruments have been created to assess suicide risk among children and youth. Among the most commonly used are the Suicide Ideation Questionnaire (SIQ-JR, Reynolds, 1988), a self-report measure developed for the evaluation of suicidal ideation in adolescents, and the Suicidal Behavior Interview (SBI; Reynolds, 1990), which is a semistructured clinical interview designed specifically to assess present and past suicidal behaviours in adolescents. Another instrument that measures suicide phenomena in adolescents is the **YSR** (Achenbach & Rescorla, 2001). Items 18 ("I deliberately try to hurt or kill myself") and 91 ("I think about killing myself") of this instrument have been previously used as indicators of the suicidal phenomena (e.g., Kirchner et al., 2011) and are the ones also used in the present study.

CHAPTER 4. PROTECTIVE VARIABLES AND RESILIENCE

In spite of the evidence highlighting the damaging effects on mental health of multiple different kinds of victimization (e.g., Arata et al., 2005; Finkelhor et al., 2007a; Greenfield & Marks, 2010; Higgins & McCabe, 2000), some individuals experience high amounts of interpersonal victimization and do not develop psychiatric illness. For example, it has been estimated that only one-tenth of the individuals exposed to severe traumatic events develop a PTSD (Perrin et al., 2014). Further, some individuals not only do not become psychiatrically ill but also show positive developmental outcomes in spite of the difficulties (Luthar, Ciccheti, & Becker, 2000). These individuals are described as "resilient" (Rutter, 2006).

Numerous definitions of resilience have been proposed. It has been broadly defined as the ability to overcome adversity (Norman, 2000). Luthar et al. (2000) identified two critical conditions when conceptualizing resilience: a) exposure to a threat or adversity, and b) achievement of positive adaptation. These authors consider that resilience should more specifically be defined as a dynamic process that encompasses positive adaptation in the context of significant adversity (Luthar et al., 2000). Other authors have further included the ability to thrive in the face of adversity in the definition of resilience (Tedeschi, Park, & Calhoun, 1998). From these definitions, the concept of posttraumatic growth is born. Posttraumatic growth refers to the achievement of levels of development that "go beyond that which would have been reached in the absence of stress" (Kaplan, 1999, p. 25). Some examples of posttraumatic growth are increased self-reliance and personal strength (Tedeschi & Calhoun, 1995).

Resilience is inhibited by risk factors and promoted by protective factors (Alvord & Grados, 2005). In other words, risk factors are circumstances that increase the probability of poor outcomes (Zolkoski & Bullock, 2012), whereas protective factors are variables that diminish the likelihood of negative outcomes (e.g., mental health problems) after adversity (CRS, 2011). According to Benzies and Mychasiuk (2009), resilience is optimized when protective factors are strengthened.

Historically, attention has been paid almost exclusively to the identification of risk factors, as the origins of resilience have deep roots in the field of medicine (Zolkoski & Bullock, 2012). However, the focus has progressively shifted (Turner, 1995) from the frustration and despair that emerge from an emphasis on risk to the optimism and hope that accompany an emphasis on protective factors (Kumpfer, 1999).

In order to try to explain how individual and environmental factors reduce the adverse effects of risk factors, several models of resilience have been identified (Zolkoski & Bullock, 2012). Garmezy, Masten and Tellegen (1984) proposed three models: a) the Compensatory Model, b) the Challenge Model, and c) the Protective Factor Model. The Compensatory Model states that a compensatory variable (e.g., social support) neutralizes the effects of the exposure to risk (e.g., peer victimization). According to Garmezy et al. (1984), the neutralizing variable does not interact with the risk factor, but has a direct, independent influence on the outcome (Fergus & Zimmerman, 2005). The Challenge Model posits that stressors are possible enhancers of competence, and thus children learn to mobilize resources when they are exposed to hardship (Garmezy et al., 1984). This type of model considers that youth become more prepared to face increasing risk as they successfully overcome low risk levels (Fergus & Zimmerman, 2005). The Protective Factor Model states that there is a conditional relationship between risk (e.g., victimization) and personal attributes (e.g., low self-esteem) with respect to adaptation. More specifically, protective factors interact with risk factors to reduce the probability of a negative outcome (Fergus & Zimmerman, 2005).

By definition, resilience is based on conditions of an identified risk or challenge that is followed by a positive outcome (Alvord & Grados, 2005). However, according to Zolkoski and Bullock (2012, p. 2296), “debate remains concerning what constitutes

resilient behaviour and how to best measure successful adaptation to hardship". In research, there are many possible ways to conceptualize and operationalize resilience; some researchers have considered it as an outcome and others as a process. Research that studies resilience as an outcome usually compares two groups, one classified as having poor outcomes and the other as having positive outcomes. However, "defining a successful outcome that demonstrates resilience can be difficult because this judgement is so value-laden and culturally-relative" (Kumpfer, 1999, p. 212). Research that studies resilience as a process usually analyses constructs that moderate the relationship between risk factors and outcome variables. From this perspective, resilience is a process that consists of an interaction between different risk/protective factors and internal characteristics (Kumpfer, 1999).

According to Zolkoski and Bullock (2012, p. 2299), the varying definitions and ways to operationalize resilience are "causing confusion within the field and igniting criticism of resilience theory". However, efforts should be made to agree on a common language that would promote the development of the field. A better understanding of ways to increase resilience in children and adolescents "holds great promise for improving the effectiveness of preventive" services and treatment policies (Kumpfer, 1999, p.179).

Self-esteem as a protective variable in front of adversity

In spite of the importance of identifying the psychosocial processes that may help to buffer the negative outcomes of victimization, today the mechanisms that may contribute to resilience remain relatively unknown.

Some studies have shown self-esteem to play a role in resilience (Bolig & Weddle, 1998). In the experience of victimization, self-esteem has been considered one of the psychosocial processes through which it may affect mental health (Turner et al., 2010b). In fact, while interpersonal victimization has been associated with low levels of self-esteem (Chan et al., 2011; Turner et al., 2010b), low levels of self-esteem have also correlated with depression, anxiety, and other psychiatric disorders (Shirk, Burwell, & Harter, 2003). Moreover, during the past few years, research has shown that high self-esteem may help to prevent psychopathological problems (Garaigordobil et al., 2005).

In this framework, some researchers have already examined the potential mediating and moderating effects of self-esteem, though the results are inconsistent (Benas & Gibb, 2007; Grills & Ollendick, 2002; Turner et al., 2010b). For example, whereas Benas and Gibb (2007) concluded that self-esteem mediated the link between peer victimization and depressive symptoms, Turner et al. (2010b) found no mediation effects when analysing the same variables in the context of multiple victimization.

Other studies have identified gender differences in the role of self-esteem between exposure to particular forms of victimization and mental health outcomes: A mediator model has been found to explain better the victimization/mental health relationship in girls, and a moderator model in boys (Grills & Ollendick, 2002). However, research has yet to examine the mediator/moderator role of self-esteem between the experience of multiple kinds of victimization and mental health problems.

CHAPTER 5. OBJECTIVES AND HYPOTHESES

The main aim of this doctoral thesis is to study how different kinds of victimization are distributed among a sample of Catalan adolescents in the community, to analyse the relationship between the experience of multiple victimization and mental health symptoms, and to examine the role that variables such as self-esteem may play as mediators of this relationship.

Table 2 describes the specific objectives and hypotheses of the studies that compose this doctoral thesis.

Table 2: Objectives and Hypotheses of each study

Study	Objectives	Hypotheses
First study. *"Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents"*	• To explore how the different victimization areas and total kinds of victimization are distributed according to age and gender in a group of Spanish adolescents. • To analyse how two facets of self-esteem, namely self-liking (SL) and self-competence (SC), are distributed according to the degree of victimization (or victimization status), gender and age. • To analyse how post-traumatic stress symptoms are distributed according to the degree of victimization, gender and age.	• In a community sample, adolescent boys will experience higher levels of victimization than will girls for all types of victimization except sexual abuse (Finkelhor, 2007). • In both boys and girls SL and SC will be significantly more affected in the poly-victim group than in the victim group, given adolescents' tendency to attribute multiple victimizations to their own characteristics and failings (Turner et al., 2010b). • In both boys and girls the poly-victim group will show a greater number of total post-traumatic stress symptoms (TPTSS) than will both the victim and non-victim groups, given the accumulative impact of victimization on adolescents' mental health (Turner et al., 2010a).
Second study. *"Impact of poly-victimization on mental health: the mediator and/or moderator role of self-esteem"*	• To test the relationships between the total kinds of victimization (TKV) experienced during the life-time, self-esteem components (self-liking and self-competence) and mental health issues (internalizing and externalizing problems) in adolescents. • To examine two competing models regarding these relations: a mediator model and a moderator model.	• In a community sample of adolescents, a network of relations among the total kinds of victimization experienced, self-esteem components (self-liking and self-competence) and mental health issues (internalizing and externalizing problems) will be found (Chan et al., 2011; Shirk et al., 2003; Turner et al., 2010b). • On the basis of the gender differences reported in previous studies (Grills & Ollendick, 2002), the mediator model is expected to provide a better explanation of the relationship between total kinds of victimization and mental health in girls, whereas the moderator model is expected to fit better in the case of boys. In other words, in girls, victimization is expected to influence psychological symptoms through self-esteem, whereas in boys self-esteem is expected to influence psychological responses to victimization, with boys under conditions of high victimization being less likely to be negatively affected by these victimization experiences if they have high self-esteem levels (Grills & Ollendick, 2002)
Third study. *"Poly-victimization and risk for suicidal phenomena in a community sample of Spanish adolescents"*	• To determine the prevalence of victimization and suicidal phenomena in a community sample of Spanish adolescents, with special attention being paid to gender differences. • To examine the association between the reported degree of victimization and suicidal phenomena.	• In a community sample, boys and girls are expected to report similar rates of total kinds of victimization and suicidal phenomena (Kirchner et al., 2011; Soler et al., 2012). • Those adolescents who report a higher number of victimizations (poly-victims) are expected to show a greater risk for all kinds of suicidal phenomena than are their less-victimized (victims) counterparts (Turner et al., 2010a).
Fourth study. *"Relationship between particular areas of victimization and mental health in the context of multiple victimizations"*	• To explore the percentage of adolescents reporting each area of victimization and also the percentage of adolescents reporting each area exclusively (i.e., not in combination with any other area). • To examine the extent to which the relationship between particular areas of victimization and mental health symptoms varies when other areas are taken into account.	• In a community sample of adolescents, the percentage of adolescents reporting one area of victimization in exclusivity (i.e., not in combination with any other area), will be very low, given that they tend to co-occur (Herrenkohl & Herrenkohl, 2009). • The relationship between each kind of victimization and psychological symptoms is expected to diminish significantly when a more comprehensive picture of victimizations is considered, because said relationship is more dependent on the combined effect of different kinds of victimization than on the individual effect of a specific kind (Finkelhor et al., 2007a; Gustafsson et al., 2009).

CHAPTER 6. METHOD

Participants

Participants in the sample were students from different high schools in Catalonia, aged 14 to 18 years old. The first study recruited students from seven different schools, whereas the rest of studies comprised adolescents from eight different schools. Table 3 shows descriptive data for the samples in each study.

In general, the characteristics of the participants vary slightly from one study to the other. Figures 1 – 5 present the composition of the final sample (923 participants).

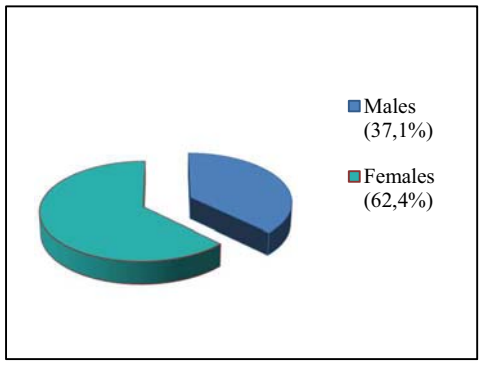

Figure 1. **Gender**

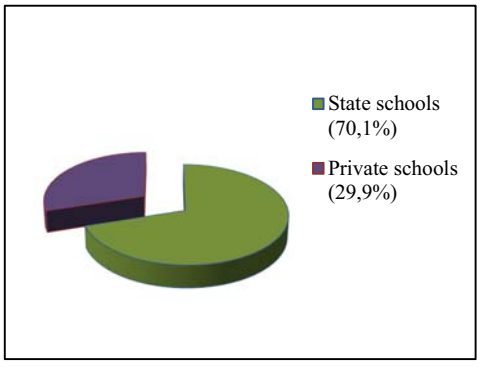

Figure 2. **Type of school**

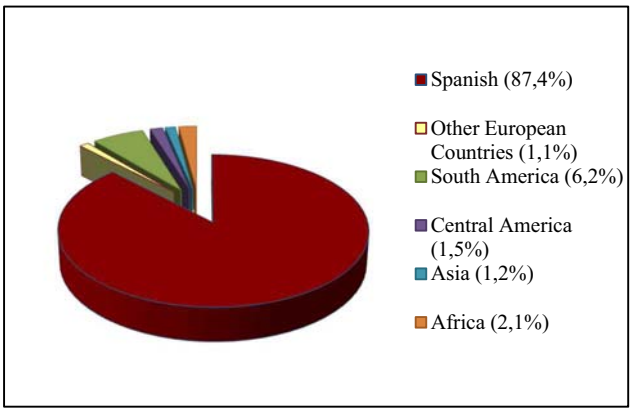

Figure 3. **Nationality**

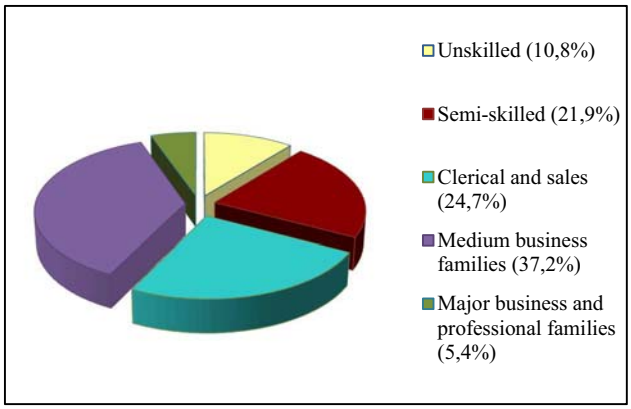

Figure 4. **Socio-Economic Status (Hollingshead, 1975)**

According to the data provided by the Spanish Ministry of Education (2011), this sample is representative in terms of the kind of school (state-funded vs. privately run) and the national backgrounds of students (Spanish vs. foreign). As regards participation by gender, girls were oversampled, probably because participation was voluntary and girls tend to be more willing to take part in studies.

Table 3. Descriptive data for the sample of each study

Study	*N*	% Gender	Age *M* (SD)	Type of sample
1	722	35.3 Boys 64 Girls	15.77 (1.19)	Adolescents enrolled in 7 different schools in Catalonia.
2	736	37 Boys 63 Girls	15.67 (1.23)	Adolescents enrolled in 8 different schools in Catalonia (after dismissing adolescents who presented missing data in any of the study variables).
3 & 4	923	37.3 Boys 62.7 Girls	15.70 (1.20)	Adolescents enrolled in 8 different schools in Catalonia.

Procedure

After obtaining permission from school principals, students were contacted via in-class announcements in which they were told what their participation in the research would involve. Participation was voluntary, requiring written consent from parents. The

rate of participation was 44.7%, very similar to that found in comparable studies requiring consent from both parents and students (Turner et al., 2010a).

All questionnaires were administered in small groups in a single 60-minute session. A project staff member was present at all times to clarify any doubts arising during the administration. Students were reminded that there were no right or wrong answers and were instructed to choose the most appropriate answer according to their own experience. In order to facilitate the assessment of sensitive data, special attention was paid to protect privacy and ensure confidentiality. However, core dilemmas concerning ethical issues arise especially in research involving abused children, as it becomes necessary to consider their right to confidentiality and their protection and safety (Mudaly & Goddard, 2009; Mudaly & Goddard, 2012). In our study, confidentiality was preserved in all cases, except when the information provided by the adolescents revealed problems of victimization that might be punishable by law (e.g. sexual abuse), or might represent a serious psychological problem (e.g. suicide risk). In these cases, a meeting with the school psychologist and/or the head teacher was arranged to identify the subject on the basis of the socio-demographic data. These professionals then interviewed the adolescent identified to verify the information given and proceeded according to the code of professional ethics.

At the end of the assessment session, students were invited to write down their email should they wish to arrange a subsequent psychological consultation with a qualified staff member. This research was vetted by the bioethics' committee of the University of Barcelona.

Measures

In total, a socio-demographic datasheet and three instruments were used. The instruments used in each study are specified (indicated with a cross) in table 4.

The ***socio-demographic data sheet*** was elaborated ad hoc and included information about adolescents' age, gender, number of siblings, country of birth, as well as other household characteristics such as parents' marital, occupational or educational status.

The ***Rosenberg Self-Esteem Scale*** (RSES, Rosenberg, 1965) is a self-report that assesses one's own evaluation using 10 different items: five positively worded items (e.g. 'On the whole, I am satisfied with myself'), and five negatively worded (e.g. 'I feel I do not have much to be proud of'). Adolescents are asked to indicate the strength of their agreement with the statement for each item on a 4-point Likert scale ranging from 1 (absolutely disagree) to 4 (absolutely agree). The Spanish adaptation of this scale was validated by Atienza, Moreno and Balaguer (2000) and by Pastor et al. (1997) in an adolescent population. Given that these authors did not reach an agreement concerning the dimensional structure of the RSES, an exploratory factor analysis was conducted in each of our studies, based on principal components analysis and the retention of factors with an eigenvalue higher than 1. For all the studies, two factors were identified that jointly explained approximately 54% of the variance. Only items loading ≥ .40 were retained and factorial purity was ensured by omitting the items loading on more than one factor (items 1 and 10). The first had the highest explanatory value and consisted of items 2, 5, 6, 8 and 9 (Cronbach's alpha = $.78_{\text{study 2}}$/$.79_{\text{study 1}}$). The second factor comprised items 3, 4, and 7 (Cronbach's alpha = .66). This structure can be interpreted as proposed by Sinclair et al. (2010) and Tafarodi and Swann (1995, 2001). According to these authors, the first factor (SL) evaluates self-liking (e.g. 'I feel useless,' 'I wish I respected myself more'), which is considered to reflect the appraisal of oneself as a social object, as a good or bad person according to internalized criteria for worth, whereas the second factor (SC) evaluates self-competence (e.g. 'I am able,' 'I am good at...'), and is considered the appraisal of oneself as a causal agent, as a source of power and efficacy in terms of achieving personal goals. The SL and SC scales were calculated by summing the corresponding item values and reverse coding the negatively worded items. SL scores ranged from 5 to 20, and SC scores from 3 to 12. The correlation between SL and SC ranged from .47 to .50 depending on the sample and was significant in all cases ($p < .001$).

The ***Youth Self Report*** (YSR, Achenbach & Rescorla, 2001) is a self-report that measures psychological distress in children and adolescents aged between 11 and 18 through a list of 112 items that represent thoughts, feelings and behaviours. It classifies psychological distress into two broad-band syndromes (internalizing and externalizing problems) and eight narrow-band syndromes (anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-

breaking behaviour and aggressive behaviour). Participants are asked to indicate on a 3-point Likert scale ranging from 0 (not at all) to 2 (very often) how frequently each of the item statements had happened to them within the last six months. The 2001 version of the YSR (Achenbach & Rescorla, 2001) allows for the exploration of eight DSM-oriented scales: Affective Problems, Anxiety Problems, Somatic Problems, Attention Deficit/Hyperactivity Problems, Oppositional Defiant Problems, Conduct Problems, Obsessive-Compulsive Problems and Post-traumatic Stress Problems. These scales enable the level of mental health problems to be categorized as 'normal,' 'borderline' or 'clinical'. Abad, Forns, Amador and Martorell (2000) and Abad et al. (2002) validated this self-report in a Spanish adolescent population. The various studies included in this thesis used different items and scales, according to their specific objectives. The DSM Post-traumatic Stress Problems Scale was used in the first and fourth study; the internalizing and externalizing problems scales were used in the second and fourth study; and items 18 ("I deliberately try to hurt or kill myself") and 91("I think about killing myself") were used in the third study. The Post-traumatic Stress Problems Scale comprises 14 items and its scores range from 0 to 28. The reliability of this scale was acceptable in our sample (Cronbach's alpha = .72). The internalizing problems scale is composed of 31 items, with scores ranging from 0 to 62, whereas the externalizing problems scale is comprised of 32 items, with scores ranging from 0 to 64. In our study, both the internalizing problems scale (Cronbach's alpha = .87) and the externalizing problems scale (Cronbach's alpha = .84) showed good reliability. Items 18 ("I deliberately try to hurt or kill myself") and 91 ("I think about killing myself"), which were used to assess suicide phenomena, reached an acceptable internal consistency (Cronbach's alpha = .71).

The ***Juvenile Victimization Questionnaire*** (JVQ, Hamby, et al., 2004) is a self-report questionnaire that provides a description of 36 major forms of offenses against children and youth, and includes some events which children and parents do not typically conceptualize as crimes, such as nonviolent victimizations (Finkelhor, Ormrod, et al., 2005b). The authors paid special attention to translating clinical and legal concepts such as "neglect" or "sexual harassment" into language that children could understand. The suitability of the language and content of the instrument has been reviewed and tested with victimization specialists, parents and children. As a result, the JVQ has been considered appropriate for self-reporting in children as young as eight

years of age (Finkelhor, Ormrod, et al., 2005b). It originally focuses on 34 major forms of offenses against children and youths and which can be classified into five general areas of concern: conventional crime, child maltreatment, peer and sibling victimization, sexual victimization, and witnessing and indirect victimization (Finkelhor, Ormrod, et al., 2005b). The Conventional Crime area (CC) includes questions about robbery, personal theft, vandalism, assault with and without weapons, attempted assault, kidnapping, and bias attack. The Child Maltreatment area (CM) examines physical, psychological and emotional abuse by caregivers, neglect, and custodial interference or family abduction. Peer and Sibling Victimization (PSV) takes account of gang or group assault, peer or sibling assault, non-sexual genital assault, bullying, emotional bullying, and dating violence. Sexual Victimization (SV) examines sexual assault by a known adult, nonspecific sexual assault, sexual assault by a peer, attempted or completed rape, flashing or sexual exposure, and verbal sexual harassment. Finally, Witnessing and Indirect Victimization (WIV) refers to being a witness to domestic violence, a witness to parent assault of a sibling, a witness to assault with and without weapons, burglary of family household, murder of a family member or friend, witness to murder, exposure to random shootings, terrorism or riots, and exposure to war or ethnic conflicts. In the last version of the JVQ (Finkelhor, Hamby, et al., 2005; Finkelhor, Ormrod, et al., 2005a) a new scale was included: Internet Victimization (IV). Only our fourth study included IV, which comprises two questions about online harassment.

Youths are asked to indicate the number of times each of the events has occurred to them. The primary versions of the JVQ ask about the last year as the time frame for victimization reports. However, the instrument can be adapted for a lifetime perspective (Finkelhor, Hamby, et al., 2005). The instrument also "provides some short, closed-ended follow-up questions to follow endorsement of a victimization screening question" (Finkelhor, Hamby, et al., 2005). As pointed out by Finkelhor, Ormrod, et al. (2005b, p. 8), "sometimes a single event may fit more than one victimization category": for example, a single victimizing event such as robbery might also include physical aggression, which will result in the young person responding affirmatively to both items in the JVQ. Whether or not two or more different forms of victimization are part of the same victimizing event can only be established through this short interview with follow-up questions. The authors point out that, although the instrument can be used without

the follow-up questions, it will provide considerably less information for the purpose of classifying different victimization events (Finkelhor, Hamby, et al., 2005). The questionnaire is designed in an interview format with children from 8 to 17 years of age, but it can be used in a self-administered format for juveniles 12 and older (Finkelhor, Hamby, et al., 2005). According to Finkelhor, Hamby, et al. (2005), the psychometric properties of the JVQ are acceptable (Cronbach's alpha for the 34 items is .80 in their American sample) and suggest that it is a good instrument for obtaining reliable, valid reports of youth victimization. In the samples of the studies included in this thesis, Cronbach's alpha ranged from .82 to .85, indicating good internal consistency. The JVQ structure obtained a factorial confirmation with Spanish/Catalan adolescents for data referring to victimization experienced in the last twelve months (Forns, Kirchner, Soler & Paretilla, 2013).

Table 4. Instruments used in each study

	Socio-demographic data sheet	**Rosenberg Self-esteem Scale**	**Youth Self-Report**	**Juvenile Victimization Questionnaire**
Study 1. *Effects of Poly-victimization on self-esteem and post-traumatic stress symptoms*	X	X	X	X
Study 2. *Mediator and moderator role of self-esteem*	X	X	X	X
Study 3. *Poly-victimization and risk for suicidal phenomena*	X		X	X
Study 4. *Victimization areas and mental health in the context of multiple victimization*	X		X	X

Data Analysis

All analyses were performed with SPSS, version 12. A cross-sectional design using quantitative methodology was performed. Both parametric and non-parametric statistics were used to analyse data.

Descriptive data (i.e. percentages, interquartile range, mean, median, standard deviations…) were found for the different variables included in the study. Percentage differences were calculated using the *z* test.

Differences in a continuous variable (e.g., total kinds of victimization) according to a categorical variable (e.g., gender) were analysed through Mann-Whitney *U* test and Kruskal-Wallis test for non-parametric data, and through Student's *t* tests and ANOVA for parametric data. The association between different categorical variables (e.g., gender and age differences in victimization status) was calculated by means of χ^2 and γ. Associations between several categorical (i.e., gender, age and victimization status) and continuous variables (i.e., self-esteem), were conducted through MANOVAs, performing post-hoc comparisons through the Bonferroni test.

To test for differences in the presence of suicidal phenomena between the three victimization groups, Fisher's χ^2 was calculated separately by gender, and contrasted by Monte Carlo method.

The relationship between different variables was estimated through Pearson correlations. Significant differences between correlation coefficients were established through *z* tests.

Mediation and moderation tests were conducted through multiple regression analyses and hierarchical regression analyses respectively. Post hoc Sobel tests were also conducted to confirm mediation. Prior to the creation of interaction terms to test for moderating effects, the predictor variables were centred in order to reduce problematic multicollinearity (Aiken & West, 1991; Holmbeck, 1997).

Relative risk (RR) was used to calculate the risk of exposure to a certain variable (i.e., self-injurious/suicidal behaviour) when in a certain condition (i.e., suicidal ideation).

Odds ratios (OR) were calculated to determine the strength of association between a risk factor (i.e., status of victimization) and a mental health problem (i.e., suicidal phenomena).

To examine the relationship between each individual area of victimization and mental health problems, as well as its variation when the other areas were taken into account, several hierarchical multiple regression analyses were conducted, one for each area of victimization (CC, CM, PSV, SV, WIV, and IV).

To compute the total kinds of victimization reported by each participant, as well as their score in each area of victimization, the Screener Sum Version method (Finkelhor, Ormrod, et al. 2005a) was used. This was common to all the studies, and consisted in the simple counting of endorsed screeners ("yes" responses) from the JVQ. The last year reports of victimization were used in study 1 (Soler, Paretilla, Kirchner, & Forns, 2012) and study 3 (Soler, Segura, Kirchner, & Forns, 2013), whereas life-long victimization was used in studies 2 (Soler, Kirchner, Paretilla, & Forns, 2013) and 4 (Soler, Forns, Kirchner, & Segura, 2014).

For a more schematic presentation of the procedures used in each study, please refer to table 3.

Table 1. Data Analysis according to each study

Study	Analysis	Statistics
Study 1. *Effects of Poly-victimization on self-esteem and post-traumatic stress symptoms*	Frequency of victimization (in total and for each area)	Percentages
	Gender differences in Total Kinds of Victimization (TKV)	Mann-Whitney *U* test
	Age differences in TKV	Kruskal-Wallis test
	Gender differences in 'victimization status'	χ^2
	Age differences in 'victimization status'	γ
	Gender, Age, and 'victimization status' differences in SL and SC	MANOVA and Bonferroni Test
	Gender differences in TPTSS	Mann-Whitney *U* test
	Age differences in TPTSS	Kruskal-Wallis test
	'Status of victimization' differences in TPTSS	Kruskal-Wallis test. Then Mann-Whitney *U* test for between-group differences.
Study 2. *Mediator and moderator role of self-esteem*	Gender differences in TKV, SL, SC, IS and ES	Student's *t*-test
	Network of relations between TKV, SL, SC, IS and ES	Pearson Correlations
	Mediation and moderation role of SL and SC between TKV and both IS and ES	Hierarchical Multiple Regression Analysis Post-hoc Analysis Sobel test
Study 3. *Poly-victimization and risk for suicidal phenomena*	Gender differences in TKV	Student's *t*-test
	Gender differences in 'status of victimization'	Student's *t*-test for victims Mann-Whitney *U* test for poly-victims
	Gender differences in 'status of victimization'	χ^2
	Gender differences in the three groups of suicidal phenomena	χ^2
	Association between 'suicide ideation' and 'self-injurious/suicidal behavior'	χ^2
	Risk of reporting 'self-injurious/suicidal behavior' when reporting 'suicide ideation'	Relative Risk (RR)
	'Presence of suicidal phenomena' differences among the three groups of victimization	Fisher's χ^2. Then *z* test to locate where these differences are found.
	Gender differences in the 'presence of suicidal phenomena' for each victimization group	χ^2
	'Degree of suicidal phenomena' differences among the three groups of victimization	Percentage differences
	Risk for each suicidal phenomenon according to 'status of victimization' and gender	Odds Ratio (OR)
Study 4. *Victimization areas and mental health in the context of multiple victimization*	Prevalence of adolescents reporting each area of victimization exclusively and in combination with others	Percentages
	Variations in the association between particular areas of victimization and mental health symptoms when other areas are introduced in the equation	Hierarchical Multiple Regression Analysis

CHAPTER 7. RESULTS (PAPERS)

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ORIGINAL CONTRIBUTION

Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents

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Abstract This study aims to provide evidence concerning the effects of experiencing multiple forms of victimization (poly-victimization) on self-esteem and post-traumatic stress symptoms in Spanish adolescents. A total of 722 adolescents were recruited from seven secondary schools in Catalonia, Spain. The Rosenberg Self-Esteem Scale, the Youth Self Report and the Juvenile Victimization Questionnaire were employed to assess self-esteem, post-traumatic stress symptoms and victimization, respectively. Participants were divided into three groups (non-victim, victim and poly-victim groups) according to the total number of different kinds of victimization experienced. Results showed that 88.4 % of adolescents had been exposed to at least one kind of victimization. Poly-victimization was associated with a higher number of post-traumatic stress symptoms in both boys and girls. Also, self-liking was significantly lower in the poly-victim group, whereas self-competence was equivalent across the three victimization groups. Girls were approximately twice as likely to report child maltreatment (OR = 1.92) and sexual victimization (OR = 2.41) as boys. In conclusion, the present study adds evidence on the importance of taking account of the full burden of victimizations suffered when studying victimization correlates. Also, it highlights the importance of prevention policies to focus particularly on preserving adolescents' sense of social worth.

Keywords Victimization · Self-esteem · PTSD · Mental health · Child · Adolescent

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Introduction

Victimization, namely harm that occurs to one individual as a result of another individual violating social norms, has largely been considered a significant stressor and a psychologically damaging factor for both children and adults [19, 29, 31, 56, 59]. However, the characteristics of childhood and adolescence mean that the study of victimization in younger individuals need to differ conceptually from that involving adults. Specifically, while children and adolescents may experience all the kinds of victimization which affect adults, they also suffer from some that are specific to their condition of dependency and lack of maturity. It is this dependent status which gives them a broader spectrum of vulnerability than is found among adults [17]. Therefore, when exploring the consequences of victimization in children and adolescents, two different kinds of effects should be considered: developmental effects and localized effects [13]. Developmental effects refer to deep and generalized impacts on development and are linked to the sensitive period through which children and adolescents are living, one in which developmental tasks or processes are particularly vulnerable [17]. Examples of the developmental effects of victimization include impaired attachment (expressed as dazed behavior or avoidance of parents and caregivers) and reduced self-esteem [25, 43, 57]. Localized effects refer to common post-traumatic stress symptoms (PTSS), such as increased levels of fear and vigilance, anxiety around adults who resemble the offender, fear of returning to the place where victimization occurred, or nightmares [7, 11, 13, 42, 58].

To date, most research has focused on the effects of specific kinds of victimization, with little attention being paid to exposure to multiple forms of victimization or poly-victimization. Thus, over the last 10 years, the relationship

between child victimization and self-esteem has been studied in terms of bullying or peer victimization [5, 23, 26, 31, 36, 37, 40, 51, 57], sexual victimization [34, 50, 53, 57], child abuse or neglect [8, 12, 57], and both experienced and vicarious violent victimization [8, 22, 33, 38, 46]. However, research has yet to examine the effects of multiple forms of victimization on self-esteem.

Post-traumatic stress symptoms have similarly been related to victimization in terms of bullying or peer victimization [11], sexual victimization [7, 44, 58], child abuse and neglect [44, 52] and both experienced and vicarious violent victimization [32, 42]. However, although a few studies have recently studied the relationship between poly-victimization and trauma symptoms [18, 21, 27, 56], the literature contains no studies which analyse gender differences on PTSS according to the status of victimization (non-victims, victims and poly-victims).

There is clearly a need for an in depth study of the influences of poly-victimization on mental health. Finkelhor et al. [18], and Finkelhor et al. [20] estimate that over the course of a year a victimized child suffers a mean number of three different kinds of victimization. Therefore, focusing on just one kind of victimization may overestimate its relationship with other variables, such as self-esteem or post-traumatic stress symptoms. In this sense, much of the presumed influence of a particular type of victimization could be due to the hidden influence of multiple victimizations [56]. Moreover, according to Finkelhor et al. [20], suffering different kinds of victimization is more harmful than is going through repeated episodes of the same type, even if this type is considered one of the most harmful (e.g. sexual victimization). Hence, it is important to analyse the existing association between the experience of multiple different kinds of victimization and both self-esteem and post-traumatic stress symptoms, especially taking into account that adolescents tend to attribute multiple victimizations to their own characteristics and failings [57].

From the perspective of developmental victimization it is important to take into account not only age, which is basically related to the child's or adolescent's maturity and dependency status, but also gender [15]. However, there remains controversy as to the influence of gender on the rate of suffered victimizations [15], on levels of self-esteem [24, 35, 41], and the impact of victimization on mental health [6, 10, 27, 47, 48]. It is also important, therefore, for research to analyse both gender and age differences in broad samples of children and/or adolescents.

In light of the above, the present study aims to contribute further evidence to the field of child and adolescent victimization and promote a better understanding of poly-victimization and its effects on PTSS and self-esteem. The research objectives are as follows: firstly, to explore how the different victimization areas and total kinds of victimization are distributed according to age and gender in a group of Spanish adolescents; secondly, to analyse how two facets of self-esteem, namely self-liking (SL) and self-competence (SC), are distributed according to the degree of victimization (or victimization status), gender and age; and thirdly, to analyse how post-traumatic stress symptoms are distributed according to the degree of victimization, gender and age.

Taking the aforementioned studies as a starting point, the current research explores three hypotheses. First, in a community sample, adolescent boys will experience higher levels of victimization than will girls for all types of victimization except sexual abuse [14]. Second, in both boys and girls SL and SC will be significantly more affected in the poly-victim group than in the victim group, given adolescents' tendency to attribute multiple victimizations to their own characteristics and failings [57]. Third, in both boys and girls the poly-victim group will show a greater number of total post-traumatic stress symptoms (TPTSS) than will both the victim and non-victim groups, given the accumulative impact of victimization on adolescents' mental health [56].

Methods

Participants

Participants were 722 adolescents aged 14 to 18 years old enrolled in seven different schools in Catalonia. Specifically, 26.9 % were in the ninth grade of high school (M_{age} = 14.35; SD = .56), 20.2 % in tenth grade (M_{age} = 15.38; SD = .64), 30 % in eleventh grade (M_{age} = 16.30; SD = .57), 18.9 % in twelfth grade (M_{age} = 17.09; SD = .55); the remaining 4 % were engaged in vocational training (M_{age} = 17.22; SD = .70). The majority (61.8 %) were studying in state schools, with the remainder (38.2 %) in State-subsidized privately-run schools. Most of the participants (n = 462, 64 %) were female; of the remainder 35.3 % (n = 255) were male, and .7 % did not report their gender. The large majority (87.6 %) were of Spanish nationality, with 1.2 % coming from other European countries, 5.2 % being South-American, 2 % Central American, 1.5 % Asian and 2.5 % African. A total of 79.8 % of the adolescents lived with their biological parents, 7.3 % lived with their biological mother, 1.9 % with their biological father, 8.9 % with biological father or mother and his or her partner, 1.3 % lived with adoptive parents and .8 % with legal tutors.

Based on Hollingshead four factor index [30], the participants' families corresponded to the following categories: 17.7 % unskilled, 24.1 % semiskilled workers, 23.3 % clerical and sales, 30.4 % medium business families and 4.5 % major business and professional families.

Procedure

After obtaining permission from school principals, students were contacted via in-class announcements in which they were told what their participation in the research would involve. Participation was voluntary, requiring written consent from parents. The rate of participation was 44.7 %.

All questionnaires were administered in small groups in a single 60-min session. Students were reminded that there were no right or wrong answers and were instructed to choose the most appropriate answer according to their own experience. In order to facilitate the assessment of sensitive data, special attention was paid to protect privacy and assure confidentiality. A project staff member was present at all times to clarify any doubts arising during the administration. At the end of the assessment session, students were given the option of writing down their email so they could be invited to a subsequent psychological debriefing meeting with a qualified staff member. A meeting with the school principal was also arranged in order to provide information about those cases that needed to be reported to the authorities. A university Ethics Committee approved the study.

Measures

A demographic data sheet and three instruments were used.

The socio-demographic data sheet included information about adolescents' age, gender, number of siblings, country of birth, parents' country of birth, parents' marital status, parents' occupational status, and other household characteristics.

RSES

The Rosenberg Self-Esteem Scale [49] was used to evaluate each adolescent's self-esteem. The original self-report assesses the individual's own evaluation across ten different items, five of which are positively worded (e.g. 'On the whole, I am satisfied with myself'), and five negatively worded (e.g. 'Sometimes I feel really useless'). Adolescents were asked to indicate the extent to which they agreed with each item statement on a four-point Likert scale ranging from 1 (totally disagree) to 4 (totally agree). The Spanish adaptation of this scale has been validated in an adolescent population by Atienza et al. [4], and by Pastor et al. [45]. Given that these authors did not reach an agreement concerning the dimensional structure of the RSES, in the present study an exploratory factor analysis was conducted (KMO = .890, Bartlett's test of sphericity = 1866.96, $p < .001$), based on principal components analysis (oblimin rotation) and the retention of factors with an eigenvalue higher than 1. Two factors were identified that together explained 54.07 % of the variance. The first factor accounted for 43.07 % of the explained variance and consisted of items 2, 5, 6, 8 and 9 (Cronbach's alpha = .79). The second factor accounted for the other 11 % of the explained variance and comprised items 3, 4 and 7 (Cronbach's alpha = .66). This structure can be interpreted in line with the proposal of Tafarodi and Swann [55]. Thus, the first factor (SL) evaluates self-liking (e.g. 'I feel useless,' 'I wish I respected myself more'), which is considered to reflect the appraisal of oneself as a social object, as a good or bad person according to internalized criteria for worth. The second factor (SC) evaluates self-competence (e.g. 'I am able,' 'I am good at…') and is considered to represent the appraisal of oneself as a causal agent, as a source of power and efficacy in terms of achieving personal goals. SL and SC scales were calculated summing the corresponding item values and reverse coding the negatively worded items. SL scores ranged from 5 to 20, and SC scores from 3 to 12. The correlation between SL and SC was significant ($r = .50$; $p < .001$).

YSR

The Youth Self Report [2, 3] is a self-report inventory that measures social competences (competence scale) and psychological distress (syndrome scale) in children and adolescents between 11 and 18 years old. The syndrome scale comprises a list of 112 items representing thoughts, feelings and behaviours. Participants are asked to indicate how often each of the item statements happened to them within the last 6 months. Each item is rated on a three-point Likert scale ranging from 0 (not at all) to 2 (very often). The 2001 version of the YSR [2] allows for the exploration of eight DSM-oriented scales: affective problems, anxiety problems, somatic problems, attention deficit/hyperactivity problems, oppositional defiant problems, conduct problems, obsessive–compulsive problems and post-traumatic stress problems. These scales enable the level of mental health problems to be categorized as 'normal,' 'borderline' or 'clinical'. The Spanish adaptation of the YSR has been validated in an adolescent population by Abad et al. [1]. For the purpose of the present study, only the post-traumatic stress problems scale was used to assess the adolescents' responses to victimizing events. This scale comprises 14 items and its scores range from 0 to 28. The reliability of the scale is acceptable (Cronbach's alpha = .72).

JVQ

The Juvenile Victimization Questionnaire [28] is a self-report questionnaire that focuses on 34 major forms of offenses against children and youth and which can be

classified into five general areas of concern: conventional crime, child maltreatment, peer and sibling victimization, sexual victimization, and witnessing and indirect victimization [16]. The conventional crime area includes questions about robbery, personal theft, vandalism, assault with and without weapons, attempted assault, kidnapping, and bias attack. The child maltreatment area examines physical, psychological and emotional abuse by caregivers, neglect, and custodial interference or family abduction. Peer and sibling victimization takes account of gang or group assault, peer or sibling assault, non-sexual genital assault, bullying, emotional bullying, and dating violence. Sexual victimization examines sexual assault by a known adult, nonspecific sexual assault, sexual assault by a peer, attempted or completed rape, flashing or sexual exposure, and verbal sexual harassment. Finally, witnessing and indirect victimization refers to being a witness to domestic violence, a witness to parent assault of a sibling, a witness to assault with and without weapons, burglary of family household, murder of a family member or friend, witness to murder, exposure to random shootings, terrorism or riots, and exposure to war or ethnic conflicts. Young people are asked to indicate the number of times each of the aforementioned events occurred to them during the last year. In the present study, clear instructions were given to help participants identify a 1-year interval by giving them a reference point in time (e.g. 'think about the time from around last summer'). The content validity of the scale is based on the legal punishable status of the items included in the questionnaire. Cronbach's alpha reliability for the 34 items reaches .80 in the North American population [16]. In the present sample, Cronbach's alpha reached .84, indicating good internal consistency.

Data analysis

In order to analyse victimization the Screener Sum Version [20] was used to compute total victimization reports on the JVQ. This procedure involves the simple counting of endorsed victimization screeners ("yes" response). The percentage of victimized youth was then calculated. Descriptive values (interquartile range and median) were calculated for the total number of victimizing events and for each area of concern, for which percentages were also calculated. Gender and age differences were analysed using, respectively, the Mann–Whitney *U* test and the Kruskal–Wallis test.

At this point in the analysis, and in line with the criterion of Finkelhor et al. [19] and Turner et al. [56], participants were assigned to a 'victimization status' or 'degree of victimization', categorizing as poly-victims those respondents whose level of victimization placed them within the top 10 % of the sample in this regard. In the present study, the use of this cut-off point meant that participants who had experienced nine or more different forms of victimization during the last year were classified as poly-victims. Three groups were then created as follows: poly-victim group (the 10 % most victimized); victim group (those suffering between one and eight victimizations), and non-victim group (those who had not suffered any victimization). Gender and age differences in relation to victimization status were then calculated through χ^2 and γ, respectively.

The next step involved conducting a MANOVA to analyse gender, age and victimization status differences in relation to self-esteem, taking the two components of self-esteem (SL and SC) as dependent variables. Between-subjects effects for the dependent variables were also analysed. Post hoc comparisons were performed using Bonferroni test.

Gender and age differences in relation to TPTSS were examined using, respectively, the Mann–Whitney *U* test and the Kruskal–Wallis test. Differences in TPTSS between the three victimization status groups were then explored by means of Kruskal–Wallis analyses, and independently by gender. Subsequent Mann–Whitney *U* tests were conducted to specify between-groups differences. All analyses were performed with SPSS, version 12.

Results

Total kinds of victimization, victimization areas and victimization status according to gender and age

As regards the total kinds of victimization experienced, the results show that the large majority of the sample (88.4 % of participants) had been exposed to at least one kind of victimization during the previous year, with 71.6 % having been exposed to 2 or more different kinds of victimization, 31.7 % to 5 or more, and 5.1 % to 11 or more.

Descriptive data values (interquartile range and median) for total kinds of victimization, as well as descriptive values and percentages for each area of victimization, are presented in Table 1 according to gender. The most frequent kind of victimization suffered by adolescents was witnessing and indirect victimization (64.2 %), followed by conventional crime (55.5 %) and peer and sibling victimization (48.4 %). Child maltreatment was reported by 33.7 % of the sample, and sexual abuse by 18.3 %.

The mean number of total kinds of victimization suffered was 3.92 ($SD = 3.95$). It can be seen in Table 1 that there were no gender or age differences in relation to the total kinds of victimizing events suffered. However, there were several gender differences for specific areas of victimization. Child maltreatment and sexual victimization were significantly more common among girls, with as

Table 1 Descriptive data (interquartile range and median) for total kinds of victimization and areas of victimization according to gender. Percentages of adolescents who experienced each area of victimization. Mann–Whitney *U* test for gender differences and Kruskal–Wallis test for age differences

	Gender								Age 14–18	
	Male $n = 255$			Female $n = 446$			Mann–Whitney		Kruskal–Wallis	
	%	IQR	Mdn	%	IQR	Mdn	*U*	*p*	χ^2	*p*
Juvenile Victimization Questionnaire										
Total kinds of victimization	–	1–5	3	–	1–6	3	−1.30	.194	1.38	.848
Conventional crime	50.8	0–2	1	58.2	0–2	1	−1.47	.141	3.23	.520
Child maltreatment	24.9	0–.5	0	48.9	0–1	0	−3.82	<.001	2.63	.622
Peer and sibling victimization	48.8	0–1	0	48	0–1	0	−52	.598	8.73	.068
Sexual victimization	10.7	0–0	0	22.4	0–0	0	−3.80	<.001	1.88	.759
Witnessing/indirect victimization	66.1	0–2	1	63.4	0–2	1	−1.66	.097	5.33	.255

Table 2 Descriptive values of SL and SC (mean and standard deviation) and of TPTSS (median and inter-quartile range) for the total sample and for each victimization status according to gender

		Total		Non-victims		Victims		Poly-victims	
Rosenberg self-esteem scale (M and SD)									
Self-liking	Boys	16.11	2.84	16.14	2.58	16.48	2.62	13.30	3.35
	Girls	14.16	3.31	14.67	3.69	14.39	3.22	12.27	3.12
Self-competence	Boys	10.03	1.40	10.11	1.26	10.12	1.37	9.73	1.89
	Girls	9.33	1.51	9.94	1.66	9.35	1.42	8.67	1.46
Total post-traumatic stress symptoms (Mdn and IQR)									
	Boys	7	4–10	5	4–9	7	5–10	11	9–16
	Girls	9	6–12	7	5–10	9	6–12	13	10–15

n for Rosenberg self-esteem subgroups (total: *n* boys = 254, *n* girls = 458; non-victims: *n* boys = 28, *n* girls = 49; victims: *n* boys = 181, *n* girls = 334; poly-victims: *n* boys = 23, *n* girls = 48). *n* for total post-traumatic stress symptoms (total: *n* boys = 239, *n* girls = 448; non-victims: *n* boys = 27, *n* girls = 49; victims: *n* boys = 178, *n* girls = 337; poly-victims: *n* boys = 19, *n* girls = 47)

many as 48.9 % of girls reporting having suffered child maltreatment and 22.4 % sexual victimization, the corresponding rates in boys being 24.9 % and 10.7 %. The odds ratio for child maltreatment was 1.92 [CI 95 % = 1.53–3.80], while that for sexual victimization was 2.411 [CI 95 % = 1.37–2.70].

The distribution of participants according to victimization status was not associated with any differences in terms of gender ($\chi^2 = .464$; $df = 2$; $p = .793$) or age ($\gamma = -.012$; $p = .065$).

Levels of self-esteem according to gender, age and victimization status

Table 2 presents descriptive data for the self-esteem variables. Gender, age and victimization status differences in relation to the two main components of self-esteem were examined by means of a MANOVA, taking SL and SC as dependent variables. A significant total main effect was found (Wilks' $\lambda = .078$, $p < .001$, $\eta^2 = .922$) for gender (Wilks' $\lambda = .982$, $p = .003$, $\eta^2 = .018$) and victimization status (Wilks' $\lambda = .958$, $p < .001$, $\eta^2 = .021$), but not for age (Wilks' $\lambda = .986$, $p = .366$, $\eta^2 = .007$). No interaction effects were found. The subsequent univariate ANOVAs indicated significant gender differences in relation to both SL ($F_{[1,\ 684]} = 8.971$, $p = .003$, $\eta^2 = .014$) and SC ($F_{[1,\ 684]} = 8.063$, $p = .005$, $\eta^2 = .013$), with boys always obtaining higher mean values. Significant victimization status differences were also found in relation to SL ($F_{[2,\ 684]} = 11.419$, $p > .001$, $\eta^2 = .035$). Post hoc analyses showed that levels of SL were lower in the poly-victim group than in both the non-victim ($p < .001$) and victim groups ($p < .001$), whereas no statistical differences were found between victims and non-victims ($p = 1.0$). Victimization status did not show differences in relation to SC ($F_{[2,\ 684]} = 2.027$, $p = .133$, $\eta^2 = .006$).

Total post-traumatic stress symptoms according to gender, age and victimization status

Table 2 shows descriptive values (inter-quartile range (IQR) and median) for the total score of post-traumatic stress symptoms (TPTSS) according to victimization status and gender. The Mann–Whitney U test showed that girls report significantly more post-traumatic stress symptoms than do boys ($U = 38843.5$; $p < .001$). However, the Kruskal–Wallis test revealed no age differences ($\chi^2 = 5.55$; $p = .235$).

Given the gender differences observed for the total raw score of post-traumatic stress symptoms a Kruskal–Wallis analysis was then conducted for boys and girls separately in order to study TPTSS differences among the three victimization status groups. This analysis revealed differences between the victimization groups for both boys ($\chi^2 = 21.51$; $df = 2$; $p < .001$) and girls ($\chi^2 = 29.92$; $df = 2$; $p < .001$). Mann–Whitney U tests were then used to specify the between-groups differences. In boys, the poly-victim group had significantly higher levels of TPTSS than did both the victim ($U = 666.0$; $p < .001$) and non-victim groups ($U = 85.5$; $p < .001$), whereas no significant differences were found between the latter two groups ($U = 1996.5$; $p = .156$). In females, the poly-victim group again had significantly higher levels of TPTSS than did the victim ($U = 4666.5$; $p < .001$) and non-victim groups ($U = 428.0$; $p < .001$), while the victim group also had significantly higher levels than did the non-victim group ($U = 6525.5$; $p = .017$).

Discussion

Previous studies have identified changes in both self-esteem and PTSS as being important psychological outcomes of victimization [43, 58]. However, most of these studies [8, 12, 22, 23, 34, 50] have only focused on the effects of specific kinds of victimizations, thereby overlooking the potential influence of suffering multiple kinds of victimization. The present study provides evidence concerning the effects on mental health (self-esteem and post-traumatic stress symptoms) of experiencing multiple kinds of victimizations, and also highlights gender differences in this regard.

The adolescents' answers regarding the mean number of different kinds of victimization experienced (3.9) are in line with those reported by Finkelhor et al. [20]. In the present study, no age differences could be found in relation to the number of different kinds of victimization suffered during the previous year, or regarding self-esteem or TPTSS. Overall, boys and girls reported equivalent amounts of victimization, although child maltreatment and sexual victimization were reported twice as often by girls. These data partially confirm the first hypothesis of the present study, which stated that in a community sample, adolescent boys would experience higher levels of victimization than girls for all types of victimization except for sexual abuse [14].

With respect to self-esteem and PTSS, girls reported significantly lower levels of self-esteem and higher levels of TPTSS than did boys, these findings being in line with previous research [24, 27]. This could be partially explained by the kinds of victimization that girls suffer significantly more than do boys (i.e. child maltreatment and sexual victimization), as according to Finkelhor et al. [19] these experiences lead to more negative psychological outcomes than do other types of victimization.

The analysis of adolescents' levels of self-esteem according to their victimization status revealed that both boys' and girls' sense of being a valuable person (SL) was equivalent in victims and non-victims. It was only when participants had suffered nine different kinds of victimizations or more (poly-victimization group) that their sense of personal value, which is worth oriented and linked to a sense of social worth, decreased significantly, thereby illustrating the important impact of suffering multiple kinds of victimization. These results support our second hypothesis in terms of SL and are in line with those reported by Turner et al. [56], demonstrating that the experience of multiple victimizations from different sources might lead youth to consider themselves as much more unworthy than their counterparts, making it much harder to resist a negative self-evaluation. However, the adolescents' sense of their own power and self-efficacy in meeting personal goals (SC) follows a different pattern. Indeed, their SC, which is ability oriented and linked to the self-assessment of personal abilities, did not diminish significantly according to their degree of victimization (i.e. minimal or multiple victimization). Therefore, experiencing multiple kinds of victimization appears to affect adolescents' self-evaluation as worthy social beings, but it does not seem to make them question their self-efficacy, thereby contradicting our second hypothesis as far as SC is concerned. Some potential reasons for this are provided by [54]. Negativity from others (rejection, disapproval, interpersonal conflicts) may affect the valuative representation of oneself as a social object (SL), which is assumed to derive from appraisals of worth conveyed by others. However, one's sense of efficacy at reaching personal goals (SC) may be related more to achievement events (successes and accomplishments) than to victimization events.

As regards the number of post-traumatic stress symptoms, mean values increased with the degree of victimization in girls, who showed significantly more symptoms even in relation to just a few different kinds of

victimization. Conversely, boys reported significantly more post-traumatic stress symptoms when experiencing poly-victimization. These findings partially confirm our third hypothesis, except for the fact that girls in the victim group also reported significantly more TPTSS than did their non-victim counterparts. These results could be interpreted from the perspective of the cumulative effect of increasing stressors as highlighted by Cloitre et al. [9].

Lastly, it should be noted that impaired self-esteem may be a direct outcome of victimization [43] and, at the same time, self-esteem might have a direct influence on the appearance of post-traumatic stress symptoms. It is therefore important to consider the mediating role that self-esteem might play between the experience of multiple kinds of victimization and the appearance of post-traumatic stress symptoms, whereby it would act as a protective factor if it remained high.

Taken together, these findings justify the need for further studies on the role which self-esteem may play as a mediator between exposure to multiple kinds of victimization and post-traumatic stress symptoms, while taking into account two different facets of self-esteem (SL and SC) and gender differences. Moreover, these two self-esteem facets, although widely supported by recent literature [54, 55], should be reanalyzed to confirm and extend the results of the current study.

Strengths and limitations

The present study has a number of limitations that should be acknowledged.

Firstly, in order to operationalize the measures of victimization and poly-victimization, only different incidents occurring during a 1-year period were taken into account. This means that a second and consecutive assault of the same kind happening over the course of a year, or different kinds of victimization happening before this 1-year period, were not taken into consideration as additional victimization. One would expect, therefore, that the effect of repetitive victimizations over time may be minimized. However, as Finkelhor et al. [20] point out, the exclusion of different episodes of the same type of victimization helps the researcher to inquire about different types of victimization, which was the principal aim of the present study. Moreover, when Finkelhor et al. [19] compared the merits of lifetime versus past-year assessment of poly-victimization, they concluded that researchers interested in poly-victimization could use either approach (life-time or 1-year period) according to a variety of considerations. In the present study, efforts were made to carry out an accurate assessment of the immediate risk environment that adolescents are facing, and also to ensure the validity of victimization recall, which makes 1-year period assessment suitable, even though this approach does not allow for the effects of victimization being life-long accumulative. Another important drawback of the current study's operationalization of poly-victimization is that no greater weight was given to certain kinds or combinations of victimization that are known to be particularly harmful and traumatizing (e.g. sexual victimization involving caregiver perpetrations). However, Finkelhor et al. [20] found that the enhancement that this procedure would provide in terms of explaining trauma symptoms is limited, and they concluded that the relative gains are not worth the methodological complexity.

It is also important to mention that non-victimizing traumatic life events were not taken into account. Future research should therefore evaluate the actual effect of interpersonal victimization while controlling for these non-victimizing traumatic experiences.

A further point of note is that the use of criterion described by Turner et al. [56] and Finkelhor et al. [19] for classifying subjects according to their degree of victimization produced three unbalanced groups. This obviously entails psychometric drawbacks when comparing these three groups. Although we decided here to obtain an equivalent poly-victimization group to that reported by Finkelhor et al. [20] we believe it is important for further research to consider other groupings.

The low rate of participation (44.7 %) can also be considered a limitation of the study, although it is similar to those recorded in other studies [56] that require two steps for the participation: consent from parents and consent from adolescents.

Lastly, as in most cross-sectional studies, causal ordering cannot be clearly established. In this context, Turner et al. [56] found that children with high levels of internalizing and externalizing symptoms were particularly likely to experience increased exposure to several forms of victimization, controlling for earlier victimization and adversity. Furthermore, psychologically distressed children and youth may tend to perceive or remember more victimization, thereby creating artefactual associations [18]. Studies that adopt a longitudinal approach are clearly needed to address this limitation.

With respect to the strengths of the current study, it should be noted that the sample size is considerable and more than 10 % of participants came from social minorities. A further point is that, although there is still debate concerning the dimensional structure of self-esteem [39], the fact that self-esteem was studied here as a concept comprised of two somewhat distinct yet related constructs (SL and SC) reveals nuances that could be overlooked by a unidimensional conceptualization. This approach produced results that should be useful in terms of targeting the treatment policy (e.g. in victimized youth it is important to

promote their sense of being a socially valuable person, since this component of self-esteem is the most affected when an adolescent suffers multiple kinds of victimization).

In conclusion, the present study is the first to provide preliminary evidence for the effects of poly-victimization on two different facets of self-esteem. It is also the first to analyse the impact of poly-victimization on post-traumatic stress symptoms according to gender. Further studies should be conducted in order to improve our understanding of victimization in youth and its impact on mental health, as well as of the protective role that some variables, such as self-esteem, may play in terms of buffering the impact of victimization.

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Conflict of interest None.

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Impact of Poly-Victimization on Mental Health: The Mediator and/or Moderator Role of Self-Esteem

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Abstract

The current study examines the relationship between the total kinds of victimization (TKV) experienced, self-esteem, and internalizing symptoms (IS) and externalizing symptoms (ES). It also explores the mediator and/or moderator role of two self-esteem facets: self-liking (SL) and self-competence (SC). The sample comprised 736 adolescents recruited from eight secondary schools in Catalonia, Spain. The Rosenberg Self-Esteem Scale, the Youth Self Report, and the Juvenile Victimization Questionnaire were used to assess self-esteem facets (SL and SC), psychological distress (IS and ES), and the TKV suffered. This article has several innovative features. On one hand, it considers that self-esteem is comprised of two different but related factors: SL and SC. On the other hand, it is the first study to provide evidence for the mediator/moderator role of SL and SC between victimization and psychological symptoms, taking account of the TKV experienced. Results suggest that SL is more relevant to mental health than SC. A low sense of being a worthy social being (SL) is more closely related to both victimization and poor mental health than a low sense of personal efficacy (SC). Moreover, SL seems to partially mediate the relationship between TKV and both IS and ES, whereas SC only acts as

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a partial mediator for the TKV–IS relationship in girls. At the same time, SL acts as a partial moderator of the TKV–IS relationship in boys. These findings support the importance of self-esteem in buffering the impact of victimization on mental health and may indicate that proper prevention and treatment policies should focus on adolescents' sense of being a good person, according to their own criteria of worth.

Keywords
child abuse, mental health and violence, youth violence

Introduction

In recent decades, evidence has accumulated on the mental health effects of interpersonal victimization. It has been established that victimization is a major stressor and an important etiological factor in several psychiatric disorders, such as depression (Bifulco, Moran, Jacobs, & Bunn, 2009; Bosacki, Dane, Marini, & YLC-CURA, 2007; Marini, Dane, Bosacki, & YLC-CURA, 2006), anxiety (Bifulco et al., 2009; Marini et al., 2006), posttraumatic stress symptoms (Cantón-Cortés & Cantón, 2010; Crosby, Oehler, & Capaccioli, 2010; O'Donnell, Roberts, & Schwab-Stone, 2011; Ullman, Najdowski, & Filipas, 2009), substance use disorders (Ford, Elhai, Connor, & Frueh, 2010; Sullivan, Farrell, & Kliewer, 2006), and delinquent behavior (Ford et al., 2010; Sullivan et al., 2006).

In spite of the large number of studies reporting a clear association between specific kinds of victimization and both internalizing and externalizing problems, to date little research has taken account of the full burden of victimization to which adolescents are exposed. In fact, current research on victimization estimates that the mean number of different kinds of interpersonal violence suffered by victimized children during a 1-year period is between 3 (Finkelhor, Ormrod, & Turner, 2007) and 3.7 (Finkelhor, Ormrod, Turner, & Hamby, 2005). Therefore, focusing on the effects of just one kind of victimization can overestimate its influence, which may instead be due to the hidden impact of other types of victimization that are not taken into account (Turner, Finkelhor, & Ormrod, 2010a).

According to Arata, Langhinrichsen-Rohling, Bowers, and O'Farrill-Swails (2005), Greenfield and Marks (2010), and Higgins and McCabe (2000), children who are exposed to different kinds of victimization are those that experience the worst psychological adjustment, even worse than those who suffer repeated episodes of the same kind of victimization (Finkelhor et al., 2007). This highlights the potential damage of

experiencing multiple kinds of victimization. Even so, some individuals experience high amounts of different kinds of interpersonal victimization and do not develop a psychiatric illness. The psychosocial processes that might prevent multiple-victimized adolescents from suffering psychological distress, in other words, the mechanisms that may contribute to their resilience, are still widely unknown.

The importance of studying the protective factors that may help to buffer the negative effects of victimization is beyond any doubt. Some researchers have considered self-esteem to be one of the psychosocial processes through which victimization may affect mental health. Indeed, interpersonal victimization has been associated with low levels of self-esteem (Chan, Brownridge, Yan, Fong, & Tiwari, 2011; Turner, Finkelhor, & Ormrod 2010b). At the same time, low levels of self-esteem have been correlated with depression, anxiety, and other psychiatric disorders (Shirk, Burwell, & Harter, 2003). Some researchers have already examined the potential mediating and moderating effects of self-esteem, with inconsistent results (Benas & Gibb, 2007; Grills & Ollendick, 2002; Turner et al., 2010b). Other studies have identified gender differences in the role of self-esteem between exposure to particular forms of victimization and mental health outcomes: A mediator model has been found to be more explicative in girls and a moderator model more explicative in boys (Grills & Ollendick, 2002). However, research has yet to examine the mediator role of self-esteem between the experience of multiple kinds of victimization and mental health problems.

The present study has two main objectives. First, we aim to test the relationships between the total kinds of victimization (TKV) experienced during the lifetime, self-esteem components (self-liking [SL] and self-competence [SC]) and mental health issues (internalizing symptoms [IS] and externalizing symptoms [ES]) in adolescents. As suggested by the results of the empirical studies mentioned above, a network of relations among all these variables was expected. Second, we aimed to examine two competing models regarding these relations: a mediator model and a moderator model. On the basis of the gender differences reported in previous studies (Grills & Ollendick, 2002), the mediator model was expected to provide a better explanation of the relationship between TKV and mental health in girls, whereas the moderator model was expected to fit better in the case of boys. In other words, in girls, victimization was expected to influence psychological symptoms through self-esteem, whereas in boys self-esteem was expected to influence psychological responses to victimization, with boys under conditions of high victimization being less likely to be negatively affected by these victimization experiences if they had high self-esteem (Grills & Ollendick, 2002).

Method

Participants

The sample comprised 736 students from eight schools in Catalonia (Spain) aged 14 to 18 (M = 15.67 years; SD = 1.23). A total of 21.8% were 14 years old, 20.4% were 15 years old, 29.5% were 16 years old, 23.1% were 17 years old, and 5.2% were 18 years old. Most of the participants were female (63%, n = 464) whereas the other 37% were male (n = 272). As much as 89.5% of the sample (n = 659) was Spanish, whereas the rest of the adolescents came from South America (5.3%, n = 39), Africa (1.2%, n = 9), Central America (1.1%, n = 8), Asia (1.2%, n = 9), and other European countries (1.2%, n = 9). The majority of the sample, 80.9% of the adolescents (n = 586), lived with their biological parents, 8.7% (n = 63) lived with their biological mother, 2.6% (n = 19) with their biological father, 5.9% (n = 42) with their biological father or mother and his or her partner, 1.1% (n = 8) lived with adoptive parents and 0.8% (n = 6) with legal tutors. According to the Hollingshead four-factor index (Hollingshead, 1975), the participants' families corresponded to the following categories: 10.3% (n = 49) unskilled, 22.4% (n = 107) semi-skilled workers, 25.6% (n = 122) clerical and sales, 37.3% (n = 178) medium business families and 4.4% (n = 21) major business and professional families. The rate of participation in the study was 44.7%.

Procedure

After obtaining permission from the school principals, students were contacted via in-class announcements to ask for their contribution to the research. Participation was voluntary but required written consent from parents. All questionnaires were administered in small groups during one 60-min session. A project staff member instructed students to choose the most appropriate answer according to their own experience, and was present at all times to answer any questions arising during the application. Special attention was paid to protect privacy and assure confidentiality during data collection to facilitate the assessment of sensitive data. This confidentiality was preserved in all cases, except when the information provided by the adolescents revealed problems of victimization that might be punishable by law (e.g., sexual abuse), or might represent a serious psychological problem (e.g., suicide risk). In these cases, a meeting with the school psychologist and/or the head teacher was arranged to identify the subject on the basis of the sociodemographic data. These professionals then interviewed the adolescent identified to verify the information given and proceeded according to the code of

professional ethics. This research was vetted by the bioethics' committee of the University of Barcelona.

Measures

A sociodemographic datasheet and three instruments were used.

The sociodemographic data sheet was elaborated ad hoc and included information about adolescents' age, gender, number of siblings, country of birth, as well as other household characteristics such as parents' marital, occupational, or educational status.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a self-report that assesses one's own evaluation using 10 different items: five positively worded items (e.g., "On the whole, I am satisfied with myself"), and five negatively worded items (e.g., "I feel I do not have much to be proud of"). Adolescents are asked to indicate the strength of their agreement with the statement for each item on a 4-point Likert-type scale ranging from 1 (*absolutely disagree*) to 4 (*absolutely agree*). Pastor, Navarro, Tomás, and Oliver (1997) validated the Spanish adaptation of this scale in an adolescent population, finding inconclusive results concerning its dimensional structure. In the current study, an exploratory factor analysis was conducted (Kaiser–Meyer–Olkin = .891, Bartlett's sphericity = 2,146.39, $df = 45$, $p < .001$), with principal components analysis (varimax rotation), and an eigenvalue higher than 1. Two factors were identified that jointly explained 53.52% of the variance. Only items loading ≥ .40 were retained and factorial purity was ensured by disallowing those items loading on more than one factor (items 1 and 10). The first factor accounted for 30.25% of the variance and consisted of items 2, 5, 6, 8, and 9 (Cronbach's $\alpha = .78$). The second factor explained 23.27% of the variance and comprised items 3, 4, and 7 (Cronbach's $\alpha = .66$). This structure can be interpreted as proposed by Sinclair et al. (2010), Soler, Paretilla, Kirchner, and Forns (2012), and Tafarodi and Swann (1995, 2001). According to these authors, the first factor evaluates SL (e.g., "I feel useless," "I wish I respected myself more"), which is considered the appraisal of oneself as a social object, as a good or bad person according to internalized criteria for worth, whereas the second factor evaluates SC (e.g., "I am able," "I am good at . . . "), and is considered the appraisal of oneself as a causal agent, as a source of power and efficacy in terms of achieving personal goals. The SL and SC scales were calculated by summing the corresponding item values and reverse coding the negatively worded items. SL scores ranged from 5 to 20, and SC scores from 3 to 12. The correlation between SL and SC was .47.

The Youth Self Report (Achenbach & Rescorla, 2001) is a self-report that measures psychological distress in children and adolescents aged between 11

and 18 through a list of 112 items that represent thoughts, feelings, and behaviors. It classifies psychological distress into two broad-band syndromes (internalizing and externalizing problems) and eight narrow-band syndromes (anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior). Participants are asked to indicate on a 3-point Likert-type scale ranging from 0 (*not at all*) to 2 (*very often*) how frequently each of the item statements had happened to them within the last 6 months. Abad, Forns, Amador, and Martorell (2000) and Abad, Forns, and Gómez (2002) validated this self-report in a Spanish adolescent population. For the purpose of the current work, only the internalizing and externalizing problems scales were used. The internalizing problems scale is composed of 31 items, with scores ranging from 0 to 62, whereas the externalizing problems scale is comprised of 32 items, with scores ranging from 0 to 64. In the current sample, both the internalizing problems scale (Cronbach's $\alpha = .87$) and the externalizing problems scale (Cronbach's $\alpha = .84$) showed good reliability.

The Juvenile Victimization Questionnaire (Hamby, Finkelhor, Ormrod, & Turner, 2004) is a self-report questionnaire that originally focused on 34 major forms of offenses against children and youths that can be classified into five general areas of concern: Conventional Crime, Child Maltreatment, Peer and Sibling Victimization, Sexual Victimization, and Witnessing and Indirect Victimization (Finkelhor, Hamby, Ormrod, & Turner, 2005). The Conventional Crime section includes questions about robbery, personal theft or vandalism, among others. The Child Maltreatment section examines victimization such as physical, psychological, and emotional abuse by caregivers. Peer and Sibling Victimization takes into account gang assaults, peer or sibling assaults and bullying among others. The Sexual Victimization section examines incidents such as sexual assaults, flashing, and verbal sexual harassment. Finally, Witnessing and Indirect Victimization refers to witnessing domestic violence, a parent assaulting a sibling and assault with and without weapons, among others. Youths are asked to indicate the number of times each of the events has occurred to them. The content validity of the scale is based on the legal punishable status of the items included in the questionnaire. Cronbach's α reliability for the 34 items is .80 in an American sample (Finkelhor et al., 2005). In this sample, Cronbach's α reached .83, indicating good internal consistency.

Data Analysis

The Screener Sum Version (Finkelhor et al., 2005) was used to compute the TKV reported in the Juvenile Victimization Questionnaire. This procedure consists of a simple sum of all the endorsed victimization screeners ("yes"

response). After obtaining the number of TKV for each adolescent, in line with our gender hypothesis, means and standard deviations for each study variable were calculated using raw scores for the whole sample and separately by gender. To explore gender differences in the study variables, a series of independent *t*-tests were conducted.

At this point in the analysis, given that the purpose of this study was to determine the network of relations among the different variables when victimization comes into play, the participants who did not report any kind of victimization (7.3%, $n = 54$) were excluded from subsequent analysis. Pearson correlations between all variables were conducted separately for boys and girls. Prior to the creation of interaction terms to test the moderating effects of self-esteem, the predictor variables (TKV, SL and SC) were centered to reduce problematic multicollinearity (Aiken & West, 1991; Holmbeck, 1997). The tolerance level was well above .66 for all analyses. Thereafter, multiple regression analyses were conducted separately by gender to examine the mediating role of SL and SC between victimization and both IS and ES. Post hoc Sobel tests were performed to confirm mediation. The mediating role of SC between TKV and ES was not tested for boys, as the prerequisites for testing mediation were not met. Lastly, to examine the hypothesized moderating role of SL and SC, hierarchical regression analyses were carried out independently for boys and girls, and for both IS and ES. All analyses were performed with SPSS, version 12.

Results

Descriptive Analyses

Table 1 presents descriptive data for TKV, SL, SC, IS, and ES using row scores. A series of independent *t* tests revealed significant gender differences for the measures of SL, SC, and IS. Boys reported higher levels of self-esteem than girls (both SL and SC), whereas girls reported more emotional distress (i.e., IS) than boys. No significant gender differences were found for the TKV experienced.

Network of relations among TKV, self-esteem (SL and SC), and mental health problems (IS and ES)

To determine the strength of associations among the TKV experienced, self-esteem components (SL and SC), and mental health issues (IS and ES), a series of Pearson correlations were conducted separately by gender.

As shown in Table 2, correlation analyses revealed significant relations among almost all the study measures. The relationship between TKV and

Table 1. Means (M) and Standard Deviations (SD). Gender Differences (Student's *t*-tests), and Size Effect.

		Total (n = 736)		Boys (n = 272)		Girls (n = 464)					
	Range	*M*	*SD*	*M*	*SD*	*M*	*SD*	*t*	*df*	*p*	*Cohen's d*
TKV	0-33	5.74	4.57	5.81	5.12	5.70	4.22	.300	734	.764	.02
SL	0-20	14.88	3.22	16.01	2.88	14.22	3.23	7.78	621.85	<.001	.59
SC	0-12	9.63	1.50	10.07	1.40	9.37	1.49	6.36	734	<.001	.48
IS	0-62	13.67	8.16	10.47	7.14	15.55	8.14	8.83	627.81	<.001	.66
ES	0-64	13.29	7.19	12.63	7.36	13.68	7.08	1.91	734	.056	.15

Note: ES = externalizing symptoms; IS = internalizing symptoms; SC = self-competence; SL = self-liking; TKV = total kinds of victimization.
For SL and IS, different variances were assumed.

Table 2. Pearson Correlations Among TKV, SL, SC, Internalizing Symptoms (IS) and Externalizing Symptoms (ES) by Gender.

	TKV	SL	SC	IS	ES
TKV	—	−.25**	−.19**	.43**	.35**
SL	−.18**	—	.40**	−.62**	−.21**
SC	−.11*	.45**	—	−.21**	−.008
IS	.31**	−.54**	−.34**	—	.37**
ES	.43**	−.23**	−.12*	.38**	—

Note: SC = self-competence; SL = self-liking; TKV = total kinds of victimization.
Top right boys (n = 272); bottom left girls (n = 464).
*$p \leq .05$. **$p \leq .01$.

self-esteem measures was from low to moderate and negative (Garret, 1990), which indicates that the adolescents who report more kinds of victimization also tend to report less self-esteem. However, the relationship between SL and both IS and ES was negative and from moderate to substantial. The relationship between SC and both IS and ES was negative and from low to moderate, except in the case of boys, where no significant correlation was found between SC and ES. In both boys and girls, SL and SC were more closely correlated with IS than with ES ($p \leq .001$ in all cases).

The relationship between TKV and both IS and ES was positive and from moderate to substantial, indicating that those adolescents who report more kinds of victimization also tend to report more IS and ES. In girls, this correlation was significantly higher for ES ($z = -2.12$; $p = .03$) than for IS. This

shows that in girls a high amount of victimizations is associated more with externalizing than with internalizing symptoms.

Mediator Model Test

Before we could analyze the mediating role of SL and SC, three conditions needed to be met (Baron & Kenny, 1986; Holmbeck, 1997). That is, there had to be a significant association between (a) the predictor and the dependent variable, (b) the predictor and the hypothesized mediator, and (c) the hypothesized mediator and the dependent variable. According to these prerequisites, the mediating role of SC between TKV and ES could not be studied in the case of boys (see Table 2). If these prerequisites are not met, no mediation is possible.

To carry out the mediational analysis, IS was first regressed on TKV and then on both SL and SC (see Table 3). When TKV was entered in the regression, the standardized β coefficient was significant for both boys ($t = 7.510$; $p \leq .001$) and girls ($t = 6.787$; $p \leq .001$). When SL and SC were controlled, the standardized β coefficient for TKV in boys ($t = 6.337$; $p \leq .001$) was reduced and, at the same time, the standardized β coefficient for SL was significant ($t = 11.207$; $p \leq .001$). The same happened in the case of girls for TKV ($t = 5.413$; $p \leq .001$) and for SL ($t = 10.237$; $p \leq .001$), but in this case SC was also significant ($t = -2.617$; $p = .009$). Given that in both cases the independent variable was less highly associated with the dependent variable when the mediator was controlled, the results show a partial mediating role of SL between TKV and IS for boys, and a partial mediating role of SL and SC for girls.

Thereafter, the same process was carried out with ES (see Table 3). The TKV β coefficient was significant for both boys ($t = 5.896$; $p \leq .001$) and girls ($t = 9.825$; $p \leq .001$). In boys, when SL ($t = 2.175$; $p = .029$) was controlled, the TKV β coefficient was reduced to some extent ($t = 5.222$; $p \leq .001$), whereas the standardized β coefficient for SL was slightly significant. However, R^2 only increased from .122 to .135, which, according to Cohen (1992), is too small an effect to be taken into consideration. Thus, we consider that in boys SL does not mediate the relationship between TKV and ES. However, when SL and SC were controlled in girls, the TKV β coefficient dropped to some extent ($t = 9.100$; $p \leq .001$) whereas the SL ($t = 3.256$; $p \leq .001$) β coefficient was significant, but not for SC ($t = .131$; $p = .896$). This indicated a partial mediating effect of SL between TKV and ES in girls only.

All the mediating effects found were confirmed through post hoc Sobel tests (two-tailed $p < .02$ in all cases).

Table 3. Hierarchical Regression Analyses for TKV, SL, SC, the Corresponding Interaction Terms and Internalizing and Externalizing Symptoms.

Steps	Variable	Step 1 β	Step 2 β	Step 3 β	R^2 adjusted	Change F
Internalizing						
Boys						
1	TKV	.434**	.306**	.317**	.185	56.40**
2	SL		−.579**	−.530**	.471	66.78**
	SC		.076	.065		
3	TKV × SL			−.191**	.498	7.45**
	TKV × SC			.038		
Girls						
1	TKV	.309**	.214**	.178**	.093	46.06**
2	SL		−.449**	−.447**	.342	83.26**
	SC		−.114**	−.108*		
3	TKV × SL			−.075	.346	2.31
	TKV × SC			−.026		
Externalizing						
Boys						
1	TKV	.354**	.321**	.322**	.122	34.76**
2	SL		−.134*	−.110	.135	4.73*
	SC		—	—		
3	TKV × SL			−.097	.137	1.35
	TKV × SC			−.007		
Girls						
1	TKV	.426**	.396**	.387**	.179	96.54**
2	SL		−.157**	−.156**	.201	6.78**
	SC		−.006	−.003		
3	TKV × SL			.010	.199	.591
	TKV × SC			−.052		

Note: SC = self-competence; SL = self-liking; TKV = total kinds of victimization.
The mediator role of SC was not examined for externalizing symptoms in boys because the prerequisites were not met.
*$p \leq .05$. **$p \leq .01$.

Moderator Model Test

To examine the hypothesized moderator role of both SL and SC, hierarchical regression analyses were conducted separately by gender and for both IS and ES. That is, TKV was first entered into the regression, followed by SL and SC (as in the previous mediation analyses) and finally the interaction terms (i.e.,

TKV × SL; TKV × SC) were introduced in Step 3 (see Table 3). Moderation exists when the interaction between the predictor variable (TKV) and the moderator variable (SL or SC) produces a significant regression coefficient and when this coefficient is related with a significant increase in the explained variance. That is, a moderation effect would exist if the statistical association between victimization and psychological symptoms was found to be stronger for adolescents reporting lower self-esteem than for adolescents reporting higher self-esteem (Baron & Kenny, 1986).

For boys, the R^2 regressing IS on TKV in the first step was .185. The inclusion of SL and SC significantly increased R^2 to .471. This increase was basically due to SL (see Table 3). Finally, when the interaction terms were included, R^2 increased to .498, which was significant. This increase was basically due to the TKV × SL interaction ($t = 3.759$; $p \leq .001$), which indicates a moderator role of SL. With the inclusion of the interaction term in the third equation, TKV remained significant ($t = 6.636$; $p \leq .001$). This indicates that the moderator role of SL is only partial. To appreciate the nature of this interaction effect, boys who scored above and below the means on TKV and SL were examined. Boys who reported higher SL scores reported lower IS than boys who reported lower SL scores under conditions of a high amount of different kinds of victimization. Nevertheless, as can be seen by the β values in Table 3, SL has greater explanatory value as a mediator of the relationship between TKV and IS than as a moderator. For girls, the R^2 regressing IS on TKV was .093. The inclusion of SL and SC significantly increased R^2 to .342, which, as previously described, is due to the explicative power of both SL and SC. When the interaction terms were included, R^2 did not significantly increase ($R^2 = .346$), showing no moderation effects.

For boys, the R^2 regressing ES on TKV was .122. The inclusion of SL in the second step of the equation significantly increased R^2 to .135, but when the interaction terms were included no significant increase in the regression coefficient was detected ($R^2 = .137$). This indicates that neither SL nor SC had a moderator effect.

For girls, the R^2 regressing ES on TKV was .179. The inclusion of SL and SC significantly increased R^2 to .201, but the inclusion of the interactions terms did not increase the regression coefficient ($R^2 = .199$). Thus, no moderator effects were found.

Conclusion

Adolescents reported an average of 5.74 different kinds of victimization during their lifetime. Overall, boys and girls in this sample reported higher levels of lifetime victimization than adolescents in other samples (Finkelhor,

Ormrod, & Turner, 2009). However, there was a larger age interval between participants in the present sample. This makes it harder to compare our results with those of Finkelhor et al.'s (2009) sample, since it is expected that older participants will have had more chances of suffering victimization.

In line with previous research, boys reported higher levels of SL and SC (Giletta, Scholte, Engels, & Larsen, 2010) and lower levels of IS (Giletta et al., 2010) than girls. Girls at adolescent ages have been considered to show higher psychological distress than boys (Abad et al., 2002). Nevertheless, the levels of IS and ES found in the present sample do not exceed neither clinical nor borderline levels, since T values were < 60 (Achenbach & Rescorla, 2001). No gender differences were found in the amount of victimization experienced (Finkelhor et al., 2009).

On the whole, our results suggest that there is a positive association between the TKV experienced and mental health outcomes (i.e., IS and ES) and a negative association between the former and self-esteem, especially SL.

In girls, the TKV experienced were more strongly related to externalizing than to internalizing problems. One explanatory hypothesis of this phenomenon is that when girls suffer interpersonal violence from multiple sources, they tend to develop a negative world view (Grills & Ollendick, 2002). Thus, they frequently turn the damage toward others (with disruptive behavior) rather than toward themselves. However, as in most cross-sectional studies, causal ordering cannot be clearly established. In fact, previous research on this topic concluded that children with high levels of IS and ES were particularly likely to experience increased exposure to several forms of victimization (Turner et al., 2010b). Therefore, it could also be hypothesized that girls who present more externalizing problems also tend to put themselves into danger more often than girls who present more internalizing problems. Studies adopting a longitudinal approach are clearly needed to address this issue.

As for the two components of self-esteem (SL and SC), findings concerning the differential association between each of them and both victimization and mental health issues add empirical support to the speculated differences and suggest that they reflect different underlying constructs (Huang & Dong, 2012). In particular, for both boys and girls, it seems as though suffering different kinds of victimization was more closely related to and experienced as a negative self-evaluation of worth as social beings (SL) than as a negative self-appraisal of their ability to fulfill personal goals (SC). In addition, and in line with previous research (Surgenor, Maguire, Russell, & Touyz, 2007), having a negative sense of personal value (SL) is more closely related to both IS and ES than having a negative view of personal ability or self-efficacy (SC). More specifically, in boys, having a low

sense of being capable (possibly derived from multiple experiences of unsuccessful goal pursuit) is not related with externalizing problems. However, it is worth mentioning that both components of self-esteem have a stronger link with IS.

To further examine the relationship between the TKV experienced and both IS and ES, mediation and moderation effects were tested for SL and SC by gender. As predicted, and in line with prior research (Grills & Ollendick, 2002), results provided support for SL as a partial moderator of the relationship between the TKV experienced and IS in boys. That is, victimization differentially affected the number of IS reported by boys with high versus low SL. Thus, it appears that under conditions of suffering a high amount of different kinds of victimization, a higher sense of social worth (SL) acts as a protective factor against IS, whereas a lower sense of being a valuable person (SL) serves as a risk factor for greater IS. Furthermore, the results also supported a partial mediator role of SL in boys and girls for IS, and only in girls for ES. In boys, the mediator role of SL for the TKV–IS relationship is more powerful than the moderator role. All this means that victimization experiences negatively influence boys' and girls' sense of being a valuable person, which, in turn, helps to explain the levels of internalizing and externalizing problems they report. That is, one's negative self-evaluation of social worthiness associated with suffering from interpersonal victimization acts as an important factor in the relationship between the TKV experienced and psychopathological symptoms (especially IS). In the girls' case only, one's sense of being efficacious (SC) also plays a significant role as a mediator for IS. Thus, in girls, victimization is related to both one's sense of worthiness (SL) and self-efficacy (SC), which, in turn, act as explanatory factors for the victimization–IS relation.

Therefore, an important conclusion of the present research is that SL does not seem to be a mere correlate of victimization. Instead, it may be integrally involved in the establishment and maintenance of both internalizing and externalizing problems. As for the role that SC plays, it appears to be much less relevant, as it is only involved in the etiology of IS in the girls' case.

This study is innovative because it takes account of the full range of victimizations that adolescents are exposed to during their lifetimes. Most research on the correlates of interpersonal victimization only focus on one kind of victimization (e.g., sexual victimization or child maltreatment), and disallow the influence of suffering multiple kinds of victimization. Bearing in mind that Finkelhor et al. (2005), and Finkelhor et al. (2007) estimate that over the course of a year a victimized child suffers a mean number of three different kinds of victimization, focusing on just one kind of victimization may overestimate its relationship with other variables, such as self-esteem or

IS and ES. Thus, considering the exposure to the full range of different kinds of victimization enables us to minimize the hidden influence of variables that are not taken into account (Turner et al., 2010a).

Despite all the innovative features of this study, some limitations should be acknowledged. First, to operationalize victimization, different incidents occurring during the lifetime were taken into account. This means that a second and consecutive assault of the same kind was not taken into consideration as additional victimization. One would expect, therefore, that the effect of repetitive victimizations over time may be minimized. For this reason, in addition to studying the number of different types of victimization, future studies should also examine their frequency. Moreover, as we have underlined earlier, reporting multiple kinds of victimization may be a cause or a consequence, or even both a cause and a consequence, of psychological distress during adolescence. At the same time, the relations between mental health issues, mediators and victimization may even be the other way around; the intrapersonal variables we assumed to be outcomes of victimization might instead be potential predictors. The cross-sectional design of this study did not allow us to address this question of causality.

Another limitation is the fact that, to a certain degree, there may be some overlapping of constructs between self-esteem and IS. This should be analyzed in greater depth in future research. Moreover, it is important to mention that correlations between TKV and SC in both boys and girls and correlations between SC and ES in girls are below the recommended minimum of $r = .2$ for practical significance (Ferguson, 2009). Therefore, future research should reanalyze the findings of the current study, especially concerning SC. Moreover, given that only partial mediations were found between TKV and both IS and ES, future studies should also use longitudinal designs to bolster confidence in the substantive value of the findings.

Furthermore, it is important to take into account that the psychological effects of victimization are considered according to adolescents' own reports. This may potentially present problems in terms of reliability and validity, because the person's current mental state, repression of traumatic life events, trauma recall or even embarrassment may affect both the likelihood of disclosure and the accuracy of the information provided (Fisher, Bunn, Jacobs, Moran, & Bifulco, 2011). To resolve this issue, reports from third parties should also be considered in the future.

In conclusion, the findings of this study suggest that the relations between victimization and psychological symptoms have to be interpreted in the light of other factors such as one's sense of social worth (SL). The mediator mechanisms revealed provide further evidence that internalizing and externalizing problems might be related to the inherent negative self-evaluation after

victimization. These findings suggest that adolescents' sense of being good people, according to internalized criteria for worth (SL) in particular, as well as their sense of their ability to meet personal goals (SC) in the girls' case, may be important to prevent adolescents from developing IS and ES, thus helping them to build up resilience in the face of adversity.

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Polyvictimization and Risk for Suicidal Phenomena in a Community Sample of Spanish Adolescents

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This study aims to provide data regarding the association between reported degree of victimization and suicidal phenomena, with special emphasis on gender differences. There were 923 adolescents recruited from eight secondary schools in Catalonia, Spain. The Youth Self-Report (YSR) and the Juvenile Victimization Questionnaire (JVQ) were used to assess suicidal phenomena and victimization, respectively.

Participants were divided into three groups (nonvictim, victim, and polyvictim groups) according to the total number of different kinds of victimization reported. Results showed that the polyvictim group reported significantly more suicidal phenomena than did the victim and nonvictim groups in both boys and girls. Furthermore, although no gender differences in reported suicidal phenomena were found in the nonvictim group, girls reported significantly more suicidal phenomena in both the victim and the polyvictim groups.

In conclusion, the results suggest that victimization may play an important role in generating gender differences with respect to reported suicidal phenomena. In addition, this study highlights the importance of taking into account the whole range of victimizations suffered by adolescents when seeking to design suicide prevention and intervention policies.

Keywords: polyvictimization; suicide ideation; self-injury; adolescence

Suicide is the fourth leading cause of death for young adolescents aged 10–14 years and the third leading cause of death among older adolescents aged 15–19 years (Ali, Dwyer, & Rizzo, 2011; Olfson, Shaffer, Marcus, & Greenberg, 2003; Range, 2009). In fact, in Spain, more deaths are caused by suicide than by traffic accidents, although fewer resources are devoted to preventing the former (Ruiz-Pérez & Olry, 2006). These alarming data highlight the need to identify suicide risk factors so as to guide and increase prevention and intervention policies.

Various biological, psychological, and social risk factors appear to be associated with the development of suicidal phenomena, that is, thoughts of suicide, self-injurious behavior, and/or suicide attempts (Jacobs, Brewer, & Klein-Benheim, 1999; Yang & Clum, 1996). In this context, numerous studies (Beautrais, Joyce, & Mulder, 1996; Santa Mina

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& Gallop, 1998; Young, Twomey, & Kaslow, 2000) have identified child and adolescent victimization as an important social risk factor for suicidal phenomena.

Both suicidal phenomena and childhood victimization have an alarmingly high prevalence (Evans, Hawton, & Rodham, 2005). For example, a recent study with a community sample of Spanish adolescents (Kirchner, Ferrer, Forns, & Zanini, 2011) found that 12.5% of adolescents report suicidal thoughts and 11.4% report self-injurious behaviors. Regarding victimization, studies report that adolescents suffer an average of 3.0 (Finkelhor, Ormrod, & Turner, 2007), 3.7 (Finkelhor, Ormrod, Turner, & Hamby, 2005), or even 3.9 (Soler, Paretilla, Kirchner, & Forns, 2012) different kinds of victimizations during a 1-year period.

The association between a reported history of child victimization and suicide thoughts and behaviors has been investigated in a large number of studies. However, this relationship has only been studied with respect to specific kinds of victimization. For example, the link between victimization and suicidal phenomena has been studied in relation to child maltreatment (Beautrais et al., 1996; Straus & Kantor, 1994; Wagman Borowsky, Resnick, Ireland, & Blum, 1999), sexual abuse (Fergusson, Horwood, & Lynskey, 1996; Paolucci, Genuis, & Violato, 2001; Wagman Borowsky et al., 1999), and bullying (Brunstein, Sourander, & Gould, 2010). However, we have found no studies that examine the association between suicidal phenomena and the total kinds of childhood victimization experienced. Given that more than two out of three adolescents (71.6%) report having suffered two or more different kinds of victimization in a 1-year period (Soler et al., 2012), taking account of only one type of victimization (e.g., sexual abuse) when studying its influence on mental health may overestimate its effects, while at the same time underestimating the gravity of suffering multiple kinds. Moreover, it is becoming increasingly clear that adolescents suffering different kinds of victimization may be at higher risk for various psychological impairments than are adolescents who suffer repeated episodes of the same kind, even if the latter is considered one of the most damaging types of victimization (Finkelhor et al., 2007; Turner, Finkelhor, & Ormrod, 2010). This further underlines the need for studies to take account of the whole range of victimizations that adolescents experience.

There is some controversy concerning gender differences in the rates of suicidal phenomena. Although some studies find that girls report more suicidal ideation (García-Resa et al., 2002) and commit more self-injurious behaviors (Hawton & Harris, 2008; Hawton, Rodham, Evans, & Weatherall, 2002; Laye-Gindhu & Schonert-Reichl, 2005; Madge et al., 2008), others observe no significant differences (Beautrais et al., 1996; Bjärehed & Lundh, 2008; Cerutti, Manca, Presaghi, & Gratz, 2011; Hilt, Nock, Lloyd-Richardson, & Prinstein, 2008; Kirchner et al., 2011). Moreover, some studies find that although female adolescents have higher rates of suicide attempts than do their male counterparts, males are more successful at killing themselves (Canetto & Lester, 1995; García-Resa et al., 2002; Lewinsohn, Rohde, Seeley, & Baldwin, 2001; Ruiz-Pérez & Olry, 2006).

Given the aforementioned, the aim of this study is twofold. Firstly, it aims to determine the prevalence of victimization and suicidal phenomena in a community sample of Spanish adolescents, with special attention being paid to gender differences. Secondly, it seeks to examine the association between the reported degree of victimization and suicidal phenomena. Taking prior research with similar samples as a starting point, boys and girls are expected to report similar rates of total kinds of victimization and suicidal phenomena (Kirchner et al., 2011; Soler et al., 2012), whereas those adolescents who report a higher number of victimizations (polyvictims) are expected to show a greater risk for all

kinds of suicidal phenomena than are their less-victimized (victims) counterparts (Turner et al., 2010). This study is among the first to examine suicidal phenomena among adolescents while taking account of the full burden of victimizations they have been exposed to. This aspect is of key importance when it comes to targeting treatment and prevention policies at those adolescents who are at higher risk for suicidal behaviors.

METHODS

Participants

The group comprises 923 adolescents aged between 14 and 18 years old ($M = 15.70$; $SD = 1.2$) and enrolled in eight different schools in Catalonia, Spain. Most of them (62.7%) were female. The large majority were born in Spain (87.5%), although there were also adolescents who had been born in South America (6.3%), Africa (2.2%), Central America (1.6%), Asia (1.3%), or other regions of Europe (1.1%). The 80.0% of adolescents lived with their biological parents, 8.3% lived with their biological mother, 2.5% with their biological father, 7.3% with their biological father or mother and his or her partner, 1.1% lived with adoptive parents, and 0.8% with legal guardians. According to the data provided by the Spanish Ministry of Education (2011), the sample is representative of the kind of school (63.9% state-funded) and the national backgrounds of students (12.5% foreign). Regarding the participation of the sexes, girls were oversampled, probably because participation is voluntary and girls are generally more predisposed to take part in studies.

Based on the Hollingshead Four-Factor Index (Hollingshead, 1975), the participants' families corresponded to the following categories: 11.8% unskilled, 22.4% semiskilled workers, 25.0% clerical and sales, 35.1% medium business families, and 5.7% major business and professional families.

Procedure

After obtaining permission from school principals, students were contacted via in-class announcements. Participation was voluntary, confidential, and anonymous, but required written consent from parents. The rate of participation was 44.7%, very similar to that found in comparable studies requiring consent from both parents and students (Turner et al., 2010).

Questionnaires were administered in small groups in a single 60-min session. Prior to the administration, students were instructed on how to choose the most appropriate answer according to their own experience. Two project members were present throughout the administration to clarify any doubts arising. At the end of the assessment session, students were given the option of writing down their e-mail address so they could be invited to a subsequent psychological debriefing meeting with a qualified staff member.

Both parents and adolescents were informed that the data obtained would be treated confidentially. Nonetheless, if the information provided by the adolescents revealed problems of victimization that might be punishable by law (e.g., sexual abuse), or might represent a serious psychological problem (e.g., suicide risk), a meeting with the school psychologist and/or the head teacher was arranged to identify the subject on based on the sociodemographic data. These professionals then interviewed the adolescent in question to verify the information given, and proceeded accordingly. This research was vetted by the Bioethics' Committee of the University of Barcelona.

Measures

Sociodemographic Data. A sociodemographic data sheet was created ad hoc to collect information regarding the adolescents' age, gender, and country of birth, as well as other household characteristics such as parents' occupational and educational status.

Suicide Behavior. The *Youth Self-Report* (YSR; Achenbach & Rescorla, 2001) is a self-report instrument that measures psychological distress in children and adolescents aged between 11 and 18 years, doing so via a list of 112 items that represent emotional and behavioral problems. Participants are asked to indicate on a 3-point Likert scale ranging from 0 (*not at all*) to 2 (*very often*) how often each of the item statements happened to them within the last 6 months. For the purpose of this study, items 18 ("I deliberately try to hurt or kill myself") and 91 ("I think about killing myself") were used as indicators of suicidal phenomena. The Spanish adaptation of the YSR was validated in an adolescent population by Abad, Forns, Amador, and Martorell (2000) and by Abad, Forns, and Gómez (2002). In this sample, the internal consistency of items 18 and 91, assessed by Cronbach's alpha, reached .71.

Total Kinds of Victimization. The *Juvenile Victimization Questionnaire* (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004) was used to assess the number of different kinds of victimization that adolescents had been exposed to. The JVQ is a self-report instrument that originally focuses on 34 major forms of offenses against children and youth gathered in five general areas of concern: conventional crime, child maltreatment, peer and sibling victimization, sexual victimization, and witnessing and indirect victimization (Finkelhor, Hamby, Ormrod, & Turner, 2005). The *conventional crime* area includes questions about robbery, personal theft, vandalism, assault with and without weapons, attempted assault, kidnapping, and bias attack. The *child maltreatment* area examines physical, psychological, and emotional abuse by caregivers, neglect, and custodial interference or family abduction. *Peer and sibling victimization* takes account of gang or group assault, peer or sibling assault, nonsexual genital assault, bullying, emotional bullying, and dating violence. *Sexual victimization* examines sexual assault by a known adult, nonspecific sexual assault, sexual assault by a peer, attempted or completed rape, flashing or sexual exposure, and verbal sexual harassment. Finally, *witnessing and indirect victimization* refers to being a witness to domestic violence, a witness to parent assault of a sibling, a witness to assault with and without weapons, burglary of family household, murder of a family member or friend, witness to murder, exposure to random shootings, terrorism or riots, and exposure to war or ethnic conflicts. Youth were asked to indicate if each of the item events occurred to them during the last year. The content validity of the scale is based on the legal punishable status of the items included in the questionnaire. It shows good reliability, with Cronbach's alpha reaching .85 in the current sample and .80 in American samples (Finkelhor, Hamby, et al., 2005).

Data Analysis

In a first step, the Screener Sum Version method, consisting in the simple counting of endorsed screeners ("yes" response) from the JVQ, was used to compute means and standard deviations for the different kinds of victimization reported (Finkelhor, Hamby, et al., 2005). The Student's *t* test was used to examine gender differences in relation to the total kinds of victimization.

Following the criterion of Turner et al. (2010) and Finkelhor, Ormrod, and Turner (2009), participants were assigned to one of three groups according to their degree of

victimization, categorizing as polyvictims those respondents whose victimization levels fell in the top 10% of the sample. In this study, this cutoff point classified as poly-victims those participants who had suffered eight or more different kinds of victimization during the last year. The three groups were therefore defined as follows: nonvictims (those who did not report any victimization), victims (those reporting between one and seven different kinds of victimizations), and polyvictims (those suffering eight or more different kinds).

The Student's t test and Mann–Whitney U test were then applied to determine any gender differences in the total kinds of victimization reported in the victim and polyvictim groups, respectively. The association between gender and the degree of victimization was calculated by means of χ^2.

The prevalence of suicidal phenomena was analyzed based on responses to items 18 and 91 of the YSR. The presence (score of 1, "somewhat or sometimes true," or 2, "very often or often true") or absence (score of 0, "not at all") of the experience referred to by each item statement was considered. The following percentages were then examined: The percentage of adolescents reporting the presence of only self-injurious/suicidal behavior (item 18), the percentage of adolescents reporting the presence of only suicidal ideation (item 91), and the percentage of adolescents reporting the presence of both self-injurious/suicidal behavior and suicidal ideation (items 18 and 91). To calculate the proportion of adolescents reporting any kind of suicidal phenomena, the sum of the aforementioned percentages was computed.

Gender differences in relation to the different categories of suicidal phenomena (only self-injurious/suicidal behavior, only suicidal ideation, and both self-injurious/suicidal behavior and suicidal ideation) were calculated by means of χ^2. The χ^2 test was also used to examine the association between suicidal ideation (item 91) and self-injurious/suicidal behavior (item 18). The likelihood of reporting self-injurious/suicidal behavior when reporting suicidal ideation was determined by calculating the relative risk (RR), separately by gender.

In a separate analysis, the sample was divided into those participants who reported any kind of suicidal phenomena and those who reported none. Fisher's χ^2 was calculated separately by gender to test for differences in the presence of suicidal phenomena between the three victimization groups. Percentage differences between these groups were then calculated using the z test. The χ^2 was also calculated to test for gender differences in each of the victimization groups.

Lastly, to examine in greater depth the presence of suicidal phenomena in each victimization group, the different kinds of suicidal phenomena (only self-injurious/suicidal behavior, only suicide ideation, or both) were considered. The percentage of adolescents reporting the different suicidal phenomena in each victimization group and by gender was calculated. Subsequently, percentage differences between the three victimization groups were calculated, as well as the odds ratio (*OR*) for those groups in which percentage differences were significant at $p \leq .05$. All analyses were performed with SPSS Version 12.0.

RESULTS

Analysis of Victimization: Prevalence Data

Adolescents in this sample reported an average of 3.83 ($SD = 3.86$) different kinds of victimization during the last year. There were no gender differences in the total kinds of

victimization experienced ($t = .656$, $df = 897$, $p = .512$). More specifically, 14.2% of the sample said they had suffered no kinds of victimization, 15.8% reported having suffered one kind of victimization, 70.0% reported two or more different kinds of victimization, and 31.1% reported having suffered five or more.

Following the criterion of Turner et al. (2010) and Finkelhor et al. (2009), the sample was then divided into three groups according to the participants' degree of victimization. By definition, adolescents in the nonvictim group ($n = 128$) reported 0 victimization. Adolescents in the victim group ($n = 655$) reported an average of 3.19 different kinds of victimization ($SD = 1.84$), whereas those in the polyvictim group ($n = 121$) reported an average of 11.29 ($SD = 4.43$). No gender differences in the total kinds of victimization were found in either the victim ($t = 1.9$, $df = 648$, $p = .06$) or polyvictim ($U = 1{,}529.5$, $p = .539$) groups. Neither were there any gender differences related to the degree of victimization ($\chi^2 = .488$, $df = 2$, $p = .784$, $\eta^2 = .019$).

Analysis of Suicidal Phenomena: Prevalence Data

The analysis showed that 12.7% of adolescents answered affirmatively to item 18 of the YSR (self-injurious/suicidal behavior), whereas 7.8% answered affirmatively to item 91 (suicidal ideation). However, these percentages do not take into account those adolescents who answered affirmatively to both items. Therefore, three percentages were calculated: 6.80% reported self-injurious/suicidal behaviors, 1.95% reported suicidal ideation, and 5.85% reported both. This means that as many as 14.6% of adolescents (7.6% of boys and 18.92% of girls) reported some kind of suicidal phenomena. Girls reported slightly significantly more self-injurious/suicidal behaviors ($\chi^2 = 25.14$, $df = 1$, $p < .001$, $\eta^2 = .17$) and both suicidal ideation and self-injurious/suicidal behaviors ($\chi^2 = 21.72$, $df = 1$, $p < .001$, $\eta^2 = .15$) than did boys. Thus, girls were respectively almost five times ($OR = 4.65$, 95% CI = 3.2–6.8) and twice ($OR = 2.07$, 95% CI = 1.5–2.8) as likely as boys to report self-injurious/suicidal behaviors and both suicidal ideation and self-injurious/suicidal behaviors.

To determine the risk of self-injurious/suicidal behavior among those adolescents reporting suicidal ideation, the association between these two phenomena was examined by means of χ^2. Of those adolescents who reported suicidal ideation, 75% also reported self-injurious/suicidal behavior ($\chi^2 = 273.84$, $df = 1$, $p < .001$, $\eta^2 = .55$).

The relative risk (RR), analyzed separately by gender, shows that boys reporting suicidal ideation are 3.5 times more likely to report self-injurious/suicidal behaviors, whereas girls who report suicidal ideation are 7.5 times more likely to do so.

Presence or Absence of Suicidal Phenomena According to the Degree of Victimization and Gender

After distributing participants according to their degree of victimization, the sample was then divided into those participants who reported any kind of suicidal phenomena (either suicidal ideation or self-injurious/suicidal behavior) and those who reported none. Differences between the three victimization groups in relation to the presence of suicidal phenomena were tested by means of Fisher's χ^2, using the Monte Carlo method and separately by gender. This analysis revealed differences for both boys and girls, although these differences were slight in the case of boys (see Table 1). Percentage differences by group were then calculated to locate these differences more specifically. This showed that the rate of suicidal phenomena was significantly higher in the polyvictim than in the victim

TABLE 1. Presence/Absence of Suicidal Phenomena According to the Degree of Victimization and Gender

	Boys				Girls							
	No Suicidal Phenomena		Any Suicidal Phenomena		No Suicidal Phenomena		Any Suicidal Phenomena					
	n	%	*n*	%	*n*	%	*n*	%	χ^2	*df*	*p*	η^2
Polyvictims	32	78.0	9	22.0	40	50.6	39	49.4	8.45	1	.004	.27
Victims	224	94.1	14	5.9	345	84.6	63	15.4	13.08	1	<.001	.14
Nonvictims	45	93.8	3	6.3	74	92.5	6	7.5	.072	1	.789	.02
	$\chi^2 = 9.87$, $p = .006$, $\eta^2 = .20$				$\chi^2 = 48.47$, $p < .001$, $\eta^2 = .32$							

group in both boys ($z = 3.46$, $p < .001$) and girls ($z = 6.78$, $p < .001$). Moreover, in the girls' case, the percentage of suicidal phenomena in the victim group was also higher than that in the nonvictim group ($z = 1.86$, $p = .03$). A χ^2 analysis was then performed to test for gender differences in the presence of suicidal phenomena for each victimization group. This revealed slightly higher percentages of suicidal phenomena for girls in both the victim and polyvictim groups, but not in the nonvictim group (see Table 1).

Risk for Each Suicidal Phenomenon According to Victimization and Gender

In order to study suicidal phenomena according to the degree of victimization and gender, three different suicidal phenomena were considered: only suicidal thoughts, only self-injurious/suicidal behavior, and both suicidal thoughts and behaviors. Percentage differences between the three victimization groups in relation to each suicidal phenomenon were calculated separately by gender. No differences were found regarding suicidal thoughts, neither in boys nor in girls. However, the results for self-injurious/suicidal behaviors showed that although no differences were found in boys, female polyvictims reported significantly higher rates than did girls in the victim group. The *OR* indicated that, with respect to nonvictims, polyvictim girls had a 10-fold higher risk of reporting self-injurious/suicidal behavior (see Table 2). Finally, and regarding the percentage of adolescents reporting both suicidal thoughts and self-injurious/suicidal behaviors, rates for both boys and girls were significantly higher in the polyvictim group than in the other groups. Specifically, polyvictim girls had almost a sixfold higher risk of reporting both suicidal thoughts and behaviors compared to their nonvictim counterparts (see Table 2).

DISCUSSION

In line with previous research (Finkelhor et al., 2007; Finkelhor, Ormrod, et al., 2005; Soler et al., 2012), the results of this study show that adolescents tend to experience more than one different kind of victimization during a 1-year period. Indeed, 70% of the sample reported two or more different kinds of victimization, with the average number being 3.83. These results underline the importance of taking into account the whole range of

TABLE 2. Frequencies, Percentages, Percentage Differences, Odds Ratios (*OR*) and 95% Confidence Interval for Each Suicidal Phenomenon According to Degree of Victimization and Gender

	Suicidal Thoughts				Self-Injurious/Suicidal Behaviors				Suicidal Thoughts and Self-Injurious/Suicidal Behaviors			
	n	%	*z*	*OR* (95% CI)	*n*	%	*z*	*OR* (95% CI)	*n*	%	*z*	*OR* (95% CI)
Degree of victimization												
Boys (*n*)												
Polyvictims (41)	0	0		—	2	4.88		—	7	17.07		Infinity[a]
			1.020				1.630				4.400*	
Victims (241)	6	2.48		—	3	1.24		—	5	2.07		—
			0.167				1.420				1.010	
Nonvictims (48)	1	2.08		—	2	4.17		—	0	0		1.00 (referent)
Girls (*n*)												
Polyvictims (80)	2	2.50		—	20	25.00		10.00 (2.26–44.20)	17	21.25		5.67 (1.50–20.10)
			0.314				4.130*				4.790*	
Victims (409)	8	1.96		—	33	8.07		3.23 (0.76–13.72)	22	5.38		—
			0.430				1.770				0.605	
Nonvictims (80)	1	1.25		—	2	2.50		1.00 (referent)	3	3.75		1.00 (referent)

[a]The *OR* could not be calculated because of the absence of participants in the reference condition.
*$p \leq .001$.

victimizations, which adolescents suffer so as to avoid the bias that is introduced when only one specific type of victimization is associated with suicidal phenomena or other variables.

Overall, boys and girls reported equivalent amounts of different kinds of victimization. In fact, even when participants were divided into the three victimization groups (nonvictims, victims, and polyvictims), the proportion of boys and girls in each group remained equivalent. These results are in line with the findings of Soler et al. (2012) and with our first hypothesis.

As for suicidal phenomena, 12.7% of the present sample reported self-injurious/suicidal behavior, whereas 7.8% of participants reported suicidal ideation. The percentage of adolescents reporting self-injurious/suicidal behavior is similar to that found in a recent study of Spanish adolescents conducted by Kirchner et al. (2011), whereas the percentage reporting suicidal ideation is slightly lower. Given that the sample studied by Kirchner et al. (2011) was very similar to that of this study, it is not clear why there is a difference in the reported rate of suicidal ideation. This aspect would need to be analyzed in greater detail by future research. Regarding sex differences, boys and girls reported equivalent rates of suicidal ideation; this being consistent with the findings of Kirchner et al. (2011). However, in line with the large majority of studies on this topic (Hawton & Harris, 2008; Hawton et al., 2002; Laye-Gindhu & Schonert-Reichl, 2005; Madge et al., 2008), girls reported more self-injurious/suicidal behaviors and a greater amount of both suicidal ideation and self-injurious/suicidal behaviors than did boys. In fact, in this study girls were almost five times more likely than boys to report self-injurious/suicidal behaviors and twice as likely to report both suicidal ideation and self-injurious/suicidal behaviors. However, given that the effect size of these differences was low and that several studies (Canetto & Lester, 1995; Lewinsohn et al., 2001) have claimed that males are two to four times more successful at killing themselves when committing a suicide act, future research should also consider those adolescents who actually killed themselves to establish more reliable gender differences in relation to suicidal phenomena, because more boys than girls may have been overlooked in this study.

Among those adolescents reporting suicidal ideation, 75% also reported self-injurious/suicidal behaviors; there being a strong association between these two suicidal phenomena, as reported by several previous studies (Kirchner et al., 2011; Laye-Gindhu & Schonert-Reichl, 2005; Muehlenkamp & Gutierrez, 2004). It should also be noted that this association seems to be stronger in the case of girls. Thus, of those adolescents reporting suicidal thoughts, boys were 3.5 times and girls 7.5 times more likely to report self-injurious/suicidal behavior than were adolescents who did not report suicidal thoughts. However, a greater number of adolescents reported having engaged in self-injurious/suicidal behaviors alone than having the experience of both suicidal thoughts and behaviors (6.80% vs. 5.85%). This might be explained by nonsuicidal self-harming behaviors, which cannot be clearly distinguished from suicidal self-injury behaviors in the YSR item used to assess this aspect. Obviously, this needs to be taken into account when interpreting the results. In fact, some authors (Mangnall & Yurkovich, 2008; Skegg, 2005) argue that self-injurious behavior could, in some adolescents, act as a way of coping with psychological distress, given that some adolescents express a quick relief of tension after a self-harm episode. Therefore, rather than engaging in self-injurious behavior as a way of killing themselves, most adolescents may be using it as a strategy for coping with their negative emotions without there being any suicidal intention involved. Future research would need to address this aspect by asking participants specifically about these two different intentions. Whatever the case, there is considerable evidence indicating that many suicide attempts and episodes of deliberate self-harm do not receive medical attention (Choquet &

Menke, 1989; Hawton et al., 2002), because too few resources are devoted to these issues. Given that suicide is the third leading cause of death among youth the age of our sample, this is a critical aspect that needs to be addressed.

Regarding the prevalence of suicidal phenomena according to the adolescents' degree of victimization, the results show a different picture for boys and girls. In boys, only the polyvictim group reported a significantly greater presence of suicidal phenomena than both the victim and nonvictim groups. In girls, however, the victim group reported a significantly greater presence of suicidal phenomena than did the nonvictim group, and the polyvictim group reported significantly more than did the victim group. Although a greater proportion of polyvictims reported suicidal phenomena than did their nonvictim counterparts in both boys and girls, it is worth highlighting that whereas only one-fifth of male polyvictims (22.0%) reported some kind of suicidal phenomenon, a half of female polyvictim did so (49.4%). In fact, girls reported significantly more suicidal phenomena than did boys in both the victim and polyvictim groups, although this was not the case in the nonvictim group. These findings suggest that victimization may play an important role in producing these gender differences in reported suicidal phenomena. They may also indicate that females show greater vulnerability in response to victimization. Future research should seek to determine the role that both intrinsic variables (related to personality or psychopathology) and extrinsic variables (environmental factors, such as patterns of education) may play in terms of increasing their vulnerability. At all events, another possible explanation for these results is that self-harming behaviors may be more widely used by girls as a way of coping with victimization. In fact, when we analyzed the different suicidal phenomena separately, the percentage of adolescents reporting suicidal thoughts did not significantly increase in line with the degree of victimization, neither for boys nor for girls. However, whereas the percentage of boys reporting self-injurious/suicidal behaviors did not increase in line with the degree of victimization, the percentage of girls reporting such behaviors was significantly higher in the polyvictim group. Specifically, female polyvictims were 10 times more likely to report self-injurious/suicidal behavior than were their nonvictim counterparts. This finding suggests that girls make greater use of self-harm behaviors as a way of coping with victimization. Regarding the proportion of adolescents reporting both suicidal thoughts and self-injurious/suicidal behavior, this was higher in the polyvictim group than in both the victim and nonvictim groups for both genders. This finding is in line with previous research (Turner et al., 2010) and highlights the important impact that multiple victimization has on young people's mental health, over and above the experience of a few different kinds of victimization.

In conclusion, the relevance of the aforementioned findings lies in the fact that they highlight the notable presence of suicidal thoughts and self-injurious/suicidal behaviors in a community sample of adolescents. It is therefore important to devote more resources to the implementation of suicide prevention and intervention policies, including in nonclinical adolescent populations. It should also be noted that polyvictimization has been found to lead to more suicidal phenomena, especially among girls. Policies on suicide should therefore take into account the number of different kinds of victimization to which youth have been exposed or are currently suffering, and focus especially on victimized girls because they show a greater vulnerability.

Strengths and Limitations

To date, much of the evidence on suicidal thoughts and behaviors during childhood and adolescence has been gathered from specific populations, such as runaway adolescents

(Evans et al., 2005). Hence, a key feature of the present sample is that it comes from a community (school-based) environment, and it may therefore be more representative of the normative adolescent population. Moreover, it should be noted that the sample size is considerable, with more than 10% of participants coming from social minorities.

Another important aspect of the current research is that it takes into account the multiple kinds of victimizations to which adolescents may be exposed. In this regard, both this study and previous research (Finkelhor et al., 2007; Finkelhor, Ormrod, et al., 2005; Soler et al., 2012) show that adolescents tend to experience more than one kind of victimization, thereby highlighting the importance, when studying victimization correlates, of considering the whole range of victimization experienced to reduce the impact of spurious variables.

A further strength of the current research is that in contrast to previous research on this topic (e.g., Kirchner et al., 2011), three groups were considered in relation to reported suicidal phenomena. Specifically, adolescents who reported both suicidal thoughts and behaviors were considered as a separate group, thereby reducing the potential magnification effect of assigning these adolescents to two different groups (i.e., both the suicidal thoughts group and the self-injurious/suicidal behaviors group).

This study also has several weak points that should be acknowledged. One important drawback is related to the classification of subjects according to their degree of victimization. Applying the criterion of Turner et al. (2010) and Finkelhor et al. (2009) led to the creation of three unbalanced groups, which has obvious psychometric implications. Moreover, the Screener Sum Version (Finkelhor, Hamby, et al., 2005) used here neither take into account those kinds of victimization experienced more than once nor is greater weight given to those kinds known to be particularly harmful and traumatizing (e.g., sexual victimization). Nonetheless, we decided to follow the criteria of Finkelhor, Hamby, et al. (2005) to be able to compare results with other related studies. At all events, we believe it is important for further research to consider other groupings (to reduce the imbalance found here), and to look further at the experiences involved when operationalizing victimization (to decide whether to give a greater weight to certain events). In addition, given that some studies report that girls suffer more from those kinds of victimization known to be particularly harmful (Finkelhor, Ormrod, et al., 2005), future studies should also seek to determine whether the greater vulnerability we detected among girls is associated with the accumulative effects of victimization or with the kinds of victimizations that girls suffer more than boys do. Moreover, the association between victimization and suicidal phenomena may be influenced by other intrasubject variables (such as depression or anxiety) and external variables (such as nonvictimization adversity). These variables should be considered in further research.

Regarding the suicide measure, it is important to acknowledge that the YSR is a screening instrument and item 18 ("I deliberately try to hurt or kill myself") is too ambiguous to be considered a reliable indicator of suicidal behavior. Because this item refers to two conceptually different actions (Mangnall & Yurkovich, 2008), future research clearly needs to analyze these phenomena separately. Nevertheless, several studies have shown a close relationship between the two, with self-injurious behaviors being a clear risk factor for suicide attempts (Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006; Owens, Horrocks, & House, 2002). In this study, efforts were made to carry out an accurate assessment of the most at-risk adolescents, and thus adolescents who commit self-injurious behaviors cannot be excluded. However, future research should seek to investigate suicidal phenomena with instruments designed specifically for this purpose because studying such phenomena based on just two items is an important limitation.

Another drawback of the current research, one that affects all studies based on self-report measures, is that there may be problems with the reliability and validity of adolescents' responses to the items of each questionnaire. Specifically, variables such as the person's current mental state or even embarrassment at answering certain questions might affect the accuracy of the information provided (Fisher, Bunn, Jacobs, Moran, & Bifulco, 2011), and this may even help to account for the gender differences found. In future research, therefore, third-party reports should also be considered.

Lastly, and as in most cross-sectional studies, it is only possible to identify associations between the variables studied, and no causal relationships can be inferred. This is a very important aspect because the consequences of victimization may appear long-term. Future longitudinal research is therefore required to address these issues.

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ORIGINAL CONTRIBUTION

Relationship between particular areas of victimization and mental health in the context of multiple victimizations in Spanish adolescents

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Abstract The main objective of this paper is to study the relationship between different areas of victimization (e.g., sexual victimization) and psychological symptoms taking into account the full range of victimizations adolescents suffer. The final aim is to contribute further evidence regarding the bias that those studies which focus on just one area of victimization may be introducing into our psychological knowledge. A total of 923 adolescents (62.4 % girls) between 14 and 18 years old were recruited from seven secondary schools in Catalonia, Spain. The Youth Self-report and the Juvenile Victimization Questionnaire were employed to assess psychological problems (internalizing and externalizing symptoms) and victimization, respectively. The large majority of adolescents reported having experienced more than one area of victimization. However, Conventional Crime area was the one that was more reported in isolation. Overall, the explicative power of a particular area of victimization was greatly reduced or even lost its significance when the other areas were taken into account. However, some areas remained significant and were different by gender. Clinicians and researchers should take into account the whole range of victimizations adolescents suffer when intending to understand the psychological aftermaths of victimization. Some areas of victimization appear to be more important at explaining particular psychological symptoms, those being Peer and Sibling Victimization in the case of boys, and both Conventional Crime and Internet Victimization in the case of girls.

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Keywords Multiple victimization · Adolescence · Post-traumatic stress symptoms · Internalizing symptoms · Externalizing symptoms

Introduction

Several studies have pointed out that children and youth are exposed to a variety of interpersonal victimization [11–13, 16, 26–28, 30]. In the Spanish context, recent research by Soler, Paretilla, Kirchner, and Forns [26] found that adolescents from a community sample suffered a mean number of 3.9 (SD = 3.95) different kinds of victimization during a one-year period. This is of particular relevance because interpersonal violence is considered a major stressor and has been widely associated with several psychiatric disorders including post-traumatic stress [6, 8, 21, 23, 26], externalizing symptoms [13, 27, 29], internalizing symptoms [5, 22, 28], and total psychological symptoms [16].

One problem, however, is that the large majority of studies which have analyzed the relationship between victimization and mental health focus on just one area of victimization (e.g., sexual victimization, child maltreatment, or bullying). According to Turner et al. [30], this might overestimate the influence of that particular area on mental health, given that much of its presumed influence could actually be due to the hidden influence of suffering multiple victimizations. Consequently, studies which focus on just one area of victimization may be introducing serious bias into our psychological knowledge. Acknowledging this possibility, Finkelhor, Ormrod, and Turner [11] and Gustafsson et al. [16] studied the changes in the strength of the relationship between particular kinds of victimization and mental health symptoms (post-traumatic stress and total psychological symptoms, respectively)

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when other kinds of victimizations were considered. Overall, they concluded that the relationship between each kind of victimization and psychological symptoms diminished significantly when a more comprehensive picture of victimizations was considered, because said relationship was more dependent on the combined effect of different kinds of victimization than on the individual effect of a specific kind. This led Finkelhor, Ormrod, Turner, and Hamby [12] to propose a measure of polyvictimization (composed of the sum of all the kinds of victimization experienced by children and adolescents), it being argued that this was a better predictor of psychological symptoms.

In light of the above, the present study aims to contribute further evidence regarding the extent to which a failure to take into account the whole range of victimizations may overestimate the influence of particular areas of victimization. To this end, the first research objective was to explore not only the percentage of adolescents reporting each area of victimization but also the percentage of adolescents reporting each area exclusively (i.e., not in combination with any other area). Interestingly, despite the obvious relevance of knowing the frequency with which adolescents suffer each area of victimization both exclusively and in combination with other areas, our literature search identified no previous research on this specific issue. The second objective was to examine the extent to which the relationship between particular areas of victimization and mental health symptoms varies when other areas are taken into account. This would also allow us to identify any particular area of victimization whose influence on psychological symptoms remains important above and beyond the experience of multiple victimization areas. The identification of such an area or areas would provide evidence regarding those areas of victimization that should be given greater weight in order for the measure of polyvictimization to be a better predictor of mental health symptoms.

Methods

Participants

Participants were 923 adolescents aged 14–18 years ($M = 15.70$; SD = 1.20) and recruited from eight different schools in Catalonia. Most of them ($n = 576$, 62.4 %) were female, 37.1 % ($n = 342$) were male, and 0.5 % ($n = 5$) did not report their gender. The majority (70.1 %; $n = 647$) were studying in state schools, while the remainder (29.9 %; $n = 276$) attended state-subsidized, privately-run schools. In terms of nationality, the large majority (87.4 %; $n = 807$) were Spanish, with only 1.1 % ($n = 10$) coming from other European countries, 6.2 % ($n = 57$) from South America, 1.5 % ($n = 14$) from Central America, 1.2 % ($n = 11$) from Asia, and 2.1 % ($n = 19$) from Africa. According to data published by the Spanish Ministry of Education (2011), this sample is representative in terms of the kind of school (63.9 % state-funded) and nationality of students (12.5 % foreign). As regards participation by gender, girls were oversampled, probably because participation was voluntary and girls tend to be more willing to take part in studies.

Based on the Hollingshead Four-Factor Index [18] the participants' families corresponded to the following socio-economic categories: 10.8 % unskilled, 21.9 % semi-skilled, 24.7 % clerical and sales, 37.2 % medium business families, and 5.4 % major business and professional families.

Procedure

Students were contacted via in-class announcements and it was explained to them what their participation in the research would involve. Participation was voluntary, but as in all studies involving minors, written consent from parents was required. The rate of participation was 44.7 %, very similar to that found in comparable studies requiring consent from both parents and students [30].

The questionnaires (see Measures below) were administered in small groups during a 60-minute session. Prior to the administration, students were instructed on how to choose the most appropriate answer according to their own experience. A project staff member was present at all times to clarify any doubts arising during the administration. At the end of the assessment session, students were invited to write down their email should they wish to arrange a subsequent psychological consultation with a qualified staff member. Both adolescents and parents were informed that the data obtained would be treated confidentially. This confidentiality was preserved in all cases, except when the information provided by the adolescents revealed problems of victimization that might be punishable by law (e.g., sexual abuse), or might represent a serious psychological problem (e.g., suicide risk). In these cases, a meeting with the school psychologist and/or the head teacher was arranged in order to identify the individual on the basis of the socio-demographic data they had provided. Expert psychologists then interviewed the adolescent identified to verify the information given and proceeded according to the code of professional ethics. This research was approved by the Bioethics Committee of the University of Barcelona.

Measures

A socio-demographic datasheet and two instruments were used. The socio-demographic data sheet was developed ad hoc and included information about the adolescents' age,

gender, and country of birth, as well as other household characteristics such as parents' marital, occupational, and educational status.

The Youth Self-Report (YSR; Achenbach and Rescorla [3]) is designed to measure psychological distress in children and adolescents aged between 11 and 18. It comprises 112 items that represent thoughts, feelings, and behaviors, and it classifies psychological distress into two broad-band syndromes (internalizing and externalizing problems) and eight narrow-band syndromes (anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior). Respondents are asked to indicate the frequency with which each of the item statements has happened to them in the last 6 months, doing so on a three point Likert scale ranging from 0 (not at all) to 2 (very often). The Spanish version of the YSR that was used here has been validated in an adolescent population by Abad, Forns, Amador, and Martorell [2] and Abad, Forns, and Gómez [1]. For the purposes of the present study, only the internalizing and externalizing problem scales were used. The internalizing scale is composed of 31 items, with scores ranging from 0 to 62, while the externalizing scale comprises 32 items, with scores ranging from 0 to 64. In the current sample, both the internalizing and externalizing problem scales showed good reliability (Cronbach's alpha = .87 and .84, respectively).

The Juvenile Victimization Questionnaire (JVQ; [17]) is a self-report measure which, in its latest version, focuses on 36 major forms of offenses against children and youth. According to Finkelhor, Hamby, Ormrod, and Turner [10], these victimizations can be classified into six general areas of concern: Conventional Crime (CC), Child Maltreatment (CM), Peer and Sibling Victimization (PSV), Sexual Victimization (SV), Witnessing and Indirect Victimization (WIV), and Internet Victimization (IV). The CC area includes questions about robbery, personal theft, or vandalism, among others. The CM area examines physical, psychological, and emotional abuse by caregivers, while the PSV section asks about gang assaults, peer or sibling assaults, and bullying, among other issues. The SV section examines incidents such as sexual assaults, flashing, and verbal sexual harassment. WIV refers to witnessing events such as domestic violence, a parent assaulting a sibling, or assault with and without weapons, among others. Finally, IV includes questions about online harassment. Respondents are asked to indicate the number of times each of the events has occurred to them, both in the last year and previously. The content validity of the scale is based on the legal punishable status of the items. In the current sample the Cronbach's alpha reliability coefficient for the total JVQ was .82, indicating good internal consistency.

Data analysis

The Screener Sum Version [12], consisting of a simple sum of all the endorsed victimization screeners ("yes" response), was used to compute the total kinds of victimization experienced as well as the score of each area of victimization from the JVQ (CC, CM, PSV, SV, WIV, and IV). Victimization reports referring to lifetime were used. Given previous reports of sex differences in both the frequency and correlates of the different kinds of victimization and mental health problems, all subsequent analyses were conducted separately by gender.

Our first aim was to analyze the prevalence of each particular area of victimization. Two forms of prevalence were considered: total and exclusive. Total prevalence was the percentage of adolescents endorsing each particular area of victimization (e.g., the percentage of adolescents who answered "yes" to CC items, irrespective of their answers in other areas). Exclusive prevalence was the percentage of adolescents reporting victimization exclusively in each particular area (e.g., the percentage of adolescents who answered "yes" to CC items but not to those of any other victimization area). These data were gathered separately by gender.

Our second aim was to examine the relationship between each individual area of victimization and mental health problems for the total sample, and to analyze the extent to which this relationship diminished when the other areas were taken into account. To this end, all the adolescents' answers were considered, irrespective of the number of areas they had endorsed, and several hierarchical multiple regression analyses were conducted, one for each area of victimization (CC, CM, PSV, SV, WIV, and IV). Each area (e.g., CC) and the corresponding polyvictimization measure (e.g., PV–CC) were introduced as independent variables, while the dependent variable was each mental health problem (post-traumatic stress symptoms, PTSS; externalizing symptoms, ES; internalizing symptoms, IS; and total problems scale, TPS). Each regression analysis was conducted separately for boys and girls, such that a total of 48 hierarchical regression analyses were performed. Since the aim here was to explore patterns in the data, no correction for multiple testing was employed. In all the regressions, age and socio-economic status (SES) were entered as control variables in the first step. In the second step, the raw score for each area of victimization was entered. Finally, in the third step the corresponding polyvictimization (PV) measure was entered. This polyvictimization measure consisted of the sum of the raw scores for all the different areas of victimization reported. Given that a correlation between the predictors would be produced by including in the PV measure the specific area of victimization under investigation, the raw score of the

area of victimization under investigation was subtracted from the PV measure. Thus, six different PV measures were used: PV without CC, PV without CM, PV without PSV, PV without SV, PV without WIV, and PV without IV. If the regression coefficient for a particular area of victimization changed significantly after including the corresponding measure of PV in the third step of the equation, this would mean that the effects of that area would be dependent on the PV measure rather than on its independent effect. In other words, if the effect of that particular area of victimization was significant in the second step of the regression but lost its significance in the third step (when the remaining areas of victimization were also taken into account), this would imply that its influence on mental health would be due to the combined effect of other areas of victimization.

All analyses were performed with SPSS 12.

Results

Descriptives of victimization

Out of the 36 different kinds of victimization assessed by the JVQ, adolescents in this sample reported an average of 6.15 (SD = 4.87) during their life-time. There were no gender differences in the total kinds of victimization experienced ($t = .440$, $df = 857$, $p = .660$). Some 6.9 % of the sample said they had suffered no victimization over their life-time, 7.3 % reported having suffered one kind of victimization, 72.7 % reported between 2 and 11 different kinds, and 9.3 % reported 12 or more different kinds of victimization.

Total and exclusive prevalence of each area of victimization

As shown in Table 1, the most prevalent areas of victimization were Conventional Crime (CC), Peer and Sibling Victimization (PSV), and Witnessing and Indirect Victimization (WIV). As regards the Total Prevalence, which indicates the percentage of adolescents reporting a particular area of victimization regardless of their answers to the other areas, more than three out of five adolescents reported CC, PSV, and WIV. However, fewer than half the adolescents (from 15.2 to 43.6 %) reported Child Maltreatment (CM), Sexual Victimization (SV), and Internet Victimization (IV). With respect to the Exclusive Prevalence, which refers to the percentage of adolescents reporting a particular area of victimization but no other, this was marginal in both boys and girls (from 0 to 4.7 %). The only exception was for CC, since approximately half the adolescents who reported this area of victimization did not report victimization in any other area.

Impact of each area of victimization in terms of predicting mental health (PTSS, ES, IS, and TPS), before and after taking polyvictimization into account

Overall, the results show that when all the areas of victimization reported are considered, the power of explanation of a particular area of victimization is greatly reduced, and it may even lose its statistical significance in relation to explaining psychological symptoms. This is the case, specifically, for SV and WIV in boys and for PSV in girls.

However, a number of exceptions were observed. Table 2 shows that among boys the beta values for PSV remain highly significant even when the other areas of victimization are taken into account, meaning that this kind of victimization continues to have significant explanatory power in relation to the mental health symptoms assessed; in fact, the R^2 of the model which included the other areas of victimization lost its significance in relation to all symptoms except for IS. Beta values for IV indicated that this kind of victimization retained significant explanatory power in relation to Post-Traumatic Stress Symptoms (PTSS) and Internalizing Symptoms (IS) even when the other areas of victimization were included. Finally, when the other areas of victimization were included, CM beta values remained significant only in relation to Total Psychological Symptoms (TPS), while those for CC remained significant only in relation to IS.

Table 3 shows that for girls the beta values for both CC and IV remained significant in relation to all the mental health symptoms assessed, when the other areas of

Table 1 Total and exclusive prevalence for each area of victimization by gender

	Conventional crime		Child maltreatment		Peer and sibling victimization		Sexual victimization		Witnessing and indirect victimization		Internet victimization	
	TP (%)	EP (%)	TP (%)	EP (%)	TP (%)	EP (%)	TP (%)	EP (%)	TP (%)	EP (%)	TP (%)	EP (%)
Males ($n = 342$)	70.5	40.6	33.6	0	62.0	2	15.2	0	73.1	4.7	21.1	0
Females ($n = 576$)	69.8	33.0	43.6	1.2	63.0	1.9	31.8	0.7	70.3	4.0	35.9	0.5

TP total prevalence, *EP* exclusive prevalence

victimization were taken into account. SV beta values remained significant in relation to both Externalizing Symptoms (ES) and TPS. Finally, when the other areas of victimization were included, CM beta values only remained significant in relation to PTSS, while WIV beta values remained significant only with regard to ES.

Discussion

In recent decades, numerous studies have identified a range of negative psychological sequelae associated with child and adolescent victimization. Most of these studies have focused on the mental health consequences of specific areas of victimization such as child sexual abuse [6, 24, 32], peer victimization [8], child abuse and neglect [24, 25], or both experienced and vicarious violent victimization [4, 19, 23]. To date, however, very little attention has been paid to exposure to multiple forms of victimization or polyvictimization. This gap in knowledge has to be addressed, not least because most adolescents report more than one kind of victimization in a one-year period [26], and the implications of this need to be understood. Furthermore, there is an evidence to suggest that studies which focus on just one kind of victimization may be overestimating its impact on mental health [16, 30]. Specifically, the relationship found in such studies between a specific area of victimization and a mental health outcome may in fact be the result of the hidden influence of other areas of victimization that are not taken into account, or a consequence of the interaction between them. With this in mind, the present study sought to determine the extent to which such studies may have introduced a degree of bias into our psychological knowledge.

The first step towards this objective was to calculate (1) the percentage of adolescents who reported a particular area of victimization irrespective of their responses in other areas (Total Prevalence), and (2) the percentage of adolescents who reported exclusively a particular area of victimization (Exclusive Prevalence). In both cases, victimization reports referred to lifetime. Of the 342 males included in the sample, none reported having experienced CM, SV, or IV exclusively. In other words, all the boys who reported victimization in these areas also reported victimization in at least one other area. In the case of female participants, although 1.2, .7 and .5 % reported having experienced only CM, SV, and IV, respectively, these three areas of victimization were also the least reported in combination with other areas (ranging from 31.8 to 43.6 %). Overall, for both boys and girls, CM, SV, and IV were the least prevalent areas of victimization, with total prevalence ranging from 15 to 43 %, and exclusive prevalence from 0 to 1.2 %. By contrast, as many as three out of five adolescents in general reported PSV and WIV. However, as occurred with the previously mentioned areas, prevalence fell sharply to <5 % in all cases when no combination with other areas was considered. A different pattern was observed for CC, which in general was reported by 7 out of 10 adolescents. Among those adolescents who reported CC, approximately one girl out of three and two boys out of five reported exclusively this area of victimization.

Clearly then, the large majority of adolescents report a combination of different areas of victimizations. These results are in line with previous research [12] and indicate that when adolescents are asked only for a specific area of victimization there is a very high probability that other areas of victimization will be overlooked. The exception here is CC, which would be correctly reported as an exclusive area by around 50 % of adolescents. One explanation for this is that "conventional" crime, as its name suggests, is a relatively common area of victimization among the general population, even among those adolescents who, a priori, are not at risk for other areas of victimization. Another possible explanation is that since the CC area covers a variety of experiences (its items range from being robbed to being assaulted, both with and without weapons), a person may have suffered several different kinds of victimization but all within this category, such that he or she is considered as having suffered exclusively CC. This is less likely to happen in the other categories, which are more specific in their content.

Having seen that most areas of victimization, especially those that have aroused the greatest interest among researchers (i.e., SV, CM, and PSV), usually appear in combination with other areas, it is clear that studies which do not take this into account may not actually be measuring the effects of the specific area of victimization they are seeking to study. In order to examine further the extent to which these studies may have introduced bias by not controlling for the total areas of victimization experienced, we analyzed the relationship between each area of victimization and four mental health variables (PTSS, ES, IS, and TPS). This study found substantial reductions in all cases, a finding that is in line with previous research on this topic [12, 30] and which highlights the importance of taking into account all the areas of victimization experienced. In fact, it was this that led Finkelhor, Ormrod et al. [12] and Finkelhor et al. [11] to propose an operationalization of victimization that would be better able to identify those children at particularly high risk of additional victimization and psychological symptoms. They referred to this as "polyvictimization", a measure consisting of the sum of all the kinds of victimization that children and adolescents were exposed to.

Table 2 Hierarchical multiple regression analysis for boys

		PTSS			ES			IS			TPS		
		B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$
Conventional crime	2nd Step	0.530 (0.141)	0.259**	0.098**	0.949 (.258)	0.248**	0.092**	1.270 (0.250)	0.349**	0.129**	3.155 (0.684)	0.328**	0.169**
	3rd Step	0.173 (0.171)	**0.085**^{NS}	0.145**	0.366 (0.319)	**0.096**^{NS}	0.125**	0.662 (0.309)	*0.182**	0.168**	1.373 (0.836)	**0.143**^{NS}	0.220**
Child maltreatment	2nd Step	1.351 (0.326)	0.284**	0.110**	2.379 (0.608)	0.265**	0.099**	2.498 (0.596)	0.294**	0.095**	7.616 (1.560)	0.348**	0.180**
	3rd Step	0.636 (0.392)	**0.133**^{NS}	0.147**	1.113 (0.745)	**0.124**^{NS}	0.129**	0.689 (0.712)	**0.081**^{NS}	0.168**	3.793 (1.887)	*0.173**	0.227**
Peer and sibling victimization	2nd Step	0.953 (0.184)	0.337**	0.148**	1.806 (0.334)	0.346**	0.151**	1.832 (0.330)	0.368**	0.148**	5.340 (0.882)	0.406**	0.230**
	3rd Step	0.675 (0.243)	*0.239***	**0.156**^{NS}	1.552 (0.457)	*0.297***	**0.150**^{NS}	1.032 (0.445)	*0.207**	0.173**	3.901 (1.181)	*0.297***	**0.240**^{NS}
Sexual victimization	2nd Step	1.016 (0.368)	0.185**	0.071**	1.481 (0.665)	0.149*	0.056*	1.918 (0.644)	0.205**	0.057**	6.308 (1.816)	0.245**	0.128**
	3rd Step	−0.011 (.424)	**−0.002**^{NS}	0.145**	−0.297 (0.759)	**−0.030**^{NS}	0.129**	−0.183 (0.721)	**−0.020**^{NS}	0.172**	0.730 (2.096)	**0.028**^{NS}	0.220**
Witnessing and indirect victimization	2nd Step	0.442(0.175)	0.176**	0.065*	0.745 (0.324)	0.158*	0.057*	1.012 (0.319)	0.227**	0.063**	2.147 (0.860)	0.185*	0.099*
	3rd Step	−0.059 (0.197)	**−0.023**^{NS}	0.155**	−0.153 (0.368)	**−0.033**^{NS}	0.137**	−0.025 (0.355)	**−0.006**^{NS}	0.179**	−1.229 (0.959)	**−0.106**^{NS}	0.255**
Internet victimization	2nd Step	1.931 (0.475)	0.273**	0.108**	2.407 (0.874)	0.187**	0.067**	3.917 (0.829)	0.324**	0.115**	10.190 (2.377)	0.305**	0.157**
	3rd Step	1.062 (0.527)	*0.150**	0.153**	0.592 (0.967)	**0.046**^{NS}	0.125**	2.092 (0.916)	*0.173**	0.180**	4.605 (2.658)	**0.138**^{NS}	0.226**

B, β, and $R^{2\ adj}$ values for each area of victimization in terms of predicting mental health symptoms (PTSS, ES, IS, and TPS), both before (second step) and after (third step) introducing the corresponding PV measure. Hierarchical multiple regression analyses were conducted considering the adolescents' answers irrespective of the number of areas they had endorsed

Bold and italic values are not significant at $p > 0.05$

PTSS post-traumatic stress symptoms, *ES* externalizing symptoms, *IS* internalizing symptoms, *TPS* total problems scale

* $p < .05$, ** $p \leq .001$

Table 3 Hierarchical multiple regression analysis for girls

		PTSS			ES			IS			TPS		
		B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$	B (SD)	β	$R^{2\ adj}$
Conventional crime	2nd Step	0.754 (0.136)	0.288**	0.089**	1.663 (0.248)	0.348**	0.121**	1.592 (0.266)	0.316**	0.112**	5.506 (0.696)	0.435**	0.196**
	3rd Step	0.446 (0.161)	*0.170***	**0.116****	0.575 (0.276)	*0.120**	0.236**	1.029 (0.320)	*0.205***	0.134**	2.975 (0.816)	*0.235***	0.269**
Child maltreatment	2nd Step	1.261 (0.249)	0.263**	0.076**	2.337 (0.454)	0.271**	0.077**	2.249 (0.491)	0.244**	0.075**	7.017 (1.371)	0.295**	0.099**
	3rd Step	0.726 (0.273)	*0.151***	0.120**	0.635 (0.460)	**0.074**^{NS}	0.235**	1.042 (0.540)	**0.113**^{NS}	0.131**	1.916 (1.392)	**0.080**^{NS}	0.266**
Peer and sibling victimization	2nd Step	0.650 (0.174)	0.195**	0.047**	1.853 (0.305)	0.311**	0.102**	1.509 (0.330)	0.240**	0.075**	5.269 (0.866)	0.341**	0.130**
	3rd Step	0.086 (197)	**0.026**^{NS}	0.118**	0.473 (0.332)	**0.079**^{NS}	0.237**	0.543 (0.381)	**0.086**^{NS}	0.129**	1.592 (0.942)	**0.103**^{NS}	0.268**
Sexual victimization	2nd Step	0.944 (0.240)	0.206**	0.05**	2.960 (0.418)	0.359**	0.133**	1.806 (0.464)	0.208**	0.059**	6.547 (1.215)	0.308**	0.117**
	3rd Step	0.443 (0.251)	**0.096**^{NS}	0.115**	1.805 (0.421)	*0.219***	0.247**	0.801 (0.485)	**0.092**^{NS}	0.130**	2.702 (1.207)	*0.127**	0.277**
Witnessing and indirect victimization	2nd Step	0.393 (0.172)	0.123*	0.023*	1.694 (0.300)	0.298**	0.090**	0.607 (0.331)	**0.101**^{NS}	**0.026**^{NS}	3.878 (0.863)	0.265**	0.081**
	3rd Step	−0.102 (0.179)	**−0.032**^{NS}	0.129**	0.680 (0.302)	*0.119**	0.235**	−0.477 (0.343)	**−0.079**^{NS}	0.157**	0.344 (0.863)	**0.023**^{NS}	0.280**
Internet victimization	2nd Step	1.558 (0.301)	0.268**	0.079**	3.562 (0.535)	0.343**	0.120**	3.045 (0.577)	0.278**	0.092**	11.855 (1.506)	0.431**	0.195**
	3rd Step	0.925 (0.328)	*0.159***	0.123**	1.728 (0.555)	*0.167***	0.240**	1.825 (0.627)	*0.167***	0.139**	7.137 (1.605)	*0.260***	0.291**

B, β, and $R^{2\ adj}$ values for each area of victimization in terms of predicting mental health symptoms (PTSS, ES, IS, and TPS), both before (second step) and after (third step) introducing the corresponding PV measure. Hierarchical multiple regression analyses were conducted considering the adolescents' answers irrespective of the number of areas they had endorsed

Bold and italic values are not significant at $p > 0.05$

PTSS post-traumatic stress symptoms, *ES* externalizing symptoms, *IS* internalizing symptoms, *TPS* total problems scale

* $p < .05$; ** $p \leq .001$

Aware that certain kinds of victimization could be more traumatizing than others, Finkelhor, Ormrod et al. [12] tested whether some areas were more relevant than others when it came to explaining psychological symptoms. They found that the experience of sexual assault by a known adult (which falls within the SV area) and emotional bullying (part of the PSV area) both improved the prediction of depression and anxiety in adolescents, when polyvictimization was controlled for. The results of the present study are consistent with this; although, overall, particular areas of victimization decreased their influence when the other areas were taken into account; some areas remained significant. These areas differed according to gender. Among boys, PSV retained significant explanatory power in relation to all the mental health symptoms that were assessed. Interestingly, even when the remaining victimization areas were added to PSV, the ability to explain PTSS, ES, and TPS did not significantly improve, indicating that PSV might be a good predictor of such symptoms even when the other areas of victimization are not taken into account. Researchers and clinicians should therefore pay special attention to this area of victimization in boys, as it is most closely related to their mental health problems. The results for boys also showed that IV remained a significant variable in terms of explaining both IS and PTSS, even when the other areas of victimization were included. In fact, IV could be considered another kind of peer victimization, although it appears to explain more those negative behaviors and attitudes that are directed towards oneself rather than towards others (i.e., internalizing rather than externalizing symptoms). Lastly, CM and CC also remained significant in terms of explaining TPS and IS, respectively. Whereas CM could represent an area of victimization that triggers overall psychological distress in boys, CC seems especially to incline boys towards having negative attitudes and behaviors against themselves.

In girls, both CC and IV remained significant for all the mental health issues measured, when the other areas of victimization were taken into account, indicating that girls are especially vulnerable to these two areas of victimization. This is especially relevant when one considers that CC is very common and often occurs in isolation from other areas of victimization, such that girls might be widely exposed to the negative consequences of victimization. The results for girls also showed that SV remained significant in terms of explaining TPS and ES, even when the other areas of victimization were controlled for. This suggests that SV in girls may especially influence their behavior towards others and their overall distress. Cutler and Nolen-Hoeksema [9] and Gershon, Minor, and Hayward [14] hypothesized that SV could help to explain the higher rates of internalizing symptoms reported in females compared with males [7, 27]. However, the present study found no

significant relationship between sexual victimization and internalizing symptoms in either gender when the other areas of victimization were controlled for, thereby suggesting that any differences in IS rates may not be due simply to the differential effects of sexual victimization but, rather, to its combination with other areas of victimization. Future research should focus specifically on this topic in order to determine other factors that influence these gender differences in internalizing symptoms. Finally, the results for girls indicated that CM and WIV remained significant in relation to PTSS and ES, respectively. Therefore, in line with previous research, CM in girls seems to be highly related to their symptoms of traumatic stress, even when the other areas are controlled for (see the review by Kearney, Wechsler, Kaur, and Lemos-Miller [20]). As for WIV, this kind of victimization appears to be especially related to girls' behavior towards others. Thus, it could be that adolescent girls who report witnessing violence are more likely to attribute hostile intent to peers and to generate aggressive and externalizing responses [33].

A further conclusion to be drawn from these results is that although the combination of victimization areas is generally more harmful for adolescents' mental health, the number of individually relevant areas of victimization is higher among girls. In fact, girls appear to be psychologically vulnerable to all the different areas of victimization, whereas boys' vulnerability to victimization seems to be more specific and basically focused on PSV and IV. All in all, the areas of victimization assessed here seem to be related to different intensities of psychological symptoms in boys and girls.

In this regard, the R^2 values suggest that victimization is better at explaining PTSS and IS in boys, whereas in girls it offers a better explanation of TPS and, above all, ES. This is in line with previous research on this topic [27] and suggests that when boys are victimized they tend to turn the distress on themselves, whereas when girls suffer interpersonal violence they tend to feel more generally distressed and develop a negative world view [15] that may lead them to direct their suffering outwards, towards others. However, these gender differences were not tested for statistical significance. This data should therefore be regarded as preliminary and interpreted with caution, especially because more girls than boys participated in the study and thus the female/male ratio is not fully representative of the population in which the study was conducted. Moreover, these results may not be generalizable outside of the country from which they were drawn. Future research should endeavor to conduct similar studies among other adolescent populations.

The present study, in line with much previous research on victimization, assumes that victimization affects mental health. It therefore employs statistical analytic tools that involve an assumption of causality. This is an important limitation since, as in most cross-sectional studies, there is no guarantee that the observed relationships are actually in the direction they appear to be. In fact, some studies suggest that mental health problems in childhood and adolescence may represent important risk factors for increased victimization [31]. Furthermore, as Finkelhor et al. [11] suggest, psychologically distressed children and youth may tend to perceive or remember more victimization, thereby creating artifactual associations. Studies that adopt a longitudinal approach are clearly needed to address these limitations.

To sum up, in line with Finkelhor, Ormrod et al. [12], the present results suggest that in order for the polyvictimization measure to be a better predictor of mental health symptoms some areas of victimizations should be given greater weight. These areas would be PSV in the case of boys, and both CC and IV in the case of girls. However, rather than giving special weight to specific areas of victimizations or specific offenses, it may be that greater weight should be given to specific combinations of victimizations. If so, there is reason to suspect that such combinations would also be gender specific. Whatever the case, it is also important to take into account that depending on the mental health symptom that one is seeking to explain, the weight of each area of victimization varies. This means that although it is necessary to consider all the areas of victimization experienced conjointly, some areas represent a higher risk for specific mental health issues.

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Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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CHAPTER 8. DISCUSSION AND CONCLUSIONS

Overall, the results highlight the major **burden of victimization** to which Spanish adolescents are exposed. During a one-year period, the large majority of adolescents were exposed to more than one kind of interpersonal victimization; the mean number of victimizations suffered was close to four per year, and close to six during the lifetime (as measured through the JVQ). Moreover, more than 70% of adolescents reported two or more different kinds of victimization. Although adolescents in this sample seem to report higher levels of victimization than youth in other samples (e.g., Finkelhor, Ormrod, et al., 2009b), the results are in line with the leading research into the topic (Clausen & Crittenden, 1991; Finkelhor et al. 2007a; Finkelhor, Turner, et al., 2009), and stress that youth are more likely to suffer multiple victimization than single victimizing events.

Similarly, using an innovative procedure (comparing **total prevalence** vs **exclusive prevalence**), the present thesis found that extremely few adolescents suffer victimization in only one area (e.g., only peer and sibling victimization, only witnessing and indirect victimization, only child maltreatment, only sexual victimization or only internet victimization). Rather, adolescents tend to report a combination of different areas of victimizations. For example, whereas 62% of boys and 63% of girls reported victimization by peers or siblings, only 2% of boys and 1.9% of girls reported this area alone. This may support the claim that youth who have been exposed to any one kind of victimization are at greater risk for further exposures (Finkelhor, Turner, et al., 2009). Moreover, in line with previous research (Finkelhor, Ormrod, et al., 2005a), these

results indicate that when adolescents are asked about only a specific area of victimization there is a very high probability that other areas of victimization will be overlooked.

Unfortunately, the reality is that to date very little attention has been paid to exposure to multiple forms of victimization or poly-victimization. This gap in our knowledge has to be addressed, not least because studies which focus on just one kind of victimization may overestimate its impact on mental health (Turner et al., 2010a; Gustafsson et al., 2009). With this in mind, the present thesis sought to examine the impact of poly-victimization on mental health (considering a wide range of victimizations) and illustrate how studies which use a fragmented approach may be introducing a degree of bias into our psychological knowledge.

In line with Finkelhor, Ormrod, et al. (2005a), and Turner et al. (2010a), the general conclusion is that the **impact of individual areas of victimization** on mental health tends to decrease and even become irrelevant when the combination of different areas is taken into account. Thus, it is the combination of areas of victimization, and not single areas, that is really important for adolescents' mental health. However, in our study (Soler et al., 2014), and in line with Finkelhor, Ormrod, et al. (2005a), some areas appeared to be more relevant than others: peer and sibling victimization in the case of boys, and both conventional crime and internet victimization in the case of girls. These areas retained significant explanatory power for all the psychological symptoms analysed (posttraumatic stress symptoms, internalizing symptoms, externalizing symptoms, and total psychological symptoms) even when the other areas were controlled for. This highlights how important it is that both researchers and clinicians should pay close attention to boys suffering peer and sibling victimization and girls suffering conventional crime and internet victimization, as these areas of victimization are more closely related to their mental health problems. Moreover, these results suggest that in order for comprehensive measures, like poly-victimization, to be better predictors of mental health symptoms, some areas of victimization should be given greater weight. However, rather than giving special weight to specific areas of victimizations or specific offenses, it may be that greater weight should be given to specific combinations of victimizations. If so, there is reason to suspect that such combinations would also be gender specific.

According to the field of developmental victimology, it is necessary to consider gender as well as age to successfully map the patterns of victimization and its consequences in youth (Finkelhor, 2007). The results in our study (Soler et al., 2012) did not show any **age differences** with regard to the amount of victimization suffered, probably because the adolescents in the sample were within a narrow age bracket (from 14 to 18 years old). However, some interesting conclusions can be drawn with regard to **gender**. While in general boys and girls reported equivalent amounts of victimization (i.e., total kinds of victimization), girls reported twice as much child maltreatment and sexual victimization as boys. With regard to sexual victimization, these results corroborate those of Fergusson, Horwood, and Lynskey (1996b) and Finkelhor (2007).

With respect to **mental health variables**, and in line with previous research, girls at adolescent ages showed higher psychological distress overall than boys (Abad et al., 2002). Indeed, girls reported significantly higher levels of total post-traumatic symptoms (Gustafsson et al., 2009), internalizing symptoms (Giletta et al., 2010) and self-injurious/suicidal behaviours (Laye-Gindhu, & Schonert-Reichl, 2005; Madge et al., 2008; Hawton, & Harris, 2008; Hawton et al., 2002) than boys, and significantly lower levels of self-esteem (Garaigordobil, et al., 2005; Giletta et al., 2010). According to Finkelhor, Ormrod, et al. (2009a), this may be partially due to the kinds of victimization that girls suffer significantly more than boys (i.e., child maltreatment and sexual victimization), as these experiences may lead to more negative psychological outcomes than other types of victimization. However, our results suggest that if this were the case, vulnerability to these two areas of victimization may also be higher for girls. In fact, according to the findings in our last study (Soler et al., 2014), in girls child maltreatment significantly explained post-traumatic stress symptoms and sexual victimization significantly explained both externalizing symptoms and total psychological symptoms even when other areas of victimization were taken into account; however, in boys the explanation power of sexual victimization and child maltreatment was reduced overall to non-significant levels (with the exception of child maltreatment, which remained slightly predictive only with regard to total psychological symptoms). Therefore the explanation of girls' higher rates of psychological symptoms might rather be a combination of both higher rates of child maltreatment and sexual victimization and higher vulnerability to these areas in girls. Yet, in relation to victimization, another possible explanation for girls' higher psychological distress is

that although overall they suffer the same amounts of victimization (i.e., total kinds of victimization), they may perceive conducts of relational aggression as more severe than boys do (Escartin, Salin, & Rodríguez-Carballeira, 2013).

Another interesting finding is that whereas in boys victimization is better at explaining posttraumatic stress symptoms and internalizing symptoms, in girls it offers a better explanation of total psychological symptoms and, above all, externalizing symptoms (Soler et al., 2012; Soler et al., 2014). One explanatory hypothesis of this phenomenon is that when boys are victimized they may tend to turn the distress on themselves, whereas when girls suffer interpersonal violence they may tend to feel more generally distressed and develop a negative world view (Grills & Ollendick, 2002) that may lead them to direct their suffering outwards, towards others (with disruptive behaviour) rather than towards themselves. However, as in most cross-sectional studies, causal ordering could not be clearly established. In fact, previous research on this topic (Turner, Finkelhor, & Ormrod, 2010c) concluded that children with high levels of internalizing and externalizing symptoms were particularly likely to experience increased exposure to several forms of victimization. Therefore, it could also be hypothesized that girls who present more externalizing problems and boys who present more internalizing problems tend to put themselves into danger (in terms of interpersonal violence) more often. Studies adopting a longitudinal approach are clearly needed to address this issue.

As regards the **accumulative effects of multiple victimization and poly-victimization** on mental health, in general, our results suggest that there is a positive association between the total kinds of victimization experienced and mental health outcomes and a negative association between total kinds of victimization and self-esteem, especially self-liking. Not surprisingly, then, boys and girls in the poly-victim condition were the ones that reported most psychopathological symptoms (e.g., PTSS, suicidal behaviours) and lowest self-esteem, results that corroborate those of recent research on this topic (Chan, 2013; Turner et al., 2010a) and highlight the cumulative effect of increasing stressors (Cloitre et al., 2009).

As previously mentioned, overall, boys and girls reported equivalent amounts of different kinds of victimization. In fact, even when participants were divided into the

three **victimization groups** (non-victims, victims, and poly-victims), the proportion of boys and girls in each group remained equivalent. However, some gender differences should be highlighted with regard to the level of symptoms in each victimization group. In girls, the number of posttraumatic stress symptoms reported seemed to increase with their degree of victimization. That is, girls who reported poly-victimization showed significantly higher levels of posttraumatic stress symptoms than girls who reported mild levels of victimization (i.e., victims), and at the same time, the latter presented significantly higher levels than those who reported no victimization (i.e., non-victims). Conversely, boys reported significantly more post-traumatic stress symptoms only in the poly-victimization group. These data ratify, as stated earlier, a gender-specific psychopathological response linked to the cumulative pattern of interpersonal victimization.

Similarly, and as far as **suicide phenomena** are concerned, the results show that whereas in boys, only the poly-victim group reported a significantly greater presence of suicidal phenomena, in girls both the victim and the poly-victim groups reported a significantly greater presence of suicidal phenomena than the non-victim group and the victim group respectively. Moreover, whereas one fifth of male poly-victims (22%) reported some kind of suicidal phenomenon, half of female poly-victims did so (49.4%). In fact, girls reported significantly more suicidal phenomena than did boys in both the victim and poly-victim groups, although this was not the case in the non-victim group. These findings, together with those referring to posttraumatic stress symptoms, suggest that victimization may play an important role in producing the gender differences in mental health that are found in the general population. They may also indicate that females show greater vulnerability in response to victimization. Future research should seek to determine the role that both intrinsic variables (related to personality or psychopathology) and extrinsic variables (environmental factors, such as patterns of education) may play in terms of increasing their vulnerability.

The analysis of adolescents' levels of **self-esteem** according to their victimization status revealed that both boys' and girls' sense of being a valuable person (self-liking) was equivalent in victims and non-victims. However, when participants had suffered poly-victimization, their sense of personal value, which is linked to a sense of social worth, decreased significantly, thereby illustrating the important impact of

suffering multiple kinds of victimization. These results highlight again the important impact of cumulative stresses (Cloitre et al., 2009), and are in line with those reported by Turner et al. (2010a), who claimed that the experience of multiple victimizations from different sources might lead youth to consider themselves as much more unworthy than their counterparts, making it much harder to resist a negative self-evaluation. However, the adolescents' sense of their own power and self-efficacy in meeting personal goals (self-competence) follows a different pattern. Indeed, their self-competence, which is ability-oriented and linked to the self-assessment of personal abilities, did not diminish significantly according to their degree of victimization (i.e., minimal or multiple victimization). Therefore, experiencing multiple kinds of victimization appears to affect adolescents' self-evaluation as worthy social beings, but it does not seem to make them question their self-efficacy. Some potential reasons for this are provided by Tafarodi and Milne (2002). Negativity from others (e.g., rejection, disapproval, interpersonal conflicts) may affect the valuative representation of oneself as a social object (self-liking), which is assumed to derive from appraisals of worth conveyed by others. However, one's sense of efficacy at reaching personal goals (self-competence) may be related more to achievement events (successes and accomplishments) than to victimization events.

These results add empirical support to the proposed differences between these two components of self-esteem, as they seem to present different associations with other variables, like victimization, and may therefore reflect different underlying constructs (Huang & Dong, 2012). It appears that suffering different kinds of victimization is experienced more as a negative self-evaluation of worth (self-liking) than as a negative self-appraisal of one's ability (self-competence) and, in line with previous research (Surgenor, Maguire, Russel, & Touyz, 2007), negative self-liking is more closely related to both internalizing and externalizing symptoms than negative self-competence. It is worth mentioning that both components of self-esteem have a stronger link with internalizing symptoms.

Given all these associations found in our first study (Soler et al., 2012) and in others (Chan et al., 2011; Turner et al., 2010b), it was hypothesized that impaired self-esteem may be a direct outcome of victimization (Overbeek et al., 2010) and, at the same time, that self-esteem may have a direct influence on the appearance of different

psychological symptoms. Therefore, we decided to consider the **mediating and/or moderating role** that self-esteem might play between the experience of multiple kinds of victimization and mental health: that is, whether high self-esteem acts as a protective factor.

Prior research has found a mediator model to have greater explanatory power in girls and a moderator model greater explanatory power in boys (Grills & Ollendick, 2002). In our third study we tested both mediator and moderator models for self-esteem (Soler, Kirchner, et al., 2013). The results gave support for self-liking as a partial moderator of the relationship between the total kinds of victimization experienced and internalizing symptoms in boys. That is, for boys under conditions of high victimization, having a higher sense of social worth (self-liking) acts as a protective factor against internalizing symptoms. Nonetheless, the mediator role of self-liking between victimization and internalizing symptoms had greater explanatory power than the moderator role. No mediation or moderation effects were found between victimization and externalizing symptoms in boys, for whom the sense of self-efficacy (self-competence) did not seem to influence the relationship between victimization and mental health either.

In girls, the results supported a partial mediator role of self-liking between victimization and both internalizing and externalizing symptoms. This means that victimization experiences negatively influence girls' sense of being a valuable person (self-liking), which, in turn, helps to explain the levels of internalizing and externalizing problems they report. Moreover, their sense of being efficacious (self-competence) also seemed to play a significant role as a partial mediator for internalizing symptoms. Thus, in girls, victimization seems to be related to both the sense of worthiness (self-liking) and self-efficacy (self-competence), which, in turn, act as explanatory factors for the victimization–mental health symptoms relation. Therefore, it can be argued that self-liking is not a mere correlate of victimization but may be integrally involved in the triggering and maintenance of both internalizing and externalizing problems. As for the role of self-competence, it appears to be much less relevant, as it is only involved in the triggering of internalizing symptoms in the girls' case. These findings are important because they suggest that adolescents' sense of personal value (self-liking), as well as girls' sense of ability to meet personal goals (self-competence) may be important in

preventing them from developing internalizing and externalizing symptoms after victimization. This information may be of help to clinicians and health practitioners since it may signal that working on adolescents' self-liking and self-competence helps them to build up resilience in the face of adversity. However, these two facets of self-esteem, although widely supported by recent literature (Tafarodi & Milne, 2002; Tafarodi & Swann, 1995) should be reanalysed in order to confirm and extend the results of the current study. Moreover, as there is a need for more comprehensive models which integrate different types of variables (Sandín, Chorot, Santed, Valiente, & Joiner, 1998) it is important to conduct studies that include not only self-esteem but also other variables (e.g., coping strategies, personality traits) in the mediator/moderator model, as this would give a broader insight into the problem.

CHAPTER 9. STRENGTHS, LIMITATIONS AND CLINICAL IMPLICATIONS

The studies that make up this doctoral thesis have several **strengths** that should be acknowledged. Among them, we highlight its innovative nature especially in the sense of taking account of the full range of victimizations to which adolescents are exposed. Most research on the correlates of interpersonal victimization only focuses on one kind of victimization (e.g., sexual victimization or child maltreatment), and disregards the influence of suffering multiple kinds of victimization. Bearing in mind that Finkelhor, Hamby, et al. (2005), and Finkelhor et al. (2007) estimate that over the course of a year a victimized child suffers a mean number of three different kinds of victimization, focusing on just one kind of victimization may overestimate its relationship with other variables, such as self-esteem or internalizing and externalizing symptoms. Thus, considering the exposure to the full range of different kinds of victimization enables us to minimize the hidden influence of variables that are not taken into account in other studies. Moreover, the results obtained with the new approach used in our last study (Soler et al., 2014) when accounting for the prevalence of victimization (i.e., total vs. exclusive prevalence) demonstrate conclusively that very few adolescents report interpersonal victimization in just one area, but rather combination of victimization areas.

As regards the time-frame applied to operationalize victimization, different studies have used different approaches. When Finkelhor, Ormrod, et al. (2009a) compared the merits of lifetime versus past-year assessment of poly-victimization, they concluded that researchers interested in poly-victimization could use either approach (life-time or one-year period) depending on a variety of considerations. In our studies, a

positive point is that we used both approaches: the one-year period approach, when we wanted to carry out an accurate assessment of the immediate risk environment that adolescents face, and the life-time approach when we wanted to assess the life-long accumulative effects of victimization.

Another innovative feature of this thesis is its consideration of three different groups in the examination of suicidal behaviours among youth, in order to ensure that suicidal phenomena did not overlap. Specifically, adolescents who reported both suicidal thoughts and behaviours were considered as a separate group, thereby reducing the potential magnification effect of assigning these adolescents to two different groups (i.e., both the suicidal thoughts group and the self-injurious/suicidal behaviours group).

A further strength of the current research is that the sample size is considerable and that more than 10% of participants came from social minorities. Moreover, although the dimensional structure of self-esteem continues to arouse debate (Martín-Albo et al., 2007), the fact that self-esteem was studied here as a concept comprising two somewhat distinct yet related constructs (self-liking and self-competence) reveals nuances that could be overlooked by a one-dimensional conceptualization. Our approach produced results that should be useful in terms of targeting the treatment policy (e.g,. in victimized adolescents it is important to promote their sense of social value, since this component of self-esteem is the most affected by multiple kinds of victimization). However, these two facets of self-esteem should be reanalysed in order to confirm and extend the results of the current study.

Our study also has a number of **limitations** that should be acknowledged. Firstly, in order to operationalize the measures of victimization and poly-victimization, only different incidents were taken into account. This means that a second and consecutive assault of the same kind was not taken into consideration as additional victimization. One would expect, therefore, that the effect of repetitive victimizations over time may be minimized using this procedure. For this reason, in addition to studying the number of different types of victimization, we believe that future studies should also examine their frequency. However, as Finkelhor, Ormrod, et al. (2005a) point out, the exclusion of different episodes of the same type of victimization helps the

researcher to inquire about different types of victimization, which was the principal aim of our research.

Another important drawback of the current study's operationalization of poly-victimization is that no greater weight was given to certain kinds or certain combinations of victimization that may be particularly harmful and traumatizing, in spite of the evidence found supporting the appropriateness of doing so (i.e., peer and sibling victimization in the case of boys, and both conventional crime and internet victimization in the case of girls). In this sense, Finkelhor, Ormrod, et al. (2005a) found that the enhancement that giving greater weigh to certain types of victimization would provide in terms of explaining trauma symptoms is limited, and they concluded that the relative gains are not worth the methodological complexity. However, future studies should also seek to determine whether the greater vulnerability we detected among girls is associated with the accumulative effects of victimization, or with the kinds of victimization that girls suffer more than boys, or with both.

As regards the association between victimization and mental health variables, it is important to note that it may be influenced by other intra-subject variables (such as personality or coping strategies) and external variables (such as non-victimization adversity or social support) that were not taken into account. These variables should be considered in further research.

A further point of note is that the use of criterion described by Turner et al. (2010a) and Finkelhor, Ormrod, et al. (2009a) for classifying subjects according to their degree of victimization produced three unbalanced groups. This obviously entails psychometric drawbacks when comparing these three groups. Although we decided here to obtain an equivalent poly-victimization group to that reported by Finkelhor, Ormrod, et al. (2005a), we believe it is important for further research to consider other groupings.

The low rate of participation (44.7%) can also be considered a limitation of the study, although it is similar to those recorded in other studies (Turner et al., 2010a) that require two steps for the participation: consent from parents and consent from adolescents. Moreover, as more girls than boys participated in the study, the

female/male ratio is not fully representative of the population in which it was conducted. Our results should therefore be regarded as preliminary and interpreted with caution. Future research should endeavour to conduct similar studies in other adolescent populations, since these results may not be generalizable to other countries.

Another limitation is the fact that, to a certain degree, there may be some overlapping of constructs between self-esteem and internalizing symptoms. This should be analysed in greater depth in future research.

Regarding the suicide measure, it is important to acknowledge that the YSR is a screening instrument and item 18 ("I deliberately try to hurt or kill myself") is too ambiguous to be considered a reliable indicator of suicidal behavior. Because this item refers to two conceptually different actions (Mangall, & Yurkovich, 2008), future research clearly needs to analyse these phenomena separately. Nevertheless, a number of studies have shown a close relationship between the two, with self-injurious behaviors being a clear risk factor for suicide attempts (Kirchner et al., 2011; Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006; Owens, Horrocks, & House, 2002). In our study, efforts were made to carry out an accurate assessment of the most at-risk adolescents, and thus adolescents who commit self-injurious behaviors cannot be excluded. However, future research should seek to investigate suicidal phenomena with instruments designed specifically for this purpose, as studying such phenomena on the basis of just two items is an important limitation.

Furthermore, it is important to take into account that the psychological effects of victimization are considered according to adolescents' own reports. This may potentially present problems in terms of reliability and validity, because the person's current mental state, repression of traumatic life events, trauma recall or even embarrassment may affect both the likelihood of disclosure and the accuracy of the information provided (Fisher, Bunn, Jacobs, Moran, & Bifulco, 2011). To resolve this issue, reports from third parties should also be considered in the future. However, the evidence suggests that, after trauma, children provide more reliable information on their own internal states than other people (Korol, Green, & Gleser, 1999; Vogel & Vernberg, 1993).

Lastly, as in most cross-sectional studies, causal ordering cannot be clearly established. Therefore, the relations found between mental health issues, mediators and victimization may even be the other way around; the intrapersonal variables we assumed to be outcomes of victimization might instead be potential predictors. Furthermore, psychologically distressed children and youth may tend to perceive or remember more victimization, thereby creating artefactual associations (Finkelhor et al., 2007a). Studies that adopt a longitudinal approach are clearly needed to address this limitation, not least because the consequences of victimization may appear long-term.

In spite of all these limitations, the results obtained have several **clinical and practical implications**. First, the high prevalence of interpersonal victimization found among youth suggests that the suffering caused by stressful events of this kind may be behind any psychological consultation (e.g., depression), suggesting that in order to make an exhaustive assessment clinicians should always enquire about the history of interpersonal victimization. Moreover, due to the high covariation between different kinds of victimization in youth, in the context of any consultation related to a specific kind of victimization (e.g., sexual abuse) the clinician should conduct a thorough assessment of other types of victimization. Additionally, clinicians should consider gender differences with regard to the psychopathological reactions to victimization. Victimized girls may be more likely to receive psychological support soon after suffering victimization, as they are more sensitive to it and its psychopathological manifestation appears sooner. However, in victimized boys the mental health effects of victimization are not detectable until they suffer many different kinds of victimization (i.e., poly-victimization), and at this point their symptoms are triggered abruptly. This may indicate that boys do not receive adequate support from the first instance of victimization, therefore, clinicians should establish prevention policies to avoid this triggering of symptoms especially in boys, but also in girls. These policies should focus on adolescents' sense of personal value (self-liking), as well as girls' sense of ability to meet personal goals (self-competence), as these factors have been shown to prevent the development of internalizing and externalizing symptoms after victimization, and may help adolescents to build up resilience in the face of adversity.

Future research should aim to identify other factors that may play a role in the victimization-mental health relationship, not least as this would provide clinicians with

more clues as to how to help adolescents to avoid developing mental health issues after suffering victimization.

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