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The Exposure to Violence Questionnaire in Adolescents: Psychometrics and associations with well-being

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Abstract

Exposure to violence can have strong detrimental effects on adolescents, including long-term negative consequences for development, adjustment, and functionality. This study tests the factorial structure, psychometric properties, and construct validity of a Portuguese version of the Exposure to Violence Scale (EVS); a measure of adolescents' direct and indirect exposure to violence at school, in their community, at home, and on TV. The study sample comprised 306 Portuguese adolescents, 53.9% of whom were boys (M_{age}= 13 years, *SD* = 1.6), from the 6th to 10th grades. These adolescents completed the EVS, a measure of positive and negative affect, and a measure of perceived quality of life. We used confirmatory factor analysis to test structural validity. This analysis indicated that a seven correlated factors model the data well. Cronbach's alpha values indicated the sub-scales were reliable. T-tests indicated that older adolescents typically reported greater exposure to violence than younger adolescents, and that boys experienced more direct violence at school and home, and indirect violence in the community, than girls did. Finally, positive correlations with negative affect, and negative correlations with positive affect and well-being, offered evidence of convergent validity. The EVS for Portuguese adolescents has adequate psychometric properties for use as a brief screening tool for assessing the various forms and contexts of exposure to violence in adolescents. Having this validated instrument for use in Portugal has important clinical implications for teachers, health professionals, and teachers.

Keywords: exposure to violence, adolescents, psychometric, well-being

Highlights

- Exposure to violence (EtV) can have strong detrimental effects on adolescents' well-being
- It is vital to have valid measures capturing the various types and contexts of EtV
- The Portuguese *Exposure to Violence Scale* had adequate psychometric properties
- CFA supported a correlated-factors model that acknowledges poly-victimization
- Direct EtV was linked to negative emotionality and lower perceived quality of life

The Exposure to Violence Questionnaire in Adolescents: Psychometrics and associations with well-being

According to the World Health Organization [WHO], violence is "*the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation*" (Krug et al., 2002). From this perspective, violence is not defined by any specific outcome, but rather the pairing of an nefarious intention to harm with an observable behavior (Krug et al., 2002), meaning accidental acts resulting in harm do not fall under the definition of violence. Researchers have proposed that aggression and violence are conceptually similar, differing largely in terms of severity (Allen & Anderson, 2017). Specifically, violence can be considered an extreme form of aggression in which the intention is to cause severe harm (e.g. intent to kill or seriously injure; Anderson & Bushman, 2002; Bushman & Huesmann, 2010; Huesmann & Taylor, 2006). Thus, all acts of violence are, by definition, aggressive (e.g., attempted murder). In contrast, not all acts of aggression can be classed as instances of violence (e.g., a child shoving another child; Allen & Anderson, 2017; Bushman & Huesmann, 2010). Our focus in the present study is a measure of exposure to more extreme acts of aggression, and we therefore refer to violence throughout.

Exposure to violence can occur in either directly or indirectly. Direct exposure to violence refers to personal victimization. Indirect (or vicarious) exposure to violence, on the other hand, refers to witnessing, first- or second-hand, the victimization of another person (Kort-Butler, 2010; Zimmerman & Posick, 2016). Violence experienced either directly or indirectly can take many forms, including physical, emotional, psychological, sexual, and verbal violence (Margolin & Gordis, 2004). Regardless of whether violence is experienced as a victim, witness, or aggressor, research shows that there are frequently negative effects (Finkelhor et al., 2013) including various forms of distress and maladjustment in both the

short and long-term (Bogart et al., 2014; Hughes et al., 2017; Reijntjes et al., 2010; Robertson et al., 2013; Schmidt et al., 2018; Vaillancourt et al., 2013).

In Portugal, the context of the present study, exposure to violence (particularly conjugal and domestic violence) is an urgent cultural issue. Indeed, of the 29,816 crimes reported to the Portuguese Victim Support Association in 2019 (PVSA, 2019), most (79%) were domestic violence crimes. Moreover, the PVSA has registered an average of 1,473 child and adolescent victims of violence per year (equivalent to four cases per day). In 2019, these victims were mostly girls (61.9%) with an average age of 11 years. Of these, over a quarter (27%) had a filial relationship with their aggressor. Bullying is also common, with 1,898 formal complaints made to the Portuguese public security police in the period 2017/2018 (equivalent to five cases per day). To address this important cultural issue, it is vital that there are validated measures of exposure to violence for use in the Portuguese context, and particularly for use with adolescent samples. The overarching purpose of the present study, therefore, was to present and test a Portuguese version of the Exposure to Violence Scale (the EVS; Orue, & Calvete, 2010). As we shall make clear, this measure is ideally suited to assessing exposure to violence given that it acknowledges that adolescents can experience cumulative exposures, in different forms, across multiple contexts.

Exposure to Violence as an Adverse Childhood Experience

Unfortunately, violence against children and adolescents continues to be a common phenomenon and a major public health problem (Fagan, 2020). Exposure to violence can represent an Adverse Childhood Experience (ACE), which are *"experiences which require significant adaptation by the developing child in terms of psychological, social and neurodevelopmental systems, and which are outside of the normal expected environment"* (McLaughlin, 2016). Specifically, ACEs are traumatic events occurring before age 18 (therefore also including adolescence), including all types of abuse and neglect as well as parental mental illness, substance use, divorce, incarceration, and domestic violence (Centers for Disease Control and Prevention [CDC], 2016). Crucially, while exposure to

violence in adolescence can be an ACE, not all experiences are sufficiently traumatic to be classified as an ACE. Moreover, not everyone who has an ACE develops traumatic stress or post-traumatic stress disorder. Indeed, the distinction between experiences of normative stress and ACEs is not always clear (Steptoe et al., 2019) given that personal experiences are inherently subjective and dependent on an individual's perception of risk.

The most common method for assessing ACEs in cumulative risk scoring. This method involves calculating the number of adversities experienced by an individual, and assigning to each a score between 1 (not stressful) and 100 (very stressful), or 1 when the answer is yes and 0 when the answer is no (Bethell et al., 2017; Lacey & Minnis, 2020; Steptoe et al., 2019). As shown in a recent systematic review (Appleton et al., 2017), most studies (77%) have used unweighted cumulative risk scores to assess the number of ACEs. However, this method assumes that each adversity is equally influential on an outcome (McLaughlin et al., 2014), which is unlikely (Lacey & Minnis, 2020). Over time, it has become clear that there are several types of ACEs with different levels of severity, frequency, and duration (Lacey & Minnie, 2020).

The number of ACEs a person experiences (i.e. their accumulative risk) has a strong positive association with a variety of negative outcomes in adulthood (CDC, 2016; Felliti et al., 1998; McLaughlin, 2016; Steptoe et al., 2019). Research suggests ACEs have a lifelong impact on health and well-being (Bagshaw et al., 2010; Hillis et al., 2016; Zemp et al., 2016) and are associated with substance abuse, interpersonal violence, and self-harm (CDC, 2016; Felitti et al., 1998; Hughes et al., 2017; Steptoe et al., 2019). Such findings imply that a history of ACEs can perpetuate exposure to violence and lead to further accumulation of adverse experiences into adulthood, increasing the risk of perpetrating violence and victimization (Felitti et al., 1998; Forster et al., 2017).

Various factors can protect against, the negative effects of ACEs (including exposure to violence). For example, parental/family support and positive relationships with peers are particularly protective against depression after exposure to violence, especially in girls

(Quirogá et al., 2017), and in building emotional resilience in witnesses and victims of violence (Jain et al., 2012). Typically, the likelihood of violence decreases as the number of protective factors increases (Lösel & Farrington, 2012). Because ACEs have consistently been associated with worse health outcomes in the absence of protective factors and resilience (Bethell et al., 2017), their assessment can contribute to understanding risk of trauma and chronic/toxic stress, preventing and mitigating the negative impact on the development and well-being of children and adolescents (Bethel, 2017), and reducing/preventing the risk of negative outcomes in adult life (Fagan, 2020; Hillis et al., 2016).

Exposure to Violence in Adolescents: A Multi-Contextual Phenomenon

Current literature suggests that experiences of violence across different contexts are often related, with many individuals suffering multiple and cumulative exposures. Indeed, data indicates that exposure to just one episode of violence substantially inflates the chances of being further victimized (Finkelhor et al, 2011). Reflecting this phenomenon, Finkelhor et al. (2007, 2009a) coined the term “polyvictim” to describe a specific subset of children and adolescents who are subjected to multiple episodes of victimization, of different types, in various contexts of exposure. To best protect adolescents from the negative effects of violence exposure, particularly adolescents who are polyvictims, it is vital that measures of exposure to violence acknowledge the various contexts where violence can be experienced. We shall consider violence experienced at home, in the community, at school, and on TV.

Exposure to Violence at Home

It is widely considered difficult (if not impossible) to distinguish between the impact of witnessing versus directly experiencing violence, abuse, or other types of aggressive and violent behaviors in the family context. Literature shows a strong correlation between domestic violence and child abuse, with approximately half of all domestic violence situations involving direct child abuse. For this reason, some researchers argue that domestic/parental violence and child abuse and neglect are indistinguishable, and thus considered direct

victimization (Bagshaw et al., 2010; Zemp et al., 2016). This occurs not only because patterns of violence towards children and mothers are intertwined (Laing, 2010) but also because children who witness violence experience the same level of adverse psychosocial outcomes as children who directly experience physical abuse (Lloyd, 2018).

Exposure to Violence in the Community

Community violence is defined as exposure to intentional, interpersonal violent acts experienced directly or indirectly in a public setting (Kliewer, 2016). In the USA, 38% of adolescents (aged between 12–17 years) have witnessed community violence in their lifetime, including seeing someone shot with a gun, cut or stabbed with a knife, sexually victimized, mugged or robbed, threatened with a weapon, or beaten up so badly that they required medical attention (Zinzow et al., 2009). Perhaps unsurprisingly, adolescents have been found to maintain a high level of vigilance and develop strategies to safely navigate violent neighborhoods (Teitelman, et al., 2010). Therefore, exposure to community violence can have long-term negative effects on adolescents' emotional and behavioral development (Dubé et al, 2018; Kennedy et al., 2010) as well as physical health. Indeed, a systematic review of works has revealed numerous types of physical health outcomes in children and adolescents exposed to community violence, including effects on respiratory health, cardiovascular health, immune functioning, hypothalamic-pituitary-adrenal axis functioning, sleep problems, weight issues, and other general health complaints (Wright et al., 2017). Of these, cardiovascular health issues and sleep problems were most strongly linked to violence exposure (Wright et al., 2017).

Exposure to Violence at School

Most violence experienced by adolescents occurs at school (Finkelhor et al., 2015). School violence describes acts of violence that occur in an environment associated with school or, specifically, within a school community. This includes physical violence such as corporal punishment, psychological violence such as verbal abuse, sexual violence such as rape and harassment, and bullying, including cyberbullying (UNESCO, 2017). School

violence can occur inside and outside the classroom, around the school, on the way to school, and on the way home from school (Ferrara et al., 2019). Research has shown that being a victim of school violence puts students at risk of developing aggressive attitudes and behaviors (Brockenbrough et al., 2002). Further, there is a strong graded relationship between adolescent-reported ACEs and the probability of school-based victimization (Forster et al., 2017).

One of the most common (although not only) forms of school violence are bullying. Indeed, in a large-scale study of 3,197 Swedish adolescents, a significant proportion reported at least one incident of either bullying victimization (girls 36%, boys 26%) or bullying perpetration (girls 24%, boys 36%) (Lucas et al., 2015). According to Osofsky and Osofsky (2001), being bullied has an adverse impact on academic and social development and is considered a risk factor for future violent behavior. Bullying behavior has short- and long-term effects on the individual who is bullied, on the individual who bullies, on the individual who is bullied and bullies others, and on the bystander present during the bullying event (Rivara & Menestrel, 2016). Witnessing violence at school has a more harmful effect than being victimized (direct exposure). According to several studies, witnessing violence at school accounted for more variance in psychological trauma and violent behavior than being directly victimized (Flannery et al., 2004; Polanin et al., 2012). Nevertheless, exposure to school violence, whether as a victim or a witness, has harmful effects on adolescents' physical and emotional health and behavior (Reijntjes et al., 2010; Vaillancourt et al., 2013).

Exposure to Violence on TV

According to the Social Learning Theory (Bandura, 1973), adolescents acquire violent and aggressive behaviors through a process of observation and interaction with other persons. Such observations of behavior can extend to those portrayed on TV. Children and adolescents exposed to violent behavior on TV display an increased likelihood of immediately behaving aggressively (Huesmann, 2007). In an experimental study by Josephson (1987), 396 boys (7 to 9 years old) watched a violent or a nonviolent film before

they played a game of floor hockey in school. Boys who were more aggressive during the game tended to be those who saw the violent film. Witnessing violence on TV has also had negative effects in the long term. A 17-year study showed the risk of early viewing in the prediction of later aggressive behaviors (Johnson et al., 2002). According to this study, the amount of time spent watching TV during early adolescence was associated with an increase in the likelihood of being aggressive with others, particularly in male adolescents. This relationship persisted even when previous aggressive behavior, childhood neglect, family income, neighborhood violence, parental education, and psychiatric disorders were controlled. A longitudinal study with 1,037 individuals, born in 1972/73, and assessed from birth to age of 26 years, concluded that adults who had spent more time watching TV between the ages of 5 and 15 were significantly more likely to have a criminal conviction, a diagnosis of antisocial personality disorder, and more aggressive personality traits than were those who had been light TV viewers (Robertson et al., 2013).

Exposure to Violence and Well-being

The negative consequences of exposure to violence, occurring in various contexts, on adolescents' well-being are numerous and well-established. For example, violence at home is associated with higher levels of aggressive behaviors, externalizing problems, worse mental health (i.e., higher levels of anxiety and depressive symptoms as well as symptoms of withdrawal and negative affect), lower social competence, and academic performance (Helweg-Larsen et al., 2011; Hindin & Gultiano, 2006; Kennedy et al., 2010; Xavier et al., 2016). Violence at home has also been associated with negative the likelihood of being bullied and being a bully, disruptive behavior in school, self-harm, suicidal ideation, substance abuse, risk-taking behavior, criminal behavior, poor social networks, disaffection with education, and eating disorders (Lloyd, 2018; Lucas et al., 2015; Rivers & Noret, 2013; Van Horn & Lieberman, 2011). In the context of school, violence experience via bullying has been shown to have social, physical and psychological consequences (Valadez et al., 2011) and to be associated with sadness and emotional instability, reports of lower energy and

vitality, limitations in physical activities and lower psychological well-being; thus representing a risk factor for lower quality of life (Frisén, & Bjarnelind, 2010; Haraldstad, et al., 2011; Lambert et al., 2014). Moreover, adolescents who were victims of bullying were shown to be at least twice as likely to have psychosomatic disturbances (headache, stomachache, dizziness, bedwetting, palpitations, etc.), chronic pain, gastrointestinal complaints, and sleep disturbances than adolescents who were not bullied (Gini & Pozzoli, 2013; Rivara & Menestrel, 2016; van Geel et al., 2015). Violence experienced in the community and on TV can also been linked to negative outcomes. For example, studies have shown adolescents reporting at least one incident of physical violence from within their community had more psychological difficulties and lower well-being, including internalizing and externalizing problems, depression, risky sexual behaviors and substance abuse (Dubé et al., 2018; Hindin & Gultiano, 2006; Kennedy et al., 2010; Mohammad et al., 2015; Udell et al., 2017). Theoretically, cumulative exposure to violence on TV can increase the risk of aggressive behavior via processes of desensitization and social learning (Bandura, 1973).

It is relevant to note that the negative consequences and effects of exposure to violence in adolescence appear to persist into adulthood. As an example, a recent longitudinal study of African American adolescents (Schmidt et al., 2018) from the 9th grade to roughly 32 years old has shown that exposure to violence during adolescence increased perceived stress and resulted in a more negative outlook on one's future in adulthood. In addition, early exposure to violence during adolescence is related to negative psychosocial outcomes in adulthood because it disrupts normative adaptation to daily stressors (Heinze et al., 2018). Moreover, exposure to domestic violence during adolescence has a long-term impact, reflecting on an individual's psychological health, ability to regulate emotions and sense of satisfaction with life during adulthood (Pang & Thomas, 2020). Critically, however, the study also showed that family participation was able to buffer, and in some cases eliminate, the observed negative effect of exposure to violence. Similarly, friendship

attachment during adolescence has been found to attenuate the negative effects of exposure to violence on trajectories of depression and anxiety in young adults (Heinze et al., 2018).

Assessing exposure to violence in adolescents is highly relevant because this group is (a) often exposed to more serious forms of violence, (b) more likely to be victimized (Finkelhor et al., 2007; 2009b), and (c) more likely to develop behavioral dysregulation. Development in adolescence is complex and characterized by rapid and marked transformations in structural neurodevelopmental processes, including self-regulatory processes (Steinberg et al., 2017), which are particularly unstable in this period. This plasticity in development makes adolescents malleable to the models, both positive and negative, they are exposed to (Casey, 2015). Therefore, because exposure to violence is a stressor with an important impact on the organization of behavioral systems, when exposed to violence, adolescents run the risk of becoming dysregulated (manifesting as concurrent disturbances in attention, mood, and behavior). This is supported by studies using animal and human models that have shown morphological and anatomical changes resulting from exposure to violence (de Boer, 2017). However, this adaptive plasticity means that adolescence can also be considered a period of opportunity in which adaptive mechanisms for resilience, recovery, and positive development can be promoted (Backes & Bonnie, 2019). In sum, to protect adolescents from the negative effects of exposure to violence, including dysregulation and reduced well-being, it is fundamental that researchers and practitioners can accurately assess where and to what degree individuals experience violence. When those most at risk can be identified, targeted interventions can be applied to help prevent adolescents moving on harmful trajectories of cumulative exposure.

The Exposure to Violence Scale (EVS)

There are several available measures for assessing child and adolescent exposure to violence (see Chamberlain, 2016). However, many of these measures suffer from limitations. The content of many questionnaires is often focused on specific contexts (e.g. the Survey of Exposure to Community Violence; Richters & Saltzman, 1990) or types of violence (e.g.

Exposure to Violence Screening Measure; Weist et al., 2002), questionnaires are usually lengthy, and some measures include items related to gun violence that have little relevance in countries with more restrictive arms policies (Chamberlain, 2016; Oh et al., 2018). Although comprehensive, lengthy instruments (e.g., the 133-item Beyond ACE Questionnaire; National Crittenton Foundation, 2016) are often inefficient and impractical in large-scale research contexts when the aim is to understand the differences between and within populations (Ziegler et al., 2014).

The Exposure to Violence Scale (originally designed for use in Spain: *Cuestionario de Exposición a la Violencia*; Orue, & Calvete, 2010) is a 21-item self-report questionnaire that assesses exposure to violence in its various forms (physical, verbal and threats), types of exposure (direct and indirect), and occurring contexts (at home, in the community, at school, and on TV). In Orue and Calvete's (2010) original psychometric study of 1,896 children and adolescents, a confirmatory factor analysis supported modeling the EVS with four orthogonal second-order factors representing the different contexts where exposure to violence occurs, with first-order factors representing direct and indirect exposure. These four second-order factors had good internal consistency and scale scores were shown to be positively correlated with reactive ($r = .31$ to $.42$) and proactive ($r = .27$ to $.39$) aggressive behaviors, as well as to the justification of violence ($r = .25$ to $.54$). Other studies using this scale have shown that young offenders who abused their parents had experienced violence at home more frequently than young offenders who had not abused their parents, and reported more hostile social perceptions (Contreras & del Carmen Cano, 2016). In Mexican adolescents, the frequency of exposure to violence has been shown to have a direct positive association with depression (Quiroga et al., 2017).

The Current Study

The interrelationship between multiple forms, types, and contexts of exposure to violence emphasizes the cumulative nature of exposure to violence and the magnitude of the intensity and severity of these experiences (Margolin & Gordis, 2004; Finkelhor et al., 2007,

2009b). Episodes of violence, and particularly those perceived to be adverse, put adolescents at risk of experiencing more violence (as an aggressor or as a victim) (Forster et al., 2017). Taking into consideration the chronicity and long-term effects of exposure to violence, and to provide adequate care and appropriate interventions; adolescents must be assessed using reliable, valid, and practical instruments that acknowledge the various socio-ecological contexts, types, and forms of violence. At present, such an instrument does not exist for use with Portuguese adolescents. Because the EVS (Orue & Calvete, 2010) captures these different contexts, forms, and types of violence with a relatively small number of items, we argue it is an ideal measure to import and adapt to the Portuguese context. Hence, the overarching objective of this study was to evaluate the psychometric properties of a version of the EVS adapted from Spanish to European Portuguese. Specifically, we aimed to meet this objective by addressing a series of research questions. First, we sought to establish structural validity using confirmatory factor analysis (Does the EVS capture the types and contexts of exposure to violence as intended?). Second, we sought to establish whether the items in each EVS scale were internally consistent (Are the EVS scales reliable?). Third, it was of interest whether exposure to violence differed across demographic variables, and hence we sought to explore gender and age differences in our Portuguese sample. Finally, we sought to establish construct validity (Does the EVS measure what it purports to measure? Borsboom et al., 2004) by testing correlations between the EVS and theoretically related constructs. For this final issue, we examined how adolescent exposure to violence is associated with measures of quality of life and positive and negative affect (reflecting distinct dimensions of overall well-being).

Method

Participants

The sample comprised 306 Portuguese adolescents (53.9% male, *n* =165), with an average age of 13 years (*SD* = 1.6, range 11-18), from three schools in the North of Portugal.

These adolescents were enrolled in the sixth (25.8%), seventh (22.2%), eighth (27.8%), ninth (19%), and 10th grades (4.9%).

Procedures

This cross-sectional study was approved by the ethics committee of the Centro de Investigação em Psicologia para o Desenvolvimento [*Psychology for Positive Development Research Center*], Portugal. After receiving authorization from the administrations and headteachers of the three participating schools, adolescents from the sixth to 10th grades were recruited using a snowball technique for the selection of non-randomized samples. Students volunteering to participate were asked to give their parents an information sheet about the study and a consent form to sign. Students who returned a signed parental consent form then completed the study measures independently in class while being supervised by a teacher and member of the research team.

Measures

Exposure to Violence Scale (EVS)

The EVS is a 21-item self-report questionnaire, originally developed for use in Spain (*Cuestionario de Exposición a la Violencia*; Orue & Calvete, 2010), to measure the frequency of exposure to violence in adolescents. It comprises four scales, each reflecting a context where violence occurs: in school, in the community, at home, and on TV. Each scale has items that capture two different forms of exposure to violence: direct (victimization: directly experiencing acts of violence as a victim) and indirect exposure (witnessing: seeing other people experiencing acts of violence). Specific examples of items include: Exposure to violence at school - indirect form (Items 1, 8, 15; e.g. ‘‘*How frequently have you seen a person being physically abused in school?*’’) and direct form (Items 5, 12, 19; e.g. “*How frequently have you been verbally abused in school?*”); Exposure to violence in the community - indirect form (Items 2, 9, 16; e.g. “*How frequently have you seen a person being threatened in your neighborhood?*”), and direct form (items 6, 13, 20; ‘‘*How frequently have you been physically abused in your neighborhood?*’’); Exposure to violence at home - indirect

form (Items 3, 10, 17; e.g. "*How frequently have you seen a person being verbally abused at home?",* and direct form (Items 7, 14, 21; e.g. "*How frequently have you been physically abused at home*?''); Exposure to violence through TV – indirect only (Items 4, 11, 18; e.g., ''*How often have you seen a person being verbally abused on TV*?"). In addition, these 21 items capture three types of violence: physical (7 items), verbal (7 items), and threats (7 items). Each item is rated with a five-point Likert format ranging from 0 (*never*) to 4 (*every day*).

KIDSCREEN-10

This 10-item self-report questionnaire measures quality of life and well-being in children and adolescents (8 to 18 years; Erhart et al., 2009). Each item, measuring the extent to which the affect has been experienced in a specified time frame (e.g., "*Have you felt sad?"*), is rated using a five-point Likert format ranging from 1 (*nothing*) to 5 (*totally*). The instrument results in one global score and low scores indicate feeling unhappy, unfit, and dissatisfied regarding the family life, peers, and school life. In the present sample, Cronbach's alpha for the KIDSCREEN-10 was .82.

Emotions/Affects Scale (E/AS)

This 27-item self-report questionnaire, based on PANAS, was developed by the authors and measures individuals' recent emotional experiences. The E/AS is an expanded version of the Positive and Negative Affect Scale (PANAS; Watson et al., 1988), with more differentiated affective states. The instrument has two scales: 12 items measuring positive affect (e.g., excited, inspired) and 15 items measuring negative affect (e.g., upset, afraid). The extent to which each emotion is felt is rated using a five-point Likert format scale, ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Higher scores for each scale reflect higher positive affect and negative affect, respectively. In our study sample, Cronbach's alpha values for the positive and negative affect scales were .92 and .93, respectively.

Translation and Cultural Adaptation of EVS. Two researchers (including one who is fluent in the target and original languages) independently translated the original Spanish version of the EVS into Portuguese (forward translation). A back-translation (i.e., translating from Portuguese back into Spanish) was then performed to ensure the accuracy of the forward translation. A panel committee composed by experts familiar with the exposure to violence construct reviewed all versions of the translations and determined whether the translated and original versions had semantic, idiomatic, experiential, and conceptual equivalence (Hambleton, 1994; Sireci et al., 2006) (Portuguese, as well as English, versions are available in supplementary materials). We determined that the content of the Portuguese EVS did not require any major cultural adaptation given the geographical (and thus cultural) proximity of Spain and Portugal.

The Portuguese version of the EVS was then pre-tested in 10 adolescents from the three schools involved in the study. With permission of the school administrations, these students completed the EVS in the presence of a member of the research team. A structured interview was conducted after participants completed the questionnaire to determine whether the wording used rendered any of the items difficult to answer or understand, confusing, or upsetting/offensive. Efforts were made to keep questions as simple and as concrete as possible (de Leeuw et al., 2004).

Data Analysis

Data analyses were performed using IBM SPSS Statistics (v.24, SPSS Inc., Chicago, IL) and R software (version 3.61, R Core Team 2019). Before performing the main analyses, data were screened for normality, outliers, and missing values. The proportion of missing values was small for all study measures with the EVQ, KIDSCREEN-10 and Emotions/Affect Scale having 86%, 97% and 92% of participants with no missing data, respectively. We replaced missing data for these scales using a mean imputation procedure. The small number of missing values for age and gender were not imputed.

We used confirmatory factor analysis (CFA) to test competing factor models. We considered our sample size satisfactory for CFA based on Tabachnick and Fidell's (2001) recommendation for 5-10 participants per scale item. First, we tested the second-order model championed by the original authors of the EVS (Orue & Calvete, 2010). In this model, seven first-order factors representing the specific forms of exposure to violence in different contexts (e.g., victimization at home, witnessing at home) load on three second-order factors representing the broader contexts (e.g., exposure at home). This model specified that the second-order factors were orthogonal. The second model tested was a simpler four correlated factors model, each factor representing broad exposure to violence in a specific context. The third model included the seven first-order factors defined by Orue and Calvete, and these factors were allowed to correlate. Because EVS data were not normally distributed, for all models we used a WLSMV estimator. To assess the goodness of fit for these models we used a number of indicators and heuristics: (a) the Chi-square test (χ^2) and χ^2/df ratios, which are recommended to be ≤ 5 (Schumaker & Lomax, 2010); (b) the Comparative Fit Index (CFI) which is recommended to be ≥ .95 (Cangur & Ercan, 2015; Hu & Bentler, 1999); (c) the Root-Mean Square Error Approximation (RMSEA), for which values < .08 indicate acceptable fit (Browne & Cudeck, 1992), and (d) the Standardized Root Mean Square Residual (SRMR) for which values <.05 indicate good fit (Hu & Bentler, 1999).

Next, we tested the internal consistency and validity of the EVS. For each of the seven scales, we calculated a Cronbach's alpha (α) coefficient and a McDonald's omega (ω) coefficient. Omega is typically considered a more reliable measure of reliability than alpha (Dunn et al., 2014). Our interpretation of these values was guided by commonly used thresholds, with values > .70 considered 'good'. For each latent factor in the CFA model, we assessed convergent validity by calculating the Average Variance Explained (AVE) from polychoric correlations. Values > .50 are considered appropriate. Next, we tested differences in EVS scores based on gender (male versus female) and age (younger versus older adolescents based on a median split) using a series of independent-samples t-tests with

Bonferroni corrected p-values. Cohen's d coefficients were also calculated to give an indication of the magnitude of observed differences.

Finally, we tested convergent validity by examining how the EVS scales correlate with theoretically-related constructs. Based on current literature, we expected that EVS scores would be positively correlated with negative affect and negatively correlated with positive affect and perceived quality of life. We interpreted the size of these effects using traditional heuristics, where $|.10| < r < |.29|$ is a small effect, $|.30| < r < |.49|$ is a medium effect, and $r > |.50|$ is a big effect (Cohen, 1988).

Results

Descriptive Statistics

Table 1 presents descriptive statistics for the EVS scales. Most indirect exposure to violence occurred on TV, followed by at school and in the community. In contrast, most direct exposure to violence occurred at school, with little direct exposure occurring at home or within the community.

Confirmatory Factor Analysis

The first model tested (Model 1), had the same factorial structure as that presented by Orue and Calvete (2010). This model did not converge to an admissible solution due to negative disturbance terms for the Home-Direct Exposure factor. As described by Chen et al. (2006), low or non-significant error terms for first-order factors can occur when the model forces factors that are not represented in the data.

Because Model 1 suggested the data were being over-factored, we tested a second model (Model 2) consisting of four first-order factors, each representing exposure to violence in one of the four contexts (school, home, community, or TV). This model had an admissible solution, but the fit indices were not optimal: $X^2/df = 4.52$, CFI = .929, RMSEA = .096 [.089, .102], SRMR = .124.

We then tested a third model (Model 3) comprising seven correlated first-order factors. The fit indices for this model were acceptable: $X^2/df = 1.83$, CFI = .984, RMSEA =

.047 [.038, .055], SRMR = .060. It was noteworthy that the latent factor correlation between the Home-Direct Exposure and Home-Indirect Exposure factors was very strong (*r* = .95). The remaining latent associations ranged between .11 and .73.

Convergent Validity

AVE values for the seven factors ranged from .55 (School-Indirect Exposure factor) to .86 (Home-Indirect Exposure), with a mean AVE across factors of .68 (greater than the typical threshold of .50).

Correlations with quality of life and positive and negative affect.

We tested the validity of the EVS by assessing the correlations between its seven subscales and theoretically related constructs (in this case measures of quality of life and positive and negative affect). These correlations are presented in Table 2. We expected that more frequent exposure to violence would be linked to increased negative affect (positive correlations) and lower positive affect and perceived quality of life (negative correlations). The observed pattern of correlations was consistent with these expectations, implying that the EVS measures what it purports to measure. These correlations were strongest for direct and indirect exposure to violence at home, with weak positive correlations with negative affect (*r* = .25 and .26, respectively), and medium negative correlations with positive affect (*r* = -.40 and -.41, respectively) and with quality of life (*r* = -.43 and -.42, respectively). Although the signs of all correlations were theoretically consistent, not all associations were statistically significant. Notably, indirect exposure to violence at school and on TV was not significantly correlated with positive and negative affect nor with quality of life.

Internal Consistency

Cronbach’s alpha and McDonald’s omega coefficients for the seven EVS scales ranged from .70 (Community-Direct Exposure factor) to .89 (Home-Indirect Exposure). Considering common cut-off points, these values indicated the EVS scales had good internal consistency. Cronbach's alphas of the original and the Portuguese versions are shown in Table 1.

Demographic Differences in Exposure to Violence

We conducted a series of independent-samples t-tests to examine gender differences for the seven EVS dimensions. To correct for multiple comparisons, p-values were adjusted using the Bonferroni correction. The output of these tests, presented in Table 3, suggested that boys and girls tended to have similar scores. However, there was an indication that boys experienced slightly more direct violence at school (d = .31) and at home (d = .23) than girls and are exposed to more indirect violence in the community (d = .26)

We also tested differences in exposure to violence between younger and older adolescents (based on a median division of the sample). Adolescents in the younger group had an average age of 12 years (SD = 0.50, range = 11 - 12) and those in the older group had an average age of 14 years (SD = 1.9, range = 13-18). Much clearer differences were observed for these two groups than for gender. Specifically, older adolescents had higher scores on indirect exposure to violence significantly higher in all contexts, with high magnitude effects, with Cohen's d values ranging from -.55 to -.74 (Table 4). The exception to this was the non-significant differences observed in the direct exposure to violence between younger and older adolescents.

Discussion

The overarching objective of the present study was to evaluate the psychometric properties of the Portuguese EVS (Orue & Calvete, 2010). Our results broadly supported the seven-factor structure identified by the original authors, but did not support modeling data using a second-order model. Nonetheless, from our analyses we found these factors had good internal consistency and were correlated with theoretically linked constructs in an expected way, thus providing evidence of validity. Moreover, we demonstrated that using this scale it is possible to measure and understand group differences in exposure to violence, an important factor for targeting interventions at the individuals most at risk of experiencing violence.

We used CFA to test three competing factorial structures for the EVS. The first model tested the factorial structure championed by Orue and Calvete (2010). This model posits that the relationships between direct and indirect forms of exposure in the same context are explained by second-order latent factors that represented exposure in each context more broadly (e.g., exposure at home). These second-order factors were modeled as being orthogonal; that is, as being uncorrelated with one another. One issue with this type of model is that it does not acknowledge that a substantial proportion of children and adolescents accumulate experiences of violence in poly-victimization (Finkelhor et al., 2007). Our analysis indicated that this model did not fit the data well – indeed the model did not converge to an admissible solution – and this was due to some overfactoring. However, we found that the data were not well explained by a second model comprising only the four broader exposure to violence factors. Vital information was lost when the model did not acknowledge a difference between direct and indirect forms of exposure to violence. Ultimately, we found that the seven factors of the EVS were best modeled as seven correlated factors.

The magnitude of the correlations between factors was a notable finding. According to the model, direct and indirect exposure to violence at home were almost indistinguishable, with a latent factor correlation of .95. Observing and experiencing violence at home thus appear to almost always co-occur, suggesting that adolescents rarely observe violence at home without also being personally victimized (Bagshaw et al., 2010; Laing, 2010; Lloyd, 2018; Zemp et al., 2016). Although the remaining latent factor correlations were weaker, implying, for example, that it is possible to observe violence at school or in the community without being directly victimized, they displayed a pattern of significant interrelations that was not considered by Orue and Calvete (2010). This finding thus hints to the cumulative nature of exposure to violence, the vulnerability of adolescents, and the mechanisms through which they “learn” and “live” violence.

To establish construct validity, we examined correlations between exposure to violence and adolescents’ quality of life and positive and negative affect. In accordance with

our theoretical expectations, adolescents reporting a higher frequency of exposure to violence, and particularly those reporting more direct exposure, typically reported a more negative emotional experience (increased negative affect and decreased positive affect). Witnessing violence at home was also linked to a more negative emotional experience, which is consistent with studies that have suggested that the role of victim or witness in the context of family violence is indistinguishable (Bagshaw et al., 2010; Zemp et al., 2016), but other forms of indirect exposure (i.e., those occurring at school, on TV, and in the community) had no significant association with positive or negative affect. In short, indirect exposure in contexts other than the home appears to be relatively inconsequential in the emotional well-being of adolescents. In contrast, exposure to violence seems to be more strongly associated with adolescents' perceptions of quality of life. Notably, indirect, and direct exposure to violence at home, at school, and in the community was associated with a lower quality of life. In general, this pattern of associations is largely consistent with studies that indicated that adolescents with a higher rate of exposure to violence have more emotional disorders and worse perception of the quality of life (Frisén & Bjarnelind, 2010; Haraldstad et al., 2011; Helweg-Larsen et al., 2011; Hindin & Gultiano, 2006; Lambert et al., 2014; Valadez et al., 2014; Xavier et al., 2016) and, as such, serves as evidence that the Portuguese EVS has construct validity.

The most frequent exposure to violence for our sample occurred indirectly on TV, mirroring the results of Orue and Calvete (2010). While this is clearly preferable relative to direct victimization at home, in school, or in the community, this finding remains relevant because exposure to violence on TV can lead to an increase in aggressive behavior in the short term (Huesmann, 2007) and in the long-term (Johnson et al., 2002; Robertson et al., 2013) through observation and imitation processes (Bandura, 1973). Violent images on television, film, and video have substantial short-term effects on arousal, thoughts, and emotions, which increases the likelihood of aggressive or fearful behavior in children, especially boys (Browne & Hamilton-Giachritsis, 2005). As evidence of this, two meta-

analyses (Paik & Comstock, 1994; Wood et al., 1991) indicated that children and adolescents were significantly more aggressive after watching violent programs or films on television (*d* = 0.40, although not all studies showed the effects). Violence on TV also appears to influence children's self-regulatory abilities. In an experiment that consisted of children watching the 'Mighty Morphin Power Rangers' or the 'Mister Rogers' program, for 1 hour, those who watched Power Rangers were more likely to show lower levels of concentration and sustained attention while completing a task immediately after viewing compared to children in the control group (Geist & Gibson 2000). Adolescents' responses to episodes of severe stress compromise their self-regulation abilities, which can manifest as a pattern of highly reactive and disorganized functioning and behavioral systems (Eldreth et al., 2013; Zohar et al., 2018; Whitford et al., 2007). Exposure to scenes of violence is also overwhelming for the brains of children and adolescents and its consequences can manifest as problems in executive functioning. Executive functions are important for the control of attention, behavioral and emotional regulation, and social reasoning. In an experiment where children watched either a brief fast-paced cartoon (with action and violence) or an educational cartoon, those who watched the more violent images performed worse on a task measuring executive functions (Lillard & Peterson 2011). Children with low executive functioning typically show more difficulties in inhibiting aggressive and impulsive behaviors (Fitzpatrick et al., 2016).

Implications for Practice

Violence and aggressive behavior are learned through observation, experience, and interaction with other people (Bandura, 1973). Adolescents, as victims or witnesses, are at risk of experiencing more violence over time (Forster et al., 2017) and the consequences are manifested in their well-being and emotional/affective state (Mohammad et al., 2015; Polanin et al., 2012; van Geel et al., 2015; Wright et al., 2017). Because the history of exposure to violence is a strong correlate of subsequent exposure to violence (Zimmerman & Posick, 2016) it is clearly important to be able to reliably assess exposure to violence in adolescents.

To identify adolescents at-risk of experiencing future violence and to provide appropriate interventions it is paramount that clinicians, teachers, and health-care professionals (such as pediatricians and family doctors) have access to a brief screening tool for assessing the various forms and contexts of exposure.

School is a context in which adolescents should feel safe and secure. School principals and teachers should be aware of the importance of using a screening tool like the EVS across the school year to monitor exposure to violence. Foster et al. (2017) recommended that schools systematically screen for ACE, particularly among younger adolescents involved in victimization and perpetration, and suggested the development of infrastructures to increase access to trauma-informed intervention services. Moreover, physical, and emotional violence at home has been consistently associated with both, bullying victimization, and bullying perpetration (Lucas et al., 2015). Therefore, broad-spectrum school initiatives should promote strategies to prevent situations of violence and to help students to cope with direct exposure (bullying) and indirect exposure to violence (witness bullying) (Flannery et al., 2004; Polanin et al., 2012; Rivers et al., 2009; Zimmerman & Posick, 2016)

Given the high frequency of exposure to violence on TV reported by the sample, parental involvement in psychoeducational groups and media awareness programs at schools and the community is warranted. It can be a useful strategy to promote and encourage parental supervision of TV time to prevent and reducing the level of exposure to violence. Parents should watch violent content with adolescents in order to explain the difference between constructs such as "good" and "bad", "justice" and "injustice" to help ensure that violence and aggression are not felt like a "normal" way to react and behave (Canadian Pediatric Society Statement, 1999; Chassiakos et al., 2016). A recent study showed that the indirect relationship between exposure to violence on electronic devices and aggressive behavior was mediated by individual, family, and social factors (Shao & Wang, 2019). Moreover, parental monitoring is correlated with less exposure to violence in the

media and a reduction in aggressive behavior 6 months later (Gentile et al., 2014). Thus, it is essential to promote change in television viewing habits in children and adolescents, give the possibility to choose what they want to see and for how long, and sensitize them to the consequences of exposure to violence on TV, not only in current and future behavior (e.g., increased incidence of violence) but also in psychological and physical health (e.g., obesity, negative effects on learning and academic performance) (Canadian Pediatric Society Statement, 1999; Johnson et al., 2002; Robertson et al., 2013; Strasburger & Wilson, 2014).

Finally, due to its associated plasticity, adolescence is considered a window of opportunity for promoting mechanisms of resilience, recovery, and positive development (Backes & Bonnie, 2019). Consequently, promoting protective factors in this period is critical because the likelihood of violence decreases as the number of protective factors increases (Lösel & Farrington, 2012). Family support and relationships with peers, represent just two of such protective factors (Bethel, 2017; Fagan, 2020; Hillis et al., 2016; Jain et al., 2012; Quirogá et al., 2017). Indeed, currently there are programs aiming to prevent exposure to violence focus on improving parenting skills and strengthening parent-adolescent relationships (Chen & Chan, 2016; Purewal Boparai et al., 2018).

Study Limitations and Future Research

In all studies, it is important to acknowledge the design and methodological limitations that can influence the interpretation of results. Although the moderate sample size for the present study was acceptable for the analyses conducted, a notable limiting factor was that the adolescents were recruited from a relatively small geographical area in the North of Portugal. This affects the generalization of our findings beyond this limited context, and future studies should seek to address this issue by replicating our analyses in larger samples. Particular caution should be taken when applying EVS to Portuguese-speaking children and adolescents outside of Portugal (e.g., Brazil), where individuals' perceptions of exposure to violence may be fundamentally different due to distinct cultural contexts (e.g., gang culture in favelas). Future cross-cultural studies testing measurement equivalence in

samples from different countries are required to determine whether the EVS can be used to measure and compare exposure to violence in different populations. In addition, it was not possible to evaluate the test-retest reliability (or temporal stability) of the EVS, and the socioeconomic statuses (SES) of the adolescents' families were not assessed, which prevented us from exploring the relationship between SES and exposure to violence. This should be considered by future research because risk of exposure to violence seems to be greater in low SES environments.

The availability of a brief measure of exposure to violence, with adequate psychometric properties, that acknowledges the various forms, types, and contexts of violence is fundamental for conducting high-quality future research. The first endeavor of such future work should be to use a comprehensive sociodemographic questionnaire, considering factors such as ethnicity, to explore the group differences in the ways and places violence is experienced. Research on the cumulative effects of exposure to violence is also paramount. Future research is also needed to validate EVS in children (<10 years old) and incorporate additional items that capture exposure to violence through cyber-bullying, perpetrated by electronic or social media networks.

Conclusion

Adolescents who are directly and/or indirectly exposed to violence are at a greater risk of accumulating more exposure to violence over time (Forster et al., 2017) with serious negative implications for development and well-being (Mohammad et al., 2015; Polanin et al., 2012; van Geel et al., 2015; Wright et al., 2017; Zimmerman & Posick, 2016). Therefore, it is extremely important to measure and evaluate in order to be able to provide adequate and early intervention. Adolescents must be assessed using reliable, valid, and practical instruments that recognize the various contexts, types, and forms of socio-ecological violence. The present study provided the psychometric validation of a Portuguese version of the EVS, for use with Portuguese adolescents. The results provide evidence that this instrument can serve as a reliable, valid, and easy-to-use assessment tool for teachers,

pediatricians, family doctors, and other health professionals, and researchers with an interest in understanding the ways and contexts in which adolescents experience violence.

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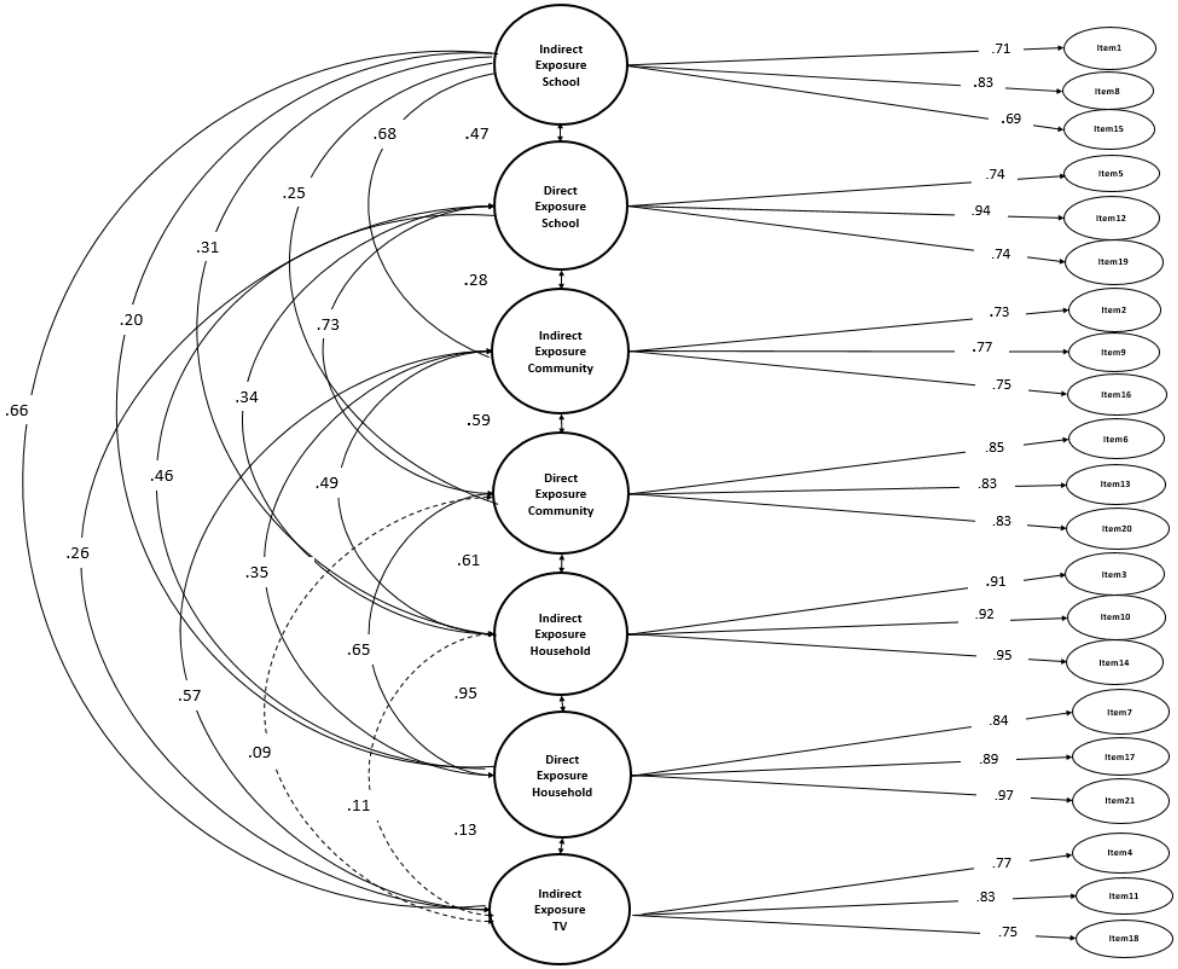

Figure 1.

Model 3: Factor loadings and covariances for the seven first-order latent factors structure

Table 1

Descriptive statistics and psychometric properties of EVS.

		Orue & Calvete (2010) Spanish Sample		Present Portuguese Sample (*N* = 306)	
EVS	Min-max	Mean (*SD*)	α	Mean (*SD*)	α/ω
Home					
Direct exposure	0-12	2.20(3.09)	.80	0.64(1.52)	.86/.85
Indirect exposure	0-12	1.60(2.57)	.71	0.65(1.68)	.89/.89
School					
Direct exposure	0-12	3.10(2.72)	.79	1.71(2.18)	.76/.77
Indirect exposure	0-12	6.57(2.95)	.73	5.28(2.71)	.75/.76
Community					
Direct exposure	0-12	1.79(2.33)	.75	0.30(0.89)	.70/.70
Indirect exposure	0-12	5.23(3.18)	.78	2.29(2.27)	.74/.74
TV (Indirect exposure)	0-12	8.30(3.12)	.77	6.02(2.83)	.79/.80

Note: EVS: Exposure to Violence Scale. α: Cronbach alpha coefficient; ω: Omega Coefficient.

Table 2

Pearson correlations between the EVS, quality of life (KIDSCREEN-10) and positive and negative affect (E/AS,PANAS) (N=306)

	Direct exposure			Indirect exposure				Wellbeing		
Scales	School	Home	Community	School	Home	Community	TV	Quality of Life	Positive Affect	Negative Affect
Direct exposure										
School	1.00	.232**	**.395****	**.365****	.232**	.163**	.251**	-.274**	-.220**	.193**
Home		1.00	.121*	.133*	**.797****	.093	.122**	**-.436****	**-.400****	.256**
Community			1.00	.166*	.209**	.263**	.135*	-.177**	-.070	.138*
Indirect exposure										
School				1.00	.154**	**.442****	**.499****	-.119*	-.053	.059
Home					1.00	.150**	.103	**-.424****	**-.401****	**.267****
Community						1.00	**.438***	-.112*	-.036	.082
TV							1.00	-.091	-.041	.066
Wellbeing										
Quality of Life									**.760****	**-.560****
Positive Affect										**-.461****

Note: EVS: Exposure to Violence Scale. $p < .05$*; $p < .01$* values in **bold** represent moderate to strong correlations.

Table 3

Output of independent samples t-tests comparing exposure to violence in males and females.

	Male	Female	t-test		
	(*n* = 165)	(*n* = 139)			
EVS	Mean *(SD)*	Mean *(SD)*	$t_{(302)}$	Adjusted *p* value[a]	Cohen's d
Direct					
Home	0.76 (1.60)	0.42 (1.21)	2.02	.043	.233
School	2.01 (2.29)	1.34 (1.98)	2.69	.007	**.310**
Community	0.38 (0.98)	0.20 (0.75)	1.76	.078	.204
Indirect					
Home	0.76 (1.77)	0.43 (1.38)	1.79	.074	.206
School	5.47 (2.78)	5.07 (2.63)	1.27	.203	.147
Community	2.57 (2.38)	1.97 (2.12)	2.30	.022	.265
TV	6.22 (3.02)	5.75 (2.69)	1.43	.152	.165

Note: EVS: Exposure to Violence Scale. [a]P-values adjusted using the Bonferroni correction. T-test did not assume equal-variance. Values in **bold** represent medium or larger effect sizes according to Cohen (1988).

Table 4

Output of independent samples t-tests comparing exposure to violence in younger versus older adolescents.

	Younger (*n* = 126)	Older (*n* = 180)	t-test		
EVS	Mean *(SD)*	Mean *(SD)*	$t_{(304)}$	Adjusted *p* value[a]	Cohen's d
Direct					
Home	0.44 (1.16)	0.78 (1.72)	-1.93	.054	-.255
School	1.63 (2.19)	1.76 (2.17)	-.518	.605	-.060
Community	0.20 (0.60)	0.37 (1.04)	-1.64	.101	-.191
Indirect					
Home	0.34 (1.00)	0.87 (2.00)	-2.77	.006	**-.551**
School	4.49 (2.75)	5.84 (2.55)	-4.40	<.001	**-.742**
Community	1.82 (1.96)	2.62 (2.42)	-3.10	.002	**-.589**
TV	5.48 (2.94)	6.39 (2.69)	-2.81	.005	**-.555**

Note: EVS: Exposure to Violence Scale. [a]P-values adjusted using the Bonferroni correction. T-test did not assume equal-variance. Values in **bold** represent medium or larger effect sizes according to Cohen (1988).

Supplementary material
Exposure to Violence Scale (EVS) (Orue, & Calvete, 2010)
English Version

The following questions refer to things that happened at your school, in the community and at your home, as well as things you have seen on TV. Please, for each of the following questions, identify the number that best describes your answer:

0-Never, 1-Once, 2-Sometimes, 3-Several times, 4-Every day

		0 1 2 3 4
a. How frequently have you seen a person being physically abused?	1.In school	
	2.In your neighbourhood	
	3.At home	
	4.On TV	
b. How frequently have you been physically abused?	5.In school	
	6.In your neighbourhood	
	7.At home	
c. How frequently have you seen a person being verbally abused?	8.In school	
	9.In your neighbourhood	
	10.At home	
	11.On TV	
d. How frequently have you been verbally abused?	12.In school	
	13.In your neighbourhood	
	14.At home	
e. How frequently have you seen a person being threatened?	15.In school	
	16.In your neighbourhood	
	17.At home	
	18.On TV	
f. How frequently have you been threatened?	19.In school	
	20.In your neighbourhood	
	21.At home	

Scoring instructions: Each item is rated on a 5-point Likert scale, ranging from 0 to 4. The scales of the questionnaire are composed of the sum of the items on each scale.

Questionário de Exposição à Violência (QEV) (Orue, & Calvete, 2010)
Versão Portuguesa (Paulo Moreira)

As perguntas a seguir referem-se a coisas que aconteceram na escola, na rua, em casa, ou sobre o que viste na TV. Por favor, para cada uma das seguintes perguntas, identifica o número que melhor descreve a tua resposta, sendo que:

0-Nunca, 1-Uma vez, 2-Algumas vezes, 3-Muitas vezes, 4-Todos os dias.

		0 1 2 3 4
a. Quão frequente viste uma pessoa a ser fisicamente violentada(o)?	1.Na escola	
	2.Na rua	
	3.Em casa	
	4.Na TV	
b. Quão frequentemente foste fisicamente violentada(o)?	5.Na escola	
	6.Na rua	
	7.Em casa	
c. Quão frequente viste uma pessoa a ser verbalmente violentada(o)?	8.Na escola	
	9.Na rua	
	10.Em casa	
	11.Na TV	
d. Quão frequentemente foste verbalmente violentada(o)?	12.Na escola	
	13.Na rua	
	14.Em casa	
e. Quão frequente viste uma pessoa a ser ameaçada(o)?	15.Na escola	
	16.Na rua	
	17.Em casa	
	18.Na TV	
f. Quão frequentemente foste ameaçada(o)?	19.Na escola	
	20.Na rua	
	21.Em casa	

Instruções de cotação: cada item deve cotado numa escala de Likert de 5 pontos, variando entre 0 a 4. As escalas do questionário são compostas pela soma dos itens de cada escala.