

DEVELOPMENT AND PSYCHOMETRIC PROPERTIES OF THE ADOLESCENTS AND CHILDREN RISK OF ABUSE AND MALTREATMENT COMMUNITY SCALE (ACRAM-CS)

PAULA SAMPER
ÁNGELA CARBONELL
JOSÉ M. TOMÁS
ADRIÁN GARCÍA-MOLLÁ
UNIVERSITY OF VALENCIA, SPAIN

The risk factors of child maltreatment have been studied by focusing on the characteristics of the victim or the close environment, leaving aside the community-related factors. We aimed to develop and provide psychometric properties of the Adolescents and Children Risk of Abuse and Maltreatment Community Scale (ACRAM-CS), a 21-item scale for the assessment of structural risk factors of child maltreatment. Structural validity, reliability, and convergent validity were studied for this measure in 608 cases — a sample informed by 286 child welfare workers: ages ranged from 0 to 18 years ($M = 12.07$, $SD = 5.23$). The results of confirmatory factor analysis (CFA) corroborate the 6-dimension factor structure from the theoretical development, $\chi^2 = 286.78$, $df = 155$, $p < .001$; CFI = .96; RMSEA = .04, 90% CI [.031, .044]. Results of convergent validity indicate a significant correlation with the Childhood Trauma Questionnaire-Short Form (CTQ-SF) and the Cleveland-Child Abuse Potential Scale (C-CAPS).

Keywords: Child maltreatment; Ecological framework; Community risk factors; Assessment; Validity.

Correspondence concerning this article should be addressed to Adrián García-Mollá, Department of Methodology for the Behavioral Sciences, University of Valencia, Av. de Blasco Ibáñez 21, 46010 València, Spain. Email: Adrian.Garcia-Molla@uv.es

Child maltreatment is a major public health problem. It includes all forms of physical or emotional abuse, sexual abuse, abandonment, neglect, and labor or other exploitation injuring children's health, development, and dignity or compromising their survival (World Health Organization, 2020). Physical or emotional abuse refers to physical, psychological, or emotional harm or risk of suffering it, as a consequence of the primary caregiver's nonaccidental excessive use of physical force or repeated actions or omissions that undermine the emotional stability of the child or adolescent. Conversely, sexual abuse is defined as any type of behavior or act that infringes on the sexual freedom of the child or adolescent in the context of a relationship of responsibility, trust, or power. We speak of abandonment when there is a breach of the duty of care or total neglect of care that occurs deliberately, and without intent to return, by the primary caregiver, leaving the physical integrity, safety, or welfare in danger. Neglect, on the other hand, refers to any act, inaction, or inability on the part of the caregiver to meet the child's physical, safety, educational, and psychological needs. Finally, labor exploitation is defined as the primary caregiver's abusive and intentional use of the child or adolescent for economic or similar purposes (García-Mollá et al., 2023). In addition, childhood experiences of maltreatment have been associated with several consequences on short- and long-term health and psychosocial development, such as mental health problems

(Cohen et al., 2019; Danese & Widom, 2020; VanMeter et al., 2021), substance abuse (Burlaka et al., 2019), or aggressive behavior (Agusti et al., 2018).

Currently, it is estimated that 25% of the adult population suffered maltreatment in childhood (World Health Organization, 2020). Concretely, a review performed by Stoltenborgh et al. (2015) shows that prevalence varies according to the specific type of maltreatment in self-reported studies: 12.7% for sexual abuse, 22.6% for physical abuse, 36.3% for emotional abuse, 16.3% for physical neglect, and 18.4% for emotional neglect. However, this review found a large gap between prevalence rates from informant studies and those from studies using self-report measures of maltreatment. Thus, the literature shows that the use of different measurement instruments could explain the inconsistencies in the estimates noted by different studies (Prevoe et al., 2017; Van Ijzendoorn et al., 2020).

Given the complex nature of child abuse and neglect (Baiden et al., 2017), the World Health Organization (2020) identified several risk factors that increase the likelihood of suffering maltreatment experiences. The aforementioned factors were classified as: child characteristics, caregiver traits, family relationships, and community and societal factors. To overcome the difficulties imposed by the multifactorial nature of child maltreatment, ecological systems theories are a good point of view for researchers who intend to understand the complex etiology of the issue. Belsky (1980, 1993) proposed an ecological model which is currently the most frequently used framework to study the etiology of child maltreatment. This model is heavily based on Bronfenbrenner's (1979) ecological model of human development and uses its hypothesis about an interaction of nested systems. Following Bronfenbrenner, the aforementioned systems could be classified into individual characteristics (ontogenic development), child-family relationship (microsystem), socio-environmental factors (exosystem), and society's values (macrosystem).

Most assessment measures on child maltreatment are developed to measure trauma symptoms or exposure to adverse events from a retrospective approach (Eklund et al., 2018; Feng et al., 2020; Leuchter et al., 2021). In addition, a review performed by Stith et al. (2009) showed that most studies regarding risk factors of child maltreatment were limited to the individual problem and highlighted the relational traits of the issue broadening the scope to microsystems dynamics. Thus, empirical evidence (Assink et al., 2019; Mulder et al., 2018) has been confined to analyzing parental risk factors. These factors are understood as the most frequent and significant predictors of child maltreatment, claiming that children's development is more determined by social systems in which they are closely involved rather than ones they are less closely involved in. Nevertheless, a large number of studies suggest that child maltreatment is more likely to happen when there is an accumulation of risk factors increasing the negative consequences (Lamela & Figueiredo, 2018; Yang & Maguire-Jack, 2018).

Austin et al. (2020) emphasized that environmental and structural factors belonging to the broader domain constitute important indicators of the risk and the seriousness of child maltreatment in terms of prevention. These factors do not directly involve the children but have an impact on the way they are treated (Sidebotham, 2001). Along the same line, studies performed by Hunter and Flores (2021) and Pittner et al. (2019) concluded that social and communitarian factors such as poverty, absence of social resources, or lack of social support could increase the risk of child maltreatment. A sign of this is that socioeconomic factors like low income and high unemployment rates areas result in a higher prevalence of child maltreatment (Hsin et al., 2018). Furthermore, neighborhood traits like ethnic heterogeneity, unemployment rates, neighborhood structure, concentrated poverty, and residential instability are more likely to promote child maltreatment (Seon, 2021; Wolff et al., 2018). Additionally, the systematic review carried out by Abdullah et al. (2020) demonstrated the greater collective efficacy of the neighborhood rather than caregivers or parents on the prevention of child maltreatment.

Commonly, structural factors are evaluated with scales related to child-family relationship, sociodemographic and community characteristics, but little is known about the institutional practices indicators. As defined by Gracia and Musitu (1993), governmental and nongovernmental institutions have an important role to play in providing social support to the victims of child maltreatment by increasing their resilience. In this line, Arrendo et al. (2017) and Terol-Cantero et al. (2004) highlighted the lack of measures to assess the good practices performed by institutions that are responsible to ensure the well-being of maltreated children and adolescents.

Community structural factors and the role of welfare systems addressing child maltreatment are less present in the literature. Different studies (Brännström et al., 2017; Finch et al., 2021; Kaufman et al., 2019) show that interventions or actions carried out in schools, residential care homes, healthcare settings, or community social services also have a decisive impact on the development and well-being of maltreated children. Kidger et al. (2012) and Zhang et al. (2021) pointed out the relevance of school for children to feel safe, feel close to people, and integrated into the school setting. For that reason, noncollaborative and nonsupportive attitudes from teachers should also be considered risk factors because they increase the vulnerability of children and adolescents experiencing maltreatment. Regarding child welfare systems, frequent changes in the professionals that are in charge of them, the separation from their broader context, or the absence of optimal resources bring about structural difficulties aggravating the negative consequences of maltreatment (Lee et al., 2006; Lueger-Schuster et al., 2018). In addition, Goldenson et al. (2022) and Munro (2019) argued that the absence of interprofessional collaboration, subjective decision-making, and the adoption of actions and protection measures not adjusted to needs are indicators that increase risk and could deteriorate the quality of life and well-being of abused children and adolescents. Therefore, the assessment of community factors should include not only the socioeconomic and family factors of the child, but also those characteristics and praxis of the environments, administrations, and welfare institutions involving the child or adolescent (health, education, and social services) that may increase the consequences of child maltreatment.

As far as we know, specific measures to assess community risk variables dealing with all the factors that form the construct are lacking. Given the significance of community variables on child welfare and the need to have a specific assessment including community risk factors, the current study aimed to develop an assessment risk inventory, as exhaustive as possible, and provide evidence about the factorial structure, reliability, and convergent-related validity. This measurement scale will be used as part of a larger battery for early detection of the risk of child maltreatment.

MATERIAL AND METHODS

This study employed data from the first wave of the Adolescents and Children Risk of Abuse and Maltreatment (ACRAM) project, a longitudinal study of child and adolescent determinants of maltreatment risk carried out in the Valencian Community (Spain). It was designed by child welfare workers and subjected to a content validity process (Carbonell et al., 2023; Navarro-Pérez et al., 2023). The value of such a tool derives not only from their ability to optimize those decisions and actions aimed to improve the quality of life and welfare of children and adolescents and their families but also from the way they can enhance the performance of the professionals and protection agencies themselves, making them potential beneficiaries too.

Sample and Procedure

The sampling method used in the study was convenience sampling. Child welfare workers from different services were contacted to provide data from cases they were assisting. They were previously trained to fill out the assessment forms. Data were collected using an online survey.

A total of 286 child welfare professionals were recruited to fill out the data. Data was gathered for 635 children and adolescents assisted by different child protective services (CPS) in the Valencian Community (Spain). CPS refer to the set of resources and institutions that care for children and adolescents at risk, including day-care centers, residential care centers, fostering services, autonomous regional government's territorial assessment centers, school psycho-pedagogical services or singular education action centers, youth justice centers, and so forth. Any circumstance that has triggered the assessment from the protection system already has a significant impact on the child or adolescent and is the reason why these children are cared for by CPS. The level of risk is divided into low, moderate, or high based on the following description (Carbonell et al., 2023): 1) low risk: vulnerable circumstances that alter the life of the child or adolescent but do not put him/her in imminent danger or seriously condition him/her; 2) moderate risk: adverse circumstances that can be addressed mainly by the natural environment of the child or adolescent and from residential-institutional settings and specialized services providing specific interventions; and 3) high risk or lack of protection: emergency situations, where the child or adolescent needs to be distanced from the environment in which he or she resides, and which undermine his or her integrity through agile and peremptory actions for which coordinated emergency measures must be adopted.

From the whole sample, 27 participants (4.25%) were excluded from the statistical analyses due to missing data. Thus, the final sample size consisted of 608 individuals, 42.9% female, 56.4% male, and 0.7% nonbinary gender. Their mean age was 12.07 years ($SD = 5.23$), ranging from 0 to 18 years. A total of 53.3% of the cases were in a low or moderate-risk situation, being cared for by child welfare workers, while 46.2% were at high risk and had been removed from their homes. No responses for the remaining 0.5% because an intervention plan had not yet been developed or was in the process of being modified. Data included cases from 36 different nationalities, the most represented countries being: Spain (78.3%), Morocco (6.4%), Romania (2.1%), Colombia (2.1%), and Algeria (1.6%).

This research complied with APA's ethical standards, and it was approved by the Ethical Commission of the Valencian Government (CSV:HYH5NVSA-Y85ZSB11-RML6ZCYX). During the research process, an ethical-responsible procedure was assumed following the ethical values promulgated in the Declaration of Helsinki. Therefore, ethical consent was obtained from all participants, guaranteeing the rights to information, protection of personal data, confidentiality, nondiscrimination, gratuitousness, and the possibility of abandoning the study at any stage. All professionals were aware of the aims of the study. The children's data were all anonymous, and all professionals signed informed consent forms.

Instruments

The *ACRAM* (Carbonell et al., 2023; Navarro-Pérez et al., 2023) is a comprehensive battery of tools for the detection and assessment of child maltreatment. It comprised a total of 98 risk indicators divided into three general sections: 1) risk factors associated to parental/caregiver behavior, 2) risk factors associated to the environment, and 3) protective factors. This study aimed to study Section 2. The Adolescents and Children Risk of Abuse and Maltreatment Community Scale (ACRAM-CS) was developed as an actuarial risk assessment inventory to be filled out by child welfare workers. The measure comprises 21 items which measure risk on six different community dimensions: socioeconomic, understood as lack of or negligence in the management of

resources (Items 1 and 2; e.g., “The primary caregiver inefficiently manages the resources available to him or her, negatively affecting the child or adolescent”); school setting, understood as factors related to errors and negligence in the school environment and poor socialization at school (Items 3, 4, 5, and 6; e.g., “The teacher does not meet the needs of the child or adolescent, regardless of the teacher’s resources or responsibility”); technical-political intervention, understood as negligence caused by frequent and unjustified changes in professionals and intervention strategies (Items 7 and 8; e.g., “The child or adolescent has been affected by frequent unjustified changes in the professionals who care for him/her and/or in the strategy of intervention with him/her and his/her family”); public administration, understood as lack of coordination between professionals, resources, and administrations that care for abused children and adolescents (Items 9 and 10; e.g., “The coordination between the welfare administrations working with the family and the child or adolescent is weak/inadequate/nonexistent”); healthcare factors, understood as factors related to errors and negligence of the health system when children and adolescents are in need (Items 11, 12, and 13; e.g., “For mental health reasons, the child has been subjected to continuous medication changes, with negative effects for the child”); and institutional malpractice, understood as harm or risk of harm caused by action or omission, by any legislation, program, procedure, professional, or institutional action (Items 14, 15, 16, 17, 18, 19, 20, and 21; e.g., “The child is in a care center, separated from the family and the child’s situation is not re-evaluated according to the review deadlines established in the current legislation”). Responses were recorded on a 3-point scale: 0 (*there is clear evidence it does not occur*), 1 (*there are signs it might occur, but it cannot be confirmed*), and 2 (*there is clear evidence it does occur*). The instrument was developed for use by Spanish-speaking people.

The *Childhood Trauma Questionnaire-Short Form* (CTQ-SF; Bernstein et al., 2003), a 28-item self-report measure of retrospective child abuse and neglect. This short version was developed from an initial version comprised of 70 items (Bernstein et al., 1994). The present study employed a version adapted for filling in by social service workers rather than self-reporting. This version of CTQ-SF was translated into Spanish and it assesses different types of maltreatment: emotional abuse (EA; i.e., “Family members have said hurtful or insulting things to the child”), physical abuse (PA; i.e., “Family members have hit the child so hard that he/she was left with bruises or marks”), sexual abuse (SA; i.e., “Someone has tried to do sexual acts or watch sexual material with the child or adolescent”), emotional neglect (EN; i.e., “The family has not been a source of strength and support”), and physical neglect (PN; i.e., “The child does not have enough to eat”). The scale presented adequate reliability for this sample with $\alpha = .93$ for EN, $\alpha = .73$ for PN, $\alpha = .95$ for SA, $\alpha = .72$ for PA, and $\alpha = .92$ for EA. Twenty-five items measure all of the scales scoring on a 5-point Likert scale from 1 (*never true*) to 5 (*very often true*). Furthermore, the scale includes three items to control for social desirability.

The *Cleveland Child Abuse Potential Scale* (C-CAPS; Ezzo & Young, 2012), a 26-item actuarial risk assessment measure assessing child maltreatment risk. This type of instrument is based on factual variables that do not require interpretation by the interviewer. For this research, only two of the seven dimensions considered on the C-CAPS were used: historical factors (i.e., “history of domestic violence from the family of origin”) and ecological and other factors (i.e., “violence in community”). The two dimensions from C-CAPS were translated into Spanish and showed adequate reliability ($\alpha = .81$ and $\alpha = .70$, respectively). Answers were coded on a 3-point Likert scale: 1 (*there is clear evidence it does not occur*), 2 (*there is partial evidence it occurs*), and 3 (*there is clear evidence it occurs*).

Statistical Analyses

The 6-factor model theoretically specified during the development of the scale was tested using confirmatory factor analysis (CFA). The estimation method employed was WLSMV, which is known to perform well when using categorical data (Finney & DiStefano, 2013).

Statistics and indices to assess goodness-of-fit included: the chi-square statistic (χ^2), the comparative fit index (CFI), and the root-mean-square error of approximation (RMSEA). According to Hu & Bentler (1999), acceptable model fit is considered in the presence of CFI values equal to or greater than .90 and RMSEA values equal to or lower than .08. Analyses were performed using Mplus 8.7. (Muthén & Muthén, 1998/2017). Descriptive statistics and correlation coefficients were calculated in SPSS 26. Interitem correlations were offered with descriptive purposes. Correlations were also calculated between the ACRAM-CS, CTQ-SF, and the two subscales from C-CAPS. Finally, the internal consistency of the factors from the best-fitting model was estimated using the composite reliability index (CRI; Raykov, 2004) given that it overcomes the limitations of Cronbach's alpha (Hancock & An, 2018).

RESULTS

Descriptive Statistics

Descriptive statistics show that answers to items of the ACRAM-CS range from 0 to 2, and their average responses oscillate between 0.05 ($SD = 0.28$) on Item 17, and 0.92 ($SD = 0.86$) on Item 2. The only exception is Item 14, whose mean is 0 ($SD = 0.06$) and responses range from 0 to 1; in other words, there is no clear evidence that children were involved in this situation. For this reason, Item 14 was excluded from the remaining analyses, because it lacked variability. Items' descriptive statistics are presented in Table 1.

TABLE 1
 Items' descriptive statistics

Factor	Items	<i>M</i>	<i>SD</i> ; range
Socioeconomic	Item 1	0.87	0.89; 0-2
	Item 2	0.92	0.86; 0-2
	Item 3	0.66	0.86; 0-2
School setting	Item 4	0.43	0.71; 0-2
	Item 5	0.17	0.49; 0-2
	Item 6	0.55	0.80; 0-2
Technical-political intervention	Item 7	0.21	0.55; 0-2
	Item 8	0.26	0.60; 0-2
Public administration	Item 9	0.21	0.53; 0-2
	Item 10	0.15	0.47; 0-2
Healthcare factors	Item 11	0.07	0.33; 0-2
	Item 12	0.12	0.40; 0-2
	Item 13	0.10	0.37; 0-2
Institutional malpractice	Item 14	0.00	0.06; 0-1
	Item 15	0.07	0.30; 0-2
	Item 16	0.12	0.40; 0-2
	Item 17	0.05	0.28; 0-2
	Item 18	0.12	0.41; 0-2
	Item 19	0.22	0.55; 0-2
	Item 20	0.07	0.35; 0-2
Item 21	0.18	0.48; 0-2	

Factor Validity

The 6-factor model proposed during the theoretical development of the scale, excluding Item 14 of the institutional malpractice dimension, was tested. Fit indices for the total sample showed adequate fit of the model to the data $\chi^2 = 286.78$, $df = 155$, $p < .001$; CFI = .96; RMSEA = .04, 90% CI [.03, .04]. Standardized item factor loadings are presented in Figure 1.

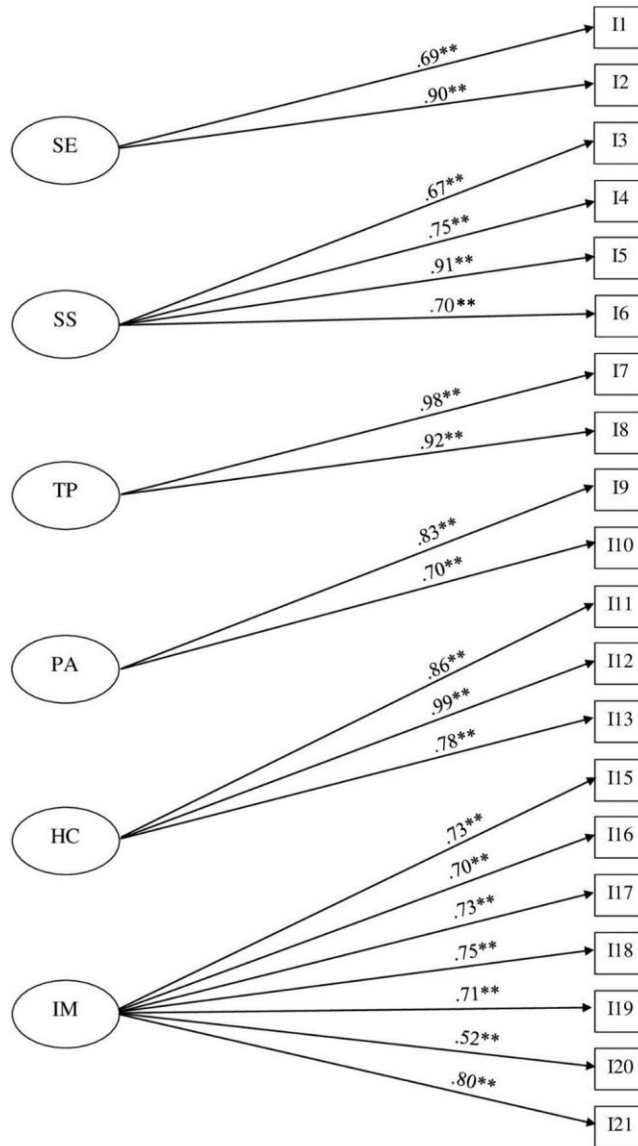


FIGURE 1
 Standardized factor loadings for the CFA model in the overall sample

Note. SE = socioeconomic; SS = school setting; TP = technical-political intervention; PA = public administration; HC = healthcare factors; IM = institutional malpractice. Correlations among the factors are presented in Table 3 rather than in Figure 1 for simplicity.
 ** $p < .01$.

Internal Consistency

Estimates of internal consistency for each factor were: CRI = .78 for socioeconomic; CRI = .85 for school setting; CRI = .95 for technical-political intervention; CRI = .74 for public administration; CRI = .91 for healthcare factors; and CRI = .88 for institutional malpractice.

Nomological Validity

Correlations between the ACRAM-CS and CTQ-SF and C-CAPS dimensions are included in Table 2. In general, we expect statistically significant relations among the dimensions in the ACRAM-CS and the two other scales on abuse and maltreatment, the CTQ-SF and the C-CAPS. However, only the two dimensions of the C-CAPS are measuring contextual factors (historical factors and ecological and other factors), while the CTQ-SF is measuring abuse and neglect from the caregivers. Therefore, we expect larger correlations with the C-CAPS dimensions as evidence of convergent validity, and specifically with the socioeconomic dimension in the ACRAM-CS, because the two factors in the C-CAPS mainly touch these socioeconomic factors. On the contrary, we expect some correlations with the abuse and neglect dimensions in the CTQ-SF, but of lower intensity as the contextual factors may enhance the effects of abuse and neglect, but are not themselves measures of maltreatment and neglect on the part of the caregivers. Therefore, the correlations among the dimensions of the ACRAM-CS and the CTQ-SF can be considered more as evidence of nomological validity rather than convergent validity.

TABLE 2
 Correlation coefficients among the dimensions of the ACRAM-CS
 and the CTQ-SF and C-CAPS dimensions

Measures' dimensions	CTQ-SF				C-CAPS		
	EN	PN	SA	PA	EA	HF	EF
ACRAM-CS							
SE	.43**	.53**	-.01	.01	.16**	.32**	.56**
SS	.23**	.23**	.11**	.09	.23**	.05	.22**
TP	.09*	.09*	.03	.05	.16**	.12*	.16**
PA	.07	.14**	.03	.09	.11*	.09*	.10*
HC	-.02	-.03	.00	.02	.03	-.04	-.01
IM	.11*	.11**	.18**	.08	.14**	.11**	.06

Note. ACRAM-CS (Adolescents and Children Risk of Abuse and Maltreatment Community Scale): SE = socioeconomic; SS = school setting; TP = technical-political intervention; PA = public administration; HC = healthcare factors; IM = institutional malpractice. CTQ-SF (Childhood Trauma Questionnaire-Short Form): EN = emotional neglect; PN = physical neglect; SA = sexual abuse; PA = physical abuse; EA = emotional abuse. C-CAPS (Cleveland Child Abuse Potential Scale): HF = historical factors; EF = ecological and other factors.

** $p < .01$; * $p < .05$.

In general, the ACRAM-CS dimensions presented some associations with the CTQ-SF and C-CAPS dimensions. Regarding the convergent validity, there are moderate to strong associations of the socioeconomic dimension with the two dimensions in the C-CAPS as expected, and a number of other statistically significant correlations of low to moderate magnitude with the other dimensions of the

ACRAM-CS. The nomological validity can be seen with the correlations among the ACRAM-CS dimensions and the five factors of the CTQ-SF. There were several statistically significant correlations between the ACRAM-CS dimensions and the CTQ-SF, in some cases even higher than expected (e.g., with the socioeconomic factor). The only dimension in the ACRAM-CS scale that showed no significant correlation with any other factor was healthcare, but this is an aspect that has not been touched on in the contents of the two scales considered for convergent and nomological validity. Correlations among the ACRAM-CS dimensions are presented in Table 3.

TABLE 3
 Correlations among ACRAM-CS dimensions

	SE	SS	TP	PA	HC	IM
SE	–					
SS	.27**	–				
TP	.12**	.29**	–			
PA	.15**	.22*	.30**	–		
HC	.01	.18**	.27**	.22**	–	
IM	.07	.25**	.37**	.35**	.20**	–

Note. ACRAM-CS (Adolescents and Children Risk of Abuse and Maltreatment Community Scale): SE = socioeconomic; SS = school setting; TP = technical-political intervention; PA = public administration; HC = healthcare factors; IM = institutional malpractice.

** $p < .01$; * $p < .05$.

DISCUSSION

The aim of this study was to provide reliability and validity evidence of the Adolescents and Children Risk of Abuse and Maltreatment Community Scale (ACRAM-CS). This scale tries to assess the structural factors that increase the vulnerability of children and adolescents to suffer maltreatment. The scale was designed for use in Spain and other Spanish-speaking countries. Specifically, the study intended to offer evidence of factorial and convergent-related validity and its internal consistency, given the existing agreement in the scientific literature regarding the need for the development of comprehensive, unbiased, and psychometrically based assessment instruments (Brumley et al., 2019; Gabrielli & Jackson, 2019; Kugler et al., 2019). This measure was developed employing the cumulative risk factors framework, which postulates that the risk of maltreatment is better predicted with the combining and cumulative effect of different factors rather than isolated adverse events (Atkinson et al., 2015; Evans et al., 2013).

As Calheiros et al. (2021) argued, the field of child maltreatment assessment is characterized by a lack of measurements considering the multidimensional nature of the problem. Commonly, instruments are designed to assess merely specific types of maltreatment restricting the evaluation and providing limited conclusions for the professional performance. Given that need, the ACRAM project, which includes the ACRAM-CS, aims to provide a comprehensive instrument to be used in professional settings. It should be noted that this battery of tools involved a great number of child welfare workers, and its development is based on their professional experience (Carbonell et al., 2023; Navarro-Pérez et al., 2023).

In relation with the role of governmental and nongovernmental institutions involved in the assistance of children in the child protection system, Arredondo et al. (2017) showed the lack of specific measures

for assessing institutional support. This key aspect should be assessed in order to ensure that the child is receiving the best possible care and that ethical requirements are met. A noteworthy feature of the ACRAM-CS is that it includes a dimension aimed to measure inadequate attention and the possible maltreatment performed by institutions. The ACRAM-CS, therefore, enables a rigorous assessment of the effectiveness of interventions and practices developed to address child maltreatment within institutional settings. It highlights institutional failures and structural drivers of risk, as suggested in previous studies (Finch et al., 2021; Konstantopoulou & Mantziou, 2020).

Regarding the descriptive statistics about the items, an indicator of institutional malpractice factor (Item 14) was excluded from the statistical analysis because of the low variance. That item assesses if children suffer physical punishment at school and there was no clear evidence that they were involved in that situation, at least in the Spanish context. As suggested by Heekes et al. (2020), corporal punishment might have reduced prevalence rates in European countries because it is an illegal practice. However, there was a lack of prevalence studies carried out in these countries precisely because it is a forbidden practice.

In respect of the first aim, factor validity was estimated for the model established during the theoretical development of the scale employing CFA. Model fit indices showed a very good fit of the structure to the data and all items loaded significantly on their corresponding dimensions. In addition, all correlation coefficients among dimensions were significant with the only exception of the correlation between socioeconomic and healthcare factors, which means that community risks may reinforce each other.

Internal consistency was estimated using the composite reliability index (CRI) based on standardized factor loadings from the best-fitting model. The results suggested that the ACRAM-CS displays an adequate internal consistency with all CRIs higher than .70.

Regarding nomological and convergent validity, first, the ACRAM-CS dimensions are, in general, correlated in the expected direction, excluding the nonsignificant correlation of socioeconomic with healthcare and institutional malpractice factors. Second, leaving aside the healthcare factor, the rest of the ACRAM-CS present significant correlation coefficients with both the CTQ-SF (Bernstein et al., 2003) and C-CAPS dimensions (Ezzo & Young, 2012). Regarding the CTQ-SF, dimensions of emotional and physical neglect, and emotional abuse are better related than the other dimensions of the CTQ-SF. Indeed, while sexual abuse had two significant (but) low correlations with the dimensions of the ACRAM-CS, physical abuse had no significant association with the analyzed scale. This lack of relationships, especially the one with physical abuse, is not consistent with the hypothesized results and should be further investigated. The C-CAPS historical factors and ecological and other factors show adequate correlation coefficients with the ACRAM-CS dimensions given the shared conception based on the theoretical models outlined by Begle et al. (2010) or Scannapieco et al. (2019) for predicting child abuse. In general, current results offer evidence of adequate criterion-related validity for the scale.

All in all, these results show the measure to have good properties for assessing risk factors of child maltreatment in an ecological framework. As noted earlier, most of the instruments in the literature focus on assessing risky parental behaviors and on the detection of specific forms of abuse (Mathews et al., 2021). Given the absence of actuarial risk inventories for a specific and exhaustive assessment of community risk factors, the need for the development of a scale with these characteristics is clear. This will enable a comprehensive understanding of the mechanisms associated with child maltreatment, focusing on the structural and institutional risk factors that perpetuate or promote child and adolescent distress, acting as cumulative risk factors (Vial et al., 2020; Yang & Maguire-Jack, 2018). The ACRAM-CS thus makes it possible to identify children and adolescents who are not in the care of the CPS, as proposed by Creighton (2002). Therefore, this tool allows for the early detection, through other factors that are not

directly maltreatment, but that contribute to its accumulation, of those cases that may be emerging, that is, that are not yet contemplated in the child welfare system. Furthermore, by using the ACRAM-CS it would be possible to identify institutional negligence and maltreatment occurring in different welfare systems, providing the necessary resources and conditions to meet the needs of children and professionals, in the best interests of the child.

Limitations

This study has both strengths and limitations. As far as we know, this is the first research to examine the validity and reliability of a comprehensive and specific assessment risk inventory for community factors of child maltreatment in Spanish. Nevertheless, the research also has some limitations. The statistical analysis to estimate validity and reliability was conducted on a sample composed of institutionalized children and adolescents selected with nonprobabilistic methods from a specific region in Spain. This fact limited the generalization of the results to other contexts where legislation and the action protocol regarding child protective services may be different. Another limitation is that the elimination of Item 14 given the low prevalence rates of corporal punishment in school among participants, may reduce the predictability of child maltreatment in other countries with higher prevalence of this practice, and, therefore, depending on the context where the scale is going to be used, it could be reconsidered for inclusion. Thus, the scale should be adapted for its use in other contexts where certain types of child maltreatment are normalized by society, as pointed out by Lansford et al. (2014) or Ni et al. (2020).

CONCLUSIONS

Child maltreatment is a complex and dynamic process involving factors that affect directly or indirectly the children and adolescents. This study provides evidence of the psychometric properties of the ACRAM-CS in the framework of the ACRAM project. To the best of our knowledge, this scale is the first one to be designed specifically to assess the structural risk factors related to welfare systems that accentuate the negative consequences of abuse and neglect on children and adolescents. This study contributes to the consolidation of the ACRAM (Carbonell et al., 2023; Navarro-Pérez et al., 2023) as the first comprehensive instrument for the evaluation of maltreatment risk in childhood and adolescence, including items related to community and institutional factors. The evidence shows that this scale is a reliable and valid measure to assess these factors and can successfully contribute to the detection and prevention of child maltreatment, which supports its professional and research use.

FUNDINGS

We received Grant AA-67543 from the Valencian Government, for the project “Development of an instrument for the detection and assessment of risk situations in childhood and adolescence” (Ref. UVEG2019/20-20163CATED CC.28509).

REFERENCES

- Abdullah, A. R., Emery, C., & Jordan, L. (2020). Neighbourhood collective efficacy and protective effects on child maltreatment: A systematic literature review. *Health & Social Care in the Community*, 28(6), 1863-1883. <https://doi.org/10.1111/hsc.13047>
- Arredondo, V., Saavedra Inostroza, C., & Guerra, C. (2017). Evaluación de un instrumento de apoyo institucional en casos de maltrato infantil [Assessment of an institutional support instrument in case of child maltreatment]. *Revista Evaluar*, 17(2). <https://doi.org/10.35670/1667-4545.v17.n2.18729>
- Assink, M., Van der Put, C. E., Meeuwse, M. W., de Jong, N. M., Oort, F. J., Stams, G. J. J., & Hoeve, M. (2019). Risk factors for child sexual abuse victimization: A meta-analytic review. *Psychological Bulletin*, 145(5), 1-11. <https://doi.org/10.1037/bul0000188>
- Atkinson, L., Beitchman, J., Gonzalez, A., Young, A., Wilson, B., Escobar, M., Chisolm, V., Brownlie, E., Khoury, J. E., & Ludmer, J. (2015). Cumulative risk, cumulative outcome: A 20-year longitudinal study. *Plos One* 10(6), Article e0127650. <https://doi.org/10.1371/journal.pone.0127650>
- Augusti, E.-M., Bangerud, G. A., Sulutvedt, U., & Melinder, A. (2018). Maltreatment and trauma symptoms: Does type of maltreatment matter? *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(4), 396-401. <https://doi.org/10.1037/tra0000315>
- Austin, A. E., Lesak, A. M., & Shanahan, M. E. (2020). Risk and protective factors for child maltreatment: A review. *Current Epidemiology Reports*, 7(4), 334-342. <https://doi.org/10.1007/s40471-020-00252-3>
- Baiden, P., Fallon, B., Den Dunnen, W., & Black, T. (2017). Police charging decisions in child maltreatment investigations: Findings from the 2008 Ontario Incidence Study of Reported Child Abuse and Neglect. *Journal of Public Child Welfare*, 11(2), 211-230. <https://doi.org/10.1080/15548732.2016.1263267>
- Begle, A. M., Dumas, J. E., & Hanson, R. F. (2010). Predicting child abuse potential: An empirical investigation of two theoretical frameworks. *Journal of Clinical Child & Adolescent Psychology*, 39(2), 208-219. <https://doi.org/10.1080/15374410903532650>
- Belsky, J. (1980). Child maltreatment: An ecological integration. *American Psychologist*, 35(4), 320-335. <https://doi.org/10.1037/0003-066X.35.4.320>
- Belsky, J. (1993). Etiology of child maltreatment: A developmental-ecological analysis. *Psychological Bulletin*, 114(3), 413-434. <https://doi.org/10.1037/0033-2909.114.3.413>
- Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, 151, 1132-1136. <https://doi.org/10.1176/ajp.151.8.1132>
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., Stokes, J., Handelsman, L., Medrano, M., Desmond, D., & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*, 27(2), 169-190. [https://doi.org/10.1016/s0145-2134\(02\)00541-0](https://doi.org/10.1016/s0145-2134(02)00541-0)
- Brännström, L., Forsman, H., Vinnerljung, B., & Almquist, Y. B. (2017). The truly disadvantaged? Midlife outcome dynamics of individuals with experiences of out-of-home care. *Child Abuse & Neglect*, 67, 408-418. <https://doi.org/10.1016/j.chiabu.2016.11.009>
- Bronfenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.
- Brumley, L. D., Brumley, B. P., & Jaffee, S. R. (2019). Comparing cumulative index and factor analytic approaches to measuring maltreatment in the national longitudinal study of adolescent to adult health. *Child Abuse & Neglect*, 87, 65-76. <https://doi.org/10.1016/j.chiabu.2018.08.014>
- Burlaka, V., Hong, J. S., Churakova, I., Serdiuk, O., Proskura, V., & Shvets, D. (2019). The role of adverse childhood experiences and corporal punishment in early adulthood depression and substance use among Ukrainian college students. *Journal of Family Violence*, 35(3), 285-295. <https://doi.org/10.1007/s10896-019-00110-x>
- Calheiros, M. M., Silva, C. S., & Magalhães, E. (2021). Child Maltreatment Severity Questionnaire (MSQ) for professionals: Development, validity, and reliability evidence. *Assessment*, 28(5), 1397-1417. <https://doi.org/10.1007/s10826-016-0385-x>
- Carbonell, A., Georgieva, S., Fernández, I., Navarro-Pérez, J. J., Samper, P., & Tomás, J. M. (2023). Diseño e implementación de la herramienta DAP 360 para la evaluación del riesgo y desprotección en la infancia y adolescencia [Design and implementation of the DAP 360 tool for the assessment of risk and desprotection in childhood and adolescence]. *Alternativas: Cuadernos de Trabajo Social*, 30(1), 53-80. <https://doi.org/10.14198/ALTERN.21964>
- Cohen, J. R., McNeil, S. L., Shorey, R. C., & Temple, J. R. (2019). Maltreatment subtypes, depressed mood, and anhedonia: A longitudinal study with adolescents. *Psychological Trauma: Theory, Research, Practice, and Policy*, 11(7), 704-712. <https://doi.org/10.1037/tra0000418>
- Creighton, S. J. (2002). Recognising changes in incidence and prevalence. In K. D. Browne, H. Hanks, P. Stratton, & C. Hamilton (Eds.), *Early prediction and prevention of child abuse: A handbook* (pp. 5-22). John Wiley & Sons.
- Danese, A., & Widom, C. S. (2020). Objective and subjective experiences of child maltreatment and their relationships with psychopathology. *Natural Human Behaviour*, 4, 811-818. <https://doi.org/10.1038/s41562-020-0880-3>

- Eklund, K., Rossen, E., Koriakin, T., Chafouleas, S. M., & Resnick, C. (2018). A systematic review of trauma screening measures for children and adolescents. *School Psychology Quarterly, 33*(1), 30-43. <https://doi.org/10.1037/spq0000244>
- Evans, G. W., Li, D., & Whipple, S. S. (2013). Cumulative risk and child development. *Psychological Bulletin, 139*(6), 1342-1396. <https://doi.org/10.1037/a0031808>
- Ezzo, F., & Young, K. (2012). Child Maltreatment Risk Inventory: Pilot data for the Cleveland Child Abuse Potential Scale. *Journal of Family Violence, 27*(2), 145-155. <https://doi.org/10.1007/s10896-012-9412-x>
- Feng, J. Y., Chen, C. C., Chang, Y. T., Chang, H. Y., & Shih, C. L. (2020). A psychometric analysis of a short form of the Chinese version of the ISPCAN child abuse screening tools-Children's home version (SC-ICAST-CH) using multidimensional item response theory. *Child Abuse & Neglect, 109*, 1-9. <https://doi.org/10.1016/j.chiabu.2020.104693>
- Finch, M., Featherston, R., Chakraborty, S., Bjørndal, L., Mildon, R., Albers, B., Fiennes, C., Taylor, D. J. A., Schachtman, R., Yang, T., & Shlonsky, A. (2021). Interventions that address institutional child maltreatment: An evidence and gap map. *Campbell Systematic Reviews, 17*(1), 1-104. <https://doi.org/10.1002/cl2.1139>
- Finney, S. J., & DiStefano, C. (2013). Nonnormal and categorical data in structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 439-492). IAP Information Age Publishing.
- Gabrielli, J., & Jackson, Y. (2019). Innovative methodological and statistical approaches to the study of child maltreatment: Introduction. *Child Abuse & Neglect, 87*, 1-4. <https://doi.org/10.1016/j.chiabu.2018.12.001>
- García-Mollá, A., Carbonell, A., Navarro-Pérez, J. J., & Tomás, J. M. (2023). Development and validation of the Adolescent and Children in Risk of Abuse and Maltreatment Protective Factors Scale (ACRAM-PFS). *Child and Adolescent Social Work Journal, 1-13*. <https://doi.org/10.1007/s10560-022-00908-7>
- Goldenson, J., Brodsky, S. L., & Perlman, M. L. (2022). Trauma-informed forensic mental health assessment: Practical implications, ethical tensions, and alignment with therapeutic jurisprudence principles. *Psychology, Public Policy, and Law, 28*(2), 226-239. <https://doi.org/10.1037/law0000339>
- Gracia, E., & Musitu, G. (1993). *El maltrato infantil. Un análisis ecológico de los factores de riesgo* [Child maltreatment. An ecological analysis of risk factors]. Centro de Publicaciones de Ministerio de Asuntos Sociales.
- Hancock, G. R., & An, J. (2018). Digital items Module 2: Scale reliability in structural equation modeling. *Educational Measurement: Issues and Practice, 37*, 73-74. <https://doi.org/10.1111/emip.12210>
- Heekes, S. L., Kruger, C. B., Lester, S. N., & Ward, C. L. (2020). A systematic review of corporal punishment in schools: Global prevalence and correlates. *Trauma, Violence, & Abuse, 23*(1), 52-72. <https://doi.org/10.1177/1524838020925787>
- Hsin, Y. C., Chang, Y. C., Lee, E. P., Chiu, C. H., Chou, I. J., Hsia, S. H., Lin, K. L., Lee, J., Huang, J. L., Wang, C. J., & Wu, H. P. (2018). Risk factors for child maltreatment by the utilization of medical service and socioeconomic environment in Taiwan. *Medicine, 97*(52), Article e13728. <https://doi.org/10.1097/md.00000000000013728>
- Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55. <http://dx.doi.org/10.1080/10705519909540118>
- Hunter, A. A., & Flores, G. (2021). Social determinants of health and child maltreatment: A systematic review. *Pediatric Research, 89*(2), 269-274. <https://doi.org/10.1038/s41390-020-01175-x>
- Kaufman, K., Erooga, M., Higgins, D., & Zatzkin, J. (2019). Youth-serving organization safety risks and the situational prevention approach. In B. Lonne, D. Scott, D. Higgins, & T. I. Herrenkohl, *Re-visioning public health approaches for protecting children* (pp. 165-180). Springer. https://doi.org/10.1007/978-3-030-05858-6_11
- Kidger, J., Araya, R., Donovan, J., & Gunnell, D. (2012). The effect of the school environment on the emotional health of adolescents: A systematic review. *Pediatrics, 129*(5), 925-949. <https://doi.org/10.1542/peds.2011-2248>
- Konstantopoulou, F., & Mantziou, I. (2020). Maltreatment in residential child protection care: A review of the literature. *Dialogues in Clinical Neuroscience & Mental Health, 3*(2), 99-108. <https://doi.org/10.26386/obrela.v3i2.171>
- Kugler, K. C., Guastafarro, K., Shenk, C. E., Beal, S. J., Zadzora, K. M., & Noll, J. G. (2019). The effect of substantiated and unsubstantiated investigations of child maltreatment and subsequent adolescent health. *Child Abuse & Neglect, 87*, 112-119. <https://doi.org/10.1016/j.chiabu.2018.06.005>
- Lamela, D., & Figueiredo, B. (2018). A cumulative risk model of child physical maltreatment potential: Findings from a community-based study. *Journal of Interpersonal Violence, 33*(8), 1287-1305. <https://doi.org/10.1177/0886260515615142>

- Lansford, J. E., Sharma, C., Malone, P. S., Woodlief, D., Dodge, K. A., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Tapanya, S., Tirado, L. M., Zelli, A., Al-Hassan, S. M., Peña, L., Bacchini, D., Bombi, A. S., Bornstein, M. H., Chang, L., Deater-Deckard, K., & Di Giunta, L. (2014). Corporal punishment, maternal warmth, and child adjustment: A longitudinal study in eight countries. *Journal of Clinical Child & Adolescent Psychology, 43*(4), 670-685. <https://doi.org/10.1080/15374416.2014.893518>
- Lee, B. R., Munson, M. R., Ware, N. C., Ollie, M. T., Scott, L. D., & McMillen, J. C. (2006). Experiences of and attitudes toward mental health services among older youths in foster care. *Psychiatric Services, 57*(4), 487-492. <https://doi.org/10.1176/ps.2006.57.4.487>
- Leuchter, L., Frewen, P., & Lueger-Schuster, B. (2021). Validation and cross-cultural comparisons of the German Childhood Attachment and Relational Trauma Screen (CARTS). *European Journal of Psychotraumatology, 12*(1), 1-12. <https://doi.org/10.1080/20008198.2021.1918901>
- Lueger-Schuster, B., Knefel, M., Glück, T. M., Jagsch, R., Kantor, V., & Weindl, D. (2018). Child abuse and neglect in institutional settings, cumulative lifetime traumatization, and psychopathological long-term correlates in adult survivors: The Vienna Institutional Abuse Study. *Child Abuse & Neglect, 76*, 488-501. <https://doi.org/10.1016/j.chiabu.2017.12.009>
- Mathews, B., Pacella, R., Dunne, M., Scott, J., Finkelhor, D., Meinck, F., Higgins, D. J., Erskine, H., Thomas, H. J., Haslam, D., Tran, N., Le, L., Honey, N., Kellard, K., & Lawrence, D. (2021). The Australian Child Maltreatment Study (ACMS): Protocol for a national survey of the prevalence of child abuse and neglect, associated mental disorders and physical health problems, and burden of disease. *BMJ Open, 11*(5), 1-11. <http://doi.org/10.1136/bmjopen-2020-047074>
- Mulder, T. M., Kuiper, K. C., Van der Put, C. E., Stams, G. J. J., & Assink, M. (2018). Risk factors for child neglect: A meta-analytic review. *Child Abuse & Neglect, 77*, 198-210. <https://doi.org/10.1016/j.chiabu.2018.01.006>
- Munro, E. (2019). *Effective child protection*. Sage Publications.
- Muthén, L. K. & Muthén, B. O. (2017). *Mplus User's Guide* (8th ed.). Muthén & Muthén. (Original work published 1998).
- Navarro-Pérez, J. J., Samper, P., Sancho, P., Georgieva, S., Carbonell, A., & Mestre, M. V. (2023). Development and content validation of a comprehensive tool for assessing risk and protective factors in children and adolescents: The ACRAM. *Children and Youth Services Review, 145*, Article 106761. <https://doi.org/10.1016/j.chiayouth.2022.106761>
- Ni, Y., Li, L., Zhou, X., & Hesketh, T. (2020). Effects of maltreatment in the home setting on emotional and behavioural problems in adolescents: A study from Zhejiang Province in China. *Child Abuse Review, 29*(4), 347-364. <https://doi.org/10.1002/car.2620>
- Pittner, K., Van Ijzendoorn, M. H., Alink, L. R., Buisman, R. S., Compier-de Block, L. H., Van Den Berg, L. J., Elzinga, B. M., Lindenberg, J., Tollenaar, M. S., Diego, V. P., & Bakermans-Kranenburg, M. J. (2019). The genetic and environmental etiology of child maltreatment in a parent-based extended family design. *Development and Psychopathology, 31*(1), 157-172. <https://doi.org/10.1017/S0954579418001608>
- Prevoo, M. J., Stoltenborgh, M., Alink, L. R., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2017). Methodological moderators in prevalence studies on child maltreatment: Review of a series of meta-analyses. *Child Abuse Review, 26*(2), 141-157. <https://doi.org/10.1002/car.2433>
- Raykov, T. (2004). Behavioral scale reliability and measurement invariance evaluation using latent variable modeling. *Behavior Therapy, 35*(2), 299-331. [https://doi.org/10.1016/s0005-7894\(04\)80041-8](https://doi.org/10.1016/s0005-7894(04)80041-8)
- Scannapieco, M., Connell-Carrick, K., & Casolaro, T. (2019). Psychosocial assessment of alleged victims of child maltreatment. In A. P. Giardino, M. A. Lyn, & E. R. Giardino, *A practical guide to the evaluation of child physical abuse and neglect* (pp. 469-491). Springer.
- Seon, J. (2021). How does neighborhood affect child maltreatment among immigrant families? *Child Abuse & Neglect, 122*, Article 105300. <https://doi.org/10.1016/j.chiabu.2021.105300>
- Sidebotham, P. (2001). An ecological approach to child abuse: A creative use of scientific models in research and practice. *Child Abuse Review, 10*(2), 97-112. <https://doi.org/10.1002/car.643>
- Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., Som, A., McPherson, M., & Dees, J. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and violent behavior, 14*(1), 13-29. <https://doi.org/10.1016/j.avb.2006.03.006>
- Stoltenborgh, M., Bakermans-Kranenburg, M. J., Alink, L. R. A., & van IJzendoorn, M. H. (2015). The prevalence of child maltreatment across the globe: Review of a series of meta-analyses. *Child Abuse Review, 24*, 37-50. <https://doi.org/10.1002/car.2353>
- Terol-Cantero, M. C., López-Roig, S., Neipp-López, M. C., Rodríguez-Marín, J., Pastor, M. A., & Martín-Aragón, M. (2004). Apoyo social e instrumentos de evaluación: Revisión y clasificación [Social support and assessment instruments]. *Anuario de Psicología, 35*(1), 23-45.
- Van Ijzendoorn, M. H., Bakermans-Kranenburg, M. J., Coughlan, B., & Reijman, S. (2020). Annual research review. Umbrella synthesis of meta-analyses on child maltreatment antecedents and interventions: Differential susceptibility perspective on risk and resilience. *Journal of Child Psychology and Psychiatry, 61*(3), 272-290. <https://doi.org/10.1111/jcpp.13147>

- VanMeter, F., Nivison, M. D., Englund, M. M., Carlson, E. A., & Roisman, G. I. (2021). Childhood abuse and neglect and self-reported symptoms of psychopathology through midlife. *Developmental Psychology*, *57*(5), 824-836. <https://doi.org/10.1037/dev0001169>
- Vial, A., Van der Put, C., Stams, G. J. J., Kossakowski, J., & Assink, M. (2020). Exploring the interrelatedness of risk factors for child maltreatment: A network approach. *Child Abuse & Neglect*, *107*, Article 104622. <https://doi.org/10.1016/j.chiabu.2020.104622>
- Wolff, K. T., Cuevas, C., Intravia, J., Baglivio, M. T., & Epps, N. (2018). The effects of neighborhood context on exposure to Adverse Childhood Experiences (ACE) among adolescents involved in the juvenile justice system: Latent classes and contextual effects. *Journal of Youth and Adolescence*, *47*(11), 2279-2300. <https://doi.org/10.1007/s10964-018-0887-5>
- World Health Organization. (2020). *Child maltreatment*. <https://www.who.int/news-room/fact-sheets/detail/child-maltreatment>
- Yang, M. Y., & Maguire-Jack, K. (2018). Individual and cumulative risks for child abuse and neglect. *Family Relations*, *67*(2), 287-301. <https://doi.org/10.1111/fare.12310>
- Zhang, H., Liu, M., & Long, H. (2021). Child maltreatment and suicide ideation in rural China: The roles of self-compassion and school belonging. *Child and Adolescent Social Work Journal*, *38*(3), 325-335. <https://doi.org/10.1007/s10560-020-00679-z>