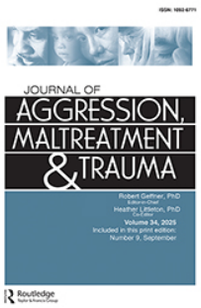

Journal of Aggression, Maltreatment & Trauma

ISSN: 1092-6771 (Print) 1545-083X (Online) Journal homepage: www.tandfonline.com/journals/wamt20

When Good Experiences Matter: Positive Childhood Experiences as a Moderator Between Adverse Childhood Experiences and Psychopathic Traits in Community and justice-Involved Samples

Olga Cunha, Marta Sousa, Telma C. Almeida, Renata Guarda & Ana Rita Cruz

To cite this article: Olga Cunha, Marta Sousa, Telma C. Almeida, Renata Guarda & Ana Rita Cruz (2025) When Good Experiences Matter: Positive Childhood Experiences as a Moderator Between Adverse Childhood Experiences and Psychopathic Traits in Community and justice-Involved Samples, Journal of Aggression, Maltreatment & Trauma, 34:9, 1447-1467, DOI: 10.1080/10926771.2025.2555564

To link to this article: https://doi.org/10.1080/10926771.2025.2555564

Published online: 03 Sep 2025.

JOURNAL OF AGGRESSION, MALTREATMENT & TRAUMA
2025, VOL. 34, NO. 9, 1447–1467
https://doi.org/10.1080/10926771.2025.2555564

Routledge
Taylor & Francis Group

When Good Experiences Matter: Positive Childhood Experiences as a Moderator Between Adverse Childhood Experiences and Psychopathic Traits in Community and justice-Involved Samples

Olga Cunha [a], Marta Sousa [b], Telma C. Almeida [c], Renata Guarda [d], and Ana Rita Cruz [b]

[a]Psychology Research Center (CIPSI), University of Minho, Braga, Portugal; [b]HEI-Lab: Digital Human-Environment Interaction Labs, Lusófona University, Lisbon, Portugal; [c]Egas Moniz Center for Interdisciplinary Research (CiiEM), Egas Moniz School of Health & Science, Caparica, Portugal; [d]Egas Moniz School of Health & Science, Caparica, Portugal

ABSTRACT

Adverse childhood experiences (ACEs) are linked to negative outcomes in behavior, mental health, and personality, including psychopathic traits. Positive childhood experiences (PCEs) may buffer these effects, but their role in this context remains underexplored. This study examined the association between ACEs, PCEs, and psychopathic traits, and explored whether PCEs moderate the ACEs-psychopathic traits relationship. The study included 1138 adults residing in Portugal, comprising 710 community participants recruited online (*M* age = 25.36), and 428 justice-involved individuals (*M* age = 41.03) recruited from 10 national prisons. Participants completed a sociodemographic questionnaire, the Adverse Childhood Experiences Scale, the Benevolent Childhood Experiences Scale, and the Self-Report Psychopathy Scale – Short Form. Results revealed a high prevalence of both ACEs and PCEs in both samples, with justice-involved individuals reporting a higher frequency of ACEs. The justice-involved sample also exhibited the highest scores on total psychopathy and across all psychopathy facets. No moderating effect of PCEs was found in the justice-involved sample; however, significant effects emerged in the community sample for total psychopathy and the interpersonal, affective, and lifestyle facets. These findings highlight the differential impact of PCEs across populations and suggest that their protective role may be diminished in contexts of more severe and persistent adversity.

ARTICLE HISTORY
Received 15 February 2025
Revised 24 June 2025
Accepted 14 August 2025

KEYWORDS
Adverse childhood experiences; benevolent childhood experiences; moderation; positive childhood experiences; psychopathic traits

Adverse childhood experiences (ACEs), introduced by Felitti et al. (1998), refer to negative events occurring before age 18, including abuse (emotional, physical, sexual), neglect (emotional and physical), and household dysfunction (domestic violence, parental separation, substance abuse, mental illness, or incarceration of a family member; Dube et al., 2003). ACEs are associated with

CONTACT Olga Cunha olga.cunha@psi.uminho.pt School of Psychology, University of Minho, Campus de Gualtar, Braga 4710-057, Portugal

a wide range of short- and long-term psychological and physical problems (e.g., Sahle et al., 2021), including depression, anxiety (Lipsky et al., 2022), post-traumatic stress disorder (PTSD) and complex PTSD (Frewen et al., 2019), sleep disturbances (Lee et al., 2020; Vadukapuram et al., 2022), substance use (Leza et al., 2021), antisocial personality disorders (DeLisi et al., 2019), and aggressive behavior (Zhang et al., 2022). A meta-analysis by Braga et al. (2017) of 33 longitudinal studies ($N = 23{,}973$) showed that childhood trauma significantly predicts adolescent aggression and antisocial behavior. Similarly, Braga et al. (2018) found that maltreated youth are almost twice as likely to exhibit antisocial behaviors in adulthood (Braga et al., 2018).

Beyond their well-documented consequences, ACEs are notably prevalent in families with suboptimal environments (Kessler et al., 2010; Lee et al., 2022). A major epidemiological survey involving 51,945 adults across 21 countries found that 38.8% reported at least one ACE before age 18 (Kessler et al., 2010). However, ACEs are significantly more common in forensic populations (e.g., Almeida & Costa, 2023), including individuals convicted of intimate partner violence (IPV; Hilton et al., 2019), sexual offenses (Almeida & Costa, 2023; Levenson et al., 2016), and violent crimes (e.g., Malvaso et al., 2022). High levels of psychopathy have also been linked to greater exposure to ACEs (e.g., Baskin-Sommers & Baskin, 2016).

Childhood experiences and psychopathic traits

Psychopathy is defined by a constellation of traits across interpersonal (e.g., deceitfulness and manipulation), affective (e.g., lack of empathy, remorse, or guilt), and behavioral domains (e.g., social deviance and criminality; Hare, 2003). In a later reformulation, Hare (2003) proposed a four-factor model, comprising interpersonal (e.g., pathological lying and manipulation), affective (e.g., lack of empathy, guilt, and concern for others), lifestyle (e.g., impulsivity and recklessness), and antisocial traits. While early views framed psychopathy as innate (Eaton, 1934, p. 190), recent research emphasizes the critical role of environmental influences – particularly ACEs – in the development of psychopathic traits (e.g., Baskin-Sommers & Baskin, 2016; de Ruiter et al., 2022; Estrada et al., 2020; Moreira et al., 2020).

One of the earliest studies on ACEs and psychopathic traits, conducted with 652 young adults, found that individuals with histories of abuse and neglect scored significantly higher on psychopathy measures, regardless of gender or ethnicity (Weiler & Widom, 1996). Later, Farrington (2006) identified physical neglect as particularly associated with higher psychopathy scores. A meta-analysis of 47 studies ($N = 12{,}737$) confirmed a moderate association between psychopathy and childhood maltreatment, including physical and emotional abuse and neglect, with a weaker link to sexual abuse (de Ruiter et al., 2022). Research also suggests these effects

vary by psychopathy facet. Estrada et al. (2020) found impulsive-antisocial traits amplified the link between exposure to violence and later aggression, while de Ruiter et al. (2022) reported stronger associations between ACEs and behavioral-antisocial traits than affective-interpersonal ones.

Several factors may explain the link between ACEs and psychopathic traits. Social learning theory (Bandura & Walters, 1977) suggests that early exposure to interpersonal violence can lead to its intergenerational transmission, fostering aggressive or antisocial behaviors. ACEs may also impair social cue interpretation and promote heightened threat sensitivity – adaptive in hostile environments (Bandura & Walters, 1977) but often maladaptive in adulthood, where individuals may perceive threats even in neutral situations (Heleniak & McLaughlin, 2020). Neurobiological evidence supports this connection: ACEs alter brain function, particularly in areas involved in threat processing (e.g., amygdala), reward anticipation, and emotional regulation (e.g., anterior cingulate cortex; McCrory et al., 2017). These same neural circuits are implicated in psychopathy (McCrory et al., 2017), further reinforcing the link between early adversity and psychopathic traits.

While ACEs are linked to psychopathy (Moreira et al., 2020), most individuals who experience abuse do not develop them. Individual differences influence how maltreatment is perceived and internalized, which in turn may contribute to the behavioral outcomes' variability (Kerig et al., 2023). Recent research highlights the protective role of positive childhood experiences (PCEs) in mitigating ACE-related harm (Cunha et al., 2024; Han et al., 2023). PCEs – also referred to as benevolent childhood experiences (BCEs) or counter-ACEs – include stable home environments, consistent routines, nurturing relationships, and community support (Almeida et al., 2021, Narayan et al., 2018). According to developmental psychopathology theory (Toth & Cicchetti, 2013), early positive experiences and secure relationships foster resilience, self-control, emotional regulation, and empathy – key capacities for healthy psychological development. Early social interactions – such as close bonds with caregivers and supportive relationships with family members, peers, and educators – play a foundational role in shaping healthy relational patterns and social experiences (Cicchetti & Toth, 2009). Empirical studies have shown that individuals with greater exposure to PCEs are less likely to be diagnosed with personality disorders (Saleptsi et al., 2004), and they tend to show fewer symptoms of and higher rates of remission from these disorders, even when accounting for the presence of ACEs (Gunay-Oge et al., 2020). Systematic reviews suggest PCEs enhance mental health by reducing depression, anxiety, and suicidal behaviors while improving psychosocial well-being (Cunha et al., 2024; Han et al., 2023). However, their impact on delinquent behavioral remains unclear due to limited research (Cunha et al., 2024).

Current study

ACEs have been extensively studied in both community and justice-involved samples. However, research on PCEs is still limited, especially among forensic samples (e.g., Cunha et al., 2024). Interestingly, studies highlight the lifelong protective impact of PCEs, even when ACEs and other negative experiences are present (e.g., Crouch et al., 2021). Nonetheless, systematic reviews have pointed to inconsistent findings regarding the moderating effect of PCEs (e.g., Cunha et al., 2024; Han et al., 2023) and, to the best of our knowledge, no research has specifically examined the relationship between ACEs, PCEs, and psychopathy. This study seeks to address this gap by expanding upon previous literature on the role of PCEs. Specifically, it analyses the relationship between ACEs, PCEs, and psychopathy in adulthood, including both total psychopathy scores and their facets. Additionally, it explores the moderating role of PCEs in the relationship between ACEs and psychopathy in a sample comprising male and female individuals from both community and justice settings. The following hypotheses were proposed: H1) ACEs will be positively associated with total psychopathy scores and all psychopathy facets across samples; H2) PCEs will be negatively associated with total psychopathy scores and all psychopathy facets across samples; H3) PCEs will moderate the relationship between ACEs and psychopathy in all samples.

Method

Participants

The study utilized a cross-sectional design and included 710 participants from the community and 428 justice-involved individuals (i.e., sentenced prisoners).

In the community sample, most participants were female ($n = 565$; 79.6%), aged 18–73 ($M = 25.36$, $SD = 8.51$). Most had completed higher education ($n = 307$; 43.2%) or a degree ($n = 307$, 37.7%), and more than half were single ($n = 593$; 83.5%). The justice-involved sample was predominantly male ($n = 317$; 74.1%), aged 19–84 ($M = 41.03$, $SD = 11.72$). Most had completed 6 to 9 years of education ($n = 223$, 52.1%), and 47.2% ($n = 202$) were single. Statistically significant differences were found between the groups across all sociodemographic variables (cf. Table 1). The justice-involved group included individuals convicted of violent ($n = 128$; 29.9%), nonviolent ($n = 181$; 42.3%), and both violent and nonviolent offenses ($n = 52$; 12.1%). Among nonviolent crimes, drug trafficking ($n = 100$; 55.2%) and theft ($n = 43$; 23.8%) were the most common. The most prevalent violent offenses included robbery ($n = 49$; 38.3%), domestic violence ($n = 37$; 28.9%), and homicide ($n = 29$; 22.7%).

Table 1. Sociodemographic characterization.

	Community (n = 710)		Justice-Involved (n = 428)			
	M	*SD*	*M*	*SD*	*t*	*p*
Age	25.36	8.51	41.03	11.72	25.751	<.001
	n	%	*n*	%	X^2	*p*
Gender						
Female	565	79.6	111	25.9	329.384	<.001
Male	139	19.6	317	74.1		
Non-binary	4	0.6	0	0		
Educational level						
No education	0	0	7	1.6	580.931	<.001
4th grade	3	0.4	43	10.0		
6th grade	3	0.4	106	24.8		
9th grade	17	2.4	117	27.3		
High school	268	37.7	84	19.6		
Technological Specialization	40	5.6	43	10.0		
Undergraduate	307	43.2	21	4.9		
Master	67	9.4	6	1.4		
PhD	5	0.7	0	0		
Marital status						
Single	593	83.5	202	48.0	174.187	<.001
Married/cohabitation	99	13.9	154	36.0		
Separated/divorced	16	2.3	54	12.6		
Widower	0	0	11	2.6		

Procedure

The study uses two convenience samples from Portugal: one from the general community and the other from justice-involved individuals. The study was conducted according to the ethical principles outlined in the Declaration of Helsinki (World Medical Association, 2024), and the Ethics Committee of the Lusófona University approved the research. Authorization to collect data within the justice system was obtained from the General Directorate of Reintegration and Prison Services – Ministry of Justice.

The justice-involved sample was drawn from 10 national prisons based on the following criteria: (a) being 18 years or older; and (b) having sufficient communication skills to complete the instruments (i.e., fluency in reading and writing Portuguese). Prison staff initially identified individuals who met the eligibility criteria. Researchers then approached them in person, explained the study's objectives, and obtained informed consent. Participants individually completed paper-and-pencil self-report measures.

The community sample was recruited online via a link shared through e-mail (e.g., researchers' contacts, institutional mailing lists) and social media platforms (e.g., LinkedIn, Facebook, Instagram). Individuals living in Portugal aged 18 or older and fluent in Portuguese were invited to participate.

Prior to completing the questionnaires, participants were informed about the study's objectives and provided electronic informed consent.

Participation in the study was voluntary, anonymous, and required 10 to 15 minutes. No financial compensation or incentives were offered to participants.

Measures

Sociodemographic and juridical questionnaire

A sociodemographic questionnaire was used to gather information on the following variables: age, gender, educational background, and marital status. The juridical questionnaire was used to collect information regarding the crime committed, time in prison, or penal status (i.e., first-time offenders or recidivists).

Adverse childhood experiences scale - short version (ACEs)

The ACEs (Felitti et al., 1998; Portuguese version Silva & Maia, 2008) is a self-report measure to evaluate childhood adversity through items focusing on experiences before the age of 18. The instrument includes 17 questions that measure 10 types of adversity: abuse (emotional, physical, and sexual), neglect (emotional and physical), household dysfunction (parental separation or divorce, exposure to domestic violence, household substance abuse, mental illness or suicide, and incarceration of household members). Responses are recorded on a dichotomous Yes/No scale. The presence of ACEs is identified when the participant responds affirmatively to at least one question within a specific type of adversity. The total adversity score is calculated by summing the number of adversity types endorsed, yielding a score ranging from 0 to 10. The original (Felitti et al., 1998) and the Portuguese version (Silva & Maia, 2008) demonstrated good psychometric properties. In the current sample, the internal consistency was .79.

Benevolent childhood experiences scale (BCEs)

The BCEs (Narayan et al., 2018; Portuguese version Almeida et al., 2021) assesses the presence of positive experiences and resources before the age of 18. It consists of 10 items answered on a dichotomous Yes/No scale, designed to capture relational and internal safety (e.g., "At least one caregiver with whom you felt safe"), stability (e.g., "opportunities to have a good time"), and interpersonal support (e.g., "Did you have at least one good friend?). The total score is calculated by summing the "Yes" responses, ranging from 0 to 10, with higher scores reflecting more positive experiences. The original version (Narayan et al., 2018) and the Portuguese adaptation (Almeida et al., 2021) demonstrated strong psychometric

properties. In this study, the BCEs scale showed an acceptable Cronbach's alpha of .71.

Self-report psychopathy scale – short form (SRP-SF)

The SRP-SF (Paulhus et al., 2016; Seara-Cardoso et al., 2020) is a 29-item self-report measure derived from the original 64-item SRP-4, based on the Hare Psychopathy Checklist-Revised (PCL-R). It assesses psychopathy across four facets: Interpersonal (e.g., "I would get a kick out of 'scamming' someone"), Affective (e.g., "I never feel guilty over hurting others"), Lifestyle (e.g., "I keep getting in trouble for the same things over and over"), and Antisocial (e.g., ", "I have threatened people into giving me money, clothes, or makeup"). Items are rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Total score is obtained summing all 29 items, and the facet scores by summing the responses of the respective items. Both the original (Paulhus et al., 2016) and Portuguese versions (Seara-Cardoso et al., 2020) revealed good psychometric properties. For the current sample, Cronbach's alpha for the total scale was .82, for the interpersonal facet was .72, for the affective facet was .62, for the lifestyle facet was .60, and for the antisocial facet was .84.

Socially desirable response set-5 (SDRS-5)

The SDRS-5 (Hays et al., 1989; Portuguese version Pechorro et al., 2019) is a five-item self-report scale measuring social desirability (e.g., "I am always friendly, even with people who are rude"). Items are rated on a five-point Likert scale from totally true to totally false. The total score is calculated by summing all the items, ranging from 5 to 25, with higher scores indicating greater levels of social desirability. Both the original and Portuguese versions have shown good psychometric properties. In the current sample, Cronbach's alpha was .62.

Data analysis

All statistical analyses were conducted using SPSS version 29.0. Descriptive analyses were performed to characterize the samples. ANCOVAs were used to compare samples on the main variables (i.e., ACEs, PCEs, and psychopathy), controlling for gender and social desirability. An additional ANCOVA was performed to compare social desirability scores between the justice-involved and community samples, controlling for gender. Pearson correlation coefficients were calculated to examine relationships between the study variables. Simple moderation analyses were carried out separately for the community and justice-involved samples using PROCESS macro version 4.1 for IBM SPSS software (Hayes, 2022), applying Model 1 to examine whether PCEs (W) moderated the relationship between the ACEs and psychopathy total scores and facets, controlling for gender and social desirability. This model enabled

an evaluation of the conditional effects, estimating how the relationship between predictors and outcomes varied across levels of the moderator and determining the statistical significance of these interactions.

Results

Comparison analyses

Results revealed that 72.2% ($n = 824$) of the total sample reported experiencing ACEs, while 80.8% ($n = 923$) reported experiencing eight or more PCEs. No statistical differences were observed between justice-involved individuals ($n = 312$; 72.9%) and those in the community ($n = 508$; 71.5%) regarding the prevalence of total ACEs, $X^2(1) = 0.241$, $p = .624$, *Cramer V* = .015.

However, statistically significant differences were identified in the frequency of ACEs, with incarcerated individuals reporting a higher frequency even after controlling for gender and social desirability. No significant differences were found between the groups in terms of PCEs. For psychopathy, statistically significant differences emerged between the groups after controlling for gender and social desirability. Justice-involved individuals scored significantly higher than community individuals on total psychopathy scores and all their facets. Additionally, significant differences were observed for social desirability, $F(1) = 67.582$, $p < .001$, $\eta^2 = .057$, with individuals from the community scoring higher than justice-involved individuals after controlling for gender. Detailed results are presented in Table 2.

Correlation analyses

The correlation analyses between all variables in the study by sample (i.e., community and justice-involved), are presented in Table 3.

Table 2. ANCOVA analyses comparing community and justice-involved samples in ACEs, PCEs, and psychopathy (total scores and facets), controlling for gender and social desirability.

	Community ($n = 710$)		Justice-Involved ($n = 424$)				
	M	SD	M	SD	*F*	*p*	ω^2
ACEs	2.03	1.99	2.69	2.61	24.303	<.001	.021
PCEs	8.65	1.74	8.70	1.74	0.095	.758	.000
Psychopathy	47.51	12.30	63.10	19.93	98.656	<.001	.081
Interpersonal Facet	11.96	4.53	14.29	5.86	6.688	.010	.006
Affective Facet	11.62	3.73	14.12	4.43	24.087	<.001	.021
Lifestyle Facet	13.74	4.21	17.04	6.22	35.184	<.001	.030
Antisocial Facet	9.11	2.69	15.89	5.51	441.768	<.001	.283
Social desirability[a]	17.16	3.14	12.97	3.97	247.234	<.001	.180

Note. [a]ANCOVA analysis was performed controlling for gender. ACEs = Adverse Childhood Experiences; PCEs = Positive Childhood Experiences.

Table 3. *Correlations between the ACEs, PCE, and psychopathy total score and facets on community (n = 710) and justice-involved samples (n = 428).*

Community sample							
	1	2	3	4	5	6	7
1. ACEs	1						
2. PCEs	−.478***	1					
3. Psychopathy	.202***	−.189***	1				
4. Interpersonal Facet	.144***	−.145***	.859***	1			
5. Affective Facet	.232***	−.248***	.842***	.669***	1		
6. Lifestyle Facet	.196**	−.135***	.824***	.581***	.577***	1	
7. Antisocial Facet	.063	−.070	.635***	.385***	.411***	.405***	
8. Social desirability	−.124***	.077*	−.394***	−.425***	−.331***	−.315***	−.129***
Justice-Involved Sample							
	1	2	3	4	5	6	7
1. ACEs	1						
2. PCE	−.373***	1					
3. Psychopathy	.353***	−.243***	1				
4. Interpersonal Facet	.242***	−.155**	.880***	1			
5. Affective Facet	.311***	−.287***	.819***	.705***	1		
6. Lifestyle Facet	.353***	−.253***	.910***	.719***	.665***	1	
7. Antisocial Facet	.324***	−.171***	.861***	.637***	.568***	.753***	
8. Social desirability	.211***	−.151**	.487***	.427***	.422***	.445***	.411***

Note. ** $p < .01$; *** $p < .001$. ACES = Adverse Childhood Experiences; PCE = Positive Childhood Experience.

In the community sample, significant positive correlations were found between ACEs and total psychopathy scores ($r = .202$, $p < .001$), as well as interpersonal ($r = .144$, $p < .001$), affective ($r = .232$, $p < .001$), and lifestyle psychopathy ($r = .197$, $p < .001$) facets. Negative correlations were also observed between ACEs and PCEs ($r = -.478$, $p < .001$). Furthermore, PCEs were negatively correlated with total psychopathy scores ($r = -.189$, $p < .001$) and interpersonal ($r = -.145$, $p < .001$) and affective ($r = .248$, $p < .001$) psychopathy facets. Social desirability was positively correlated to PCEs ($r = .077$, $p = .041$), and negatively correlated with ACEs ($r = -.124$, $p < .001$), total psychopathy ($r = -.394$, $p < .001$), and all the psychopathy facets (see Table 3).

In the justice-involved sample, significant positive correlations were observed between ACEs and total psychopathy scores ($r = .353$, $p < .001$), as well as all the psychopathy facets. In contrast, significant negative correlations were identified between PCEs and ACEs ($r = -.373$, $p < .001$), total psychopathy scores ($r = -.243$, $p < .001$), and all the psychopathy facets. Social desirability was positively correlated to ACEs ($r = .211$, $p < .001$), total psychopathy ($r = .487$, $p < .001$), and all psychopathy facets (see Table 3).

Moderation analysis

To test whether PCEs moderated the effect of ACEs on psychopathy (i.e., using both psychopathy total scores and facets scores), moderation analyses were performed for the community sample and the justice-involved sample, controlling for gender and social desirability, based on the correlation analyses results. Table 4 summarizes the results of the interactions between the predictor and the moderator, considering the psychopathy outcomes.

Table 4. Moderation analysis for community and justice-involved samples controlling for gender and social desirability.

	b	SE	*t*	*p*	95% CI
Community sample					
Psychopathy (outcome)					
ACEs	−1.617	0.864	−1.872	.062	[−3.313; 0.079]
PCEs	−1.715	0.400	−4.284	<.001	[−2.501; −0.929]
Interaction	0.313	0.102	3.055	.002	[0.112; 0.514]
Gender	−9.420	0.974	−9.673	<.001	[−1.592; −1.096]
Social desirability	−1.344	0.126	−10.645	<.001	[−11.332; −7.508]
Interpersonal Facet (outcome)					
ACEs	−0.576	0.328	−1.755	.080	[−1.221; 0.069]
PCEs	−0.510	0.152	−3.348	<.001	[−0.809; −0.211]
Interaction	0.094	0.039	2.403	.017	[0.017; 0.170]
Gender	−0.566	0.048	−11.786	<.001	[−0.660; −0.472]
Social desirability	−2.315	0.370	−6.252	<.001	[−3.042; −1.588]
Affective Facet (outcome)					
ACEs	−0.311	0.270	−1.152	.250	[−0.842; 0.219]
PCEs	−0.585	0.125	−4.669	<.001	[−0.831; 0.339]
Interaction	0.073	0.032	2.288	.022	[0.010; 0.136]
Gender	−0.330	0.040	−8.343	<.001	[−0.407; −0.252]
Social desirability	−2.466	0.305	−8.096	<.001	[−3.065; −1.868]
Lifestyle Facet (outcome)					
ACEs	−0.382	0.317	−1.203	.229	[−1.004; 0.241]
PCEs	−0.382	0.147	−2.597	.010	[−0.670; −0.093]
Interaction	0.092	0.038	2.440	.015	[0.018; 0.166]
Gender	−0.363	0.046	−7.841	<.001	[−0.454; −0.272]
Social desirability	−2.425	0.358	−6.782	<.001	[−3.127; −1.723]
Justice-involved sample					
Psychopathy (outcome)					
ACEs	0.826	1.528	0.540	.589	[−2.179; 3.830]
PCEs	−1.220	0.873	−1.397	.163	[−2.934; 0.496]
Interaction	0.099	0.172	0.576	.565	[−0.239; 0.438]
Gender	−9.804	1.806	−5.428	<.001	[−13.355; −6.254]
Social desirability	2.163	0.204	10.608	<.001	[1.762; 2.564]
Interpersonal Facet (outcome)					
ACEs	0.154	0.490	0.315	0.753	[−0.808; 1.116]
PCEs	−0.151	0.280	−0.540	0.590	[−0.700; 0.399]
Interaction	0.019	0.055	0.341	0.734	[−0.090; 0.127]
Gender	−2.257	0.578	−3.902	<.001	[−3.395; −1.120]
Social desirability	0.584	0.065	8.939	<.001	[0.455; 0.712]
Affective Facet (outcome)					
ACEs	0.272	0.362	0.751	.453	[−0.440; 0.983]
PCEs	−0.401	0.207	−1.941	.053	[−0.807; 0.005]
Interaction	0.002	0.041	0.043	.966	[−0.078; 0.082]
Gender	−1.246	0.428	−2.914	.004	[−2.087; −0.405]
Social desirability	0.406	0.048	8.418	<.001	[0.312; 0.501]
Lifestyle Facet (outcome)					
ACEs	−0.021	0.488	−0.042	.966	[−0.980; 0.939]
PCEs	−0.581	0.279	−2.085	.038	[−1.129; −0.033]
Interaction	0.064	0.055	1.162	.246	[−0.044; 0.172]
Gender	−3.013	0.577	−5.226	<.001	[−4.147; −1.880]
Social desirability	0.602	0.065	9.256	<.001	[0.475; 0.730]
Antisocial Facet (outcome)					
ACEs	0.294	0.447	0.658	.511	[−0.585; 1.172]
PCEs	−0.105	0.255	−0.412	.681	[−0.607; 0.397]
Interaction	0.021	0.050	0.422	.673	[−0.078; 0.120]
Gender	−2.879	0.528	−5.451	<.001	[−3.917; −1.840]
Social desirability	0.504	0.060	8.462	<.001	[0.387; 0.622]

Note. ACEs = Adverse Childhood Experiences; PCEs = Positive Childhood Experiences.

For the community sample, four moderation analyses were conducted using psychopathy total scores and interpersonal, affective, and lifestyle facets as outcomes. The analyses revealed that when ACEs and PCEs were entered simultaneously as predictors of psychopathic traits, PCEs made a significant contribution to the model – whether for total psychopathy or its interpersonal, affective, and lifestyle facets – whereas ACEs did not. In addition, the results revealed statistically significant interactions between ACEs and PCEs in predicting overall psychopathy ($b = 0.313$; $SE = 0.102$; $t = 3.055$; $p = .002$), and interpersonal ($b = 0.094$; $SE = 0.039$; $t = 2.403$; $p = .017$), affective ($b = 0.073$; $SE = 0.032$; $t = 2.288$; $p = .022$), and lifestyle facets ($b = 0.092$; $SE = 0.038$; $t = 2.440$; $p = .015$).

For the justice-involved sample, five moderation analyses were conducted, with total psychopathy scores and all the psychopathy facets as outcomes. The analysis revealed that when ACEs and PCEs were entered into the same model as predictors of psychopathy lifestyle facet, PCEs made a significant contribution to the model, but ACEs did not. However, no statistically significant interactions between ACEs and PCEs in predicting overall psychopathy ($b = 0.099$; $SE = 0.172$; $t = 0.576$; $p = .565$), or its facets (interpersonal: $b = 0.019$; $SE = 0.055$; $t = 0.341$; $p = .734$; affective: $b = 0.002$; $SE = 0.041$; $t = 0.043$; $p = .966$; lifestyle: $b = 0.064$; $SE = 0.055$; $t = 1.162$; $p = .246$; antisocial: $b = 0.021$; $SE = 0.050$; $t = 0.422$; $p = .673$) were found.

Discussion

The present study investigates the association between ACEs, PCEs, and psychopathy in adulthood, considering both overall psychopathy scores and their distinct facets. Furthermore, it explores the moderating effect of PCEs on the relationship between ACEs and psychopathy in a sample of male and female individuals from community and justice contexts.

The results reveal a high prevalence of ACEs in both samples. The justice-involved sample showed a higher mean ACEs score than typically reported for men who perpetrated IPV (Hilton et al., 2019) but lower than for men who have committed sex crimes (Levenson et al., 2016). This variation may be due to the diversity of offenses represented in the sample. Surprisingly, ACEs prevalence did not significantly differ between the justice-involved and community samples, despite prior research suggesting that individuals with zero ACEs are more common in community populations (e.g., Levenson et al., 2016; Vitopoulos et al., 2018). However, when considering ACEs frequency, justice-involved individuals reported more ACEs, consistent with literature showing higher rates of physical, psychological, and sexual abuse and neglect in forensic populations (e.g., Levenson et al., 2016; Vitopoulos et al., 2018).

Both samples also showed a high prevalence of PCEs, with no significant differences. The average number of PCEs was like that found in general population studies (e.g., Chaudhary et al., 2025) and unexpectedly higher than typically reported in offender samples (e.g., Craig et al., 2022). Given the limited research on PCEs among individuals who commit crimes (Cunha et al., 2024; Han et al., 2023; Sousa et al., 2025) these findings align with other Portuguese studies reporting similar PCEs prevalence (e.g., Almeida, Guarda, et al., 2024; Almeida et al., 2023). Overall, the results underscore that ACEs and PCEs often coexist, and the presence of ACEs does not preclude the occurrence of PCEs (e.g., Han et al., 2023).

Our findings revealed significantly higher psychopathy scores – both overall and across facets – in the justice-involved sample compared to the community sample. This aligns with prior research, as psychopathy is characterized by traits such as lack of empathy, impulsivity, and criminal versatility (Hare, 2003), which are more prevalent in correctional populations (e.g., Baskin-Sommers & Baskin, 2016). The justice-involved sample's scores are consistent with those reported in other incarcerated populations (e.g., Garofalo et al., 2020), while the community sample's scores align with the Portuguese SRP-SF validation (Seara-Cardoso et al., 2020) and similar non-forensic studies (e.g., Garofalo et al., 2020). These results support existing evidence that psychopathy is more common in forensic populations (28% to 34%; Fox & DeLisi, 2019) than in the general population (around 1.2%; Sanz-García et al., 2021). However, results should be interpreted cautiously due to gender differences between samples – the justice-involved sample was predominantly male, and the community sample mostly female. Since men typically score higher on psychopathy measures (Spormann et al., 2023), this imbalance may have influenced the findings.

Our findings indicated a positive correlation between ACEs and nearly all psychopathy facets in the community sample, except the antisocial facet. In the forensic sample, ACEs were positively and significantly correlated with all psychopathy facets. These results partially align with prior research (e.g., de Ruiter et al., 2022; van Beeck et al., 2024) and support emerging theories on complex trauma's role in personality disorders development (de Ruiter et al., 2022). While not all ACEs are traumatic, certain experiences can have traumatic effects (Remmers et al., 2024) – particularly those disrupting secure attachment to primary caregivers (Cook et al., 2005). Such ACEs may foster insecure attachment styles linked to psychopathic traits (van Beeck et al., 2024) and trigger a persistent "survival mode" that impairs self-regulation, attention, and memory (Ford, 2005). When ACEs involve caregivers, they also may lead to blunted or dissociative stress responses, central to the affective component of psychopathy (Viding & McCrory, 2019). More research is needed to further clarify these relationships.

Moreover, PCEs showed negative correlations with total psychopathy scores and some facets in both samples, suggesting a protective role against personality disorders development (e.g., Cunha et al., 2024, Narayan et al., 2018). Although PCEs have been widely studied, their impact on psychopathic traits remains underexplored (e.g., Cunha et al., 2024; Han et al., 2023). In the community sample, PCEs were not associated with the antisocial and lifestyle facets, suggesting limited influence on these traits despite their environmental sensitivity (Hicks et al., 2012). Since ACEs were significantly related to the lifestyle facet, this may indicate a stronger influence of adversity on impulsive traits than PCEs. No significant correlations were found between ACEs or PCEs and the antisocial facet in the community sample, possibly reflecting low antisocial behavior levels. Further research is necessary to confirm these assumptions.

Our findings also revealed a negative correlation between PCEs and ACEs in both samples, aligning with previous research (e.g., Almeida & Costa, 2023; Almeida et al., 2023; Bethell et al., 2019). This suggests that children facing adversity may have limited access to protective relationships and supportive resources (Morris & Hays-Grudo, 2023). The results further reinforce that ACEs and PCEs are distinct but often interrelated constructs – ACEs do not necessarily preclude the occurrence of PCEs (e.g., Han et al., 2023). This negative correlation is unsurprising, especially when adversity stems from the same individuals or environments that are supposed to offer protection and positive experiences (Han et al., 2023).

The moderation analyses revealed distinct patterns across the two samples. In the justice-involved sample, PCEs did not moderate the relationship between ACEs and psychopathy scores. Despite a high number of reported PCEs, the elevated prevalence of ACEs suggests their harmful effects may override any protective influence. This is consistent with findings from a recent systematic review, which noted that individuals with high PCEs may still experience strong negative outcomes associated with ACEs (Han et al., 2023). Moreover, research has shown that PCEs do not always mitigate the harmful consequences of ACEs, especially when both types of experiences stem from the same sources – such as within the family – which may further undermine their protective potential (e.g., Cunha et al., 2024; Han et al., 2023; Sousa et al., 2025). In contrast, moderation effects emerged within the community sample. Here, PCEs significantly moderated the relationship between ACEs and total psychopathy scores, as well as the interpersonal, affective, and lifestyle facets. These findings are consistent with recent studies in community settings (e.g., Garofalo et al., 2025) and suggest that, in less adverse contexts, PCEs may help buffer the long-term psychological effects of early adversity (Almeida, Cardoso et al., 2024; Crandall et al., 2019). This supports developmental psychopathology theory (Toth & Cicchetti, 2013), which posits that early positive experiences and secure relationships provide a foundation for

developing core adaptive capacities – such as resilience, self-control, emotional regulation, and empathy – that protect against maladaptive trajectories and mental health problems. However, the protective effects of PCEs do not seem to be present equally for all individuals. Its impact may be constrained by the severity and persistence of ACEs, which can become traumatic and disrupt key regulatory systems. Such disruptions increase the risk of cognitive, emotional, and social impairments, as well as engagement in risky behaviors and susceptibility to chronic health conditions – outcomes that PCEs alone may not be sufficient to counteract (Cicchetti, 2016; Hoppen & Chalder, 2018). This may explain why, in the justice-involved sample – where histories of ACEs are more prevalent and severe than in the general population (e.g., Bianchini et al., 2022) – PCEs fail to provide the same moderating effect observed in the community sample.

Limitations and strengths

This study has several limitations that should be considered. First, as a cross-sectional study, ACEs and PCEs were assessed retrospectively, meaning responses may be influenced by memory recall biases. Future research should consider longitudinal designs to address this issue. Second, the instruments used to assess PCEs and ACEs were dichotomous (yes/no), preventing the evaluation of the severity or chronicity of these experiences, which could impact the results. Third, the two samples were collected using different methods (online survey and paper-and-pencil), which may have influenced participants' responses, as the online data collection environment could not be controlled. Additionally, because the community sample completed the protocol online, participation was limited to individuals with internet access. Fourth, the samples were not homogeneous, which may have influenced some findings. Specifically, the community sample was predominantly composed of highly educated women, whereas the justice-involved sample consisted mainly of men with lower education levels. Fifth, both samples were convenience samples and, as such, are not representative of the Portuguese prison or general community population, limiting the generalizability of the results. Finally, self-report measures may be influenced by social desirability bias. Although efforts were made to control this factor, it may still have affected the findings.

Despite its limitations, the study offers several notable strengths. First, it explores a complex and under-researched topic by examining the interplay between ACEs, PCEs, and psychopathy in both community and justice-involved samples, providing a broader perspective on these relationships. The inclusion of two distinct samples enhances the study's generalizability and contributes valuable insights into how childhood experiences shape

psychopathic traits across different populations. Additionally, the study advances the growing literature on PCEs, highlighting their role in developmental outcomes. Notably, it reinforces the notion that while PCEs are generally beneficial, they do not always buffer the negative effects of ACEs, suggesting that other factors may influence the relationship between ACEs and psychopathy. By emphasizing both positive and adverse early-life experiences, the study offers a more comprehensive view of how these factors interact. Furthermore, the findings underscore the complexity of using self-report tools to measure psychopathy and shed light on the nuanced relationship between childhood experiences and psychopathic traits in adulthood. The results contribute to theoretical discussions in developmental psychopathology by demonstrating that ACEs and PCEs – and their interactions – require further investigation.

The study has also important implications for mental health, criminal justice, and social intervention. The positive association between psychopathy and ACEs, coupled with the negative correlation between psychopathy and PCEs, highlights the need for comprehensive strategies to mitigate the long-term effects of childhood adversity. Given the higher frequency of ACEs among justice-involved individuals, routine screening for childhood adversity should be a standard component of risk assessments. Preventative programs should prioritize early childhood interventions to reduce the likelihood of developing psychopathic traits. The study's findings suggest that fostering secure attachments and stable social environments could play a key role in preventing future antisocial behavior. Schools and child welfare agencies should implement programs that strengthen social bonding and resilience, helping children develop positive factors against adversity. Furthermore, intervention programs aimed at improving family caregiving skills and encouraging positive peer relationships may enhance resilience and better equip individuals to cope with childhood adversity.

From a policy perspective, criminal justice systems should prioritize rehabilitation, particularly for individuals with significant adverse histories. Implementing therapeutic court systems that integrate mental health treatment and vocational training may help reduce recidivism. Additionally, strengthening community-based interventions – such as peer-support programs and group therapy – can enhance social support networks for trauma survivors, promoting prosocial behavior. By integrating these strategies, policymakers, practitioners, and researchers can better address the complex relationship between childhood adversity and psychopathy, ultimately fostering more effective prevention and intervention efforts.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This study was funded by Fundação para a Ciência e Tecnologia (FCT), under HEI-Lab R&D Unit (UIDB/05380/2020, https://doi.org/10.54499/UIDB/05380/2020). This study was also conducted at the Psychology Research Centre (PSI/01662), School of Psychology, University of Minho, supported by the Foundation for Science and Technology (FCT) through the Portuguese State Budget (UIDB/01662/2020). CiiEM has provided support through Project 10.54499/UIDB/04585/2020, funded by the FCT (Foundation for Science and Technology).

ORCID

Olga Cunha http://orcid.org/0000-0001-9747-2343
Marta Sousa http://orcid.org/0000-0003-3258-9932
Telma C. Almeida http://orcid.org/0000-0002-3354-7809
Renata Guarda http://orcid.org/0000-0002-9168-1651
Ana Rita Cruz http://orcid.org/0000-0001-5320-884X

Data availability statement

The datasets generated during and/or analyzed during the current study are not publicly available due to confidentiality of the data but are available from the corresponding author on reasonable request. The data presented in this study are available on request from the corresponding author due to privacy issues

Ethical standards and informed consent

All procedures performed were in accordance with the ethical standards of the institutional ethics committee and with the 1964 Helsinki declaration and its later amendments. The current study is part of a research project approved by the Lusófona University Ethics Committee. The study was conducted in accordance with the Declaration of Helsinki and approved by the Lusófona University Ethics Committee (CEDIC-2020–15–8 on December 15, 2020). Informed consent was obtained from all subjects involved in the study.

References

Almeid, T. C., Guarda, R., & Cunha, O. (2021). Positive childhood experiences and adverse experiences: Psychometric properties of the benevolent childhood experiences scale (BCES) among the Portuguese population. *Child Abuse and Neglect*, *120*, 105179. https://doi.org/10.1016/j.chiabu.2021.105179

Almeida, T. C., Cardoso, J., Matos, A. F., Murça A., Cunha, O. (2024). Adverse childhood experiences and aggression in adulthood: The moderating role of positive childhood experiences. *Child Abuse and Neglect*, *154*, 106929. https://doi.org/10.1016/j.chiabu.2024.106929

Almeida, T. C., & Costa, M. (2023). Benevolent and adverse childhood experiences and attachment in adulthood: A comparative study between sex offenders and the general population. *Crime & Delinquency*. https://doi.org/10.1177/00111287231172716

Almeida, T. C., Fernandes, R. M., & Cunha, O. (2023). The role of positive childhood experiences in the link between childhood maltreatment and affective lability in a sample

of incarcerated men and women. *Child Abuse and Neglect*, *135*, 105969. https://doi.org/10.1016/j.chiabu.2022.105969

Almeida, T. C., Guarda, R., & Cunha, O. (2021). Positive childhood experiences and adverse experiences: Psychometric properties of the benevolent childhood experiences scale (BCES) among the Portuguese population. *Child Abuse and Neglect*, *120*, 105179. https://doi.org/10.1016/j.chiabu.2021.105179

Almeida, T. C., Guarda, R., & Cunha, O. (2024). Childhood maltreatment and empathy in community and justice samples: The moderating role of positive childhood experiences. *Deviant Behavior*, 1–18. https://doi.org/10.1080/01639625.2024.2385924

Bandura, A., & Walters, R. H. (1977). *Social learning theory*. Prentice Hall.

Baskin-Sommers, A., & Baskin, D. (2016). Psychopathic traits mediate the relationship between exposure to violence and violent juvenile offending. *Journal of Psychopathology & Behavioral Assessment*, *38*(3), 341–349. https://doi.org/10.1007/s10862-016-9535-0

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive childhood experiences and adult mental and relational health in a statewide sample: Association across adverse childhood experiences levels. *JAMA Pediatrics*, *173*(11), 1–10. https://doi.org/10.1001/jamapediatrics.2019.3007

Bianchini, V., Paoletti, G., Ortenzi, R., Lagrotteria, B., Roncone, R., Cofini, V., & Nicolò, G. (2022). The prevalence of PTSD in a forensic psychiatric setting: The impact of traumatic lifetime experiences. *Frontiers in Psychiatry*, *13*, 843730. https://doi.org/10.3389/fpsyt.2022.843730

Braga, T., Cunha, O., & Maia, Â. (2018). The enduring effect of maltreatment on antisocial behavior: A meta-analysis of longitudinal studies. *Aggression & Violent Behavior*, *40*, 91–100. https://doi.org/10.1016/j.avb.2018.04.003

Braga, T., Goncalves, L. C., Basto-Pereira, M., & Maia, A. (2017). Unraveling the link between maltreatment and juvenile antisocial behavior: A meta-analysis of prospective longitudinal studies. *Aggression & Violent Behavior*, *33*, 37–50. https://doi.org/10.1016/j.avb.2017.01.006

Chaudhary, V., Walia, G. K., Devi, N. K., & Saraswathy, K. N. (2025). Prevalence and predictors of positive childhood experiences and their relationship with adverse childhood experiences among young adults in Delhi-NCR, India. *The International Journal of Social Psychiatry*, *207640241310188*(5), 932–944. https://doi.org/10.1177/00207640241310188

Cicchetti, D. (2016). Socioemotional, personality, and biological development: Illustrations from a multilevel developmental psychopathology perspective on child maltreatment. *The Annual Review of Psychology*, *67*(1), 187–211. https://doi.org/10.1146/annurev-psych-122414-033259

Cicchetti, D., & Toth, S. L. (2009). The past achievements and future promises of developmental psychopathology: The coming of age of a discipline. *Journal of Child Psychology and Psychiatry*, *50*(1–2), 16–25. https://doi.org/10.1111/j.1469-7610.2008.01979.x

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R., Hubbard, R., Kagan, R., Liautaud, J., Mallah, K., Olafson, E., & van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, *35*(5), 390–398. https://doi.org/10.3928/00485713-20050501-05

Craig, J. M., Wolff, K. T., & Baglivio, M. T. (2022). Clustering of adverse and positive childhood experiences: The nature and correlates of risk and protective factors. *Child Abuse and Neglect*, *134*, 105878. https://doi.org/10.1016/j.chiabu.2022.105878

Crandall, A., Miller, J. R., Cheung, A., Novilla, L. K., Glade, R., Novilla, M. L. B., Magnusson, B. M., Leavitt, B. L., Barnes, M. D., & Hanson, C. L. (2019). Aces and counter-ACEs: How positive and negative childhood experiences influence adult health. *Child Abuse and Neglect*, *96*, 104089. https://doi.org/10.1016/j.chiabu.2019.104089

Crouch, E., Radcliff, E., Merrell, M. A., Hung, P., & Bennett, K. J. (2021). Positive childhood experiences promote school success. *Maternal and Child Health Journal*, *25*(10), 1646–1654. https://doi.org/10.1007/s10995-021-03206-3

Cunha, O., Sousa, M., Pereira, B., Pinheiro, M., Machado, A. B., Caridade, S., & Almeida, T. C. (2024). Positive childhood experiences and adult outcomes: A systematic review. *Trauma, Violence & Abuse*. https://doi.org/10.1177/15248380241299434

DeLisi, M., Drury, A. J., & Elbert, M. J. (2019). The etiology of antisocial personality disorder: The differential roles of adverse childhood experiences and childhood psychopathology. *Comprehensive Psychiatry*, *92*, 1–6. https://doi.org/10.1016/j.comppsych.2019.04.001

de Ruiter, C., Burghart, M., De Silva, R., Griesbeck Garcia, S., Mian, U., Walshe, E., & Zouharova, V. (2022). A meta-analysis of childhood maltreatment in relation to psychopathic traits. *PLOS ONE*, *17*(8), e0272704. https://doi.org/10.1371/journal.pone.0272704

Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics*, *111*(3), 564–572. https://doi.org/10.1542/peds.111.3.564

Eaton, H. D. (1934). Constitutional psychopathic state. *California and Western Medicine*, *40*(3), 190–191.

Estrada, S., Cinguina, M., & Baskin-Sommers, A. (2020). The role of exposure to violence and psychopathy on violent crime perpetration. *Journal of Psychopathology & Behavioral Assessment*, *43*(2), 320–331. https://doi.org/10.1007/s10862-020-09834-3

Farrington, D. P. (2006). Key longitudinal-experimental studies in criminology. *Journal of Experimental Criminology*, *2*(2), 121–141. https://doi.org/10.1007/s11292-006-9000-2

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *The American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/10.1016/s0749-3797(98)00017-8

Ford, J. D. (2005). Treatment implications of altered affect regulation and information processing following child maltreatment. *Psychiatric Annals*, *35*(5), 410–419. https://doi.org/10.3928/00485713-20050501-07

Fox, B. H., & DeLisi, M. (2019). Psychopathic killers: A meta-analytic review of the psychopathy-homicide nexus. *Aggression & Violent Behavior*, *44*, 67–79. https://doi.org/10.1016/j.avb.2018.11.005

Frewen, P., Zhu, J., & Lanius, R. (2019). Lifetime traumatic stressors and adverse childhood experiences uniquely predict concurrent PTSD, complex PTSD, and dissociative subtype of PTSD symptoms whereas recent adult non-traumatic stressors do not: Results from an online survey study. *European Journal of Psychotraumatology*, *10*(1), Article 1606625. https://doi.org/10.1080/20008198.2019.1606625

Garofalo, C., Delvecchio, E., Bogaerts, S., Sellbom, M., & Mazzeschi, C. (2025). Childhood trauma and psychopathy: The moderating role of resilience. *Psychological Trauma : Theory, Research, Practice and Policy*, *17*(3), 511–519. https://doi.org/10.1037/tra0001687

Garofalo, C., Neumann, C. S., & Velotti, P. (2020). Psychopathy and aggression: The role of emotion dysregulation. *Journal of Interpersonal Violence*, *36*(23–24), NP12640–NP12664. https://doi.org/10.1177/0886260519900946

Gunay-Oge, R., Pehlivan, F. Z., & Isikli, S. (2020). The effect of positive childhood experiences on adult personality psychopathology. *Personality & Individual Differences*, *158*, 109862. https://doi.org/10.1016/j.paid.2020.109862

Han, D., Dieujuste, N., Doom, J. R., & Narayan, A. J. (2023). A systematic review of positive childhood experiences and adult outcomes: Promotive and protective processes for

resilience in the context of childhood adversity. *Child Abuse and Neglect*, *144*, 106346. https://doi.org/10.1016/j.chiabu.2023.106346

Hare, R. D. (2003). *Hare psychopathy checklist-revised* (2nd ed.). Multi-Health Systems.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). The Guilford Press.

Hays, R. D., Hayashi, T., & Stewart, A. L. (1989). A five-item measure of socially desirable response set. *Educational and Psychological Measurement*, *49*(3), 629–636. https://doi.org/10.1177/001316448904900315

Heleniak, C., & McLaughlin, K. A. (2020). Social-cognitive mechanisms in the cycle of violence: Cognitive and affective theory of mind, and externalizing psychopathology in children and adolescents. *Development & Psychopathology*, *32*(2), 735–750. https://doi.org/10.1017/S0954579419000725

Hicks, B. M., Carlson, M. D., Blonigen, D. M., Patrick, C. J., Iacono, W. G., & Mgue, M. (2012). Psychopathic personality traits and environmental contexts: Differential correlates, gender differences, and genetic mediation. *Personality Disorders*, *3*(3), 209–227. https://doi.org/10.1037/a0025084

Hilton, N. Z., Ham, E., & Green, M. M. (2019). Adverse childhood experiences and criminal propensity among intimate partner violence offenders. *Journal of Interpersonal Violence*, *34* (19), 4137–4161. https://doi.org/10.1177/0886260516674943

Hoppen, T. H., & Chalder, T. (2018). Childhood adversity as a transdiagnostic risk factor for affective disorders in adulthood: A systematic review focusing on biopsychosocial moderating and mediating variables. *Clinical Psychology Review*, *65*, 81–151. https://doi.org/10.1016/j.cpr.2018.08.002

Kerig, P. K., Mendez, L., Alexander, A., & Chen, S. (2023). Psychopathology as a cause or consequence of youth gang involvement. In D. C., Pyrooz, J. A., Densley, & J., Leverso (Eds.), *The handbook of gangs and society* (pp. 470–498). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197618158.013.10

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., Williams, D. R., Alhamzawi, A. O., Alonso, J., Angermeyer, M., Benjet, C., Bromet, E., Chatterji, S., de Girolamo, G., Demyttenaere, K., Fayyad, J., Florescu, S., Gal, G.Gureje, O. . . . Viana, M. C. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *British Journal of Psychiatry*, *197*(5), 378–385. https://doi.org/10.1192/bjp.bp.110.080499

Lee, H., Boyd, R., Slack, S., Mather, R. S., & Murray, R. K. (2022). Adverse childhood experiences, positive childhood experiences, and adult health. *Journal of the Society for Social Work and Research*, *13*(3), 441–461. https://doi.org/10.1086/712410

Lee, H. Y., Kim, I., Nam, S., & Jeong, J. (2020). Adverse childhood experiences and the associations with depression and anxiety in adolescents. *Children & Youth Services Review*, *111*, Article 104850. 104850. https://doi.org/10.1016/j.childyouth.2020.104850

Levenson, J., Willis, G., & Prescott, D. (2016). Adverse childhood experiences in the lives of male sex offenders: Implications for trauma-informed care. *Sexual Abuse*, *28*(4), 340–359. https://doi.org/10.1177/1079063214535819

Leza, L., Siria, S., López-Goñi, J. J., & Fernandez-Montalvo, J. (2021). Adverse childhood experiences (ACEs) and substance use disorder (SUD): A scoping review. *Drug & Alcohol Dependence*, *221*, 108563. https://doi.org/10.1016/j.drugalcdep.2021.108563

Lipsky, R. K., McDonald, C. C., Souders, M. C., Carpio, C. C., & Teitelman, A. M. (2022). Adverse childhood experiences, the serotonergic system, and depressive and anxiety disorders in adulthood: A systematic literature review. *Neuroscience and Biobehavioral Reviews*, *134*, 104495. https://doi.org/10.1016/j.neubiorev.2021.12.018

Malvaso, J., Day, T., Whitten, A., Hackett, S., Singh, T., Delfabbro, P., Ross, S., & Ross, S. (2022). Associations between adverse childhood experiences and trauma among young people who offend: A systematic literature review. *Trauma, Violence & Abuse*, *23*(5), 1677–1694. https://doi.org/10.1177/15248380211013132

McCrory, E. J., Gerin, M. I., & Viding, E. (2017). Annual research review: Childhood maltreatment, latent vulnerability and the shift to preventative psychiatry-the contribution of functional brain imaging. *Journal of Child Psychology and Psychiatry*, *58*(4), 338–357. https://doi.org/10.1111/jcpp.12713

Moreira, D., Moreira, D. S., Oliveira, S., Ribeiro, F. N., Barbosa, F., Fávero, M., & Gomes, V. (2020). Relationship between adverse childhood experiences and psychopathy: A systematic review. *Aggression & Violent Behavior*, *53*, 101452. https://doi.org/10.1016/j.avb.2020.101452

Morris, A. S., & Hays-Grudo, J. (2023). Protective and compensatory childhood experiences and their impact on adult mental health. *World Psychiatry*, *22*(1), 150–151. https://doi.org/10.1002/wps.21042

Narayan, A. J., M, R. L., E, B. R., W, H. W., & F, L. A. (2018). Positive childhood experiences predict less psychopathology and stress in pregnant women with childhood adversity: A pilot study of the benevolent childhood experiences (BCEs) scale. *Child Abuse and Neglect*, *78*, 19–30. https://doi.org/10.1016/j.chiabu.2017.09.022

Paulhus, D. L., Neumann, C. S., & Hare, R. D. (2016). *The srp-4: Self-report psychopathy scale* Edition, 4th ed.

Pechorro, P., Nunes, C., Abrunhosa, R., Neves, S., & Simões, R. (2019). The socially desirable response set: Validation among a school sample of Portuguese youth. *Revista Iberoamericana de Diagnóstico e Avaliação Psicológica*, *3*(52), 15–25. https://doi.org/10.21865/RIDEP52.3.02

Remmers, M. C. C., Reijs, R. P., & Hoebe, C. J. P. A. (2024). Defining and distinguishing early life stress, trauma, adversity, toxic and chronic stress and allostatic load: A descriptive review. *Scandinavian Journal of Public Health*, *14034948241260105*. Advance online publication. 6), 670–684. https://doi.org/10.1177/14034948241260105

Sahle, B. W., Reavley, N. J., Li, W., Morgan, A. J., Yap, M. B. H., Reupert, A., & Jorm, A. F. (2021). The association between adverse childhood experiences and common mental disorders and suicidality: An umbrella review of systematic reviews and meta-analyses. *European Child and Adolescent Psychiatry*, *31*(10), 1–11. https://doi.org/10.1007/s00787-021-01745-2

Saleptsi, E., Bichescu, D., Rockstroh, B., Neuner, F., Schauer, M., Studer, K., Hoffmann, K., & Elbert, T. (2004). Negative and positive childhood experiences across developmental periods in psychiatric patients with different diagnoses – an explorative study. *BMC Psychiatry*, *4*(1), 1–14. https://doi.org/10.1186/1471-244X-4-40

Sanz-García, A., Gesteira, C., Sanz, J., & García-Vera, M. P. (2021). Prevalence of psychopathy in the general adult population: A systematic review and meta-analysis. *Frontiers in Psychology*, *12*, 661044. https://doi.org/10.3389/fpsyg.2021.661044

Seara-Cardoso, A., Queirós, A., Fernandes, E., Coutinho, J., & Neumann, C. (2020). Psychometric properties and construct validity of the short version of the self-report psychopathy scale in a Southern European sample. *Journal of Personality Assessment*, *102*(4), 457–468. https://doi.org/10.1080/00223891.2019.1617297

Silva, S., & Maia, Â. (2008). Versão portuguesa do Family ACE Questionnaire (Questionário da História de Adversidade na Infância) [Portuguese version of the Family ACE Questionnaire] Versão portuguesa do Family ACE Questionnaire (Questionário da História de Adversidade na Infância) [Portuguese version of the Family ACE Questionnaire]. In A. Noronha, C. Machado, L. Almeida, M. Gonçalves, S. Martins, & V. Ramalho (Eds.), *Actas da XIII*

Conferência Internacional de Avaliação Psicológica: Formas e Contextos. Psiquilibrios Edições.

Sousa, M., Machado, A. B., Pinheiro, M., Pereira, B., Caridade, S., Almeida, T. C., Cruz, A. R., & Cunha, O. (2025). The impact of positive childhood experiences: A systematic review focused on children and adolescents. *Trauma, Violence & Abuse*, 15248380251320978. Advance online publication. https://doi.org/10.1177/15248380251320978

Spormann, S. S., Mokros, A., & Schneider, S. (2023). Structural differences in psychopathy between women and men: A latent modeling perspective. *Forensische Psychiatrie, Psychologie, Kriminolojie*, *17*(2), 174–188. https://doi.org/10.1007/s11757-023-00765-9

Toth, S. L., & Cicchetti, D. (2013). A developmental psychopathology perspective on child maltreatment. *Child Maltreatment*, *18*(3), 135–139. https://doi.org/10.1177/1077559513500380

Vadukapuram, R., Shah, K., Ashraf, S., Srinivas, S., Elshokiry, A. B., Trivedi, C., Jain, S., & Jain, S. (2022). Adverse childhood experiences and their impact on sleep in adults: A systematic review. *Journal of Nervous & Mental Disease*, *210*(6), 397–410. https://doi.org/10.1097/NMD.0000000000001480

van Beeck, M., Bogaerts, S., Sellbom, M., Somma, A., Fossati, A., Brehmer, Y., Jankovic, M., & Garofalo, C. (2024). The relationship between experiencing childhood trauma and psychopathic personality traits: The mediating role of insecure attachment. *Journal of Aggression, Maltreatment, & Trauma*, *33*(9), 1055–1072. https://doi.org/10.1080/10926771.2024.2381558

Viding, E., & McCrory, E. (2019). Towards understanding atypical social affiliation in psychopathy. *Lancet Psychiatry*, *6*(5), 437–444. https://doi.org/10.1016/S2215-0366(19)30049-5

Vitopoulos, N. A., Peterson-Badali, M., Brown, S., & Skilling, T. A. (2018). The relationship between trauma, recidivism risk, and reoffending in male and female juvenile offenders. *Journal of Child & Adolescent Trauma*, *12*(3), 351–364. https://doi.org/10.1007/s40653-018-0238-4

Weiler, B. L., & Widom, C. S. (1996). Psychopathy and violent behaviour in abused and neglected young adults. *Criminal Behaviour & Mental Health*, *6*(3), 253–271. https://doi.org/10.1002/cbm.99

World Medical Association. (2024). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA*. https://doi.org/10.1001/jama.2024.21972

Zhang, K., Wu, B., & Zhang, W. (2022). Adverse childhood experiences in relation to comorbid cardiovascular diseases and diabetes among middle-aged and old adults in China. *Geriatrics & Gerontology International*, *22*(1), 12–18. https://doi.org/10.1111/ggi.14312