
THE MEDIATING EFFECT OF PERSONALITY ON THE RELATIONSHIP BETWEEN CHILDHOOD ABUSE AND ADULT AGGRESSION AND EMOTIONALITY

Candy Silva

*University Institute of Maia.,
Portugal*

Marisalva Fávero

*University Institute of Maia and
University of Porto, Portugal*

Diana Moreira

*Catholic University of Portugal
and University of Porto Portugal*

Patrícia Moreira

*University Institute of Maia.,
Portugal*

Valéria Gomes

*University Institute of Maia and
University of Porto, Portugal*

Ângela Leite *

*Catholic University of Portugal,
Portugal*

Abstract

The relationship between adverse childhood experiences (ACEs), life history, aggressive behaviour, and emotional regulation has been explored extensively, but the moderating role of personality in these dynamics remains insufficiently understood. Hence, the primary aim of this study is to investigate the effects of childhood sexual abuse (CSA) on aggression, emotion regulation, and personality traits in a sample of Portuguese adults. This is a cross-sectional study including 609 individuals of Portuguese descent who are 18 years old or older who were assessed through an online data collection approach. The variables under scrutiny were assessed by the Impulsive and Premeditated Aggression Scale, the Life History of Aggression Questionnaire, the Childhood Adversity History Questionnaire, the Emotional Regulation Difficulties Scale, the NEO-Five Factor Inventory, and the Triarchic Psychopathy Measure Screening. Findings reveal that CSA significantly predicts aggressive behaviour (16.7%) and emotion dysregulation (9.5%), with higher levels observed in individuals exposed to CSA, especially men. Additionally, CSA correlates with neuroticism (3.1%) and psychopathy traits like disinhibition (13.7%) and meanness (13.4%), though not boldness. Gender differences indicate that neuroticism is higher in men, while women show greater openness and conscientiousness. The research underscores that CSA contributes to the development of adverse personality traits and behaviours due to emotional and social disruptions. Also, psychopathic traits mediate the relationship between ACEs and adult aggression through several pathways, and personality mediates the relationship between ACEs and life history strategies as well as emotional regulation through its influence on impulsivity, risk-taking, emotional stability, and coping mechanisms.

Correspondence concerning this paper should be addressed to:

* Ph.D., Catholic University of Portugal, Department of Center for Philosophical and Humanistic Studies, Braga, Portugal. Address: St. Camões, Braga, Portugal. E-mail: aleite@ucp.pt

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Introduction

A World Health Organization report states that sexual violence is a global health crisis, with 20% of females and 5-10% of males experiencing childhood sexual abuse (Grady et al., 2017). This abuse has severe legal, psychological, psychiatric, and criminological effects (Drury et al., 2019). The impact is worsened by frequent, prolonged abuse, often by family members, leading to disbelief when victims disclose the abuse (Levenson et al., 2016). Childhood sexual abuse is a strong predictor of mental disorders, health issues, and suicide risk, even when accounting for other factors. It includes unwanted touching, oral and genital contact, rape, penetration, exhibitionism, voyeurism, and exposure to pornography, all without the child's consent or comprehension (Neofytou, 2022).

Childhood sexual victimization is linked to a higher likelihood of committing sexual violence (Tibbels et al., 2024). The Social Learning Theory (Bandura & Walters, 1977) explains that childhood exposure to sexual violence leads to learned abusive behaviours, manifesting as sexual aggression from adolescence into adulthood. Victims may internalize these behaviours, seeing them as acceptable (Marotta, 2021). The Strain Theory (Agnew, 1992) suggests that negative social relationships and adverse emotional states, like anger, drive adolescents towards delinquency as they seek corrective measures, potentially through illegitimate means. The Social Control Theory (Hirschi, 2015) posits that strong relationships with pro-social values and institutions deter criminal behaviour. Adherence to these norms prevents deviance (Hirschi, 2002). Labelling Theory (Becker, 2018) suggests that abused children stigmatized as offenders may be removed from their families, increasing criminal tendencies. They may resort to crime to cope with trauma, influenced by peers, low self-worth, or post-traumatic stress (Falshaw, 1996). Attachment Theory (Bowlby, 1979) asserts that abusive caregiver bonds lead to insecure attachment styles, which correlate with sexual offenses in adolescence and adulthood. Abuse victims often form insecure attachments, creating psychological and social deficiencies that increase criminal risk (Grady, 2017).

Research supports the validity of these theories. Marotta (2021) found that childhood exposure to physical and sexual violence significantly increases the risk of committing violent or sexual offenses. In a study of 14,297 inmates, those convicted of sexual offenses were much more likely to have experienced childhood sexual abuse. ACEs are linked to higher aggression and violence (Marotta, 2021). Basto-Pereira et al. (2016) also found that ACEs correlate with adult criminal behaviour.

Weizmann-Henelius et al. (2010) studied 102 female and 463 male offenders, finding that childhood sexual abuse was more pronounced in female offenders. Levenson et al. (2016) found that female sexual offenders were three

times more likely to have experienced childhood sexual abuse compared to the general female population, with half of them having been abused in childhood. High ACE scores were associated with younger victims. A survey of 679 adult male sex offenders from civilian (28%) and outpatient (72%) treatment programs in the U.S. investigated the occurrence of ACEs compared to the general male population (Levenson et al., 2016). The findings showed that individuals with CSA were twice as likely to experience other maltreatment or family dysfunction, indicating sexual abuse rarely occurs alone but with other adverse childhood experiences. Severe abuse, frequent incidents, younger age at abuse, and multiple abusers were linked to higher ACE scores (Levenson et al., 2016).

An investigation of 225 federal sex offenders in the U.S. found significant ACEs, including 27% experiencing sexual abuse. Offenders averaged nearly five paraphilias, with pedophilia (57%), pornography addiction (43%), unspecified paraphilia (35%), exhibitionism (26%), and voyeurism (21%) being the most common (Drury et al., 2017).

A study of 120 male youths in treatment for sexually abusive behaviours found that those in institutional care were more likely to have experienced sexual abuse, while those in the juvenile justice system faced higher rates of caregiver imprisonment and domestic violence. These youths had higher ACE levels than their peers (Hall et al., 2018). Another study compared 127 online sexual offenders without childhood victimization to 77 with such histories, finding that sexual victimization was linked to higher risk factors for online sexual offending. Traumatic events increased maladaptive behaviours and crime risk (Chopin et al., 2022). Neofytou (2022) reviewed female sexual offenders' trauma histories, concluding that severe childhood trauma, especially sexual abuse, significantly influences the development of sexual offending behaviours.

One study of 740 individuals convicted of sex offenses found that childhood sexual abuse (CSA), emotional neglect, and exposure to domestic violence significantly predicted the number of arrests for sex-related crimes but not for other offenses or overall criminal versatility (Levenson et al., 2016). Another retrospective study on 863 federally incarcerated individuals in the U.S. explored the impact of CSA on subsequent sexual criminal behaviour, highlighting its critical role alongside other clinical and criminological factors in shaping criminal careers (Drury et al., 2019).

In a study involving 1,176 females and 553 males, researchers investigated the role of boldness, meanness, and disinhibition as mediators between adverse childhood experiences (ACE) and aggression. They found that disinhibition and meanness were linked to ACE, but not boldness. Both meanness and disinhibition mediated the relationship between ACE and aggression, consistently across genders, although meanness had a stronger direct effect on aggression in males than females (Eisenbarth et al., 2021). The study also noted higher levels of boldness and meanness in men compared to women, with no gender moderation effect on boldness. This research provided insights

into gender differences in the expression of pathological traits among inmates (Sica et al., 2021).

Chen (2020) compared gender differences in childhood abuse, intimate partner violence, and their links to criminal behaviour, substance use, suicidal tendencies, and psychiatric disorders among 290 incarcerated individuals in Israel (65 women, 225 men). Female inmates reported higher rates of intimate partner and sexual abuse than males. Those with ACEs were more likely to commit violent offenses and exhibit suicidal behaviour and psychiatric disorders, particularly among women (Chen, 2020). In another study, Shimotsukasa et al. (2019) examined personality traits among 645 incarcerated individuals and 4,546 non-inmates in Japan, focusing on differences between violent offenders, theft offenders, drug users, and non-criminals. Additionally, Sarubin et al. (2015) explored how extroversion and neuroticism mediate the relationship between life events and resilience in 201 adults, finding that positive events increased extroversion and decreased neuroticism, while negative events had the opposite effect.

Carvalho et al. (2019) investigated how the big five personality traits and emotional adjustment traits relate to different types of sexual violence. They found that child sexual offenders exhibit higher neuroticism and lower levels of extroversion and conscientiousness compared to non-offenders. Segarra et al. (2014) examined the correlations between the triarchic psychopathy traits (boldness, meanness, and disinhibition) and the big five personality traits in 349 individuals, including 96 men. They discovered that meanness had a stronger negative association with amiability in men compared to women. Men also showed reduced extroversion and openness to experience linked with meanness, while amiability specifically predicted meanness in men. In contrast, conscientiousness was a significant predictor in women.

Neumann et al. (2010) found that females tend to show higher levels of emotion dysregulation compared to males in a study involving 870 individuals. Schwandt et al. (2013) investigated childhood trauma among alcoholics and its impact on Alzheimer's disease severity. They concluded that adverse childhood experiences (ACEs) influence disease severity through neuroticism and openness to experience. Einserbath et al. (2021) explored the role of boldness, meanness, and disinhibition in the relationship between ACEs and aggression. They found that disinhibition and meanness traits, influenced by ACEs, are associated with increased aggression levels.

This study

To conduct this study, several hypotheses were outlined. First, it is hypothesized that exposure to childhood sexual abuse (CSA) is positively related to aggressive and violent behaviours, emotion regulation difficulties (Chopin et al., 2022), and high levels of neuroticism, openness to experience (Schwandt et al., 2013), disinhibition, and meanness (Eisenbarth et al., 2021) (H1). Second, exposure to CSA is predicted to lead to aggressive and violent behaviours (Basto-

Pereira et al., 2016), emotion regulation difficulties (Chopin et al., 2022), and high levels of neuroticism, openness to experience (Schwandt et al., 2013), disinhibition, and meanness (Eisenbarth et al., 2021) (H2). The third hypothesis suggests that males exhibit higher levels of boldness and meanness (Sica et al., 2021) and openness to experience (Shimotsukasa et al., 2019) compared to females. In contrast, females are expected to show higher levels of emotional dysregulation (Neuman et al., 2010), aggressive and violent behaviours (Chen, 2020), disinhibition (Sica et al., 2021), neuroticism, amiability, and conscientiousness (Segarra et al., 2014) than males (H3). Fourth, among those exposed to CSA, males are hypothesized to demonstrate higher levels of boldness, meanness (Sica et al., 2021), and openness to experience (Shimotsukasa et al., 2019) compared to females. Conversely, exposed females are expected to exhibit higher levels of emotional dysregulation (Neuman et al., 2010), aggressive and violent behaviours (Chen, 2020), disinhibition (Sica et al., 2021), neuroticism, amiability, and conscientiousness (Segarra et al., 2014) than exposed males (H4). The fifth hypothesis posits that adults exposed to CSA will display higher levels of aggressive and violent behaviour (Marotta, 2020), emotion regulation difficulties (Chopin et al., 2022), disinhibition, meanness (Eisenbarth et al., 2021), extroversion, amiability, openness to experience (Shimotsukasa et al., 2019), and neuroticism compared to those not exposed. However, non-exposed adults are expected to have higher levels of extroversion (Sarubin et al., 2015) and conscientiousness (Carvalho et al., 2019) (H5). It is hypothesized that exposure to CSA is positively correlated with other adverse childhood experiences (Levenson et al., 2016) (H6). Finally, it is hypothesized that personality mediates the relationship between adverse childhood experiences and life history, on one hand, and aggressive behaviour and emotional regulation, on the other (Hales et al., 2023) (H7).

Objective

This study aims to investigate the impact of childhood sexual abuse (CSA) on the development of aggressive and violent behaviours, emotional regulation difficulties, and various personality traits, including neuroticism, openness to experience, extroversion, conscientiousness, agreeableness, boldness, disinhibition, and meanness in Portuguese adults and young adults. Additionally, the study seeks to determine whether these variables can predict the occurrence of CSA. The specific objectives are to: Analyse gender differences in the variables studied; examine gender differences in the prevalence of CSA; compare individuals with and without a history of CSA; and assess whether CSA occurs in isolation or overlaps with other negative childhood experiences.

Method

Participants

The total sample consisted of 615 individuals, six of whom were not aged 18 or over and/or Portuguese nationals. Thus, we proceeded with a N=609, of which 420 (68.97%) are female, aged between 18 and 83 years (M=32.90, SD=15.12).

In fact, the sample is mostly made up of individuals who have never had problems with justice (581 individuals), with Portuguese nationality and an average age of 32.64 years (SD=15.11). Of the remaining 28 people who had problems with justice, ten were related to family problems (“Divorce”, “Defamation”, “Debts”, “Parenting”, and “Pension”), six were due to violence (“Physical assault” and “Domestic violence”), six due to problems related to driving (“Driving license”, “Driving under the influence of alcohol”, and “Fine”), five related to substance abuse (“Drug trafficking”, “Drugs and alcohol”, “Drugs”) and one individual with problems due to prostitution. Finally, regarding exposure to sexual abuse in childhood 511 (83.91%) individuals did not experience any sexual abuse and 98 (16.09%) were exposed to CSA.

Measures

Sociodemographic questionnaire. To characterize the sample, the survey included questions related to sociodemographic characteristics, such as gender, age, nationality, education level, employment status, marital status and whether the individual had a court case.

The Impulsive and Premeditated Aggression Scale (IPAS; Stanford et al., 2003; Portuguese version by Cruz et al., 2019) is a 30-item self-administered scale that measures impulsivity versus premeditation in aggressive behaviour. Each item is rated on a 5-point Likert scale (1=strongly disagree, 5=strongly agree), assessing aspects of planning and control during aggressive acts. Scores can be analyzed dimensionally by summing item responses for impulsive and premeditated aggression. Categorical analysis calculates the percentage of items rated positively (4 or 5). The Portuguese version demonstrates good internal consistency: Cronbach’s alpha values were .86 for Impulsive Aggression (IA) and .81 for Premeditated Aggression (PA) in community and prison samples. IA and PA subscales were significantly correlated (community: $r=.34$, $p<.05$; prisoners: $r=.48$, $p<.001$). In this study, IA scores ranged from 10 to 50 (M=27.2, SD=7.59) and PA scores from 12 to 52 (M=30.6, SD=7.64) in the community sample. Internal consistency was high (IA: $\alpha=.88$, PA: $\alpha=.87$).

The Life History of Aggression (LHA; Coccaro et al., 1997; Portuguese version by Cruz & Barbosa, 2013) is a self-report questionnaire designed to retrospectively assess aggression across the lifespan. It quantifies aggression as a trait through three domains: aggression (physical aggression incidents), self-directed aggression (self-directed aggressive events), and consequences/antisocial behaviour (negative outcomes of aggressive acts or antisocial behaviours). The

instrument consists of 11 items rated on a 6-point Likert scale (0=never happened to 5=occurred so many times I cannot quantify). The total score is obtained by summing scores from all domains. The Portuguese version shows acceptable internal consistency ($\alpha=.71$), with good reliability in the present study ($\alpha=.88$). The subscales' alphas are .79 for aggression, .73 for self-directed aggression, and .89 for consequences/ antisocial behaviour, indicating good to very good internal consistency.

The Adverse Childhood Events Questionnaire (ACE; Felitti & Anda, 1998; Portuguese version by Pinto et al., 2014) is a self-report tool for adults that assesses 17 adverse childhood experiences through dichotomous response items. These experiences span emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, parental divorce/separation, substance abuse in the family, mental illness or suicide in the household, family member imprisonment, and exposure to domestic violence. In the ACE Portuguese version, adversity is confirmed if the respondent affirms at least one item per category. Kappa coefficients for various categories indicate substantial reliability: emotional abuse (.66), physical abuse (.55), sexual abuse (.69), exposure to domestic violence (.77), substance abuse in the family (.75), mental illness in the household (.51), incarcerated family members (.46), and parental separation/divorce (.86). The Total Adversity scale shows good internal consistency with Cronbach's alpha of .86. Individually, emotional abuse (.76), physical abuse (.79), sexual abuse (.80), emotional neglect (.78), physical neglect (.54), and domestic violence (.88) scales also demonstrate good internal consistency.

The Difficulties in Emotional Regulation Scale (DERS; Gratz & Roemer, 2004; Portuguese version by Coutinho et al., 2009) measures emotional dysregulation across six domains: non-acceptance of negative emotions, inability to pursue goals while experiencing negative emotions, difficulty controlling impulses under emotional stress, limited access to effective emotion regulation strategies, lack of emotional awareness, and lack of emotional clarity. It consists of 36 items rated on a 5-point scale (1=almost never to 5=almost always). The Portuguese version demonstrates high internal consistency (Cronbach's alpha=.93), good test-retest reliability ($r=.88$), and strong construct and predictive validity. Each subscale shows robust internal consistency, with Cronbach's alphas ranging from .72 to .89 in this study.

The NEO-Five Factor Inventory (NEO-FFI-20; Costa & McCrae, 1992; Portuguese version by Dourado et al., 2017) assesses the five-factor model of personality: extroversion, openness to experience, amiability, conscientiousness, and neuroticism. It comprises 20 items rated on a five-point Likert scale (0=strongly disagree to 4=strongly agree). Reverse-scored items include 1, 3, 13, 14, 18, and 19. Scores on each dimension range from 0 to 16, with higher scores indicating a stronger presence of that trait in the person's personality. The Portuguese version shows acceptable internal consistency (Cronbach's alpha

range: .70 to .76). In this study, neuroticism $\alpha=.42$, extroversion $\alpha=.62$, openness to experience $\alpha=.67$, amiability $\alpha=.52$, and conscientiousness $\alpha=.82$.

The Triarchic Psychopathy Measure (TriPM; Patrick, 2010; Portuguese version by Paiva et al., 2020) is a self-report tool consisting of 58 items that assess three aspects of psychopathy: boldness (calmness in threat, stress resilience, self-confidence), meanness (lack of empathy, emotional detachment, aggression), and disinhibition (impulsivity, poor emotional control). Responses are on a four-point Likert scale (0=false to 3=true). The Portuguese version demonstrates acceptable internal consistency: boldness $\alpha=.75$, meanness $\alpha=.83$, and disinhibition $\alpha=.83$. In this study, Cronbach's alpha for boldness was .72, meanness $\alpha=.89$, and disinhibition $\alpha=.88$.

Procedure

This study received approval from the Scientific Committee of the Universidade Católica Portuguesa, Faculty of Philosophy and Social Sciences, Centre for Philosophical and Humanistic Studies, in December 2023 (UCP-2023-035). Authorizations were obtained from the respective authors for the use of the instruments described. Data collection was conducted online via a protocol on the Google Forms platform, which included the questionnaires and instruments. The snowball sampling method was employed, wherein initially recruited individuals recommended other suitable participants. Once individuals meeting the inclusion criteria were identified, they were asked to refer others with similar characteristics (Peters et al., 2020). The inclusion criteria required participants to be of Portuguese nationality and at least 18 years old. Informed consent was obtained from all participants, who were informed about the study's scope, objectives, and the confidentiality and anonymity of their data. Data collection took place between January and March 2024.

Data analysis

The collected data was subsequently entered into the statistical program IBM SPSS Statistics 28 for analysis. Statistical analyses included descriptive analyses, assessment of the internal consistency of the scales using Cronbach's alpha, difference tests, correlation analyses, and regressions according to Cohen's model (1988). Also, a path analysis was conducted using AMOS 26. Model fit was assessed using the following indices: Chi-square (χ^2), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI).

Results

Relationship between sexual abuse and the variables under study

Childhood sexual abuse predicts aggressive and/or violent behaviour, emotional dysregulation, and high levels of neuroticism, openness to experience, disinhibition, and meanness by 44% ($R^2=.44$).

Specifically, CSA is positively related to aggressive and violent behaviour, results indicated a moderate positive correlation between CSA and aggressive behaviour ($r=.41$, $p<.001$), and the coefficient of determination was calculated at .17, which indicates that approximately 16.70% of the variance in aggressive behaviour can be explained by CSA. Analysis of variance revealed a significant effect of CSA on aggressive behaviour ($F=24.22$, $p<.001$). There is a statistically significant and low magnitude positive correlation between the subscale childhood sexual abuse and the subscales of the LHA. The subscale of aggression of LHA were the ones with the highest variance determination revealing that 11.30% of the variance in aggressive behaviour can be explained by CSA and the ANOVA test revealed a significant effect. Regarding the IPAS subscales, premeditated aggression, and impulsive aggression, there were statistically significant positive correlations. Premeditated aggression revealed that 7.6% of the variance in aggressive behaviour can be explained by CSA, and impulsive aggression is predicted by 7.9%.

Concerning the relationship between CSA and emotional dysregulation, it is found that CSA predicts and relates positively to emotional dysregulation. A statistically significant positive correlation of low magnitude is present ($r=.31$). Furthermore, approximately 9.5% of the variance in emotion dysregulation can be explained by CSA ($R^2=.10$). ANOVA test revealed a significant effect of CSA on emotion dysregulation ($F=10.52$, $p<.001$). Between the different subscales of the DERS can be seen a statistically significant positive correlation of low magnitude.

When assessing whether CSA correlates positively with neuroticism and openness to experience and whether it is predictive, a weak positive correlation was found between CSA and neuroticism, and about 3.1% of the variance in neuroticism can be explained by CSA. The ANOVA test revealed a significant effect, indicating that CSA is associated with differences in neuroticism scores. However, with openness to experience there is a weak positive correlation, only a very small proportion (0.30%) of the variation can be explained by CSA, but analysis of variance revealed a non-significant effect. Regarding the remaining subscales of the instrument, the relationship between CSA and extroversion indicates a weak positive correlation, and a very small proportion (0.70%) of the variance in extroversion is predicted by the CSA. Analysis of variance demonstrates a statistically significant effect of the CSA on extroversion, indicating that CSA is associated with differences in extroversion scores, although the effect size is relatively small. Amiability is predicted by 3.90%, and a moderate positive correlation between the variables was found. Finally, conscientiousness shows a weak positive correlation with CSA and its variation is explained by 1.6% by CSA.

Regarding the TriPM variables and their relationship with CSA, the results show that the presence of CSA predicts the three phenotypic constituents of psychopathy by 16.30%. Specifically, about disinhibition, there is a moderate

positive correlation, and it explains about 13.70% of the variance in disinhibition, also, the ANOVA test revealed a highly significant effect of CSA on disinhibition and meanness, that can be explained in 13.40%. However, there is no statistically significant relationship between CSA and boldness.

This evidence partially satisfies hypotheses one and two, except for the results for openness to experience which does not show a statistically significant relationship, and extroversion, amiability and conscientiousness which show a weak positive correlation, that was not hypothesized (Table 1).

Table 1. Correlations and regression of the variables in study

Scale	Variable	r	R ²	F	p
LHA	Consequences/antisocial behavior	.300	.090	60.520	<.001
	Aggression	.340	.113	77.630	<.001
IPAS	Self-directed aggression	.280	.080	52.840	<.001
	Premeditated aggression	.280	.076	50.140	<.001
	Impulsive aggression	.280	.079	51.910	<.001
DERS	Strategies	.227	.051	32.953	<.001
	Non-Acceptance	.135	.018	11.223	<.001
	Awareness	.178	.032	19.750	<.001
	Impulses	.267	.071	46.547	<.001
	Objectives	.119	.014	8.722	<.001
NEO-FFI	Clarity	.258	.066	43.168	<.001
	Openness to experience	.060	.003	2.020	.160
	Amiability	.020	.390	24.360	<.001
	Neuroticism	.180	.031	19.470	<.001
	Conscientiousness	.130	.016	10.070	.002
TriPM	Extroversion	.090	.007	4.510	.034
	Boldness	.010	.000	.050	.830
	Meanness	.370	.134	94.140	<.001
	Disinhibition	.370	.137	96.400	<.001

Note: r = Pearson correlation; R² = r-squared; F = ANOVA; p = p-value

Gender differences

Analyzing Table 2, it is possible to conclude that there is a significant difference between men and women, with men presenting, on average, higher scores of aggression, consequences/ antisocial behaviour, premeditated aggression and impulsive aggression. Finally, for self-directed aggression there was no statistically significant difference between men and women. In the DERS subscales, we verified that only the subscale of consciousness presents a significant difference between men and women, with men scoring, on average, more than women. In the remaining subscales no significant differences were found. In the NEO-FFI subscale, neuroticism presents a significant difference between men and women, with men showing higher neuroticism scores on average. Besides, openness to experience and conscientiousness have a significant difference between men and women, with women showing on average higher scores. For extroversion and amiability, no statistically significant differences were found. The analyses of TriPM subscale state that there are

significant differences in boldness, meanness, and disinhibition between men and women, with men showing higher boldness, meanness, and disinhibition on average.

Thus, the results do not fully meet hypothesis 3, since they only agree that boldness and meanness are higher in men and that conscientiousness is higher in women.

Table 2. Gender differences of the variables in study

Scale	Variable	Men		Women		t	df	p	d
		M	SD	M	SD				
LHA	Agression	5.79	4.57	7.10	5.77	-3.003	607.00	.003	.015
	Consequences/ anti-social behaviour	2.08	3.94	1.04	2.19	-3.725	607.00	<.001	.022
	Self-directed aggression	1.07	2.06	1.10	2.04	.173	358.48	.863	.000
IPAS	Premeditated aggression	36.21	11.09	34.01	11.10	-2.303	346.12	.022	.009
	Impulsive aggression	37.42	11.54	35.25	10.90	-2.182	344.48	.030	.008
DERS	Consciousness	16.77	5.50	15.73	5.70	-2.138	374.82	.033	.007
	Strategies	18.81	6.91	19.06	7.49	.401	390.30	.689	.000
	Non- Acceptance	14.76	5.91	15.17	6.36	.774	386.18	.439	.001
	Impulses	13.44	5.35	13.00	5.30	-.956	359.08	.340	.002
	Objectives	14.28	4.20	14.63	4.74	.861	607.00	.390	.001
NEO- FFI	Clarity	12.12	4.23	11.55	4.07	-1,546	349.47	.123	.004
	Neuroticism	8.58	2.78	8.00	3.22	-2.273	415.65	.024	.008
	Openess to experience	8.08	3.42	8.70	3.67	2.009	386.72	.045	.007
	Conscientousness	10.72	3.58	11.66	3.01	3.344	606.00	<.001	.018
	Extroversion	8.88	3.16	9.06	3.07	.660	607.00	.510	.001
TriPM	Amiability	9.17	3.01	9.45	3.07	1.042	367.51	.298	.002
	Boldness	26.63	9.13	24.09	9.63	-3.060	607.00	.002	.020
	Meaness	14.07	10.77	9.10	8.84	-3.060	306.45	<.001	.050
	Disinhibition	17.19	11.65	14.96	9.72	-2.290	310.51	.023	.010

Note: M = mean; SD = standard deviation; t = t-test; df = degrees of freedom; p = p-value; d = Cohen's d effect size

Differences in men and women exposed to CSA

As observed in Table 3, the variables self-directed aggression, premeditated aggression and impulsive aggression did not show significant differences concerning gender. In addition, there is a significant difference between men and women concerning aggression and consequences/ antisocial behaviours, with men presenting, on average, higher scores of aggressions, and consequences/antisocial behaviours. Concerning the variables strategies, non-acceptance, and objectives, there were no statistically significant difference between men and women. The remaining subscales show a significant difference between men and women, with abused men scoring higher on average than women. In relation to openness to experience and amiability there is a significant difference between men and women, with abused women scoring on average

higher than men on both variables. But the variables of neuroticism, conscientiousness, and extroversion did not show significance. The three phenotypic constituents of psychopathy have significant differences between men and women exposed to CSA, with women scoring higher in boldness and meanness, but in disinhibition men have in average higher levels.

Taking these results into account, they do not support hypothesis 4, as the results only confirm the hypothesis that women score higher on amiability.

Table 3. Differences between men and women exposed to CSA on the variables in study

Scales	Variable	Men exposed to CSA		Women exposed to CSA		t	df	p	d
		M	SD	M	SD				
LHA	Consequences/antisocial behavior	9.21	5.08	2.54	.55	-2.543	96.00	.013	.063
	Aggression	11.53	5.55	5.30	1.07	-1.963	51.35	.055	.039
	Self-directed aggression	1.07	2.06	1.10	2.04	.870	59.62	.388	.008
IPAS	Premeditated aggression	43.97	11.21	39.54	11.04	-1.395	60.02	.168	.020
	Impulsive aggression	45.67	10.14	41.40	10.15	-1.798	58.18	.077	.033
DERS	Clarity	16.37	4.46	12.79	4.05	-3.756	51.05	<.001	.128
	Consciousness	21.13	5.54	16.34	5.84	-3.885	58.33	<.001	.136
	Impulses	18.50	5.14	15.28	5.52	-2.796	59.33	.007	.075
	Strategies	18.81	6.91	19.06	7.49	-1.881	57.53	.065	.036
	Non-Acceptance	14.76	5.94	15.17	6.36	.001	96.00	.999	.000
NEO-FFI	Objectives	14.28	4.20	14.63	4.74	.521	58.63	.605	.003
	Openess to experience	6.83	3.28	9.03	4.13	2.814	69.01	.006	.076
	Amiability	7.03	3.11	8.56	3.44	2.164	61.00	.034	.007
	Neuroticism	7.73	2.07	8.06	2.47	-.201	52.46	.842	.000
	Conscientiousness	10.72	3.57	11.66	3.00	1.795	44.95	.079	.005
TriPM	Extroversion	8.88	3.16	9.06	3.06	-.222	49.47	.825	.001
	Boldness	28.17	7.24	24.57	8.26	-2.060	96.00	.042	.040
	Meanness	25.70	14.12	15.01	11.32	-3.990	96.00	<.001	.140
	Disinhibition	29.70	13.87	21.74	10.11	-3.200	96.00	.002	.100

Note: M = mean; SD = standard deviation; t = t-test; df = degrees of freedom; p = p-value; d = Cohen's d effect size

Differences between individuals exposed or not to childhood sexual abuse

Aggressive and/or violent behaviour presents, as observed in Table 4, a significant difference between individuals who were exposed and not exposed, with exposed individuals scoring, on average, more than non-exposed individuals, in all subscales of the instruments (IPAS and LHA). Also, for the subscale of DERS, strategies, impulses, clarity, objectives, consciousness, and non-acceptance a significant difference between individuals who were exposed and not exposed as observed, with exposed individuals presenting in average higher levels. In the NEO-FFI subscale, the statistical data only confirms that conscientiousness is higher in unexposed adults with a higher mean compared to those exposed. The subscales of extroversion and openness to experience showed

no statistically significant difference between individuals who suffered or not CSA. In addition, the variables amiability and neuroticism present statistically significant differences, with unexposed individuals having higher mean levels than exposed individuals. For boldness, the independent samples t-test produced a non-significant result, indicating that there are no statistically significant differences in boldness between individuals who have and have not experienced CSA. In meanness and disinhibition, a significant difference was found, with exposed individuals scoring higher than non-exposed individuals.

Thus, hypothesis 5 was partially confirmed, since, according to the hypothesis, the results only confirm that aggressive and violent behaviour, emotional regulation difficulties, disinhibition and meanness are higher in individuals exposed to CSA.

Table 4. Differences Between CSA Exposure on the variables in study

Scales	Variable	Exposed to CSA		Non-exposed to CSA		t	df	p	d
		M	SD	M	SD				
LHA	Agression	9.92	5.31	5.48	4.61	-7.734	126.62	<.001	.090
	Self-directed aggression	2.32	2.72	0.86	1.80	-6.702	607.00	<.001	.069
	Consequences/antisocial behaviour	3.39	5.08	0.97	2.58	-7.013	607.00	<.001	.075
IPAS	Premeditated aggression	40.90	11.23	33.50	10.25	-6.054	129.84	<.001	.057
	Impulsive aggression	42.70	10.29	34.63	10.83	-7.055	141.35	<.001	.076
DERS	Strategies	22.43	7.32	18.38	7.13	-5.101	134.67	<.001	.041
	Impulses	16.27	5.58	12.54	5.06	-6.151	129.33	<.001	.059
	Clarity	13.89	4.48	11.32	3.93	-5.307	127.24	<.001	.044
	Objectives	15.83	4.20	14.27	4.61	-3.308	145.52	.001	.018
	Consciousness	17.81	6.14	15.71	5.50	-3.145	128.61	.002	.016
NEO-FFI	Non-Acceptance	16.87	6.34	14.70	6.16	-3.121	134.50	.002	.016
	Amiability	8.09	3.40	9.60	2.91	4.118	125.61	<.001	.027
	Neuroticism	7.01	2.86	8.40	3.09	4.350	144.20	<.001	.030
	Conscientiousness	10.53	3.47	11.53	3.15	2.652	129.51	.009	.011
	Extroversion	8.55	3.23	9.09	3.06	1.523	132.41	.130	.004
TriPM	Openess to experience	8.36	4.00	8.54	3.52	.456	607.00	.649	.000
	Boldness	25.67	8.09	24.73	9.79	-.900	607.00	.368	.001
	Meanness	18.29	13.14	9.18	8.19	-9.020	607.00	<.001	.120
	Desinhibition	24.17	11.90	14.02	9.24	-9.480	607.00	<.001	.130

Note: M = mean; SD = standard deviation; t = t-test; df = degrees of freedom; p = p-value; d = Cohen's d effect size

Relationship between childhood sexual abuse and other adverse childhood experiences

As shown in Table 5, CSA presents a statistically significant positive correlation with all adverse childhood experiences, which is in line with hypothesis six.

Table 5. Correlations between CSA and other adverse childhood experiences

Variable	r	p
Childhood Emotional Abuse	.408	<.001
Childhood Physical Abuse	.294	<.001
Emotional Neglect	.296	<.001
Physical Neglect	.291	<.001
Divorce/Parental Separation	.278	<.001
Exposure to Domestic Violence	.333	<.001
Substance Abuse in the Environment	.336	<.001
Mental Illness or Suicide	.126	.002
Arrest of a Family Member	.205	<.001

Note: r = Pearson correlation; p = p-value

Personality as a mediator of the relationship between adverse childhood experiences and life history, on one hand, and aggressive behaviour and emotional regulation, on the other

The path model showed in Figure 1 demonstrated good fit: $\chi^2(6)=2.195$, $p=.061$, $RMSEA=.044$, $CFI=.989$, $TLI=.972$. Figure 1 illustrates the mediating role of personality in the relationship between ACEs and LHA, on one hand, and DERS and IPAS, on the other, confirming H7. The indirect effect of ACEs on IPAS was significant, $b=.135$, $p<.005$. Also, the indirect effect of ACEs on DERS was significant, $b=.248$, $p<.005$. Concerning LHA, its direct effect on DERS was also significant $b=.354$, $p<.001$. Next, we examined the effect of ACEs on the mediators, TriPM and NEO. The analysis showed that ACEs significantly predicted TriPM, $b=.161$, $p<.005$, and NEO, $b=-.631$, $p<.001$. Also, LHA significantly predicted TriPM, $b=.278$, $p<.005$, and NEO, $b=.905$, $p<.001$. At last, TriPM predicted significantly IPAS $b=.855$, $p<.001$; and NEO predicted significantly DERS $b=.392$, $p<.001$.

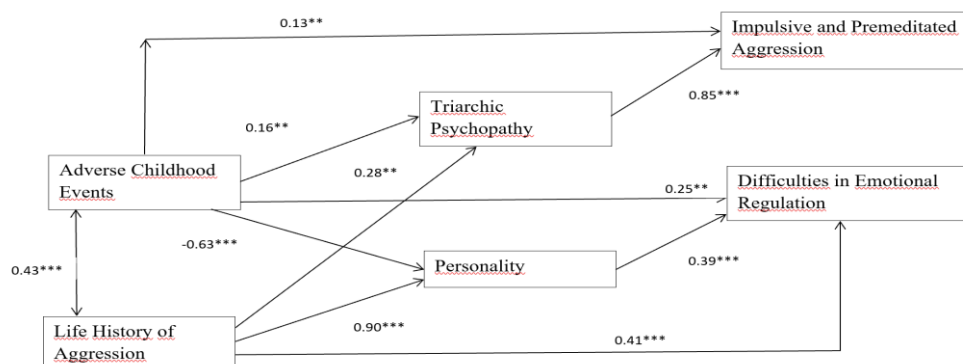


Figure 1. Personality as a mediator of the relationship between adverse childhood experiences and life history, on one hand, and aggressive behavior and emotional regulation, on the other

Discussion

The overall aim of this study was to explore the influence of childhood sexual abuse on the development of aggressive and/or violent behaviours, emotion regulation difficulties, and levels of neuroticism, openness to experience, extroversion, conscientiousness, amiability, boldness, disinhibition, and meanness, in Portuguese adults and young adults, in a sample with Portuguese nationality and over 18 years old. We also sought to understand whether any of these variables were predicted by the CSA, and to analyze differences in relation to gender, exposure to abuse and both.

Regarding aggressive and/or violent behaviour, the study found that CSA correlates positively with aggressive and/or violent behaviour, even predicting it by 16.70%, being higher in men and in exposed individuals, not being significant in relation to the difference between sexes considering that they were exposed. In addition, CSA predicts and correlates with emotional dysregulation, with 9.50% of the variance explained by CSA. Thus, it is higher in individuals exposed to CSA; however, about sex differences, it cannot be ascertained because the differences were not significant.

Personality traits according to the Big Five model are positively correlated and significantly predict neuroticism (3.10%). The correlations and regressions of the remaining variables are weak and small. In the difference between sexes, amiability and extroversion were not significant, while neuroticism is higher in men and openness to experience and conscientiousness in women. Openness to experience and amiability is higher in abused women and the others do not show significant differences. As for the difference between exposed and unexposed individuals, extroversion and openness to experience are not significant, amiability, neuroticism, and conscientiousness are higher in unexposed individuals. The CSA positively correlates with and predicts the three phenotypic constituents of psychopathy by 16.30%. Disinhibition variance is explained by the CSA by 13.70%, meanness by 13.40%, and boldness does not show a statistically significant relationship.

Levels of boldness, meanness and disinhibition are higher in males. They are also higher for male subjects exposed to CSA. For exposed and unexposed individuals, boldness did not show significant differences; however, disinhibition and malice are higher in individuals exposed to CSA. Finally, CSA, as mentioned by Levenson et al. (2016), is associated with other adverse childhood experiences. This indicates that CSA sufferers grow up in disordered social conditions that provide inadequate protection. In fact, the fact that CSA has a greater impact on the future consequences of men can be explained by the fact that the ideals of masculinity present in society make it impossible for them to seek psychological support and/or expose their weaknesses (this is also visible in the higher number of women in the sample), since this is considered a feminine behaviour. Given that the aim of life in society is to be integrated into social

circles, men prefer to keep their idea of masculinity to themselves, which later has consequences for their health, and only seek help later. In fact, a fundamental characteristic of men's behaviour in relation to health is the denial of weakness and emotional control, also, during medical consultations, men affirm a masculine identity by contrasting their use of health care in extreme situations with that of women who use it preventively (Brenton & Elliot, 2014). Thus, it has been observed that: "Men generally tend to avoid seeking help for mental and physical health problems, and men with strong masculinity beliefs are less likely than men with weak masculinity beliefs to engage in preventive health care" (Brenton & Elliot, 2014).

Nevertheless, pornographic culture promotes deviant behaviour in relation to sexuality, namely abuse, since in a society where sexuality is taboo and pornography is the source of knowledge for learning sexuality, individuals develop a completely distorted view of sex, pornography implants ideas about what sexuality is that do not correspond to reality, nor to the ethics of it, in fact, pornography consumption is predictive of individuals' perceptions regarding sexual behaviours, including the likelihood of women engaging in sex that resembles pornographic depictions, which can skew their understanding of consent and sexual aggression (Miller et al., 2019). Moreover, the severity of its influence is unknown, studies have found that children aged 10 to 15 often have their notions of sex shaped by exposure to pornography, which constitutes a significant portion of internet traffic (Principi et al., 2022; Yu et al., 2021). In general, this notion normalizes an aggressive sexuality, which can influence the idea that sexual aggression is normal, for instance, adolescents who consume pornography are more likely to adopt permissive attitudes towards sexual relationships, which can manifest in behaviours that align with the aggressive sexual scripts often depicted in pornographic materials (Pizzol et al., 2016; Yu et al., 2021). Also, meta-analyses have demonstrated a consistent association between pornography consumption and actual acts of sexual aggression, suggesting that exposure to pornographic content may desensitize individuals to the seriousness of sexual violence (Wright et al., 2016). This taboo linked to sexuality in our country is intrinsically related to the fact that it is a mostly Catholic country, and Catholicism sees sex as a source of reproduction, as well as the fact that we lived in a military dictatorship, this being in historical terms relatively recent, where people could not express their desires freely and where everything constituted a taboo (Pontes & Ribeiro, 2015).

Moreover, considering the Social Learning Theory, children who suffer abuse in childhood can internalize these behaviours and believe that they are an acceptable form of conduct (Marotta, 2021). As can be explained by the results obtained since people who have suffered from abuse, men, have problems with aggression in adulthood, thus reproducing the behaviour experienced during childhood, because aggression generates aggression. The individual who during

childhood had contact with aggressive behaviours, will tend to normalize, and reproduce them.

In addition, Attachment Theory has explained that children who experience abuse from their attachment figure tend to develop insecure attachments that lead to psychological and social deficits in adulthood because children develop beliefs and behavioural patterns based on the relationship with the primary caregiver (Grady, 2017). Since they are unable to develop trusting and secure relationships, this may explain why CSA predicts neuroticism and consequently emotional dysregulation. These individuals live in constant torment because of happened to them in the past, since they were betrayed by a figure who was close to them and should have protected them, so they end up developing alarmism and neurotic behaviour towards any individual who wants to enter their circle, which leaves them in a state of emotional dysregulation.

Also, Social Control Theory and Labelling Theory can also explain the results. Regarding the former, it has been argued that the lack of a close caring relationship, supervision and inconsistent disciplinary practices are risk factors for the development of deviant behaviour. In fact, family ties inhibit deviant behaviour, because the adolescent does not want to jeopardize the positive relationships, he/she has with his/her parents, but if these relationships are marked by mistreatment, the adolescent is likely to transgress (Hirschi, 2002). The second, explains that even if it is known that the individual was abused, in childhood, he ends up being labeled by the system as an offender. Often this labeling leads to children being removed from the family environment, which can promote the adoption of criminal behaviour in the long run. However, the victim may turn to crime to escape the trauma that characterizes the abuse, due to association with the wrong set of peers, diminished self-esteem, as a symbol of revenge against the perpetrator, or as a post-traumatic adaptive response (Falshaw, 1996).

In this sense, high levels of meanness and aggressive and/or violent behaviours appear as a way for these individuals to externalize their emotions repressed by a society that condemns/labels both the victim and the perpetrator. In view of this, many individuals do not feel comfortable reporting the abuse to their circle of attachment, for fear of reprisals or embarrassing comments. Therefore, throughout their lives, these individuals will prioritize risky, uninhibited, and daring behaviours to channel their pain, anger, and other repressed feelings, find some comfort and a mechanism that makes them feel “alive”.

Psychopathic personality traits mediate the associations between adverse childhood experiences (ACEs) and life history strategies and adult aggression through several mechanisms (Moreira et al., 2020). ACEs can lead to significant trauma and stress, as chronic exposure to stress during formative years affects brain development, particularly in regions associated with emotion regulation, impulse control, and empathy (Zeanah et al., 2018). Additionally, ACEs often

disrupt secure attachment formation, leading to difficulties in forming healthy interpersonal relationships and developing trust (Ye et al., 2024). Psychopathic personality traits frequently emerge as maladaptive responses to ACEs, characterized by a lack of empathy, superficial charm, manipulateness, and impulsivity (Dotterer et al., 2023). To cope with early trauma, individuals may develop emotional detachment or numbing, resulting in a lack of empathy and remorse. Furthermore, children exposed to violence or neglect may learn to use manipulation or aggression as survival strategies (Parker, 2024).

Psychopathic traits mediate the relationship between ACEs and adult aggression through several pathways (Moreira et al., 2020). Individuals with psychopathic traits often exhibit poor emotional regulation, leading to aggressive outbursts when faced with stress or perceived threats. High levels of impulsivity, a hallmark of psychopathy, combined with a low threshold for frustration, can result in aggressive actions (Dotterer et al., 2023). Additionally, the lack of empathy and remorse characteristic of psychopathy makes it easier for individuals to engage in aggressive behaviour without feeling guilt or considering the consequences for others (Spytska, 2024). Psychopathic individuals often engage in antisocial behaviour, which includes aggression, as a disregard for social norms and the rights of others is a common thread linking ACEs to later aggression (Zeanah et al., 2018).

Personality also mediates the relationship between ACEs and life history strategies as well as emotional regulation through its influence on impulsivity, risk-taking, emotional stability, and coping mechanisms (Ye et al., 2024). Traits such as resilience can buffer the negative effects of ACEs, while traits like neuroticism can exacerbate them (Yuan et al., 2024). Personality shapes the development of coping strategies, which can be adaptive, such as problem-solving and seeking support, or maladaptive, such as avoidance and aggression (Theodoratou & Argyrides, 2024). ACEs can lead to the development of personality traits like impulsivity and risk-taking, which align with fast life history strategies characterized by early reproduction, high risk-taking, and less investment in long-term goals (Dotterer et al., 2023). Conversely, traits like conscientiousness and future planning, which are often less developed in individuals with high ACEs, align with slow life history strategies involving delayed reproduction, careful planning, and long-term investment in relationships and goals (Hamai & Felitti, 2022).

Conclusions

This study examined the impact of childhood sexual abuse (CSA) on aggression, emotion regulation, and personality traits in Portuguese adults. Key findings highlight CSA's role in shaping aggressive behaviours, emotional dysregulation, and specific personality traits, particularly neuroticism, disinhibition, and meanness. CSA strongly predicts aggressive and violent

behaviours, explaining 16.7% of the variance, particularly in men and those exposed to CSA. This suggests early trauma fosters maladaptive behaviours, with men less likely to seek help due to societal masculinity norms. CSA predicts emotional dysregulation (9.5%) and neuroticism (3.1%), with weaker effects on other Big Five traits. Trauma from CSA disrupts emotional development, making it harder for individuals to manage their emotions. This shows that CSA has a stronger impact on emotional instability. Men exhibit higher neuroticism, while women exposed to CSA show more openness and amiability. CSA strongly predicts psychopathic traits like disinhibition (13.7%) and meanness (13.4%), especially in men, linking to aggressive behaviours. Men display higher boldness, meanness, and disinhibition, while women show greater openness and conscientiousness. These gendered responses suggest men may internalize societal pressures, leading to more aggressive behaviours. This study suggests that societal factors like rigid masculinity norms and pornography influence CSA outcomes. Men may avoid seeking help due to stigma, worsening the long-term effects on their emotional and behavioural health. Psychopathic traits such as lack of empathy and impulsivity mediate the link between ACEs and aggression, while neuroticism and impulsivity influence emotional regulation. Resilience can lessen negative effects, whereas neuroticism can worsen emotional instability. The results support Attachment Theory, Social Learning Theory, and Social Control Theory. Insecure attachments from abusive caregivers can lead to emotional dysregulation and neuroticism, while early exposure to aggression can perpetuate violent behaviour into adulthood.

This study supports established findings that childhood sexual abuse (CSA) is linked to increased aggression and emotion dysregulation. It confirms CSA as a significant predictor of these behaviours, aligning with research that views trauma as disruptive to emotional development and behaviour (e.g., Zeanah et al., 2018; Dotterer et al., 2023). Additionally, the study's results on CSA predicting psychopathic traits like disinhibition and meanness are consistent with other studies linking adverse childhood experiences (ACEs) to psychopathy and aggression (Moreira et al., 2020; Spytka, 2024). The gender differences observed - men exhibiting higher levels of disinhibition and meanness, while women show greater openness and conscientiousness - echo broader research indicating that trauma affects men and women differently, reinforcing gendered responses to emotional distress (Brenton & Elliot, 2014).

However, this study found CSA to significantly predict neuroticism but only weakly influence other Big Five personality traits. This contrasts with some research that identifies stronger links between CSA and traits such as openness or conscientiousness (Ye et al., 2024).

Practical implications

Additionally, this study's focus on Portuguese cultural factors, including societal norms around masculinity and the influence of pornography, provides a unique perspective. These cultural dimensions, shaped by historical contexts like

Catholicism and military dictatorship, offer insights that may differ from findings in other regions (Pontes & Ribeiro, 2015). The study also integrates Social Learning Theory and Social Control Theory to explain how CSA perpetuates certain behaviours and outcomes. While these theories are well-established, the specific application to the Portuguese context adds a distinctive angle not commonly explored in other research (Hirschi, 2002; Marotta, 2021).

Overall, while the study confirms many established findings about CSA, it introduces new elements by emphasizing cultural context, gender-specific impacts, and specific mediators of CSA's effects, contributing fresh perspectives to the existing body of research.

Limitations and future research directions

One of the limitations of this study is the small number of individuals who have experienced abuse compared to individuals who do not have ACE in their developmental history and the fact that most of the questionnaires were answered in online format, due to their length, may have led to bias in responses. In addition, it would be important in future research's, to do studies in which they compare victims who have suffered from abuse with psychological support and without also proceeding, the distinction of this support and how evasive they are, in addition, it would be important to understand what is the influence of awareness about sexuality and a demystification to the effect of pornography on the sexual behaviours of individuals.

Ethics statement

This study was carried out in accordance with the recommendations of Code of Ethics of Scientific Committee of the Catholic University of Portugal. The protocol was approved by the Ethics Committee for Research, Faculty of Philosophy and Social Sciences, Centre for Philosophical and Humanistic Studies. In accordance with the Declaration of Helsinki, all parents gave written informed consent for adolescents' participation in the study.

Conflicts of interest

The authors declare no conflict of interest.

Author contributions

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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