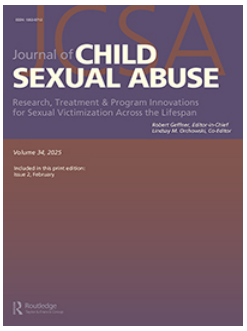

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Investigating Personality Pathology in Child Sexual Offenders: Group Comparisons and Offense Differences

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ABSTRACT

Although some studies have investigated personality pathology in individuals who have committed sexual contact offenses against children, few examined whether personality pathology relates to different groups, including individuals who have committed child sexual exploitation material (CSEM) offenses. This study compared four male groups, namely a CSEM ($n = 33$), sexual contact ($n = 30$), non-sexual violent ($n = 64$), and community group ($n = 143$) using self-report questionnaires assessing personality pathology, including impairments in personality functioning (i.e. self-control, identity integration, responsibility, relational capacities, and social concordance), and pathological personality traits (i.e. psychopathic and narcissistic traits). Correlational and multivariate analyses of variance were conducted to examine group differences. No significant differences were found between the CSEM and sexual contact groups. Compared to the community group, the other three groups showed more impairments in personality functioning. The violent group reported higher levels of psychopathic and narcissistic traits than the other groups. The community group showed more overt narcissistic traits compared to the other groups. This study indicates no differences in personality pathology between the CSEM and sexual contact groups, suggesting that interventions may not need to vary between these groups. Replication and exploration of additional constructs are necessary before drawing definitive conclusions.

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Personality pathology; child sexual exploitation material offending; contact child sexual offending; violent offending; community group

Sexual offenses against children represent a critical and distressing issue worldwide. These offenses leave a psychological burden on victims and pose significant difficulties for society in terms of prevention and rehabilitation. While much research has concentrated on sexual contact offenses against children, there is a growing recognition of the need to understand non-contact offenses, such as those involving child sexual exploitation material (CSEM). This introduction aims to delve into the distinctions and commonalities between these offenses, their impact, and the role of personality pathology.

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Child sexual offenses are generally divided into two main categories: contact offenses and non-contact offenses. Contact offenses involve physical sexual offenses against children, whereas non-contact offenses, or Internet offenses, include accessing CSEM online (Elliott et al., 2013). These offenses do not involve physical contact but have significant and harmful consequences for victims. The rise of the internet has worsened the problem of online material, making it easier for offenders to access and share exploitative material. Although some studies compared CSEM and sexual contact groups (e.g., Babchishin et al., 2011, 2015; Elliott et al., 2013; Henshaw et al., 2018), they mainly focused on demographics, attitudes, and motivations rather than personality pathology. Research on personality pathology, which encompasses impairments in personality functioning and pathological personality traits (American Psychiatric Association, 2022), in these groups is limited. Evidence suggests that personality pathology can increase the risk of committing child sexual offenses (e.g., Garofalo et al., 2018; Paquette & Cortoni, 2021). Given the different nature of child sexual offender (CSO) groups and their different environments, there may be variations in personality pathology between these groups. Understanding these mechanisms is important for identifying risk factors and intervention opportunities, which can help in early detection and reducing recidivism. Therefore, this study compared CSEM and sexual contact groups, along with a non-sexual violent group and a community group with no prior convictions or treatment history, on personality pathology, including impairments in personality functioning (i.e., self-control, identity integration, responsibility, relational capacities, and social concordance) and pathological personality traits (i.e., psychopathic and narcissistic traits).

Impairments in personality functioning

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) introduced the Alternative Model of Personality Disorders, which offers a more nuanced and dimensional understanding of personality pathology. This model enhances our ability to recognize personality pathology as a complex phenomenon. Personality pathology refers to impairments in personality functioning and pathological personality traits. Individuals with impairments in personality functioning experience difficulties in emotion-related perceptions and regulation toward themselves and others. These impairments are categorized into self-functioning and interpersonal functioning (American Psychiatric Association, 2022).

Self-functioning includes aspects like self-control and identity integration, as outlined in Verheul et al.'s Severity Indices of Personality Problems Model (2008). According to the general theory of crime (Gottfredson & Hirschi, 1990), a lack of self-control, characterized by poor introspection, emotion

regulation, and aggression management, is associated with impulsivity, insensitivity, and irresponsibility, increasing the risk of offending behavior (DeLisi & Vaughn, 2014). Impairments in interpersonal functioning, such as identity integration and responsibility, may also correlate with offending behavior. Individuals struggling with their identity often experience low self-esteem, emotional loneliness, and difficulties in forming intimate relationships (Verheul et al., 2008). These individuals may use the Internet to construct new identities or seek acceptance and sexual interactions, leading to risky online behavior due to perceived anonymity of the Internet (Marcum, 2007). Interpersonal functioning also includes relational capacities and social concordance (Verheul et al., 2008). Individuals who fail to form attachments in real life may seek intimacy through (online) sexual activities, potentially leading to offending behavior.

Studies indicate that impairments in self-functioning and interpersonal functioning are linked to offending behavior in general (DeLisi & Vaughn, 2014; Gottfredson & Hirschi, 1990; Verheul et al., 2008) and specifically to sexual offending behavior (Babchishin et al., 2015; Clevenger et al., 2016; Elliott et al., 2013; Garofalo et al., 2018; Seto et al., 2011). For instance, Garofalo et al. (2018) compared individuals who committed child sexual offenses, non-sexual violent offenses, and a community group, and found that the violent group showed greater impairments in personality functioning (i.e., self-control, identity integration, responsibility, relational capacities, and social concordance) than the other groups. Nonetheless, those who had committed child sexual offenses also reported impairments in self-control, identity integration, responsibility, and relational capacities, when compared to the community group. This suggests that impairments in personality functioning are prevalent among individuals with contact sexual offenses against children. However, limited research exists on whether these impairments are also present in other subgroups, such as individuals who commit CSEM offenses only.

Seto et al. (2011) found that individuals who commit CSEM offenses have higher psychological self-control than contact individuals, which may explain why they are less likely to reoffend or have prior contact offenses. In addition, they seem to have fewer antisocial tendencies and avoid emotional closeness in relationships (Babchishin et al., 2011). It is plausible to assume that individuals who commit CSEM offenses exhibit less impairments in self-control but more impairments in identity integration, responsibility, relational capacities, and social concordance compared to contact individuals. This may be due to their tendency to disguise their identity online (Bergen et al., 2014), and downplay responsibility and harm toward victims by believing that watching exploitative materials online does not hurt them (Howitt & Sheldon, 2007). They may also avoid intimate relationships by limiting their interactions to images (Babchishin et al., 2011).

Pathological personality traits

Psychopathic traits

Personality pathology includes not only impairments in personality functioning but also pathological personality traits (American Psychiatric Association, 2022). One such construct that has been extensively studied in the context of offending behavior is psychopathy. Psychopathy contains a variety of behavioral patterns (e.g., poor behavioral control, irresponsibility, impulsivity), affective factors (e.g., shallow affect, lack of remorse or guilt, callousness) and interpersonal factors (e.g., superficial charm, grandiosity, manipulation) (Hare & Neumann, 2008). Several theoretical models have been developed to conceptualize psychopathy. A significant model is the primary and secondary psychopathy framework, first proposed by Karpman (1948). Primary psychopathy is characterized by callousness, extreme manipulativeness, deceitfulness, low anxiety, lack of empathy and remorse, and involvement in premeditated crimes (Levenson et al., 1995). Secondary psychopathy is marked by heightened anxiety, neuroticism, withdrawal, emotionality, and impulsive, aggressive, and antisocial behavior stemming from emotional disturbances (Levenson et al., 1995).

Studies have reported varying rates of psychopathy within different offender groups (e.g., Brown et al., 2015; Olver & Wong, 2006; Schimmenti et al., 2014; Sohn et al., 2022). Olver and Wong (2006) found that individuals who sexually abused children aged 14 and older, and those who abused both children and adults, showed higher psychopathy scores than those who targeted children under 14 years and those who assaulted related victims. Schimmenti et al. (2014) found elevated psychopathic interpersonal-affective traits in individuals who sexually abused children compared to those who committed non-sexual violent offenses. Also, Brown et al. (2015) found that individuals who sexually abused both children and adults exhibited higher psychopathy scores than those who had abused only children, only adults, or who had committed non-sexual offenses. Research suggests that psychopathy seems to be more prevalent in mixed groups (offending against both children and adults) compared to single-target and non-sexual groups. Rosenberg et al. (2005) found that individuals who sexually abused children and used physical violence exhibited higher levels of psychopathy than individuals who did not use violence. Additionally, Sohn et al. (2022) found that individuals who committed child sexual offenses (physical contact) had higher psychopathy (characterized by greater interpersonal problems and affective deficiencies) compared to individuals who committed non-sexual offenses, such as homicide and robbery. Research on psychopathic traits in specific CSO subgroups, especially those who commit CSEM offenses, is limited. Webb et al. (2007) found higher psychopathy levels in individuals convicted of contact sexual abuse compared to those convicted of possessing CSEM. Another study found

that both CSEM and contact groups exhibited higher psychopathy levels compared to a control group with no criminal record, but no differences in psychopathy levels were observed between the CSEM and contact groups (Stoll et al., 2019).

Narcissistic traits

In addition to psychopathy, also narcissistic personality traits have been investigated in relationship to offending behavior (e.g., Bogaerts et al., 2004). These traits are characterized by grandiose self-esteem, preoccupation with fantasies of limitless success, a belief in being "special," an excessive craving for admiration, feelings of having special rights, exploitation of others, lack of empathy, envy, and arrogant behavior (DSM-5-Text Revision; American Psychiatric Association, 2022). Researchers have categorized narcissism into overt and covert traits, each encompassing characteristics like grandiosity, self-interest, and a desire for attention, but with some differences. Individuals with overt narcissistic traits actively seek the spotlight, displaying extraversion, overconfidence, and a disregard for other's feelings. Their impulsivity and approach-oriented behavior can sometimes lead to aggressive or even violent actions (Ettema & Zondag, 2002). Individuals with covert narcissistic traits operate more subtly. They may outwardly appear anxious, timid, and insecure, yet cherish subconscious feelings of grandiosity, convinced of their superiority over others. They often avoid social interactions and relationships due to a lack of self-confidence, social anxiety, or fear of unfavorable comparisons (Ettema & Zondag, 2002). Ettema and Zondag (2002) suggested a third dimension known as isolated narcissistic traits. Individuals who experience isolation tend to distance themselves from others, believing they are criticized and misunderstood. This type of narcissism has not been frequently studied, particularly not within CSO groups.

Some studies found support for the idea that narcissistic traits can contribute to sexual abuse against adults and may pose as a high risk of sexual recidivism (e.g., Balcioglu et al., 2024). However, the presence of these traits in individuals who commit child sexual offenses is less clear. Some studies suggest that individuals who commit child sexual offenses are less narcissistic than non-sexual offenders (e.g., Ahlmeyer et al., 2003), while others suggest that narcissistic personality disorder can be found in individuals with child victims (e.g., Arbanas et al., 2022) and even predict child sexual abuse (Bogaerts et al., 2004) and sexual recidivism (Pettersen et al., 2020). It may be assumed that narcissistic traits can manifest in CSO groups. Considering overt, covert, and isolated narcissistic traits, it is conceivable that the CSEM group resorts to anonymous online platforms to avoid real-life interactions due to feelings of insecurity and/or lack of self-confidence. Consequently, covert and isolated narcissistic traits may manifest among the CSEM group.

In contrast, the sexual contact group may exhibit more overt narcissistic traits due to their direct involvement in physical sexual abuse of children. Given the scarcity of research and the contradicting results on the presence of impairments in personality functioning and pathological personality traits among CSO groups, this study aims to clarify whether these impairments and traits are evident among different CSO groups.

Current study

While Garofalo et al. (2018) examined personality pathology among a violent and sexual offender group, they did not differentiate between various CSO groups. Other studies have studied personality functioning (e.g., Babchishin et al., 2011; Seto et al., 2011) and pathological personality traits (e.g., Pettersen et al., 2020), but research on personality pathology in specific CSO subgroups remains limited. This scarcity may be due to challenges of small sample sizes and the heterogeneity of these groups. Investigating specific personality pathology in different CSO subgroups is important from an etiological perspective. Existing literature suggests that the CSEM group is a distinct subset of sex offenders who engage primarily in online or non-contact sexual activities. This may be due to greater self-control, victim empathy, and fewer antisocial tendencies (e.g., Babchishin et al., 2011, 2015; Elliott et al., 2013; Henshaw et al., 2018). However, sexual interest in children is a risk factor for committing child sexual offenses (Hanson & Morton-Bourgon, 2005; Seto et al., 2011), suggesting that CSEM offenders may represent the same individuals at different stages of offending. Understanding whether the CSEM group shares personality pathology traits with contact offenders is crucial for tailoring treatment approaches.

This study aimed to assess potential differences between CSEM and sexual contact groups in terms of self-control, identity integration, responsibility, relational capacities, social concordance, as well as psychopathic and narcissistic traits. These two groups were compared with two control groups, namely a non-sexual violent and a community group. These control groups provided a baseline for understanding personality pathology in different CSO groups. Based on existing literature, the following hypotheses were proposed. First, it was hypothesized that the CSEM group would show less impairments in self-control and more impairments in identity integration, responsibility, relational capacities, and social concordance compared to the sexual contact group (e.g., Bergen et al., 2014; Howitt & Sheldon, 2007; Seto et al., 2011). Second, considering that the sexual contact group may engage in more aggressive, manipulative, and deceptive behavior due to physical contact (Webb et al., 2007), it was hypothesized that they would demonstrate higher levels of primary and secondary psychopathic traits compared to the CSEM group. Third, since the CSEM group may prefer anonymous online platforms

to avoid real-life interactions due to insecurities and low self-confidence, it was hypothesized that these individuals would demonstrate higher levels of covert and isolated narcissistic traits compared to the sexual contact group. Finally, it was hypothesized that the sexual contact group, being actively and physically involved in the sexual abuse of children (e.g., Bogaerts et al., 2004), would have higher levels of overt narcissistic traits than the CSEM group. This study also investigated whether the violent and community groups would display impairments in personality functioning and show psychopathic and narcissistic traits.

Method

Participants

The current study comprised secondary analysis of 270 male participants: 127 forensic outpatients and 143 men from a community group. The outpatients were in treatment for child sexual offenses or non-sexual violent offenses at four outpatient forensic psychiatric centers in the Netherlands. This group consisted of 33 CSEM offenders, 30 sexual contact offenders and 64 non-sexual violent offenders. The CSEM group engaged in accessing, downloading, and/or distributing sexually abusive materials involving children ($n = 33$). Their ages ranged from 22 to 70 years old ($M = 50.63$, $SD = 12.89$). The sexual contact group engaged in producing sexually abusive materials ($n = 2$), in-person sexual abuse of children ($n = 26$), or exhibitionism involving a child ($n = 2$). They were between 20 and 66 years old ($M = 44.80$, $SD = 14.03$). Three individuals with both CSEM and sexual contact offenses, and one involved in online solicitation were excluded to ensure sample homogeneity based on distinctions noted in previous studies (e.g., Babchishin et al., 2015). The non-sexual violent group engaged in physical assault ($n = 30$), domestic violence ($n = 20$), and threats/stalking ($n = 14$). They were between 20 and 60 years old ($M = 36.86$, $SD = 9.89$). The community group consisted of individuals with no prior convictions or treatment history. Participants who reported prior convictions ($n = 39$) or treatment history ($n = 31$) were removed from the sample. The community group was recruited through snowball sampling by master's students in clinical forensic psychology. Students initially recruited participants through acquaintances, who then recruited additional participants from their own networks. While this method may introduce bias, snowball sampling was chosen to help diversify the sample and achieve a broader community sample. Participants were between 22 and 70 years old ($M = 46.15$, $SD = 15.14$). Univariate Analysis of Variance indicated significant differences in age ($F(3,262) = 9.08$, $p = .001$) and education ($F(3,265) = 22.33$, $p = .001$) among the groups. Post hoc tests revealed that the CSEM and community group were older than the violent group, and the community group was higher educated than the other three groups. No

Table 1. Overview of the characteristics of the groups.

	CSEM	Contact	Violent	Community
	(*n* = 33)	(*n* = 30)	(*n* = 64)	(*n* = 143)
Age				
Mean years (*SD*)	50.63 (12.89)	44.80 (14.03)	36.86 (9.89)	45.82 (15.15)
Range	22–70	20–66	20–60	22–70
Education *N* (%)				
None	0 (0.0%)	0 (0.0%)	5 (7.8%)	1 (0.7%)
Lower	6 (18.2%)	2 (6.7%)	12 (18.8%)	2 (1.4%)
Middle	21 (63.6%)	24 (80.0%)	40 (62.5%)	70 (49.0%)
Higher	6 (18.2%)	4 (13.3%)	6 (9.4%)	70 (49.0%)
Missing	0 (0.0%)	0 (0.0%)	1 (1.6%)	0 (0.0%)
Index offense *N* (%)				
Accessing, downloading, distributing materials	33 (100.0%)			
Producing materials depicting minors		2 (6.7%)		
Sexual abuse against a minor		26 (86.6%)		
Exhibitionism against a minor		2 (6.7%)		
Physical assault			30 (46.9%)	
Domestic violence			20 (31.3%)	
Threats/stalking			14 (21.9%)	
Reason for treatment *N* (%)				
Treatment on their own initiative	5 (15.2%)	11 (36.7%)	41 (64.1%)	
Treatment pending trial	8 (24.2%)	8 (26.7%)	5 (7.8%)	
Treatment pending discharge from prison	6 (18.2%)	3 (10.0%)	2 (3.1%)	
Treatment for their whole sentence	11 (33.3%)	7 (23.3%)	13 (20.3%)	
Conditional treatment	1 (3.0%)	1 (3.3%)	0 (0.0%)	
Missing	2 (6.1%)	0 (0.0%)	3 (4.7%)	

Note. CSEM = Child Sexual Exploitation Material group. Contact = Contact group. Violent = Violent group. Community = Community group.

significant differences were found between the other groups. As the focus lies on comparing the CSO groups, we did not control for age and education. Table 1 provides an overview of the demographics, index offenses, and treatment reasons.

Procedure

Participants gave informed consent and participated voluntarily. They were informed about the purpose, procedure, and their right to withdraw at any time without reason. Data was collected confidentially and analyzed anonymously using identification codes. Forensic patients were assured that participation would not affect their ongoing treatment, and study results would not be shared with their therapists. Data collection involved three self-report questionnaires. Forensic outpatients completed the questionnaires in rooms provided at the outpatient centers, while the community group completed the questionnaires at home and returned them to the researchers in sealed envelopes. Ethical approval was obtained from the Fivoor Scientific Research Committee.

Materials

Personality functioning

The Severity Indices of Personality Problems – Short Form (SIPP – SF; Rossi et al., 2017) was used to measure personality functioning. This is a self-report

questionnaire consisting of 60 items rated on a 4-point Likert scale ranging from (1) *strongly disagree* to (4) *strongly agree*. The items are statements that refer to the previous three months, producing scores on five scales (12 items on each scale): self-control, identity integration, responsibility, relational capacities, and social concordance. The self-control scale assesses the ability to tolerate, control and use emotions and impulses, such as "Sometimes my feelings are so overwhelming that I can't control my reaction" (reversed). The identity integration scale measures the capacity to see yourself and your own life as stable, integrated, and valuable, such as "I know exactly who I am and what I'm worth." The responsibility scale assesses the ability to establish and achieve realistic goals consistent with the expectations generated in others, such as "When I have agreed with people about the way things are going, I usually stick to my agreements." The relational capacities scale measures the capacity to care about others and to feel cared about them, and the ability to share personal experiences with others, such as "I rarely meet anyone with whom I dare to share my thoughts and feelings" (reversed). The social concordance scale assesses the capacity to collaborate with others, to value their identities and needs, and to withhold aggressive impulses toward others, such as "Sometimes I get so angry that I feel like hitting or kick people around me" (reversed). Some items were reversed to control for response sets. Lower mean scores on the scales indicated greater impairments. The scales have demonstrated good internal reliability (self-control $\alpha = .88$, identity integration $\alpha = .87$, responsibility $\alpha = .83$, relational capacities $\alpha = .81$, and social concordance $\alpha = .81$; Rossi et al., 2017). In the current study, the internal consistency coefficients were excellent for self-control ($\alpha = .92$) and identity integration ($\alpha = .92$), and good for responsibility ($\alpha = .86$), relational capacities ($\alpha = .88$), and social concordance ($\alpha = .85$).

Psychopathic traits

The Levenson Self Report Psychopathy scale (LSRP; Levenson et al., 1995; Dutch translation from; Uzieblo et al., 2006) was used to measure psychopathic traits. This is a self-report questionnaire consisting of 26 items rated on a 4-point Likert scale ranging from (1) *strongly disagree* to (4) *strongly agree*. It has a two-factor structure that differentiates between primary (16 items; e.g., "I enjoy manipulating feelings of others") and secondary psychopathic traits (10 items; e.g., "I find myself in the same kinds of trouble, time after time"). Some items were reversed to control for response sets. Higher mean scores on primary psychopathic traits indicated being more insensitive, manipulative, and deceptive toward others. Higher mean scores on secondary psychopathic traits indicated more anxious, impulsive, and aggressive behavior. The internal consistency coefficients were good for primary psychopathic traits ($\alpha = .82$) and questionable for secondary psychopathic traits ($\alpha = .63$) (Levenson et al., 1995). In the current study, the internal consistency coefficient was good for

primary psychopathic traits ($\alpha = .82$) and acceptable for secondary psychopathic traits ($\alpha = .71$).

Narcissistic traits

The Dutch Narcissism Scale (Nederlandse Narcisme Schaal, NNS; Ettema & Zondag, 2002) was used to measure narcissistic traits. This is a self-report questionnaire consisting of 35 items rated on a 7-point Likert scale ranging from (1) *certainly not the case* to (7) *certainly the case*. It consists of three dimensions: overt (12 items), covert (11 items) and isolation (12 items). Individuals with higher mean scores on the overt scale feel a more outward comparison with others. Their self-description is based on the effect they have on others, such as "I find it very annoying when people don't pay attention to who I really am." Individuals with higher mean scores on the covert scale feel an inward comparison with others. They feel strongly influenced by and dependent upon others, such as "I am usually well aware of the impression I leave on people." Individuals with higher scores on the isolation scale tend to distance themselves from others because of their need for self-preoccupation, such as "I often have the feeling that there is a shield separating me from others." The internal consistency coefficients were good for overt narcissism ($\alpha = .82$), acceptable for covert narcissism ($\alpha = .71$), and somewhat lower for isolation ($\alpha = .60$) (Ettema & Zondag, 2002). In the current study, the internal consistency coefficients were acceptable for overt ($\alpha = .73$) and isolation narcissism ($\alpha = .78$) and good for covert narcissism ($\alpha = .80$).

Analyses

A post-hoc power analysis was conducted to assess the power of the tests performed, based on the sample size and parameter estimates. With a sample size of 270, an alpha of .05, and four groups, the critical F was 1.5, and the power was .99. All analyses were conducted using IBM SPSS Statistics for Mac OS, version 27 (IBM Corp, 2020). All p-values were derived from two-tailed tests with significance set at $p < .05$. No missing values were detected. Normality was confirmed through visually inspection of normal Q-Q plots and by checking Skewness and Kurtosis. Linearity and multicollinearity assumptions were also met, except for the homogeneity of variances across groups. Due to non-homogeneity of variances, Games-Howell post-hoc tests were used.

Pearson correlations were employed to investigate the associations among the personality functioning, psychopathy, and narcissism scales within the different groups. To evaluate group differences across all variables, multivariate analysis of variance was used, followed by Games-Howell post hoc tests to identify group differences. Multivariate analysis of variance was chosen over analysis of variance to enhance statistical power for identifying group

differences among multiple dependent variables while controlling for Type 1 errors. Cohen's *d* was used to calculate the effect size, defined as $d = (M_1 - M_2)/S_w$, where M_1 and M_2 are the group means, and S_w is the pooled-within standard deviation. For the interpretation of the effect sizes, Cohen's (1988) guidelines for interpretating small (.20), medium (.50), and large (.80) effects were used.

Results

Correlations among variables

Table 2 shows the Pearson correlations between the variables. For group specific correlations, see the supplementary material. Overall, small, medium, and large effects were found. Positive correlations were found between all personality functioning scales (medium effects) and between the personality functioning scales and the overt scale (small effects). Negative correlations were found between the personality functioning scales and the psychopathy scales (small and medium effects), the personality functioning scales and the covert scale (small effects), and the personality functioning scales and the isolation scale (medium effects). Positive correlations were also found between both psychopathy scales (medium effect), between the primary psychopathy scale and the covert scale (small effect), and between both psychopathy scales and the covert (small effects) and the isolation scale (small and medium effects). The secondary psychopathy scale was negatively correlated with the overt scale (small effect). The isolation scale was negatively correlated with the

Table 2. Pearson correlations among personality pathology in the groups.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. SIPP–SF	Self-control	–									
2.	Identity Integration	.63***	–								
3.	Responsibility	.68***	.63***	–							
4.	Relational capacities	.60***	.74***	.58***	–						
5.	Social concordance	.77***	.55***	.61***	.57***	–					
6. LSRP	Primary psychopathy	−.47***	−.32***	−.43***	−.31***	−.55***	–				
7.	Secondary psychopathy	−.74***	−.59***	−.71***	−.60***	−.69***	.51**	–			
8. NNS	Overt Narcissism	.20***	.40***	.28***	.36***	.13*	−.01	−.17**	–		
9.	Covert Narcissism	−.44***	−.45**	−.38***	−.44***	−.42***	.25***	.43***	.02	–	
10.	Isolation Narcissism	−.58***	−.64***	−.51***	−.72***	−.57***	.37***	.61***	−.22***	.59***	–

Note. SIPP–SF = Severity Indices of Personality Problems–Short Form. LSRP = Levenson Self Report Psychopathy scale. NNS = Dutch Narcissism Scale. * $p < .05$; ** $p < .01$; *** $p < .001$.

overt scale (small effect) and positively correlated with the covert scale (medium effect).

Between group comparison

We found significant multivariate differences between the four groups on the scales, $F(30,777) = 8.68$, $p < .001$, $N_p^2 = .25$. Univariate F tests revealed significant inter-group differences, as shown in Table 3, along with the means and standard deviations.

Overall, the CSEM and sexual contact group reported similar impairments in personality functioning and pathological personality traits. Regarding impairments in personality functioning, both CSO groups and the violent group reported lower scores on the personality functioning scales, indicating greater impairments in identity integration (medium and large effects) and relational capacities (medium and large effects) compared to the community group. In addition, the sexual contact and violent groups reported greater impairments in self-control (medium and large effects) and responsibility (medium effects) compared to the community group. Furthermore, the violent group reported greater impairments in self-control (large effects), responsibility (large and medium effects), and social concordance (large effects) compared to the CSEM and sexual contact groups. They also showed more impairments in identity integration and relational capacities compared to the CSEM group (medium effects) and more impairments in social concordance compared to the community group (large effect).

Regarding pathological personality traits, the violent group reported higher scores on both psychopathy scales compared to the other three groups (medium and large effects) and higher scores on the covert and isolation scale compared to the CSEM and community groups (medium and large effects). The community group reported higher scores on the overt scale compared to the other groups (medium and large effects) and lower scores on the isolation scale compared to the sexual contact group (medium effect).

Discussion

The present study investigated differences in personality pathology, including impairments in personality functioning and pathological personality traits, among a CSEM and sexual contact group, and a violent and community group. First, we hypothesized that the CSEM group would show less impairments in self-control and more impairments in identity integration, responsibility, relational capacities, and social concordance compared to the sexual contact group. In addition, we expected the sexual contact group to demonstrate higher levels of psychopathic traits compared to the CSEM group and that the CSEM group would demonstrate higher levels of covert and isolated

Table 3. Means, standard deviations, univariate F tests, pairwise comparisons and individual Cohen's d among personality pathology in CSEM ($n = 33$), contact ($n = 30$), violent ($n = 64$) and community ($n = 143$) groups.

		CSEM		Contact		Violent		Community		Pairwise Comparisons			
Measure		*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	N_p^2	($p < .05$)	*d*
SIPP – SF	Self-control	3.52	0.46	3.27	0.50	2.40	0.66	3.60	0.42	7.68***	.07	2,4,5,6	1.86, 1.42, 0.67, 2.37
	Identity integration	3.35	0.59	3.22	0.69	2.89	0.75	3.67	0.43	14.18***	.13	2,3,5,6	0.66, 0.69, 0.93, 1.42
	Responsibility	3.32	0.45	3.18	0.46	2.81	0.55	3.47	0.50	5.68**	.05	2,4,5,6	0.98, 0.71, 0.59, 0.56
	Rel. capacities	2.98	0.66	2.82	0.75	2.51	0.60	3.33	0.48	14.52***	.13	2,3,5,6	0.76, 0.68, 0.95, 1.51
	Social concordance	3.45	0.37	3.38	0.43	2.66	0.62	3.37	0.43	0.48	.01	2,4,6	1.44, 1.27, 1.43
LSRP	Primary	1.68	0.46	1.79	0.37	2.14	0.55	1.89	0.45	3.30*	.03	2,4,6	0.88, 0.70, 0.52
	Secondary	1.81	0.39	1.82	0.35	2.44	0.48	1.75	0.37	0.76	.01	2,4,6	1.39, 1.40, 1.70
NNS	Overt	4.30	0.77	4.33	0.72	4.50	0.86	4.94	0.60	19.52***	.17	3,5,6	1.01, 0.98, 0.64
	Covert	3.55	0.95	3.66	1.03	4.10	0.97	3.41	0.92	0.80	.01	2,6	0.57, 0.74
	Isolation	3.56	0.88	3.70	0.92	4.13	0.76	3.14	0.74	8.57***	.08	2,5,6	0.71, 0.72, 1.22

Note. CSEM = Child Sexual Exploitation Material group. Contact = Contact group. Violent = Violent group. Community = Community group. SIPP – SF = Severity Indices of Personality Problems – Short Form. LSRP = Levenson Self Report Psychopathy scale. NNS = Dutch Narcissism Scale. N_p^2 = Partial Eta Squared effect size measure. The significant differences between the groups are indicated by 1. CSEM – Contact, 2. CSEM – Violent, 3. CSEM – CS, 4. Contact – Violent, 5. Contact – CS, 6. Violent – CS. The Cohen's *d* are indicated for the individual differences between the groups.

* $p < .05$; ** $p < .01$; ***$p < .001$.

narcissistic traits compared to the sexual contact group. Finally, we expected that the sexual contact group would exhibit higher levels of overt narcissistic traits than the CSEM group. Whether the violent and community group would also display personality pathology was studied exploratory.

The correlations results indicated negative associations between the personality functioning scales and the psychopathy scales, as well as between the personality functioning scales and the covert and isolated scales. In addition, positive associations were found between both psychopathy scales and the covert and isolated scales. These findings indicate that greater impairments in personality functioning (i.e., self-control, identity integration, responsibility, relational capacities, and social concordance) are related to pathological personality traits (i.e., psychopathic traits and covert and isolated narcissistic traits). This aligns with previous research (Garofalo et al., 2018; Hare & Neumann, 2008). Furthermore, less impairments in self-control, identity integration, responsibility, relational capacities, and social concordance, as well as fewer secondary psychopathic traits, were related to overt narcissistic traits. This seems contrary to expectations, as lower impairments in personality functioning are typically seen as less risky for sexual offending behavior, whereas psychopathic and narcissistic traits are often considered risk factors for sexual offending behavior (Bogaerts et al., 2004). On the one hand, individuals with higher overt narcissistic traits might have stable and purposeful lives, engage effectively in relationships, but also exhibit potential for aggression or violence (Bogaerts et al., 2021). On the other hand, having more overt narcissistic traits such as confidence, self-interest, and being able to take control, might positively impact psychological health (Ng et al., 2014), potentially enhancing identity integration, responsibility, and relational capacities. Further investigation of the construct validity of overt narcissism is recommended to determine the extent to which it aligns with healthy narcissism.

The first hypothesis was rejected, as the CSEM and sexual contact groups reported similar impairments in personality functioning. An exploratory finding revealed that both CSO groups exhibited greater impairments in identity integration and relational capacities compared to the community group. This indicates that both CSO groups have more difficulties in perceiving life as stable, integrated, and purposeful and in forming intimate and meaningful relationships. These difficulties may be explained by unsafe attachments and negative childhood experiences, potentially leading to sexual offending behavior (Ward & Beech, 2006). This could also explain why individuals accessing CSEM prefer anonymous online platforms, as they may seek to hide their identity and avoid real-life interactions (Babchishin et al., 2011; Bergen et al., 2014). Moreover, the sexual contact group displayed additional difficulties in managing and controlling emotions and impulses, as well as in establishing and achieving goals. This is consistent with self-

regulation theories, where impaired self-regulation is seen as key in sexual offending behavior (Elliott et al., 2013; Ward & Beech, 2006). The combination of poor self-control, responsibility deficits, cognitive distortions, and reduced empathy toward victims may increase the risk of contact offenses against children (Elliott et al., 2013).

Our hypotheses regarding the levels of psychopathic and narcissistic traits in the CSEM and sexual contact groups (H2, H3 and H4) were rejected. The sexual contact group did not show higher levels of psychopathic (H2) and overt narcissistic traits (H4), and the CSEM group did not demonstrate more covert and isolated narcissistic traits (H3). Instead, the sexual contact group was more isolated than the community group and the community group showed more overt narcissistic traits than the other groups. These findings are in contrast with our expectations and previous studies, which commonly reported psychopathic and narcissistic traits in sex offender populations (e.g., Bogaerts et al., 2004; Garofalo et al., 2018). Although the sexual contact group seems more isolated than the community sample, a plausible explanation for the observed low levels of psychopathic and narcissistic traits in CSEM and sexual contact groups is that the low-risk patients in our study may not occupy the extreme end of the psychopathic and narcissistic spectrum. Consequently, they may not exhibit the pronounced manipulativeness, deceitfulness, and self-centeredness characteristics, as observed in high-risk populations. Another explanation is the potential existence of different subgroups within our CSEM and sexual contact groups. Research has suggested that these groups are intrinsically heterogeneous, marked by varying characteristics and motives (Lim et al., 2021). Specifically, individuals who commit CSEM offenses only might exhibit different traits than those who engage in online solicitation or a mixed pattern of CSEM and contact offenses (e.g., Babchishin et al., 2015). Individuals who commit CSEM offenses may exhibit barriers toward contact offending due to limited access to children or empathy toward children that prevents acting on their sexual fantasies (Babchishin et al., 2011; Elliott et al., 2013). Conversely, those with a mixed pattern of offenses may score higher on indicators of antisociality (e.g., Brown et al., 2015). Given that severe psychopathic and narcissistic traits are strong predictors of sexual recidivism (Balcioglu et al., 2024; Biedermann et al., 2023), especially when combined with sexual interests in children (Rosenberg et al., 2005; Seto et al., 2011), it is important to replicate this study across various target groups, including high-risk CSO groups.

Another explanation pertains to the construct validity of overt narcissism. Initially, it seemed unexpected that the community sample scored higher on overt narcissism compared to the other groups. However, examining specific items, such as “Others see me as someone who can stand up for themselves” and “I see myself as someone with leadership capabilities,” higher scores in the

community group are not surprising. The key question is whether this scale measures pathological narcissistic traits or aligns more with healthy manifestations of narcissism. Further investigation into the construct validity of this scale is recommended.

Exploratory findings showed that the violent group had more impairments in personality functioning and more pathological personality traits compared to the other groups. These findings confirm those of Garofalo et al. (2018), indicating that the violent group has a different personality profile than the CSO groups, necessitating different approaches for the violent group compared to the CSO groups.

Contrary to our expectations, no significant differences emerged between the CSEM and sexual contact groups across the variables in our study. One explanation may be group overlap. Individuals in the CSEM group might also have histories of contact offenses, as group differentiation was based solely on the offense type for which they were receiving treatment. Another possibility is that differences between CSO groups could be found in other areas, such as opportunities, motivations, or (sexual) coping strategies (Paquette & Cortoni, 2021). The identity integration scale assesses a stable and coherent self-concept, including self-worth, life purpose, and enjoyment, which are crucial for a cohesive identity (Luyten & Blatt, 2011; Verheul et al., 2008). As some items may resemble depressive symptoms, future research could benefit from focusing on alternative aspects, such as depressive symptoms, to provide a clearer differentiation between these groups. Another explanation is that CSEM individuals have greater Internet access, leading to online offenses, while contact individuals have more opportunities for physical contact with children, leading to offline offenses (Babchishin et al., 2015). Alternatively, individuals may start with online offenses and transition to offline offenses as they seek greater satisfaction. Investigating changes in offender profiles over time is recommended. According to the age crime curve, offending behavior generally decreases over time (Moffitt, 1993). However, based on the reviews of Crookes et al. (2022) and Smethurst et al. (2021), it can be assumed that differences in age of onset and desistance between CSO subgroups exist. These differences may reflect situational factors like access to children. For instance, individuals may cease offenses as children grow up, but new opportunities could arise with the arrival of grandchildren. Longitudinal and age-cohort studies focusing on different CSO subgroups could help determine whether certain subgroups are more prevalent at specific life stages.

Strengths and limitations

This study is distinctive for its comparison of CSO groups, and a violent and community group based on impairments in personality functioning and pathological personality traits. The study also has some limitations. A first limitation is

the small sample size of the CSO groups, primarily consisting of low-risk outpatients, potentially affecting generalizability. Therefore, these results should be interpreted with caution. The difficulty of obtaining forensic samples for research, particularly CSO subgroups, limits generalizability. However, this study's ability to differentiate between CSO subgroups highlights its uniqueness, offering valuable insights in a relatively understudied area. Future studies could enhance the validity by replicating this study with similar and alternative instruments across various target groups, including high-risk individuals. A second limitation is our reliance on self-report questionnaires without corroboration from external sources, which can introduce bias and social desirability concerns, particularly in populations with a history of sexual offenses (Tan & Grace, 2008). Given the challenge of including CSO groups in our study, other external sources were not used. Relying solely on self-reports may portray participants as low-risk, while alternative sources (e.g., penile plethysmography and polygraphy) could reveal contact victims among the CSEM group. Future research should diversify sources and explore this group with potentially higher levels of antisociality and more sexual interest in children compared to those solely involved in online or offline child sexual offenses. In addition, we did not control for impression management and social desirability, so it is possible that fluctuations in responses occur. Although questionnaires like the Levenson Self Report Psychopathy scale tend to be relatively robust against response bias (Ray et al., 2013), it is important to approach our results with caution. A third limitation stems from the lack of specific information about our CSO groups. We lacked details on treatment status information, potentially affecting results due to varying treatment durations. Lastly, we did not control for other psychopathologies like specific paraphilias, intellectual disabilities, autism spectrum disorders, or sexual abuse histories. Future research may consider these variables for a more comprehensive analysis.

Conclusion

This study broadens our understanding of personality pathology across CSO groups, as well as in violent and community groups. No significant differences in personality pathology were found between the CSO groups in terms of personality functioning impairments and pathological personality traits. Consequently, interventions may not require differentiation between these groups. However, replication is necessary to confirm these findings. Future research should use similar and diverse instruments across various CSO subgroups, including high-risk CSO groups, and investigate additional factors contributing to online and offline child sexual offending behavior. This approach will advance our comprehension of these behaviors and support the development of more effective interventions.

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Ethical standards and informed consent

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants for being included in the study.

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