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To Be or Not to Be Empathic: the Role of Empathy in Child Sexual Offending

Marta Sousa[1] · **Olga Cunha**[2] · **Rui Abrunhosa Gonçalves**[1] · **Andreia de Castro-Rodrigues**[3]

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Abstract
Although treatment providers very often use empathy training in treatment for those who sexually offend, it is essential to further investigate the predictive capacity of this construct for committing a child sexual offending. This study aimed to examine the relationship between empathy and different types of offending behavior (i.e., child sexual offending and nonsexual offending). The sample was composed of 113 male individuals who sexually offended minors (ISOMs) and 146 individuals convicted of nonsexual crimes. Four separate binary logistic regression analyses were conducted controlling for sociodemographic variables. Only cognitive empathy emerged as a predictor for committing a sexual crime against a minor, with ISOMs being more likely to score less in cognitive empathy than the nonsexual group. Therefore, extrafamilial ISOMs are more likely to score higher in cognitive empathy than intrafamilial. This study highlighted the importance of addressing cognitive empathy in psychological intervention for ISOMs.

Keywords Affective empathy · Intrafamilial child sexual offending · Extrafamilial child sexual offending · Cognitive empathy

Child Sexual Abuse

Child sexual abuse is an extreme form of child maltreatment with several negative consequences for the victims and their families (Hailes et al., 2019). Consequently, prevention strategies are considered a priority.

A more refined characterization of individuals who sexually offended minors (ISOMs) has been particularly beneficial for the development of more effective interventions (Bonta & Andrews, 2016). A relevant distinction among ISOMs has been according to the relationship between victim and perpetrator (intrafamilial and extrafamilial ISOMs). Intrafamilial

✉ Marta Sousa
martaasousaa@gmail.com

[1] Psychology Research Center (CIPSI), School of Psychology, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

[2] Lusófona University, Hei Lab, Porto, Portugal

[3] ISPA – University Institute, William James Center for Research, Lisbon, Portugal

ISOMs are related biologically or by marriage with the victim, that is, father, grandfather, stepfather, or uncle (Loinaz Calvo et al., 2019). Contrarily, extrafamilial ISOMs are people outside the victim's family environment like a friend of a family, babysitter, teacher, or an unknown person. These distinctions are of extreme importance considering the prevalence, risk of recidivism, and impact of these abusive acts. Intrafamilial child sexual abuse is more prevalent (Kloppen et al., 2016) and is associated with more severe harm than extrafamilial child sexual abuse (Muratoglu et al., 2018). However, extrafamilial ISOMs showed a significantly higher risk of recidivism, with more risk factors than intrafamilial ISOMs (Johnson et al., 2016).

Empathy and Sexual Offending

The inclusion of empathy as a treatment target in the psychological programs for ISOMs is very common. McGrath et al. (2009) identified that between 87 and 95% of psychological programs had an empathy training component. More recently, a systematic review that aimed to provide more detailed treatment targets for ISOMs found that nine out of ten psychological treatments included an empathy module (Sousa et al., 2022). However, interventions to increase empathy have been more theory-led than evidence-based. It has been assumed that the ability to be empathic encourages prosocial behavior (Ward & Durrant, 2013) since if people can experience others' feelings, they are less likely to victimize them (Farrington, 2007). Nevertheless, meta-analyses have shown that empathy is not an effective target in reducing reoffending (Hanson & Morton-Bourgon, 2005), limiting the evidence that an empathetic response inhibits sexual offending. Therefore, there is an ongoing debate about the importance of including empathic training in psychological intervention.

Some aspects contribute to this lack of consensus about the importance of empathic training in programs. First, the way that empathy has been operationalized has undergone significant changes over time, shifting from a unidimensional to a multidimensional construct (e.g., Cohen & Strayer, 1996; Hogan, 1969; Jolliffe & Farrington, 2004). In a unidimensional way, it was conceptualized only as a cognitive process (Hogan, 1969) or an affective process (Bryant, 1982). Cognitive empathy refers to the ability to identify and understand the mental status of others (Hogan, 1969), that is the ability to imagine or take the perspective of another person to understand what they may be feeling. This term includes perspective-taking abilities in relation to thoughts, beliefs, and intentions and the inference of emotions and feelings (Sebastian et al., 2012). Affective empathy comprises the ability to recognize others' emotions; to feel what others are feeling; to feel sympathy, compassion, or concern for others; and to feel discomfort in reaction to others' distress (Shamay-Tsoory et al., 2009). The contemporary view of general empathy tends to include both affective and cognitive forms (Cohen & Strayer, 1996; Davis, 1983; Marshall et al., 1995), suggesting that it may be more appropriate to increase information to the study of empathy (Eklund & Meranius, 2021). Also, some authors proposed that empathic processing involves multiple components: (1) perspective taking, (2) the ability to experience emotion, (3) a belief that others are worthy of compassion and respect, (4) the absence of situational factors, and (5) an ability to manage the feelings of personal distress (Barnett & Mann, 2013).

Second, the different definitions of the construct are accompanied using diverse measures that compromise the ability to compare outcomes (Brown et al., 2012). Besides, the lack of a universally accepted definition has also made the task of creating

instruments to measure empathy difficult. The literature also pointed out that the instruments used had validity limitations, which decreases the capacity to determine if empathy influences child sexual offending (Jolliffe & Farrington, 2004).

Third, there has been little agreement about the type of empathy deficit that could lead to sexual offending. Some authors claim that ISOMs had only empathy deficits for their specific victim (Marshall et al., 2001), exhibiting equivalent levels of generalized empathy to other samples (i.e., community samples and individuals with nonsexual convictions) (Teuma et al., 2003). The assumption has been that this empathy impairment reflects a range of distorted thinking patterns rather than an empathy deficit per se. Some authors proposed that ISOMs are acutely aware of the consequences of sexual abuse in victims but cognitively distort their knowledge to avoid any erosion of their sense of self-esteem and self-worth (Marshall & Marshall, 2019; O'Shaughnessy, 2009).

Oppositely, some researchers reported that ISOMs have general empathy deficits (Cardona et al., 2018; Ferretti et al., 2021; Hockley & Langdon, 2015; Sohn et al., 2022), which explained why perpetrators of sexual abuse can persist in their deviant behavior in the face of their victims' suffering (O'Donohue & Schewe, 2019). The idea of more general empathy deficits was supported by the results of two meta-analyses that linked a compromised trait of empathy to demonstrations of aggression (Miller & Eisenberg, 1988; Vachon et al., 2014). However, results differ based on the comparison group. A recent meta-analysis has shown that ISOMs had both general and cognitive empathy deficits when compared to the general population, but not affective empathy deficits (Morrow, 2020). The authors follow Marshall and collaborators' (1995) model of the process of constructing an empathetic response to justify these results (Marshall et al., 1995). The authors suggest that affective empathy is the first step in building an empathic response but is later shaped by cognitive empathy. Thus, the combined information forms an emotional experience that, if correct, can be similar to that of the observed individual. However, poor cognitive empathy can distort affective empathy responses, despite the potential initial accuracy of the affective response. However, if cognitive empathy is compromised, this combined information will be distorted, which will compromise a compromised empathic response (Morrow, 2020). Contrarily, these conclusions are refuted when comparing ISOMs and individuals with nonsexual crimes, in which no significant differences were found in general empathy (Tibbels et al., 2022) but ISOMs tended to display cognitive empathy deficits. These results suggest, however, that the lack of ability to understand the mental states of others could remove a barrier to preventing sexual offending behavior.

Considering the lack of consensus in this area and the possible detrimental effect of introducing an intervention target that could be more theory-led vs evidence-based (Mann & Barnett, 2013), it is crucial to study the role of general empathy in child sexual offending to create psychological interventions that more accurately address the needs of ISOMs. So, the study has two aims. First, the study examines the relationship between general empathy and different types of offending behavior (i.e., child sexual offending and nonsexual offending); specifically, we intended to assess whether cognitive and affective empathy is related to child sexual offending and nonsexual offending behavior. Second, considering the impact of intrafamilial sexual abuse and the high prevalence of extrafamilial sexual abuse (Finkelhor et al., 2014; Guziak, 2020; Kloppen et al., 2016; Stroebel et al., 2012), the present study also aims to examine the relationship between general empathy and different types of child sexual offending (i.e., intrafamilial child sexual offending and extrafamilial child sexual offending).

Method

Participants

This study's sample comprises ISOMs and individuals with nonsexual convictions (INSCs), recruited from six national prisons, and four community services in Portugal (i.e., probation services and one clinical specialist in the treatment of criminal behavior). The selection of participants had the following inclusion criteria: (a) being male, (b) having a conviction for child sexual abuse, and (c) having sufficient reading and writing skills to answer the instruments. Besides, having a conviction for any sexual crime was the only exclusion criterion for the selection of the nonsexual conviction group.

One hundred and thirteen male ISOMs participated in the present study. This group recruited participants from prison ($n=66$; 58.4%) and from the community ($n=47$; 41.6%). Individuals in the community were serving noncustodial measures. Most participants are convicted of sexual acts against children aged 14 or under ($n=99$, 87.6%). At the same time, a small percentage are convicted for possession of child pornography ($n=21$; 18.6%), committing sexual acts with minors between 14 and 16 years old ($n=10$; 8.8%), appealing to minors in prostitution ($n=3$; 2.7%), and enticing minors into prostitution ($n=1$; 0.8%). The mean age of the ISOMs was 45.19 (SD = 14.58). Almost half of them were married/cohabiting in the present ($n=48$, 42.5%), and 39 ISOMs were single (34.5%). The educational levels that present the greatest expression in terms of prevalence were primary school ($n=32$; 28.3%) and 6th grade ($n=31$; 27.4%). Concerning professional status, about half of the sample was employed at the moment of the incident ($n=61$; 54.0%) and almost a third of the sample was unemployed ($n=36$; 31.9%). Furthermore, about a third of the sample had previous convictions ($n=40$; 35.40%).

A total of 146 INSCs also participated in the study ($M=40.57$; SD = 9.65). Almost half of the participants were single ($n=61$; 41.8%), and 43 INSCs (29.5%) were married. More than half of the sample ($n=79$; 54.1%) was unemployed at the moment of the incident and more than a third of the sample was employed ($n=59$; 40.4%).

The educational levels that present the greatest expression in terms of prevalence were 6th grade ($n=56$; 38.4%) and 9th grade ($n=36$; 24.7%. They were convicted for different crimes including homicide, threat, robbery, coercion, and possession of a prohibited weapon, among others. Besides, most of the participants had previous convictions ($n=115$; 78.8%). Participants' characteristics are presented in Table 1.

Procedures

The current study was approved by the Ethics Committee for Research in Social and Human Sciences of the University of Minho and by the General Directorate of Reintegration and Prison Services, Ministry of Justice. The study was performed with the collaboration of four community services in the North of the country and six national prisons.

A list of potential participants (who met the inclusion criteria) was obtained for the first author by staff from the justice system. All potential participants were informed about the study's nature and conditions (i.e., voluntary participation), its anonymity and confidentiality, and the nonexistence of financial or any other form of compensation for participating, nor any form of damage derived from the participation. From the list of potential participants, about

Table 1 Participant characteristics

	ISOMs ($n=113$)	INSCs ($n=146$)				Intrafamilial ISOMs ($n=52$)	Extrafamilial ISOMs ($n=61$)			
	M (SD)	*M* (SD)	*t*	gl	95% CI	*M* (SD)	*M* (SD)	*t*	gl	95% CI
Age	45.19 (14.58)	40.57 (9.65)	2.909**	184	[1.49; 7.75]	47.31 (11.45)	43.38 (16.68)	1.47	106	[−1.35; 9.21]
	N (%)	*N* (%)	χ^2	gl	Cramer *V*	*N* (%)	*N* (%)	χ^2	gl	Cramer *V*
Marital status at the moment of the crime										
Single	41 (36.3)	66 (45.2)	3.037	2	.108	12 (23.1)	29 (47.5)	7.78*	2	.26
Married/cohabiting	63 (55.8)	65 (44.5)				36 (69.2)	27 (44.3)			
Divorced/separated	9 (8.0)	14 (9.6)				4 (7.7)	5 (8.2)			
Widowed	-	-				-	-	-		-
Marital status										
Single	39 (34.5)	61 (41.8)	4.868	3	.137	13 (25.0)	26 (42.6)	6.95	3	.24
Married/cohabiting	48 (42.5)	43 (29.5)				22 (42.3)	26 (42.6)			
Divorced/separated	25 (22.1)	41 (28.1)				16 (30.8)	9 (14.8)			
Widowed	1 (0.9)	1 (0.7)				1 (1.9)	-	-		-
Employment										
Employee	61 (54.0)	59 (40.4)	17.672***	3	.263	30 (57.7)	31 (50.8)	1.10	3	.10
Unemployed	36 (31.9)	79 (54.1)				15 (28.8)	21 (34.4)			
Retired	8 (7.1)	1 (0.7)				3 (5.8)	5 (8.2)			
Student	6 (5.3)	5 (3.4)				2 (3.8)	4 (6.6)			
Education										
4th grade	32 (28.3)	25 (17.1)	7.222	4	.167	17 (32.7)	15 (24.6)	6.90	4	.25
6th grade	31 (27.4)	56 (38.4)				17 (32.7)	14 (23.0)			
9th grade	25 (22.1)	36 (24.7)				9 (17.3)	16 (26.2)			
12th grade	20 (17.7)	26 (17.8)				9 (17.3)	11 (18.0)			
More than 12th grades	5 (4.4)	3 (2.1)				-	5 (8.2)			

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

93% of the participants participated fully in the survey administration after signing informed consent. All the instruments were self-administered individually with the assistance of the first author of this paper. The perpetrator's institutional files were consulted, after their authorization, and relevant information about sociodemographic and penal variables was collected.

Data was collected during 2021 and 2022, and ethical procedures concerning privacy and data protection were followed.

Measures

Adapted Basic Empathy Scale (BES Adapted)

The BES Adapted (Pechorro et al., 2015; Salas-Wright et al., 2012) is a 7-item self-report measure designed to measure empathy. Previous factor analysis identified two factors: affective empathy which encompasses three items (e.g., "I get caught up in other people's feelings easily"; "I often get swept up in my friend's feelings"; "After being with a friend who is sad about something I usually feel sad"), and cognitive empathy which includes four items (e.g., "I can usually figure out when my friends are scared"; "When someone is feeling 'down', I can usually understand how s/he feels"; "I can often understand how people are feeling even before they tell me"; "I can usually figure out when people are cheerful"). Each item is scored on a 5-point ordinal scale (1 = strongly disagree to 5 = strongly agree). The factor scores are obtained by summing the items, with higher scores indicating an increased presence of empathy characteristics. The original version of the BES Adapted (Salas-Wright et al., 2012) had an acceptable reliability indicator (coefficient alpha = 0.764). The Portuguese version of the scale presented good psychometric properties, with internal consistency values ranging between 0.74 and 0.80 for each subscale (Pechorro et al., 2015). In the present study, the internal consistency values ranged from 0.64 to 0.72 for the affective and cognitive subscale, respectively. The total score presented an alpha of 0.69.

Sociodemographic Questionnaire

The sociodemographic questionnaire was developed to collect data about age, education, marital status, and professional occupation at the moment of the incident. The perpetrators' files were also analyzed to obtain information about criminal records (i.e., previous convictions) and crimes perpetrated (e.g., type of offense, time of conviction).

Data Analysis

Tests of differences and chi-square tests were conducted to examine the differences and associations between the type of crime and all the variables (i.e., sociodemographic variables and empathy scores). Parametric and nonparametric tests were performed since normality and homogeneity were not assumed. If tests showed similar results, parametric tests were preferentially reported (Fife-Schaw, 2000). The variables that presented statistically significant differences between the groups were included as covariates to control their possible effects in the binary logistic regression analysis. Thus, four binary logistic regressions were used to investigate the relationship between empathy (total score and subscales) and the dependent variables (ISOMs *versus* INSCs; intrafamilial ISOMs *versus* extrafamilial ISOMs). All the analyses were conducted using SPSS version 28.

Results

Sociodemographic Characteristics

ISOMs and INSCs

Results concerning sociodemographic characteristics revealed statistically significant differences between the ISOMs and INSCs in the following variables: age t (184) = 2.91, p = 0.004, employment at the moment of the crime, $\chi^2(3) = 17.67$, $p < 0.001$, with a small effect size, $V = 0.26$. The results showed that ISOMs are older than INSCs and had a higher number of individuals employed at the moment of the crime. Oppositely, INSCs had a higher percentage of individuals unemployed.

Intrafamilial and Extrafamilial ISOMs

Results revealed statistically significant differences in relation to marital status at the moment of the incident, $\chi^2(2) = 7.78$, $p = 0.020$, with a small effect size, $V = 0.26$. Intrafamilial ISOMs had a higher number of individuals married at the moment of the incident. Besides, extrafamilial ISOMs had an identical number of individuals single and married at the moment of the incident.

Empathy Scores

ISOMs and INSCs

There were statistically significant differences between the ISOMs and the nonsexual crimes group in cognitive empathy, t (255) = −2.33, p = 0.021, with ISOMs scoring less on the cognitive empathy scale. There were no significant differences in the total score, t (255) = −0.716, p = 0.475, and in the affective empathy score, t (252) = 1.312, p = 0.191, between the two groups (see Table 2).

Intrafamilial and Extrafamilial ISOMs

Besides, there were statistically significant differences between intrafamilial and extrafamilial ISOMs in relation to cognitive empathy, t (109) = −2.510, p = 0.014. Intrafamilial ISOMs scored less in the cognitive empathy than extrafamilial ISOMs. There were no significant differences in the total score, t (96) = −1.536, p = 0.128, and in the affective empathy, t (109) = 0.107, p = 0.915, between the two groups.

Crime Type as a Function of Empathy Subscales

ISOMs and INSCs

Two binary logistic regressions were conducted to find the variables that best predict the two forms of offending behavior (i.e., child sexual offending and nonsexual offending) (Table 3). Empathy total score and empathy subscales are entered as predictors in two independent models after controlling for the variables that revealed statistically

significant differences between the two groups—that is, age and employment at the time of the crime and the collection site. The sociodemographic variables were entered in the first step, followed by the empathy subscales/empathy total score.

In both models, the variables included in the first step produced a statistically significant model, $\chi^2(5) = 100.536$, $p < 0.001$. The role of such variables produced a pseudo-R^2 between 32.9 (Cox and Snell) and 44.2 (Nagelkerke), revealing that the model accurately classified 76.2% of the cases.

When we added the empathy subscales to this analysis, the model was statistically significant, $\chi^2(7) = 108.494$, $p < 0.001$, with this variable producing a pseudo-R^2 between 35.0 (Cox and Snell) and 47.0 (Nagelkerke). The model accurately classified 78.2% of the cases. Two variables contributed significantly to the model: employment at the moment of the crime (OR = 0.477; 95% CI = [0.249; 0.916]) and cognitive empathy (OR = 0.865; 95% CI = [0.982; 1.237]). ISOMs are almost 0.5 times more likely to have employment at the moment of the crime. Besides, for almost each unit increase in cognitive empathy score, the odds of being a ISOMs decreased by a factor of 0.865.

After including the empathy total score, the model remained statistically significant, $\chi^2(6) = 101.286$, $p < 0.001$, accounting for between 33.1% (Cox and Snell R^2) and 44.4% (Nagelkerke R^2) of the variance in the subtypes of ISOMs. The overall classification accuracy rate was 77.6%. The odds ratio shown in Table 3 indicated that, after controlling for group differences in covariates, the empathy total score did not contribute significantly to the model.

Intrafamilial and Extrafamilial ISOMs

Two binary logistic regressions were conducted entering the covariate and the empathy subscales and empathy total score as predictors in two independent models.

Both logistic regression models presenting the sociodemographic variable and the location of the collection were statistically significant, $\chi^2(3) = 10.305$, $p = 0.016$, accounting for between 9.0% (Cox and Snell R^2) and 12.1% (Nagelkerke R^2) of the variance in subtypes of ISOMs. These models classified 66.1% of all cases. When empathy subscales were added to this model, these variables produced a pseudo-*r*-square between 12.4% (Cox and Snell R^2) and 16.5% (Nagelkerke R^2) and the overall classification accuracy rate was 67.0%. The model was significantly reliable, $\chi^2(5) = 14.369$, $p = 0.013$. The odds ratio shown in Table 4 indicated that, after controlling for group differences in covariates, for each unit increase in cognitive empathy score, the odds of being a extrafamilial ISOMs increased by a factor of 1.167 (OR = 1.167, $p = 0.049$).

After including the empathy total score, the model remained statistically significant, $\chi^2(4) = 11.369$, $p = 0.023$, accounting for between 9.9% (Cox and Snell R^2) and 13.2% (Nagelkerke R^2) of the variance in the subtypes of ISOMs. The overall classification accuracy rate was 67.9%. In this model, after controlling for group differences in covariates, the empathy total score did not contribute significantly to the model.

Discussion

The main goal of this study was to analyze the relationship between empathy traits and the two facets of empathy (i.e., cognitive and affective) and the type of crime committed (i.e., intrafamilial and extrafamilial child sexual offending and nonsexual offending). It makes

Table 2 Differences between groups regarding empathy scores

	ISOMs ($n=113$)	INSCs ($n=146$)			
	M (SD)	*M* (SD)	*t*	gl	95% CI
BES					
Cognitive empathy	14.18 (2.97)	15.05 (2.99)	−2.330*	255	[−0.1.61; −0.135]
Affective empathy	8.87 (2.55)	8.42 (3.02)	1.312	252	[−0.229; 1.141]
Total score	23.05 (4.51)	23.47 (4.74)	−0.716	255	[−1.57; 0.733]
	Intrafamilial ISOMs ($n=52$)	Extrafamilial ISOMs ($n=61$)			
	M (SD)	*M* (SD)	*t*	*gl*	95% CI
BES					
Cognitive empathy	13.43 (3.15)	14.82 (2.66)	−2.510*	109	[−2.48; −0.291]
Affective empathy	8.90 (2.77)	8.85 (2.37)	0.107	109	[−0.914; 1.018]
Total score	22.33 (4.96)	23.67 (4.03)	−1.536	96	[−3.057; 0.390]

*$p < .05$

an important contribution to a better comprehension of these phenomena, helping clarify the contradictory results of previous research on empathy deficits (e.g., Teuma et al., 2003; Tibbels et al., 2022). This clarification might help to increase knowledge and ground more effective interventions for ISOMs.

The results of this study indicated that cognitive empathy was a significant predictor of committing a sexual offense against a minor, with ISOMs showing a lower probability to score higher in cognitive empathy than the INSCs. Besides, the affective empathy score and the empathy total score were not predictors of committing a sexual offense against a minor. Concretely, this result suggests that ISOMs are lacking in their ability to understand the mental states and perspectives of others but may be similar in affective empathy and general empathy with INSCs. It could imply that affective empathy and the total score may not be decisive for committing a sexual crime over committing a nonsexual one. These results are, in part, in line with the two recent meta-analyses and systematic reviews (e.g., Morrow, 2020; Tibbels et al., 2022), which found cognitive empathy deficits in ISOMs but added information about the lack of consensus about the role of affective empathy. At the same time, our results challenge the idea that ISOMs had only an empathy impairment toward their victims or victims of sexual abuse (Barnett & Mann, 2016; Marshall et al., 2001).

The cognitive empathy deficits in ISOMS are not surprising since one of the most important sources of information to produce accurate judgments about others' feelings (i.e., cognitive empathy) is facial expression recognition (Janssen, 2012), which the literature has revealed to be a difficulty for ISOMs (Chapman et al., 2018; Igoumenou et al., 2017). Specifically, deficits in accuracy for disgust were consistently reported in samples with individuals who sexually offended (Chapman et al., 2018). Furthermore, the impairment in cognitive empathy as a predictor to commit a sexual crime against children is not also surprising since a lack of empathy may have an impact on interpersonal interactions. The inability to take the perspective of others may hamper the creation and maintenance of intimate supportive relationships (Decety et al., 2018; Morrow, 2020), which is an empirically supported risk factor for committing a sexual crime (Maniglio, 2012). Also, the incapacity to take the perspective of the victim in

Table 3 Logistic regression model presenting the predictors of child sexual offending

	BES-A subscales						BES-A total score					
	Model 1			Model 2			Model 1			Model 2		
	B	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)
Age	0.016	0.016	1.016	0.012	0.016	1.012	0.016	0.016	1.016	0.016	0.016	1.016
Employed/unemployed	−0.751	0.325	0.472*	−0.740	0.333	0.477*	−0.751	0.325	0.472*	−0.764	0.326	0.466*
Employed/ retired	1.672	1.182	5.325	1.717	1.197	5.567	1.672	1.182	5.325	1.694	1.184	5.440
Employed/ student	−0.927	1.136	0.396	−0.698	1.160	0.498	−0.927	1.136	0.396	−0.854	1.140	0.426
Setting	−22.065	5904.0	0.000	−22.067	1.160	0.498	−22.065	5904.0	0.000	−11.062	5906.25	0.000
Cognitive empathy				−0.145	0.056	0.865*						
Affective empathy				0.097	0.059	1.102						
Empathy total score										−0.030	0.034	0.971
Chi-squared	100.536***			108.494***			100.536***			101.286***		
Pseudo-R^2 (Cox and Snell, Nagelkerke)	0.329, 0.442			0.350, 0.470			0.329, 0.442			0.331, 0.444		

BES-A Adapted Basic Empathy Scale; ***$p < .001$; **$p < .01$; *$p < .05$

Table 4 Logistic regression model presenting the predictors of intra- and extrafamilial child sexual offending

	BES-A subscales						BES-A total score					
	Model 1			Model 2			Model 1			Model 2		
	B	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)	*B*	S.E	Exp (*B*)
Setting	−0.778	0.416	0.459	−0.705	0.423	0.494	−0.778	0.416	0.459	−0.760	0.417	0.468
Single/nonsingle	−.1.036	0.438	0.355*	−0.846	0.453	0.429	−1.036	0.438	0.355*	−0.960	0.445	0.383
Married/nonmarried	−0.243	0.822	0.785	−0.301	0.838	0.740	−0.243	0.822	0.785	−0.279	0.822	0.756
Cognitive empathy				0.155	0.079	1.167*						
Affective empathy				−0.077	0.087	0.926						
Empathy total score										0.048	0.046	1.049
Chi-squared	10.305*			14.369**			7.648*			11.369*		
Pseudo-R^2 (Cox and Snell, Nagelkerke)	0.090, 0.121			0.124, 0.165			0.090, 0.121			0.099, 0.132		

BES-A Adapted Basic Empathy Scale; ***$p < .001$; **$p < .01$; *$p < .05$

the moment of the crime could remove a barrier to avoiding sexual offending behavior (Tibbels et al., 2022). Taking all of this into account, increasing cognitive empathy may act as a protective factor (Schuler et al., 2022), highlighting its importance as a target in psychological interventions. Furthermore, it is important to have in mind that low empathy levels have been linked to experiences of neglect, abuse, victimization, and deprivation in childhood, which is very common in ISOMS and might serve as a barrier to empathy development (Kahn et al., 2021; Locher et al., 2014; Narvey et al., 2021). In circumstances where people are victims of these forms of maltreatment, emotional numbing may occur, which diminishes the individual's capacity to engage in perspective-taking (i.e., cognitive empathy) (Kerig et al., 2012). Thus, empathy training per se may not have the desired effects if treatment providers do not incorporate trauma-informed care into child sexual offending treatment (Levenson, 2014).

Our results also suggest that increased cognitive empathy may be more important in intrafamilial than extrafamilial ISOMs, since intrafamilial ISOMS have more probability of scoring less in cognitive empathy; this result may be related to the fact that intrafamilial offenders are more likely to have experienced sexual abuse, family abuse, or neglect than extrafamilial ISOMs, which might as mentioned above affect empathy development (Seto et al., 2015). However, the small number of individuals in each group may have influenced the results, so future studies should consider a larger sample to draw more powerful conclusions.

While the study provides contributions to a significant step in distinguishing which empathy components psychological treatment should address, it is not without some limitations. First, our sample was composed only of men, so it is not clear how the findings extend to women who sexually offended minors. Second, the groups of intrafamilial and extrafamilial ISOMs were small, so further replications with larger samples are required. At the same time, further research should explore if low cognitive empathy is a risk factor for those who sexually reoffend. Third, the ISOMs might be parsed into subgroups based on contact level (i.e., hands-on, and hands-off), since the literature has shown differences in empathy traits (Babchishin et al., 2011). Fourth, our samples were collected by a convenience procedure, which limits the generalization of the current findings. Fifth, our sample of INSCs is heterogeneous, so future studies should consider using a more homogeneous sample.

In sum, the present study sheds light on an area where there is little agreement—the contribution of general empathy to committing a child sexual offense. Our findings reveal that only cognitive empathy predicted committing a sexual crime against a minor. When ISOMs are separated into different groups (intrafamilial vs extrafamilial ISOMs), intrafamilial ISOMs were more likely to score less in cognitive empathy. These findings illustrate the need to differentiate the subtypes of ISOMs and to incorporate cognitive empathy development in psychology treatment programs.

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Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Competing Interests The authors declare no competing interests.

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