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RESEARCH ARTICLE

**The role of multiple attachments in intergenerational transmission of child sexual
abuse among male victims**

Short title: Attachment and transmission of CSA

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The role of multiple attachments in intergenerational transmission of child sexual abuse
among male victims

Abstract

Background: According to Finkelhor (1984), difficulties child sexual abusers have in establishing adaptive adult relationships are a consequence of attachment problems with parents. Research shows that insecure attachment is associated with both the experience of child sexual abuse (CSA) as a victim and perpetration of CSA as an adult. Attachment may thus be a key factor in intergenerational transmission (IT) of CSA.

Objective: The study aims to examine the direct, interactive, and mediated effects linking attachment in different relationships (mother, father, romantic partner) to IT of CSA among male victims.

Participants and Setting: Thirty-two abusing and 27 non-abusing male CSA survivors were recruited, respectively, in a prison and via networks of former foster children or CSA victims.

Method: All participants completed the Attachment Multiple Model Interview to assess attachment along four dimensions (security, deactivation, hyperactivation, and disorganization) in the relationship with mother, father, and partner.

Results: Partial least square modeling suggests that the partner carries forward (mediates) the increased risk of committing sexual abuse associated with insecure/disorganized attachment with the father. A significant partner-mother interaction also suggests that the deleterious effects of attachment to the mother in terms of committing CSA are countered by more secure/organized attachment to the partner.

Conclusions: Findings highlight the pivotal role of the romantic partner in IT of CSA. Beyond early intervention, therapy in adulthood aimed at fostering adaptive ways of finding emotional security in the relationship with an adult could thus be encouraged.

Keywords: child sexual abuse, intergenerational transmission, child sexual assault, attachment, incest, internal working models, disorganized attachment

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Child sexual abuse (CSA) has major long-lasting consequences on victims' development. CSA is associated with an increased risk of psychopathology, including mood disorders, post-traumatic stress disorder, anxiety disorders, substance use disorders, and suicidal tendencies (Cutajar et al., 2010). CSA is also a widespread and global problem as its prevalence rate reaches 12%, one third of which concern intrafamilial abuse (Stoltenborgh et al., 2011). Although prevalence rates vary widely according to methodology (eg., source of data, definition used, extent of coverage...) and the country under study, a meta-analysis of data collected upon almost ten million participants suggests that CSA affects 18% of girls and 7.6% of boys (Stoltenborgh et al., 2011; see also Perada et al. 2009 for similar findings). Underreporting of CSA is however especially likely among male victims (Dhaliwal et al., 1996; Romano & De Luca, 2001) with actual CSA rates perhaps even higher. These alarming figures and the devastating consequences of CSA stress the need to improve preventive measures against the occurrence of CSA.

Prevention can include actions aimed at reducing intergenerational transmission of CSA (i.e., the perpetration of sexual abuse toward one's own children among former CSA victims). Although most victims of CSA do not commit sexual offenses (Salter et al., 2003), sexual offenders are more likely to have sexual abuse histories (Jespersen et al., 2009; Seto & Lalumière, 2010). Sexual victimization can thus be considered as a potentially important developmental risk factor for later sexual offending (Krahe & Berger, 2017; Lee et al., 2002), particularly among intrafamilial offenders (see Faller, 1989).

Although female child maltreatment survivors may perpetuate the abuse into the next generation (see Langevin et al., 2019), committing CSA is much more common among men (World Health Organization, 2003), who are involved in up to 94% of cases (Bourke et al., 2012). Despite this increased risk, most studies on intergenerational cycles of abuse have focused on women (see Langevin et al., 2019) and little is known about transmission among male victims. In addition, to our knowledge no study has examined the processes involved in intergenerational transmission of CSA specifically (see Langevin et al., 2019). Because sexually victimized boys seem to be at particular risk of later repeating this type of abuse (World Health Organization, 2003), it is crucial to understand the factors that precipitate or break this pathological cycle in order to develop well-suited preventive measures.

Attachment as a key factor in intergenerational transmission of CSA

Attachment is both severely impacted by the experience of CSA (eg., Ensink et al., 2020) and critical for developing interpersonal competencies (Thompson, 2016). Researchers (e.g., Finkelhor, 1984) point to interpersonal deficits as a major risk factor for sexual offending against children. Because attachment to caregivers is believed to play a crucial role in the belief that one is worthy of love and capable of establishing close relationships (Waters et al., 2017), lack of support or protection from parents in the context of CSA may compromise the victim's self-esteem and the associated capacity to later establish adaptive intimate relationships in adulthood (see Krahe & Berger, 2017). According to Ward and Beech (2005), such deficits put former CSA victims at greater risk of abusing children later in life, especially children inside the home. Secure attachment relationships also provide the opportunity for children to learn about social cues (Meins et al., 2002) and how these cues can be used to guide behavior in interactions with others (e.g., de Rosnay & Hughes, 2006). In the absence of a secure

relationship, these opportunities may be lacking and prevent the proper development of competencies likely to inhibit aggression and perpetration of CSA (Eisenberg et al., 2015; Gery et al., 2009; Jolliffe & Farrington, 2004) such as empathy (for a review see Stern & Cassidy, 2018), emotion recognition (Steele et al., 2008), emotion understanding (Cooke et al., 2016; Laible & Thompson, 1998), and emotion regulation (e.g., Pierrehumbert et al., 2012; Spangler & Zimmermann, 2014). Given its key role in the development of relational competencies, attachment may thus represent an important factor involved in intergenerational transmission of CSA.

The experience of CSA may seriously compromise children's trust in caregivers' capacity to protect them and to ensure their safety and thereby lead to insecure attachment. Several studies suggest increased rates of insecure or disorganized attachment (i.e., conflicting attachment strategies) among sexual abuse survivors in childhood (Charest et al., 2018; Ensink et al., 2020; Fresno et al., 2014), adolescence (van Hoof et al., 2015), and adulthood (Bailey et al., 2008; Martin et al., 2017; see also Labadie et al., 2018 for a review of self-reported attachment styles). Insecure and disorganized attachment are linked to factors associated with an increased risk of sexual offense, such as aggression (Marcus & Kramer, 2001; Van IJzendoorn et al., 1999) or emotion dysregulation (Hertsgaard et al., 1995; Spangler & Grossmann, 1993). Questionnaire-based studies show that child abusers report more insecure attachment patterns (e.g., McKillop et al., 2012) and intrafamilial abusers report especially high levels of insecurity (Seto et al., 2015). Of note, though, these studies did not document the prevalence of disorganized attachment among child abusers, as they relied on self-report questionnaires and disorganized attachment cannot be self-reported. Therefore, the role of disorganized attachment in perpetration of child abuse is still unknown. Furthermore, because these studies did not address the question of abusers' own

history of incurred CSA, it is also unclear whether insecure or disorganized attachment can contribute to explain intergenerational transmission of CSA.

Specific, combined, and cascade effects of multiple attachments among child sexual abusers

Although the experience of CSA has a deleterious impact on the establishment of secure attachment, the fact that most CSA survivors do not perpetuate the abuse prompts the question of whether secure attachment towards a non-abusive attachment figure could protect victims and foster more favorable socioemotional development. Trust in parents is associated with disclosure of CSA (Schönbucher et al., 2012), which in turn can buffer the influence of abuse (Kogan, 2005). More generally, non-abusing caregivers who believe, support, and protect their children from further trauma presumably help them feel secure and have better outcomes.

Some studies have shown that attachments to different figures combine to account for later outcomes (Boldt et al., 2014; Kochanska & Kim, 2013) and that secure attachment to one attachment figure can protect against the deleterious effects of insecure attachment to another attachment figure (e.g., Miljkovitch et al., 2018). These results point to the need to consider attachment as relationship-specific rather than as a trait of the person as each relationship may play a distinct role in preventing or precipitating intergenerational transmission of CSA.

Nevertheless, the quality of attachment in one relationship may not be independent of attachment in another relationship. For instance, Finkelhor (1984) postulates that difficulties child abusers have in establishing satisfying adult relationships are a consequence of attachment problems with parents. Insecure attachment to both parents, especially the father, has been documented among child abusers (McKillop et al., 2012) and the literature suggests that they have poor quality

adult relationships as well (e.g., Garofalo & Bogaerts, 2019). Yet, the interplay between attachment to each parent and attachment to the romantic partner has not been investigated.

Longitudinal research on low-risk samples suggests that attachment to the partner in adulthood is associated with attachment to the mother (Grossmann et al., 2005; Miljkovitch et al., 2015) but not the father (Grossmann et al., 2005). The respective impact of attachment to each parent in the case of CSA is however unclear, as this type of experience, which is most often caused by fathers or stepfathers in the case of intrafamilial abuse (Stoltenborgh et al., 2011), also has a strong impact on the capacity to establish secure romantic attachment relationships in adulthood (Godbout et al., 2009). It is therefore unclear how attachment to each parent is linked to attachment in romantic relationships among victims of CSA and whether the relative impact of attachment to each parent in terms of repeating the abuse may be carried forward (i.e., mediated) by attachment to the partner.

However, in some instances, an adult romantic relationship may also be an opportunity for CSA victims to obtain sensitive, appropriate responses to their emotional needs, and thereby perhaps reduce the risk of repeating the abuse. In a sample of abused women (all types of abuse), Egeland et al. (1988) found that a supportive relationship with a specific person was associated with a break in the cycle of abuse. Consequently, it seems important to examine whether the quality of the attachment relationship with an adult romantic partner has a moderating effect on the association between attachment to each parent and perpetration of CSA among former victims.

The current study

The present study is aimed at identifying the specific, combined, and cascade

effects of multiple attachments as they relate to a break in the cycle of CSA. In other words, we aim to better understand what differentiates, among male survivors of CSA, those who sexually abuse children and those who do not. More specifically, the objectives are (see Figure 1):

- (1) to examine the respective role of attachment towards each attachment figure (mother, father, romantic partner) in the act of perpetrating intrafamilial CSA. Because insecure attachment to both parents, especially the father, has been documented among child abusers (McKillop et al., 2012), we expected perpetrated abuse to be linked to insecure attachment to both parents, particularly with the father. We also expected more disorganization in these two relationships among child abusers, given that disorganization has been shown to contribute to maladaptation after the experience of CSA (Charest et al., 2018; Hébert et al., 2020) and to factors associated with an increased risk of perpetrated abuse (Hertsgaard et al., 1995; Spangler & Grossmann, 1993; Van IJzendoorn et al., 1999). The literature also suggests poor quality of adult relationships among child sexual offenders (e.g., Garofalo & Bogaerts, 2019); accordingly, we expected more insecure attachment to the partner among abusers compared to non-abusers.
- (2) to examine whether the association between attachment to each parent and perpetrated abuse is mediated by attachment to the partner. As mentioned above, longitudinal findings on low risk samples show that attachment to the partner is linked to attachment to the mother but not the father (Grossmann et al., 2005; Miljkovitch et al., 2015). At the same time, abuse committed by paternal figures is known to have a devastating effect on the establishment of satisfying adult relationships among victims (Godbout et al., 2009). Therefore, we expected attachment to both parents to predict attachment to the partner among CSA

survivors. Because studies also report insecure attachment in romantic relationships among child abusers (e.g., Garofalo & Bogaerts, 2019), we expected attachment to the partner to be linked, in turn, with perpetration of CSA and thereby be a mediator connecting attachment to each parent and perpetrated abuse.

(3) to test whether attachment to the partner moderates the links between, respectively, attachment to the mother and perpetrated abuse, and attachment to the father and perpetrated abuse. Based on Egeland et al.'s (1988) findings on abused women, we expected attachment towards the partner to moderate the link between attachment to parental figures and perpetration of CSA, in that the link would become weaker as attachment to the partner would get more favorable (i.e., more secure and organized).

Method

Participants and procedure

Fifty-nine adult male survivors of CSA participated in the study: 27 non abusers and 32 child abusers. To constitute the group of child abusers, 45 participants convicted for intrafamilial CSA were recruited in a prison. Participants completed the CECA-Q (presented below) to document childhood experiences of maltreatment. Only those who reported a history of CSA ($N = 32$) were selected for the present study. Nineteen of these participants were abused by a member of their family and 14 by someone living inside the house (for a total of 26 abused by one and/or the other). The remaining six were abused by someone outside the family or the home. Eighteen participants from this abuser group had a biological connection to their victims whereas 14 did not (i.e., stepfathers). Age of participants in this group ranged from 34 to 47 ($M = 40.13$; $SD = 3.43$).

To constitute the group of non-offenders ($N = 27$; see Figure 2), we contacted child protection services in charge of adults who were placed in foster care or an institution during childhood as a consequence of maltreatment, as well as a network of former foster children. The records of all these participants substantiated a history of maltreatment. Among the 77 participants who agreed to be part of this study, only 25 were men, 15 of whom had been sexually abused. An additional 12 participants were recruited via an association of CSA victims. All participants from this group had been victims of intrafamilial sexual abuse. More specific data on the abusers was available for 14 participants from the non-offender group: all but one were abused by a family member and one by a non-member living under the same roof. Age of participants in this group ranged from 18 to 59 ($M = 31.19$; $SD = 11.37$).

Written informed consent was obtained from all participants. They were free to withdraw from the study at any time. All participants, except those for whom records of past abuse were available, completed the CECA-Q. The AMMI (presented below) was administered to all participants by a trained psychologist. After the interview, participants were offered the possibility to debrief. They could also contact the psychologist who conducted the interview later on. The study was conducted in accordance with the terms of the institution's ethics and of the Helsinki World Medical Association Declaration on Ethical Principles for Medical Research involving Human Subjects.

Measures

Childhood Experience of Care and Abuse Questionnaire (CECA-Q, Bifulco et al., 2005). The CECA-Q covers parental loss, neglect, antipathy, physical, sexual, and psychological abuse. The validity of the CECA-Q scales is substantiated by significant associations with the Childhood Experience of Care and Abuse Interview (CECA; Bifulco

et al., 1994) and expected links with depression (Bifulco et al., 2005). In the validation study, test-retest showed high levels of agreement for the summed scores with $r = .70$, $p < .001$ for screening items for sexual abuse. High reliability and validity of the CECA.Q self-report of childhood adversity was found in terms of lack of care (neglect and antipathy), physical, and sexual abuse. It shows high internal consistency for care scales and satisfactory test-retest scores for all care and abuse scales. Satisfactory sensitivity and specificity was shown with lower cut-off scores achieving the higher sensitivity required for good screening capability. For the purposes of the present study, only the item documenting the occurrence of sexual abuse was used to corroborate the experience of CSA and select participants.

Attachment Multiple Model Interview (AMMI, Miljkovitch et al., 2015). The AMMI is a semi-structured interview that assesses attachment representations in specific relationships. For each relationship, attachment is measured according to four scales: security, deactivation, hyperactivation, and disorganization (of the attachment system). Security is coded according to participants' tendency to retrieve secure-base script events and to provide a coherent narrative of experience. Deactivation, which is conceptually close to avoidant attachment, refers to a turning away from attachment, whether mentally (reluctance to admit or think about attachment needs) and/or behaviorally (inhibition of attachment behaviors). Hyperactivation refers to a focus on the attachment figure and more or less explicit attempts to elicit the attention of or proximity to the attachment figure. Scores for these first three scales vary from 0 to 8. Scores on the disorganization scale vary from 0 to 16 and are obtained on the basis of deactivation and hyperactivation scores: $(\text{deactivation} + \text{hyperactivation}) - \text{absolute value of } (\text{deactivation} - \text{hyperactivation})$. Thus, higher scores on both these attachment scales (as opposed to low scores on either one or both), leads to a higher disorganization

score.

The validity of the AMMI has been established with longitudinal data gathered from age 4 to 23, showing that AMMI scores at age 23 reflect corresponding cumulated lifetime scores for security, deactivation, and hyperactivation (Miljkovitch et al., 2015). Concerning the disorganization scale, expected links with unresolved trauma (according to the Adult Attachment Interview; George et al., 1985) and with borderline personality disorder provide further confirmation of its construct validity (Miljkovitch et al., 2015, 2018). Intracorrelations between the AMMI scales are theoretically consistent (eg., negative associations between security and respectively deactivation, hyperactivation, and disorganization). The AMMI's capacity to discriminate between mother, father, and partner attachment has been confirmed by ANOVA and contrast tests (Miljkovitch et al., 2015). In the present study, participants were interviewed about their relationships with their mother, their father, and their romantic partner (past or present).

Results

Preliminary analyses

Participants in the non-abuser group were significantly younger than participants in the abuser group ($t = -3.72, p < .001$). Therefore, age was controlled for in the main analyses. Group differences on attachment were also found (see Table 1). Regarding attachment to the mother, security was low and comparable in the two groups. Deactivation scores were also close and rather high (above 6) for both groups. Differences were found, however, for hyperactivation and disorganization, which were higher among abusers, although still moderate in the non-abuser group. Concerning the father, tendencies were quite the same, except for security, which was significantly lower in the abuser group. In the relationship with the partner, abusers revealed to be less secure and to exhibit more deactivation and disorganization than non abusers.

Main analyses

Partial least square modeling (PLS-PM ; Vinzi et al., 2010) in R (version 3.0) was used to test our conceptual mediation-moderation model. This variance-based structural equation modeling technique does not rely on distributional assumptions and does not require large sample size or normality (Chin et al., 2003). Two models were tested: (1) the outer (measurement) model linking the manifest variables (MVs) to their latent variables (LVs) and (2) the inner (structural) model connecting relevant latent variables. To estimate probability values for significance testing, we relied on the bootstrapping technique.

Outer model

The initial theoretical model including latent variables (LVs) and manifest variables (MVs) is presented in Table 2. First, we defined a complete model with each LV composed of all its MVs. The theoretical model included 30 MVs loaded on 7 LVs. The unidimensionality test enabled us to select the MVs for the final model. Because their coefficients were not significant, 14 MVs were removed from the final model: MV *deactivation* and MV *hyperactivation* for the LVs *attachment to mother*, *attachment to father*, *attachment to partner*, *mother-partner interaction*, and *father-partner interaction*. The resulting external model comprised 16 MVs loaded on 7 LVs corresponding to the following factors: child abuse (perpetrated), attachment to mother, attachment to father, attachment to partner, mother-partner interaction, father-partner interaction, and age (see Table 3). The quality of this outer model was acceptable regarding the unidimensionality of all the LVs (all DG-rho > 0.70) and cross-loadings (see Table 4).

Inner model

The inner model (see Table 3) was then built to examine the links between security (inverted scale) and disorganization towards the mother, security and

disorganization towards the father, security and disorganization towards the partner, age, and child abuse. The model's Goodness of Fit was .48. Direct and indirect bootstrapped path coefficients (95% confidence interval) are presented in Table 5. The model explained 55% of the variance of perpetrated child abuse. Figure 3 shows the path coefficients (β) between the LVs for the inner model.

Direct paths showed a strong link between attachment to the father and attachment to the partner ($\beta = 0.44$) and, in turn, a significant link between attachment to the partner and child abuse ($\beta = 0.28$). Direct paths also revealed an association between age and child abuse ($\beta = 0.35$). The analysis also showed a significant moderating effect of attachment to the partner on the link between attachment to the mother and child abuse ($\beta = -0.42$). Conversely, no significant link was found between attachment to mother or attachment to father and child abuse. The father-partner interaction was not significant either.

Indirect paths (displayed in Table 5) showed that the indirect effect of attachment to father on perpetrated child abuse via attachment to partner was also significant ($\beta = 0.12$). However, the mediation linking attachment to mother to child abuse via attachment to partner was not ($\beta = 0.03$).

Additional analyses were conducted to break down the mother-partner interaction. To examine the moderating effect of the mother on the partner-abuse link, we split the sample into two groups, one below the median score of mother attachment and one above this score. We then examined for each group the association between attachment to the partner and committed abuse (point-biserial correlations) and found that for the group with lower scores of insecurity/disorganization to the mother, the link was positive and significant ($r = .47, p = .02$). For the group with higher scores of insecurity/disorganization to the mother, the link between insecure/disorganized

attachment to the partner and committed abuse was greater in magnitude ($r = .64, p < .001$). To fully describe the interaction, we also followed the same procedure to examine the moderating role of the partner and found even clearer contrast: for the group with lower scores of insecurity/disorganization to the partner, the link between attachment to the mother and committed abuse was close to zero ($r = -.07, p = .75$), whereas for the group with more insecure/disorganized attachment to the partner, the link was strong and significant ($r = .46, p = .02$). In other words, exhibiting more insecure/disorganized attachment to one's romantic partner appears to constitute a risk factor for repeating the experience of sexual abuse when former victims also exhibit more insecure/disorganized attachment to their mother; in contrast, secure/organized attachment to the partner seems to act as a protective factor against repetition of the abuse.

Discussion

The aim of the present study was to examine the ways in which attachment to different figures combine to explain differences between survivors of CSA who transmit the abuse to the next generation and those who break the cycle of abuse. Our first objective consisted in examining how attachment within each relationship (mother, father, and partner) independently explained intergenerational transmission of abuse. Based on previous findings (e.g., Garofalo & Bogaerts, 2019), we expected child sexual offending to be associated with insecure attachment in all three relationships, and with disorganization in the relationship with each parent. When relationships were considered independently, t-tests confirmed that for each relationship, the abuser and non-abuser groups obtained expected and significantly different attachment scores on several scales.

Regarding the relationship with the mother, abusers were not more insecure than non-abusers, who were also low on security. The two groups were also comparable in terms of deactivation, which was strong in both groups. However, abusers seemed less successful at maintaining this attachment strategy as they also exhibited a strong tendency to hyperactivate their attachment system, leading to significantly increased disorganization. As a reminder, disorganization increases as two incompatible attachment strategies (i.e., deactivation and hyperactivation) are exhibited within the same relationship. Perhaps then, the inability to keep attention away from attachment in the relationship with one's mother (collapse of the deactivating strategy) reveals continued longing for emotional security (hyperactivation) among abusers. Conversely, more efficient deactivation (i.e., not countered by the opposite strategy of hyperactivation) towards one's mother is characteristic of abuse survivors who do not abuse children. Therapeutic intervention aimed at helping victims accept the relative inability of their mothers to provide sufficient security may prevent a maladaptive quest to satisfy unfulfilled affective needs (hyperactivation).

Findings concerning attachment to father were quite similar, except that unlike with mother, abusers were significantly more insecure than non-abusers. In fact, considering the 0-8 scoring scale, scores for security to father were remarkably low in the abuser group. Unfortunately, we do not have precise information on who abused our participants, but it would seem useful to determine in future studies whether security is lower when the participant's father was the abuser and whether this explains the increased risk of repeating the abuse.

As for the relationship with the partner, differences between the two groups were quite similar to those found for the relationship with the father except that higher disorganization among abusers was due to higher deactivation rather than to

hyperactivation (which was moderate in both groups). Because the mean score of deactivation among abusers is above 6 (compared to 4.21 among non-abusers), it seems that they are more likely to deny their own attachment needs in the relationship with their partner, or at the least to limit their expression (Miljkovitch et al., 2015). This may compromise the partner's capacity to fulfill their needs and presumably contribute to further feelings of insecurity (as suggested by their lower security scores). The strong deactivation may also reveal the belief that attachment needs cannot be satisfied by the partner. The fact that abusers hyperactivate their attachment system in the relationship with their partner, despite their attempts to downplay the importance of attachment, suggests that they nevertheless continue to long for affection. Non-abusers also moderately hyperactivate their attachment system in their relationship with their partner, but this strategy is more coherent (i.e., accompanied by less deactivation). The greater consistency in their attempts to satisfy their emotional needs may explain why they are more successful at gaining a sense of security and, consequently, less likely to abuse children as a way to satisfy unfulfilled needs.

These findings point to the fact that whatever the relationship considered, what characterizes the abusers of our sample is disorganized attachment. Attachment strategies, whether they consist in avoiding the attachment figure (deactivation) or in accentuating calls for attention (hyperactivation) are thought to be aimed at eliciting the attachment figure's attention and care (Main, 1990). The generalized failure to establish a coherent attachment strategy (resulting in the use of both hyperactivating and deactivating strategies) regardless of the attachment figure may reflect a chronic incapacity to obtain security from attachment figures just as it may further compromise appropriate means of gaining it. This may tie up with Finkelhor's (1984) description of sexual offenders' interpersonal deficits. This finding is also somewhat consistent with

studies on children that show that attachment disorganization mediates the effect of sexual abuse on subsequent maladaptation (Charest et al., 2018; Hébert et al., 2020).

Providing the opportunity to develop and consolidate organized attachment strategies seems to be an important objective to pursue in intervention with CSA victims.

Although our findings are consistent with those of previous studies in that they show a link between quality of attachment to the partner and sexual offending (Garofalo & Bogaerts, 2019), the comparison with non-abusing CSA victims allows us to go beyond what was shown previously. This comparison highlights the fact that the experience of CSA does not necessarily lead to a dysfunctional attachment relationship with a partner associated with the perpetration of abuse. In fact, abused but non-abusive participants showed better quality attachment to their romantic partners.

Attachment to the partner seems all the more essential that when all relationships are considered simultaneously, that with the partner is the only one to remain directly associated with perpetration of child abuse. This points to the importance of relationships established in adulthood in breaking the cycle of child abuse. Those participants who succeeded in feeling more secure and less disorganized in their romantic relationship were those who did not inflict the same type of abuse they had experienced themselves. And although differences were also found in the relationship with each parent, what seemed most critical was the quality of attachment with the partner. Therefore, the current findings extend to sexually abused men and to attachment to a romantic partner the results reported by Egeland et al. (1988), who found a protective role of a supportive relationship with an adult in childhood among abused women (all types of abuse).

This significant role of attachment to the partner prompts the question of the possible moderating effect it may have on the link between attachment to parents and

the act of committing CSA. The current results show that attachment to partner does not moderate the effect of attachment to father. In fact, attachment scores within these two relationships are highly correlated, showing that participants who are more insecure and disorganized with their fathers also are with their partners. Importantly, the results suggest that the increased risk of committing sexual abuse associated with insecure/disorganized attachment with the father seems to be “carried forward” by the partner, as the father-abuse link is essentially mediated by attachment to the partner rather than being direct. Attachment to partner thus has a mediating, not a moderating, role in the link between attachment to father and perpetration of child abuse.

However, when it comes to the mother-abuse link, attachment to partner does have a significant moderating effect. Although the overall role of attachment to mother in predicting intergenerational transmission of CSA seems absent *prima facie*, it appears that when it is combined with low security/high disorganization with the partner, the association with perpetrated abuse becomes significant. Taken from a different angle, the moderation effect also suggests that the possible deleterious effects of attachment to the mother (in terms of committing CSA) are countered by a more favorable attachment relationship with the partner. The protective role that attachment to the partner may play highlights the need to accompany male CSA survivors in forming secure attachment in romantic relationships.

Concerning the associations between attachment to partner and attachment to each parent, it is worth noting that our results are somewhat different from those found in low-risk samples. Whereas previous studies showed significant links between partner and mother attachment only (Grossmann et al., 2005; Miljkovitch et al., 2015), we found that the relationship with the partner was only linked to attachment to the father in the present sample of CSA survivors. Because sexual abuse is more often committed by men

(World Health Organization, 2003), it seems likely that our participants who had been victims of intrafamilial CSA were more often abused by their fathers than by their mothers. Perhaps then, it is the relationship with the abusive parent, rather than with the father per se, that is associated with quality of attachment to the romantic partner. Unfortunately, we do not have precise information on the identity of our participants' abusers. In any case, our findings suggest that in the context of CSA, attachment to the mother may not be as consequential for romantic relationships as it seems to be in low-risk samples, perhaps due to the accumulation of risk factors unrelated to the relationship with her. Further research is needed to understand the respective contributions of relationships with both parents to the quality of romantic relationships among CSA victims and whether the effects of an abusive attachment relationship actually override those of a potentially healthier bond with the other parent.

Because our abuser group was significantly older than our non-abuser group, we included age in the model to conduct stringent analyses. In all logic, age was associated with sexual abusing given the age-related recruitment bias. The risk of having abused children in one's past also mathematically increases with age. Nevertheless, further studies are needed to examine more precisely whether age can be a critical factor to take into consideration in the prevention of repetition of CSA.

The current study has several limitations that must be acknowledged. One major limitation was lack of access to a representative sample of male CSA victims. Because survivors are usually reluctant to disclose information on their past experiences (Azzopardi et al., 2019), we turned to child protection services and an association of CSA victims to recruit participants. Participants recruited via child protection services were placed during childhood. This normally implies that attachment to both parents was problematic in that neither one was capable of providing proper care for their child. This

may explain why the role of the mother, in the present study, was not significant in predicting the commission of abuse, as attachment in both groups was highly insecure. Abused children who receive protection from their mothers and who thus are not placed in foster care probably have a more secure relationship with her. Inclusion of such cases would have enabled us to appraise mothers' role more accurately. It is possible that such cases were included via the association we contacted. However, the fact that they belonged to such an association may be another selection bias in that their willingness to reflect upon and share their experience with others presumably inflated the number of participants with low deactivation scores.

Although some of the abusers also reported having been foster children, this information was not collected in a systematic way and could not be controlled for. Because foster placement is an opportunity to establish an alternative attachment bond (Dozier et al., 2001) and may thus modify the initial role played by parents as well as individuals' later ability to develop healthy romantic relationships, this factor should be controlled for in future research.

CSA in the abuser group was not substantiated by records and was merely based on their responses to the CECA-Q. Because victims, especially males, may underreport sexual victimization (O'Leary & Barber, 2008), we may have excluded false negatives. This may also have had an impact on the findings, namely with respect to deactivation, which includes a reluctance to talk about difficult past experiences (including CSA). Despite these reservations, using a semi-structured interview rather than a paper-and-pencil self-report to assess attachment limits self-presentation biases, which may lead to estimation errors of attachment distributions (Dozier & Lee, 1995; Roisman et al., 2004). An interview format also allows for the assessment of features that participants are not

aware of, lack of awareness being particularly likely in the case of strong deactivation (Main, 1990).

Although the PLS-PM analysis tested a model with specified directional links, the cross-sectional design of the study calls for great caution as to actual causal effects (e.g., the presumed impact of attachment to parents on attachment to the partner).

Longitudinal studies would be useful to better ascertain the chronology of the sequences identified in the present study. Also, the abuser group included only incarcerated men. Living in prison and separated from one's family members is likely to influence the way one reflects on attachment relationships. Consequently, the characteristics associated with perpetrated abuse may in part be confounded with those due to the experience of prison. Note, however, that attachment scores on the AMMI in adulthood have been found to be significantly associated with cumulative longitudinal measures of attachment collected from age 4 to 21 (Miljkovitch et al., 2015). In any case, attachment is far from being the only factor involved in perpetrated abuse (Christensen, 2017; Jordan et al., 2019; Kneer et al., 2018) and the importance of other factors should not be downplayed.

The mediation-moderation model that we tested did, however, account for 55% of the variance of perpetrated abuse. This is quite encouraging given that, aside from age, all variables (attachment representations) were nonstatic factors, in other words factors that therapists can act upon. Several critical points were identified and could constitute targets for intervention with CSA victims. Although attachment to the partner seems to play a pivotal role, the tested model retained attachment to the father as the starting point. Early intervention could thus focus on victims' representations of their relationship with their father (or perhaps their abuser), in order to prevent them from establishing subsequent relationships, namely with romantic partners, along similar

lines. The same is somewhat true for victims' representations of their relationship with their mother, which are also associated with the commission of CSA when “corroborated” by negative and incoherent representations of the partner. Overall, the current findings converge towards the observation that the CSA victims who perpetuated the cycle of abuse were more likely to have pervasive disorganized attachment representations as they exhibited disorganization across all of the relationships examined. For that reason, it seems crucial to help victims work through the experience of trauma in a way that enables them to establish coherent and organized attachment strategies, which would allow them to better integrate and move away from what happened so as to develop more adaptive ways of obtaining emotional security.

Of course, such a process may be much easier to achieve when victims are rapidly protected against further abuse and given the opportunity to establish or benefit from a secure attachment bond (see Stovall-McClough & Dozier, 2004). Our study does not enable us to estimate the role of circumstances linked to the experience of abuse and it would be worthwhile to examine whether the severity of incurred abuse and its characteristics are associated with repeated dysfunctional relationships. Consideration of larger context variables also seems important as both attachment and the dynamics of CSA are strongly embedded in a society's culture. For instance, parents' reactions to disclosure of CSA (and whether they believe, support, and protect their children) are likely influenced by social norms and consequently affect children's attachment to them and how the latter integrate and are impacted by the experience of abuse (see Yüksel, 2000). Thus, prevention measures aimed at parents and how to cope with CSA should carefully integrate this notion and future studies are needed to document the role of culture, society and religion in the interplay between attachment and CSA.

In any case, a more secure relationship seems necessary to develop alternative ways of being attached, which, in turn, can prevent the perpetuation of intergenerational transmission of abuse. We did not have data on attachment to caregivers other than parents, but our results suggest that a quality relationship with a romantic partner can have this protective effect as non-abusing victims were significantly more secure and less disorganized in the relationship with their partners than abusing victims. This further stresses the importance of attachment-focused intervention (see Steele & Steele, 2018), including in adulthood (Johnson & Whiffen, 2006), to help break the cycle of CSA.

References

- Azzopardi, C., Eirich, R., Rash, C. L., MacDonald, S., & Madigan, S. (2019). A meta-analysis of the prevalence of child sexual abuse disclosure in forensic settings. *Child Abuse & Neglect*, *93*, 291-304. <https://doi.org/10.1016/j.chiabu.2018.11.020>
- Bailey, H. N., Moran, G., & Pederson, D. R. (2007). Childhood maltreatment, complex trauma symptoms, and unresolved attachment in an at-risk sample of adolescent mothers. *Attachment & Human Development*, *9*(2), 139-161. <https://doi.org/10.1080/14616730701349721>
- Bifulco, A., Bernazzani, O., Moran, P. M., & Jacobs, C. (2005). The childhood experience of care and abuse questionnaire (CECAQ) : Validation in a community series. *British Journal of Clinical Psychology*, *44*(4), 563-581. <https://doi.org/10.1348/014466505X35344>
- Boldt, L. J., Kochanska, G., Yoon, J. E., & Nordling, J. K. (2014). Children's attachment to both parents from toddler age to middle childhood : Links to adaptive and maladaptive outcomes. *Attachment & Human Development*, *16*(3), 211-229. <https://doi.org/10.1080/14616734.2014.889181>
- Bourke, A., Doherty, S., McBride, O., Morgan, K., & McGee, H. (2014). Female perpetrators of child sexual abuse: Characteristics of the offender and victim. *Psychology, Crime & Law*, *20*(8), 769-780.
- Charest, F., Hébert, M., Bernier, A., Langevin, R., & Miljkovitch, R. (2018). Behavior problems in sexually abused preschoolers over a 1-year period : The mediating role of attachment representations. *Development and Psychopathology*. <https://doi.org/10.1017/S0954579418000226>
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study. *Information Systems Research*, *14*(2), 189-217.
- Christensen, L. (2017). Child sexual offenders : The psychology of offending. In W. Petherick & G. Sinnamon (Éd.), *The psychology of criminal and antisocial behavior : Victim and offender perspectives*. (2017-28929-015; p. 439-458). Elsevier Academic Press. <https://doi.org/10.1016/B978-0-12-809287-3.00015-8>
- Collin-Vézina D, Daigneault I, Hébert M. (2014). Lessons learnt from child sexual abuse

- research: Prevalence, outcomes and preventive strategies. *Child Adolescent Psychiatry Mental Health*, 7:22.
- Cooke, J. E., Stuart-Parrigon, K. L., Movahed-Abtahi, M., Koehn, A. J., & Kerns, K. A. (2016). Children's emotion understanding and mother-child attachment : A meta-analysis. *Emotion*, 16(8), 1102-1106. <https://doi.org/10.1037/emo0000221>
- Cutajar, M. C., Mullen, P. E., Ogloff, J. R. P., Thomas, S. D., Wells, D. L., & Spataro, J. (2010). Psychopathology in a large cohort of sexually abused children followed up to 43 years. *Child Abuse & Neglect*, 34(11), 813-822. <https://doi.org/10.1016/j.chiabu.2010.04.004>
- de Rosnay, M., & Hughes, C. (2006). Conversation and theory of mind : Do children talk their way to socio-cognitive understanding? *British Journal of Developmental Psychology*, 24(1), 7-37. <https://doi.org/10.1348/026151005X82901>
- Dozier, M., & Lee, S. W. (1995). Discrepancies between self- and other-report of psychiatric symptomatology : Effects of dismissing attachment strategies. *Development and Psychopathology*, 7(1), 217-226. <https://doi.org/10.1017/S095457940000643X>
- Dozier, M., Stovall, K. C., Albus, K. E., & Bates, B. (2001). Attachment for infants in foster care : The role of caregiver state of mind. *Child Development*, 72(5), 1467-1477. <https://doi.org/10.1111/1467-8624.00360>
- Egeland, B., Jacobvitz, D., & Sroufe, L. A. (1988). Breaking the cycle of abuse. *Child Development*, 59(4), 1080-1088. <https://doi.org/10.2307/1130274>
- Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2015). Prosocial development. In M. E. Lamb, C. Garcia Coll, & R. M. Lerner (Éd.), *Handbook of child psychology : Social, emotional, and personality development* (7^e éd., Vol. 3, p. 610-658). Wiley.
- Ensink, K., Borelli, J. L., Normandin, L., Target, M., & Fonagy, P. (2020). Childhood sexual abuse and attachment insecurity : Associations with child psychological difficulties. *American Journal of Orthopsychiatry*, 90(1), 115-124. <https://doi.org/10.1037/ort0000407>
- Faller, K. C. (1989). Why sexual abuse? An exploration of the intergenerational hypothesis. *Child Abuse & Neglect*, 13(4), 543-548. [https://doi.org/10.1016/0145-2134\(89\)90058-6](https://doi.org/10.1016/0145-2134(89)90058-6)
- Finkelhor, D. (1984). *Child sexual abuse: New theory and research*. New York: Wiley.
- Fresno, A., Spencer, R., Ramos, N., & Pierrehumbert, B. (2014). The effect of sexual abuse

- on children's attachment representations in Chile. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders*, 23(2), 128-145. <https://doi.org/10.1080/10538712.2014.870949>
- Garofalo, C., & Bogaerts, S. (2019). Attachment and Personality Disorders Among Child Molesters : The Role of Trust. *Sexual Abuse: A Journal of Research and Treatment*, 31(1), 97-124. <https://doi.org/10.1177/1079063217720928>
- George, C., Kaplan, N., & Main, M. (1985). *Adult Attachment Interview*. Unpublished manuscript, University of California at Berkeley.
- Gery, I., Miljkovitch, R., Berthoz, S., & Soussignan, R. (2009). Empathy and recognition of facial expressions of emotion in sex offenders, non-sex offenders and normal controls. *Psychiatry Research*, 165(3), 252-262. <https://doi.org/10.1016/j.psychres.2007.11.006>
- Godbout, N., Sabourin, S., & Lussier, Y. (2009). Child sexual abuse and adult romantic adjustment : Comparison of single- and multiple-indicator measures. *Journal of Interpersonal Violence*, 24(4), 693-705. <https://doi.org/10.1177/0886260508317179>
- Groh, A. M., & Roisman, G. I. (2009). Adults' autonomic and subjective emotional responses to infant vocalizations : The role of secure base script knowledge. *Developmental Psychology*, 45(3), 889-893. <https://doi.org/10.1037/a0014943>
- Grossmann, K., Grossmann, K. E., & Kindler, H. (2005). Early Care and the Roots of Attachment and Partnership Representations : The Bielefeld and Regensburg Longitudinal Studies. In K. E. Grossmann, K. Grossmann, & E. Waters (Éd.), *Attachment from infancy to adulthood : The major longitudinal studies*. (2005-08055-005; p. 98-136). Guilford Publications.
- Hébert, M., Langevin, R., & Charest, F. (2020). Disorganized attachment and emotion dysregulation as mediators of the association between sexual abuse and dissociation in preschoolers. *Journal of Affective Disorders*, 267, 220-228. <https://doi.org/10.1016/j.jad.2020.02.032>
- Hertsgaard, L., Gunnar, M., Erickson, M. F., & Nachmias, M. (1995). Adrenocortical responses to the Strange Situation in infants with disorganized/disoriented attachment relationships. *Child Development*, 66(4), 1100-1106. <https://doi.org/10.2307/1131801>
- Jespersen, A. F., Lalumière, M. L., & Seto, M. C. (2009). Sexual abuse history among adult

- sex offenders and non-sex offenders : A meta-analysis. *Child Abuse & Neglect*, 33(3), 179-192. <https://doi.org/10.1016/j.chiabu.2008.07.004>
- Johnson, S. M., & Whiffen, V. E. (2006). *Attachment Processes in Couple and Family Therapy* (1sted.). Guilford Press.
- Jolliffe, D., & Farrington, D. P. (2004). Empathy and offending : A systematic review and meta-analysis. *Aggression and Violent Behavior*, 9(5), 441-476. <https://doi.org/10.1016/j.avb.2003.03.001>
- Jordan, K., Wild, T. S. N., Fromberger, P., Müller, I., & Müller, J. L. (2019). Are There Any Biomarkers for Pedophilia and Sexual Child Abuse? A Review. *Frontiers in Psychiatry*, 10, 940. <https://doi.org/10.3389/fpsy.2019.00940>
- Kneer, J., Borchardt, V., Kärgel, C., Sinke, C., Massau, C., Tenbergen, G., Ponseti, J., Walter, H., Beier, K. M., Schiffer, B., Schiltz, K., Walter, M., & Kruger, T. H. C. (2018). Diminished fronto-limbic functional connectivity in child sexual offenders. *Journal of Psychiatric Research*. <https://doi.org/10.1016/j.jpsychires.2018.01.012>
- Kochanska, G., & Kim, S. (2013). Early attachment organization with both parents and future behavior problems : From infancy to middle childhood. *Child Development*, 84(1), 283-296. <https://doi.org/10.1111/j.1467-8624.2012.01852.x>
- Kogan, S. M. (2005). The Role of Disclosing Child Sexual Abuse on Adolescent Adjustment and Revictimization. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders*, 14(2), 25-47. https://doi.org/10.1300/J070v14n02_02
- Krahé, B., & Berger, A. (2017). Gendered pathways from child sexual abuse to sexual aggression victimization and perpetration in adolescence and young adulthood. *Child Abuse & Neglect*, 63, 261-272. <https://doi.org/10.1016/j.chiabu.2016.10.004>
- Labadie, C., Godbout, N., Vaillancourt-Morel, M.-P., & Sabourin, S. (2018). Adult profiles of child sexual abuse survivors : Attachment insecurity, sexual compulsivity, and sexual avoidance. *Journal of Sex & Marital Therapy*, 44(4), 354-369. <https://doi.org/10.1080/0092623X.2017.1405302>
- Laible, D. J., & Thompson, R. A. (1998). Attachment and emotional understanding in preschool children. *Developmental Psychology*, 34(5), 1038-1045. <https://doi.org/10.1037/0012-1649.34.5.1038>
- Langevin, R., Marshall, C., & Kingsland, E. (2019). Intergenerational Cycles of Maltreatment : A Scoping Review of Psychosocial Risk and Protective Factors.

- Trauma, Violence & Abuse*, 1524838019870917.
<https://doi.org/10.1177/1524838019870917>
- Lee, J. K. P., Jackson, H. J., Pattison, P., & Ward, T. (2002). Developmental risk factors for sexual offending. *Child Abuse & Neglect*, 26(1), 73-92.
[https://doi.org/10.1016/S0145-2134\(01\)00304-0](https://doi.org/10.1016/S0145-2134(01)00304-0)
- Main, M. (1990). Cross-cultural studies of attachment organization : Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development*, 33(1), 48-61. <https://doi.org/10.1159/000276502>
- Marcus, R. F., & Kramer, C. (2001). Reactive and proactive aggression: Attachment and social competence predictors. *The Journal of Genetic Psychology: Research and Theory on Human Development*, 162(3), 260-275.
<https://doi.org/10.1080/00221320109597483>
- Martin, J., Raby, K. L., Labella, M. H., & Roisman, G. I. (2017). Childhood abuse and neglect, attachment states of mind, and non-suicidal self-injury. *Attachment & Human Development*, 19(5), 425-446.
<https://doi.org/10.1080/14616734.2017.1330832>
- McKillop, N., Smallbone, S., Wortley, R., & Andjic, I. (2012). Offenders' attachment and sexual abuse onset : A test of theoretical propositions. *Sexual Abuse: Journal of Research and Treatment*, 24(6), 591-610.
<https://doi.org/10.1177/1079063212445571>
- Meins, E., Fernyhough, C., Wainwright, R., Gupta, M. D., Fradley, E., & Tuckey, M. (2002). Maternal mind-mindedness and attachment security as predictors of theory of mind understanding. *Child Development*, 73(6), 1715-1726.
<https://doi.org/10.1111/1467-8624.00501>
- Miljkovitch, Moss, Bernier, Pascuzzo, & Sander. (2015). Refining the assessment of internal working models : The Attachment Multiple Model Interview. *Attachment & Human Development*, 17(5), 492-521.
<https://doi.org/10.1080/14616734.2015.1075561>
- Miljkovitch, R., Deborde, A.-S., Bernier, A., Pham-Scottez, A., Speranza, M., & Corcos, M. (2018). Borderline Personality Disorder in adolescence as a generalized of disorganized attachment. *Frontiers*. <https://doi.org/10.3389/fpsyg.2018.01962>
- O'Leary, P. J., & Barber, J. (2008). Gender differences in silencing following childhood sexual abuse. *Journal of Child Sexual Abuse: Research, Treatment, & Program*

- Innovations for Victims, Survivors, & Offenders*, 17(2), 133-143.
<https://doi.org/10.1080/10538710801916416>
- Pierrehumbert, B., Torrissi, R., Ansermet, F., Borghini, A., & Halfon, O. (2012). Adult attachment representations predict cortisol and oxytocin responses to stress. *Attachment & Human Development*, 14(5), 453-476.
<https://doi.org/10.1080/14616734.2012.706394>
- Roisman, G. I., Tsai, J. L., & Chiang, K.-H. S. (2004). The Emotional Integration of Childhood Experience : Physiological, Facial Expressive, and Self-Reported Emotional Response During the Adult Attachment Interview. *Developmental Psychology*, 40(5), 776-789. <https://doi.org/10.1037/0012-1649.40.5.776>
- Salter, D., McMillan, D., Richards, M., Talbot, T., Hodges, J., Bentovim, A., Hastings, R., Stevenson, J., & Skuse, D. (2003). Development of sexually abusive behaviour in sexually victimised males : A longitudinal study. *The Lancet*, 361(9356), 471-476.
[https://doi.org/10.1016/S0140-6736\(03\)12466-X](https://doi.org/10.1016/S0140-6736(03)12466-X)
- Schönbucher, V., Maier, T., Mohler-Kuo, M., Schnyder, U., & Landolt, M. A. (2012). Disclosure of child sexual abuse by adolescents: A qualitative in-depth study. *Journal of Interpersonal Violence*, 27(17), 3486-3513.
- Seto, M. C., Babchishin, K. M., Pullman, L. E., & McPhail, I. V. (2015). The puzzle of intrafamilial child sexual abuse : A meta-analysis comparing intrafamilial and extrafamilial offenders with child victims. *Clinical Psychology Review*, 39, 42-57.
<https://doi.org/10.1016/j.cpr.2015.04.001>
- Seto, M. C., & Lalumière, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychological Bulletin*, 136(4), 526-575. <https://doi.org/10.1037/a0019700>
- Spangler, G., & Grossmann, K. E. (1993). Biobehavioral organization in securely and insecurely attached infants. *Child Development*, 64(5), 1439-1450.
<https://doi.org/10.2307/1131544>
- Spangler, G., & Zimmermann, P. (2014). Emotional and adrenocortical regulation in early adolescence : Prediction by attachment security and disorganization in infancy. *International Journal of Behavioral Development*, 38(2), 142-154.
<https://doi.org/10.1177/0165025414520808>
- Steele, H., & Steele, M. (2018). *Handbook of attachment-based interventions* (H. Steele & M. Steele (Eds.)). Guilford Press.

- Steele, Howard, Steele, M., & Croft, C. (2008). Early attachment predicts emotion recognition at 6 and 11 years old. *Attachment & Human Development, 10*(4), 379-393. <https://doi.org/10.1080/14616730802461409>
- Stern, J. A., & Cassidy, J. (2018). Empathy from infancy to adolescence : An attachment perspective on the development of individual differences. *Developmental Review, 47*, 1-22. <https://doi.org/10.1016/j.dr.2017.09.002>
- Stoltenborgh, M., van IJzendoorn, M. H., Euser, E. M., & Bakermans-Kranenburg, M. J. (2011). A global perspective on child sexual abuse : Meta-analysis of prevalence around the world. *Child Maltreatment, 16*(2), 79-101. <https://doi.org/10.1177/1077559511403920>
- Stovall-McClough, K. C., & Dozier, M. (2004). Forming attachments in foster care: Infant attachment behaviors during the first 2 months of placement. *Development and Psychopathology, 16*(2), 253-271.
- Stroebel, S. S., O'Keefe, S. L., Beard, K. W., Kuo, S.-Y., Swindell, S. V. S., & Komor, M. J. (2012). Father-daughter incest : Data from an anonymous computerized survey. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders, 21*(2), 176-199. <https://doi.org/10.1080/10538712.2012.654007>
- Thompson, R. A. (2016). Early attachment and later development: Reframing the questions. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications., 3ed ed.* (pp. 330-348). The Guilford Press.
- van Hoof, M.-J., van Lang, N. D. J., Speekenbrink, S., van IJzendoorn, M. H., & Vermeiren, R. R. J. M. (2015). Adult Attachment Interview differentiates adolescents with childhood sexual abuse from those with clinical depression and non-clinical controls. *Attachment & Human Development, 17*(4), 354-375. <https://doi.org/10.1080/14616734.2015.1050420>
- Van IJzendoorn, M. H., Schuengel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganized attachment in early childhood : Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology, 11*(2), 225-249.
- Vinzi, V. E., Trinchera, L., & Amato, S. (2010). PLS Path Modeling : From Foundations to Recent Developments and Open Issues for Model Assessment and Improvement. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Éd.), *Handbook of Partial Least Squares* (p. 47-82). Springer Berlin Heidelberg.

https://doi.org/10.1007/978-3-540-32827-8_3

Ward, T., & Beech, A. (2006). An integrated theory of sexual offending. *Aggression and Violent Behavior, 11*(1), 44-63. <https://doi.org/10.1016/j.avb.2005.05.002>

Waters, T. E. A., Ruiz, S. K., & Roisman, G. I. (2017). Origins of secure base script knowledge and the developmental construction of attachment representations. *Child Development, 88*(1), 198-209. <https://doi.org/10.1111/cdev.12571>

World Health Organization. (2003). *Guidelines for medico-legal care for victims of sexual violence*. World Health Organization.

https://www.who.int/violence_injury_prevention/publications/violence/med_leg_guidelines/en/

Yüksel, S. (2000). Collusion and denial of childhood sexual trauma in traditional societies. In A. Y. Shalev, R. Yehuda, & A. C. McFarlane (Eds.), *International handbook of human response to trauma*. (pp. 153–162). Kluwer Academic Publishers.

Figure 1: Conceptual mediation-moderation model

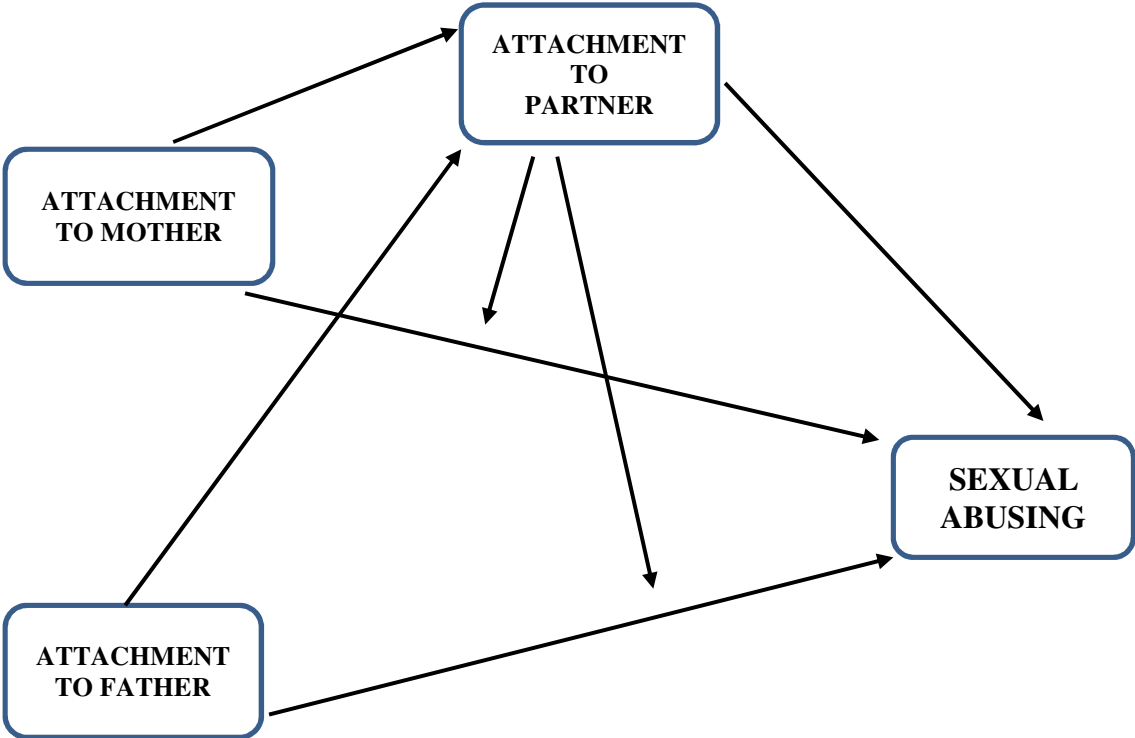


Figure 2: Selection process of the abused/non-abusing group (N=27)

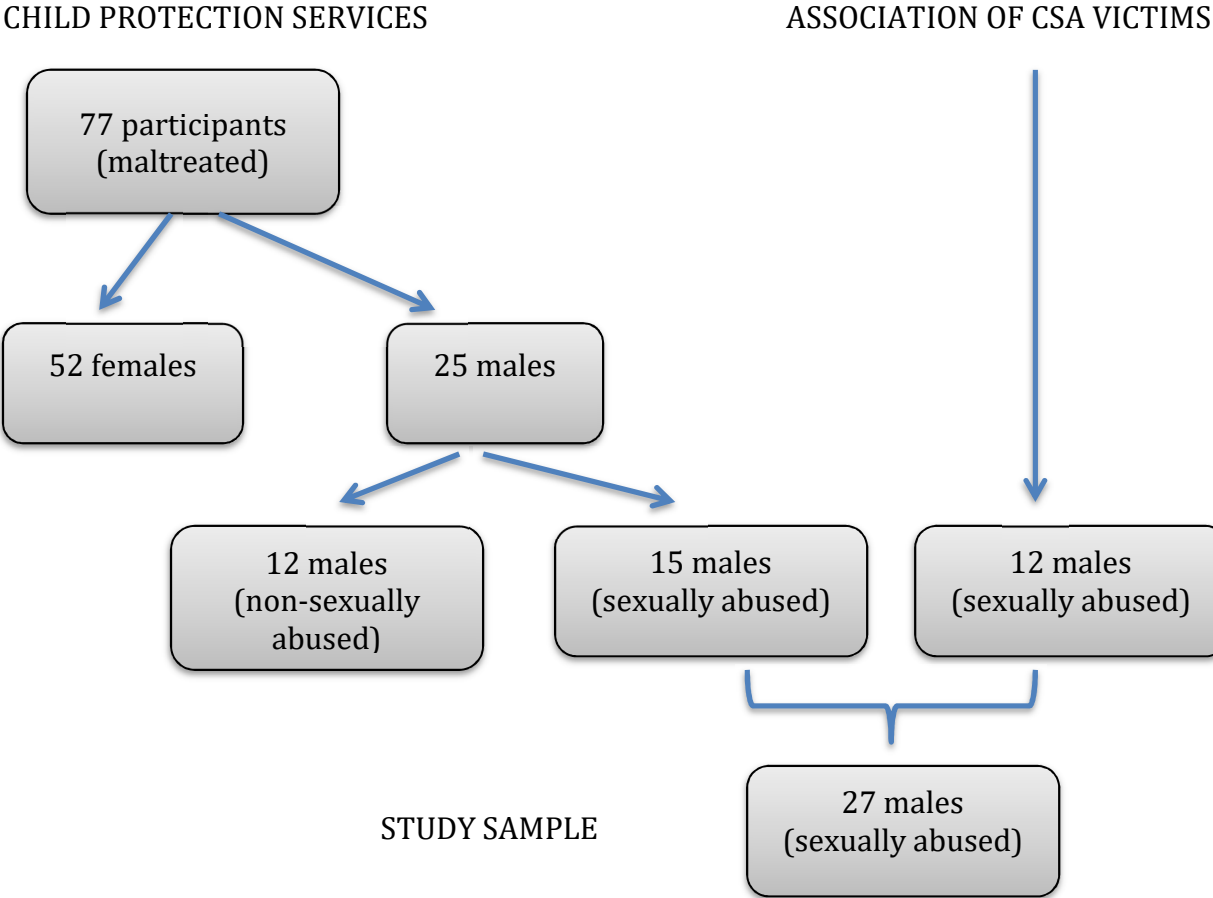


Figure 3: PLS PM graph predicting intergenerational transmission of CSA

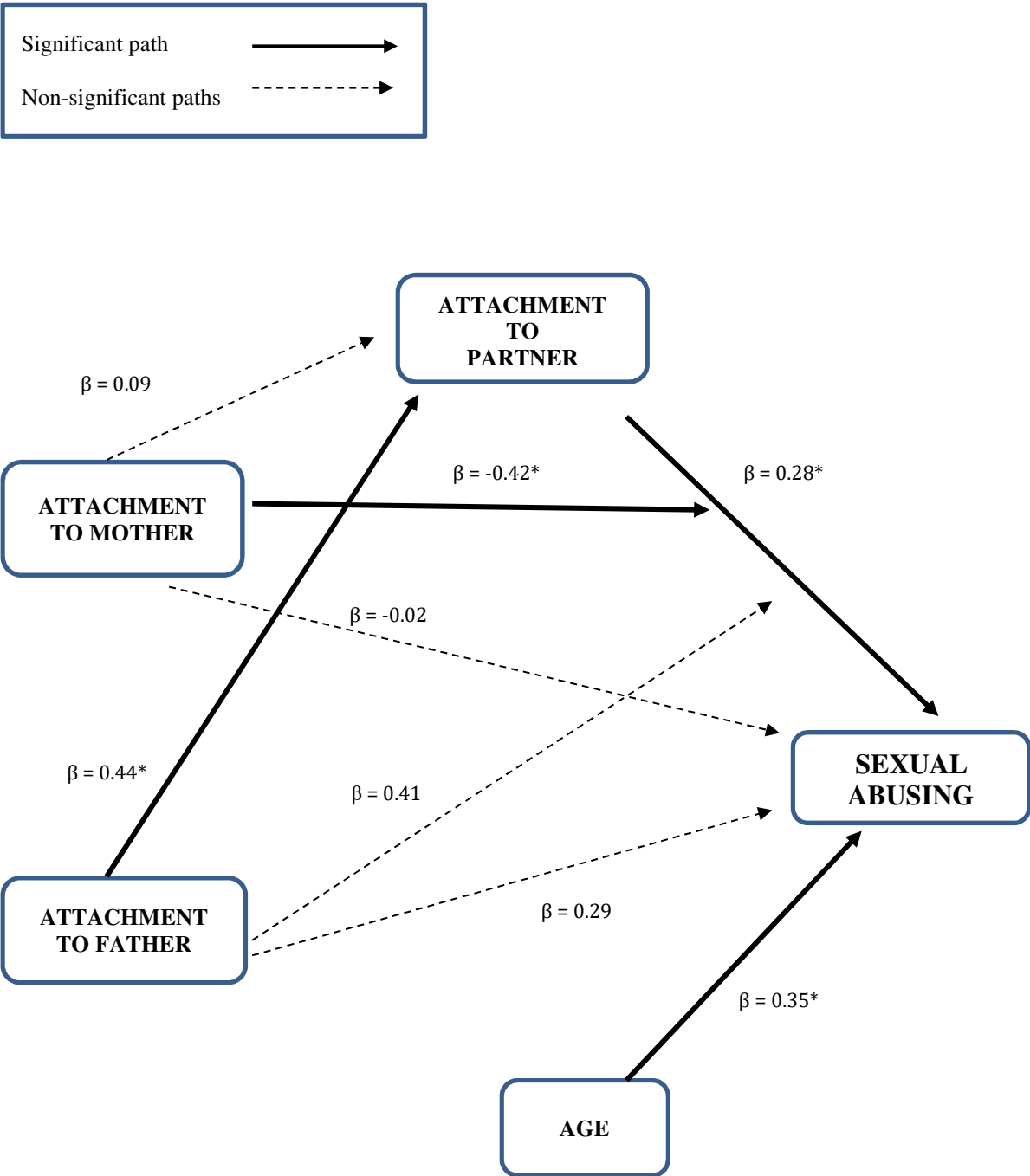


Table 1. Group comparisons between non-abuser and abuser participants on the Attachment Multiple Model Interview (AMMI) scales.

AMMI	Abuser Mean ± SD [Range]	Non abuser Mean ± SD [Range]	t
Security-mother	1.33±.92 [0-3]	1.93±2.25 [0-6]	-1.29
Security-father	.42 ±.62 [0-2]	1.76 ±2.14 [0-6]	-3.14**
Security-partner	1.36±1.20 [0-4.5]	4.24±1.89 [1-7]	-6.85***
Deactivation mother	6.48±.95 [4-8]	6.17±1.62 [2-8]	.88
Deactivation father	6.96±.73 [5.5-8]	6.35±1.59 [3-8]	1.82
Deactivation partner	5.89±1.23 [3-8]	4.40±2.08 [0-7]	3.25**
Hyperactivation mother	4.95±1.52 [0-8]	3.54±2.16 [0-7]	2.84**
Hyperactivation father	4.55±1.68 [0-7.5]	2.30±2.28 [0-6]	4.24***
Hyperactivation partner	4.17±1.74 [0-7.5]	3.24±2.16 [0-8]	1.83
Disorganization mother	9.49±2.77 [0-14.66]	7.14±3.90 [0-14]	2.69**
Disorganization father	9.02±3.27 [0-15]	4.81±4.19 [0-12]	4.24***
Disorganization partner	7.75±2.98 [0-12]	4.78±3.76 [0-10]	3.32**

Note: ** $p < .01$; *** $p < .001$

Table 2. Conceptual model for latent variables (LVs) and manifest variable (MVs)

Latent variables	Manifest variables
Child molestation	Child molestation
Attachment Mother	Security Deactivation Hyperactivation Disorganization
Attachment Father	Security Deactivation Hyperactivation Disorganization
Attachment Partner	Security Deactivation Hyperactivation Disorganization
Attachment Mother x Partner	Security mother Deactivation mother Hyperactivation mother Disorganization mother Security partner Deactivation partner Hyperactivation partner Disorganization partner
Attachment Father x Partner	Security father Deactivation father Hyperactivation father Disorganization father Security partner Deactivation partner Hyperactivation partner Disorganization partner
Age	Age

Table 3. Descriptive statistics for latent variables (LVs) and manifest variable (MVs)

Latent variables (LVs)	Manifest variables (MVs)	Mean (SD)	R ²
Child molestation	Child molestation		0.55
Attachment-Mother	Security	0.57 (0.19)	—
	Disorganization	0.74 (0.60)	
Attachment-Father	Security	0.61 (0.14)	—
	Disorganization	0.91 (0.04)	
Attachment-Partner	Security	0.95 (0.03)	—
	Disorganization	0.65 (0.23)	
Attachment-Father x Partner	Security Father		—
	Disorganization Father		
	Security Partner		
	Disorganization Partner		
Attachment-Mother x Partner	Security Mother		—
	Disorganization Mother		
	Security Partner		
	Disorganization Partner		
Age	Age		—

Table 4. Unidimensionality test for latent variables (LVs) and manifest variable (MVs)

Latent variables (LVs)	Manifest variables (MVs)	Unidimensionality
Child molestation	Child molestation	1
Attachment-Mother	Security Disorganization	0.75
Attachment-Father	Security Disorganization	0.72
Attachment-Partner	Security Disorganization	0.82
Attachment-Father x Partner	Security Father Disorganization Father Security Partner Disorganization Partner	0.91
Attachment-Mother x Partner	Security Mother Disorganization Mother Security Partner Disorganization Partner	0.87
Age	Age	1

Table 5. Direct and indirect bootstrapped path coefficients

Latent variables (LVs)	B weight			95% bootstrap CI
Direct paths				
Attachment-Mother → Child molestation	-0.02			[-0.23, 0.13]
Attachment-Father → Child molestation	0.29			[-0.04, 0.70]
Attachment-Partner → Child molestation	0.28			[0.16, 0.69] *
Attachment-Father → Attachment Partner	0.44			[0.38, 0.69] *
Attachment-Mother → Attachment Partner	0.09			[-0.29, 0.19]
Attachment-Mother x Partner → Child molestation	0.41			[-0.38, 0.61]
Attachment-Father x Partner → Child molestation	-0.42			[-0.50, -0.20]
				*
Age → Child molestation	0.35			[0.12, 0.45] *
Direct and indirect paths				
	Direct	Indirect	Total	
Att. Mother → Att. Partner → Child molestation	-0.02	0.03	0.00	[-0.27, 0.18]
Att. Father → Att. Partner → Child molestation	0.29	0.12	0.42	0.09, 0.97] *

Note: CI: Confidence Interval; *: p<.05; Att.: Attachment