



Disorganized Attachment as Partial Mediator of Relationship Between Childhood Sexual Abuse and Dissociation: The Role of Relationship to Perpetrator

Kimiya Qanavati¹, and Shaghayegh Zahraei

Department of Psychology, Al-Zahra University, Tehran, Iran

Abstract

Childhood sexual abuse (CSA) is a major social problem with various negative outcomes for a person's life, such as dissociation. Previous research has shown that insecure attachment styles, especially disorganized attachment, play a role in mediating the effect of childhood sexual abuse on dissociation. However, most of these studies have not considered several abuse characteristics, such as relationship to the perpetrator, to play a role in determining the effect of childhood sexual abuse on outcomes such as dissociation. Our study borrows from betrayal trauma theory that states the effects of a traumatic event vary considerably based on one's relationship to perpetrator, with more severe consequences for those traumatized at the hands of someone close to them. Therefore, this study aimed to analyze the mediating role of attachment styles on the relationship between child sexual abuse and dissociation in terms of the relationship to the perpetrator. A sample of 258 adult men and women between the ages of 18 to 55 years was selected via convenience sampling. Individuals completed questions from Childhood Trauma Questionnaire, Dissociative Experiences Scale, and Relationship Scales Questionnaire. Based on their relationship to perpetrators, participants were divided into two groups. Two mediation analyses were performed in each group to evaluate the mediating effects of attachment styles on the association between childhood sexual abuse and dissociation. Mediation analyses showed that fearful avoidant (disorganized) attachment partially mediated the relationship between CSA and dissociation (indirect = 0.10, 95% CI [0.0284–0.1833]) only in participants whose perpetrator was someone within their family. Results are discussed in terms of the role of victim-perpetrator relationship and attachment styles in pathways to dissociation.

Keywords: Attachment styles, child sexual abuse, dissociation, relationship to perpetrator

1. Introduction

Childhood sexual abuse (CSA) is a traumatic experience that can drastically affect the trajectory of a person's development as it relates to their physical and mental well-being (Lassri et al., 2023). The World Health Organization (2017) defines childhood sexual abuse as "the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society." Although this is useful, a universal CSA definition does not exist (Mathews & Collin-Vézina, 2019). Moreover, the definitions used by researchers are often not the same as those used by legal institutions (Lange, 2020). Consequently, it is difficult to ascertain the exact prevalence rates of CSA due to the aforementioned reasons and the methodological ways in which data is collected. Also, a considerable amount of CSA events is never disclosed to authorities (Lange, 2020). Despite the variability in prevalence rates, the existing ones both worldwide and in Iran (8 to 15 percent) are quite concerning, which makes CSA a major social problem (Amini, 2016). Research illuminates that experiencing CSA is associated with a wide range of psychological difficulties that vary in severity (Harryman, 2023). These difficulties include, but are not limited to, depression, anxiety, suicidal ideation, substance abuse, and attachment insecurity (Fuller-Thomson et al., 2020), (Gray & Rarick, 2018), (Palo & Gilbert, 2015). Several studies have shown the extent to which these difficulties are experienced depends on distinct but often interrelated abuse characteristics in CSA (Ventus et al., 2017). Abuse characteristics such as age of onset, abuse severity, abuse frequency, degree of contact (contact sexual abuse vs. non-contact abuse), and the relationship to the perpetrator play a role in determining the different consequences of CSA (Ventus et al., 2017), (Wallis & Woodworth, 2020). One of the most researched characteristics of abuse is the victim's relationship to the perpetrator. Research has consistently shown that the chances of children being sexually abused by someone they know are much higher than by someone they don't know. In the majority of CSA cases, the abuser is someone the survivor knows, such as relatives, family members like siblings or primary caregivers, and/or a known individual in a position of trust (Harryman, 2023), (Wallis & Woodworth, 2020). Intra-familial child sexual abuse (IFCSA) is defined as "any sexual activity-intimate physical contact that is sexually arousing between non-married members of a family (Coleman, 1984, p.256). Extra-familial child sexual abuse is defined as "sexual abuse by anyone other than a relative" (Bolen, 2002, p.91). Intra-familial child sexual abuse is more commonplace than extra-familial child sexual abuse and has far more severe consequences (Goodyear-Brown, 2011), (Wallis & Woodworth, 2020). One of the most well-known consequences of trauma (including interpersonal trauma) is dissociation. Dissociation is defined as "an experienced loss of information or control over mental processes that, under normal circumstances, are available to conscious awareness, self-attribution, or control, in relation to the individual's age and cognitive development." (Cardena & Carlson, 2011). As per Cardena & Carlson (2011), dissociative symptoms can be identified as "a loss of continuity in subjective experience with accompanying involuntary and unwanted intrusions into awareness and behavior" and/or "an inability to access information or control mental functions or behaviors, manifested as symptoms such as gaps in awareness, memory, or self-identification, that are normally amenable to such access/control" and/or "a sense of experiential disconnectedness that may include perceptual distortions about the self or the environment." Dissociation is highly prevalent in survivors of traumatic events, including CSA survivors (Dorahy et al., 2022; Kate et al., 2021; Lassri et al., 2023). The connection between trauma and dissociation is well-established in research, leading some experts to conceptualize dissociation as an adaptive response to mostly interpersonal forms of trauma (such as abuse and violence) in a way that can help the survivor cope with the intense

psychological and/or physical pain they are being subjected to (Dorahy et al., 2022; Gewirtz-Meydan & Lahav, 2021). Not only has dissociation been consistently associated with CSA, but it has also been found to act as a mediator between CSA and other psychologically related phenomena, such as revictimization (Lassri et al., 2023). However, it is worth considering that not all trauma survivors (including CSA survivors) experience dissociation (Dorahy et al., 2022). This raises the question of what factors are present in the sexual abuse experience that place an individual at higher risk of developing dissociative tendencies. Several explanations have been proposed to shed light on how certain factors might promote dissociation in the context of CSA (Lawson & Akay-Sullivan, 2020). Betrayal trauma theory (BTT) (Freyd, 1996) emphasizes the importance of the interpersonal context of trauma (Dorahy et al., 2022). According to BTT, a trauma high in betrayal happens when the perpetrator is interpersonally close (someone who is trusted, relied upon, or cared for) to the victim (Hocking et al., 2016). Betrayal traumas are substantially different from non-betrayal traumas such as disasters, accidents, or interpersonal traumas perpetrated by strangers because they lack the close emotional bond present in betrayal traumas (Mosley, 2022). BTT is built upon the foundational premises of attachment theory (Bowlby, 1980), which states that humans naturally seek to create and maintain attachment bonds with their caregivers and be proximate to them when threatened or stressed (Lawson & Akay-Sullivan, 2020). But when a child is being abused by the very same person who is responsible for providing them with safety and care, they are faced with a unique challenge. Confronting the abuser and risking the attachment bond and, consequently, their chance of survival is not feasible for a young child. So, BTT proposes that in order to maintain the attachment relationship, it is more adaptive for victims of high betrayal trauma to block abuse-related information from entering their conscious information processing system. A phenomenon known as betrayal blindness (Freyd, 1996). Although this tendency to forget might act as an adaptive mechanism at the time of the abuse, studies have shown that it will have a lasting effect on the victim's cognitive abilities to detect violations of trust and signs of betrayal in close relationships (Edwards et al., 2012; Gobin & Freyd, 2009; Hocking et al., 2016). This is in line with evidence that victims of high betrayal trauma (especially CSA survivors) are more at risk of revictimization than victims of low betrayal trauma (Gobin & Freyd, 2009; Zamir et al., 2018). One of BTT's main assertions is that one of the pathways from high betrayal trauma to revictimization is through dissociation. In a study done by Freyd & Gobin (2017), participants were shown a sexually ambiguous drawing that could be perceived as child sexual abuse. Participants with a history of high betrayal trauma had higher levels of state dissociation while looking at the drawing and a lower ability to detect betrayal. But in this study, betrayal trauma was not directly linked to betrayal blindness. But was rather indirectly linked to it through dissociation. It is important to search for other important factors that may facilitate victims of high betrayal trauma developing dissociative tendencies. Attachment style could be one of the factors responsible for the development of dissociation in victims of high betrayal trauma. Attachment theory (Bowlby, 1969; Bowlby, 1973) offers that early on in childhood, children form a bond with their caregiver(s), for it can serve as an evolutionary adaptive way of ensuring survival. An infant's proximity to a reliable and responsive caregiver can help the child have a secure base in times of terror and/or distress (Bowlby, 1969; Bowlby, 1973; Bowlby, 2008). These relationships to attachment figures also form basic models called internal working models (Bowlby, (1973). Internal working models dictate the kind of expectations and perceptions children form about their and others' roles in relationships based on their attachment to their caregiver(s). Children who experience responsiveness, nurture, and positive reactions from their caregiver(s) are expected to form a secure attachment and, consequently, positive working models. However, children who experience unresponsiveness, neglect, and negative reactions from their attachment figures

are more likely to form insecure attachments and disturbed internal models of themselves and others (Bowlby, 1973). Although Bowlby's (Bowlby, 1969) attachment theory focused on attachment bonds in childhood, it provided grounding for the notion that the attachment system, once formed, stays relatively stable and pervades into adulthood, affecting interpersonal experiences, especially romantic ones (Bowlby, 2008; Fraley & Roisman, 2019). In adulthood, attachment is conceptualized as having a style or orientation that explains approaches to and ways of relating to close ones, such as romantic partners (Paetzold & Rholes, 2021). Attachment researchers usually assess adult attachment styles by using two dimensions of attachment: anxiety and avoidance. The anxiety dimension is based on representational models of self, and the avoidance dimension is based on representational models of others (Bartholomew & Shaver, 1998). Adults scoring high on the avoidance dimension have difficulty experiencing intimacy, are uncomfortable relying on other people, and tend to view independence as one of their main qualities. Adults scoring high on the anxiety dimension are unsure and doubtful of their partner's emotions for them, have low self-esteem, and need excessive reassurances of love and support (Mikulincer & Shaver, 2016). Those who score relatively low on both dimensions are considered to have attachment security. Research has shown that adult survivors of CSA have higher attachment insecurities (anxiety and avoidance) compared to non-abused adults (Brenner et al., 2021). But, in cases of intra-familial CSA (especially perpetrated by a caregiver), the child's attachment system is severely disrupted. When a child is abused by their attachment figure, the child's core beliefs about trust, safety, and care are severely violated, and consequently, this violation results in the disintegration of self. In cases where the attachment figure is the source of distress, the purpose of the attachment system is survival. In times of distress and negative emotions, these children can't rely on proximity seeking strategies in order to adaptively regulate negative affect because it would place them near their attachment figure, which is another major source of distress. The association between attachment insecurity (especially anxiety) and dissociation is well known in research (Coe et al., 1995; Kong et al., 2018). Borrowing from betrayal trauma theory, in cases of CSA perpetrated by a caregiver, in order to survive, the child is more invested in securing the attachment relationship. As a result, they may turn to dissociation to restrict awareness of the abuse. Main (2006) also elaborated on the role of internal working models in the development of dissociation. In cases of high betrayal CSA, the contradiction between the protective role of the caregiver and the reality of them abusing the child leads to unintegrated and contradictory models of the self and others. Later in adulthood, when dealing with a stressful situation, activation of these models might play a role in employing dissociation as a response (Tomas-Tolentino, 2010). Some studies have tried to understand the relationship between attachment styles and dissociation in CSA victims. Paetzold & Rholes (2021) found disorganized attachment to better mediate the relationship between child abuse (including sexual maltreatment) and dissociation than avoidance and anxiety. Since this study focused on child abuse and not specifically child sexual abuse, they didn't ask for any characteristics of abuse. Tomas-Tolentino (2010) Found that among CSA survivors whose perpetrator of CSA was a father, 80% had a high level of dissociation. When it comes to CSA, dissociation, and attachment styles in Persian literature, Nabizadeh et al. (2021), found that dissociative experiences mediated the relationship between traumatic childhood experiences and schizotypal personality traits. In a study done by Hakak et al. (2019), they found both childhood traumas and dissociative experiences to be correlated with internet addiction. However, none of these studies focused on childhood sexual abuse separately, which alludes to a paucity of literature in Persian studies on the relationship between CSA and dissociation and how different factors might affect this relationship. One of which is attachment style. Therefore, we find it necessary to examine the role of attachment styles in predicting dissociation in adult survivors of high betrayal CSA.

Besides the established link between disorganized attachment styles and dissociation, some researchers have found other attachment styles to be linked to dissociation as well. In a study done by Kong et al. (2018), anxious and avoidant attachment styles were found to mediate the relationship between sexual abuse and adult dissociation. Therefore, we find it necessary to include these two insecure attachment styles in our study as well to find out whether they will have a mediating effect on the link between child sexual abuse and dissociation or not. Based on previous research, we hypothesize that the relationship between child sexual abuse and dissociation subscales will be mediated in parallel by adult disorganized (fearful), dismissing, and preoccupied attachment, with fearful attachment having a stronger mediation pathway than the other two attachment styles in participants with a history of intrafamilial CSA but not in participants with a history of extrafamilial CSA.

2. Material and Methods

2.1 Participants and Procedure

258 individuals with a history of childhood sexual abuse participated in this study. The participants were recruited via online communities, mainly groups of university students on Telegram messenger. Data was collected using convenience sampling. The general inclusion criteria for the study were (a) having been sexually abused before the age of 18, which was assessed based on each participant's answer to an item in the questionnaire (as explained in the Measures section); (b) being in the age range of 18 to 55. After having the study explained to them, once participants had consented to take part in the study, they were provided an online link to the questionnaires. The mean age of participants for the entire sample was 24.20 years ($SD = 6.95$; range = 18–52). Participants predominantly identified as female ($N = 215$, 83.3%), with the rest identifying as male ($N = 43$, 16.7%). In terms of level of education, most participants had a bachelor's ($N = 209$, 81%), followed by a master's ($N = 44$, 17.1%), and a doctoral degree ($N = 5$, 1.9%). The marital status of 211 participants was single (81.8%), and 47 were married. (18.2%).

2.2 Measures

Childhood Trauma Questionnaire—Short Form: This is a short form of the Childhood Trauma Questionnaire (Bernstein et al., 1998) that was developed by Bernstein et al. in 2003. It is a retrospective self-report questionnaire that measures an individual's experiences of child abuse and neglect. The short form includes 28 items, comprising 25 clinical and 3 validity items. The clinical items are divided into 5 subscales: emotional, physical, and sexual abuse, and emotional and physical neglect. All 28 items are rated on a 5-point Likert-type scale with response options ranging from Never True to Very Often True. In a study done by Bernstein et al. (2003), The Cronbach's α for all the subscales ranged from 0.78 to 0.95. In Iran, Ebrahimi et al. (2014) reported an adequate Cronbach's α for all five subscales, ranging from 0.81 to 0.98. In this sample, for the sexual abuse subscale, Cronbach's α was 0.90. In order to select only the participants who had experienced childhood sexual abuse, all five questions from the sexual abuse subscale of the CTQ were adapted. Before presenting the participants with questions, they were given a definition of CSA, which described it as "the involvement of a child in any sexual activity with an adult (18+) or a child or adolescent who is at least five years older or a child or adolescent who is in a position of power or control over the child but may not be five years older. Sexual activities include any instances of sexual touching, oral acts involving genitalia, penetration, voyeurism, and exhibitionism." Any participant that had chosen an option other than "Never True" for the item "I believe that I was sexually abused" was automatically included in the study and presented with the rest of

the items. Participants were also asked questions about their relationship to the perpetrator, whether it was a family member (including parents, siblings, or relatives) or a non-family member, as well as their age at onset and abuse frequency.

Dissociative Experiences Scale (DES-II): The Dissociative Experiences Scale-II (1993) was used to assess dissociation. This 28-item self-measure asks the participants to estimate, on a scale from 0% to 100%, the percentage of time they experience 28 dissociative experiences. This scale categorizes the 28 dissociative phenomena into three subscales: depersonalization-derealization, dissociative amnesia, and absorption/imaginative involvement. Studies have shown good validity and reliability for this scale (Bernstein et al., 1993). In a study done by Amrollahi et al. (2016) on a Persian sample, the Cronbach's alpha was 0.93. For the current study, the Cronbach's alpha for total dissociation was 0.91.

Relationship Scales Questionnaire (RSQ): To assess attachment styles, the Relationship Scales Questionnaire (RSQ) (1994) was used. It has 30 short statements about an individual's attitudes and characteristics in close relationships and asks the participants to determine on a 5-point Likert scale which option best describes their own personal style. This scale measures four attachment styles: secure, dismissing, preoccupied, and fearful attachment styles. Griffin and Bartholomew (1994) found acceptable internal consistency for the RSQ subscales. In a study done by Salavati et al. (2015) on a Persian sample, the Cronbach's alpha was 0.73. For the current study, the Cronbach's alpha for secure, preoccupied, fearful avoidant, and dismissing avoidant was 0.74, 0.76, 0.74, and 0.78, respectively.

2.3 Data Analysis

A number of independent-samples t-tests were performed for descriptive analyses. Then we ran two mediation analyses (model 4), using PROCESS macro v4.2 in SPSS. We separately tested two parallel mediation models for both intrafamilial and extrafamilial CSA groups, with the scores of CSA as the independent variable, dissociation as the dependent variable, and the scores of secure, preoccupied, dismissing-avoidant, and fearful-avoidant attachment styles as mediators. In this model (4), mediators can be correlated with one another, but a causal relationship should not exist between them. In order to make inferences about indirect effects, the PROCESS automatically generates 95% percentile bootstrap confidence intervals for all indirect effects. We selected the default number of 5000 bootstrap samples. If the 95 percent confidence interval for any parameter does not cross zero, it means that the indirect effect is statistically significant, thus proving mediation (Hayes, 2017). Since all the variables in the model were continuous, all their coefficients are presented in standardized form.

3. Results

3.1 Descriptive statistics

Table 1 provides a between-group comparison of the intrafamilial CSA and extrafamilial CSA groups based on scores assessed using the CTQ childhood sexual abuse subscale, RSQ, and DES-II. The intrafamilial CSA group scored higher on CSA and fearful avoidant attachment than the extrafamilial CSA group. The extrafamilial CSA group scored higher on secure, preoccupied, and dismissing avoidant attachment styles than the intrafamilial CSA group. The intrafamilial CSA group scored higher on depersonalization and dissociative amnesia than the extrafamilial CSA group. But the extrafamilial CSA group scored higher on the absorption subscale and total dissociation. A number of independent samples t-tests were conducted to compare all the variables of the study in the intrafamilial CSA and extrafamilial

CSA groups. Results showed that the difference between the two groups on CSA, $t(256) = 5.89$, $p < 0.05$, and fearful avoidant attachment, $t(256) = 5.13$, $p < 0.05$, were significant. Also, results showed that participants who experienced extrafamilial CSA had higher mean scores on secure, $t(256) = -3.12$, $p < 0.05$, and preoccupied attachment style, $t(256) = -2.76$, $p < 0.05$, than those who experienced intrafamilial CSA, and these differences were also significant. No significant differences were found in the scores of dismissing avoidant attachment style or total dissociation between the two groups.

3.2 Mediation Analysis

In order to estimate the direct effects of the severity of CSA on dissociation and the indirect (mediated) effects through secure, preoccupied, dismissing avoidant, and fearful avoidant attachment styles, all four mediators were simultaneously included in the mediation models. For each group, models were tested separately. Age at onset and abuse frequency are closely related to the relationship to the perpetrator; therefore, they were controlled by being included as covariates in the analysis. The direct and path coefficients for the parallel mediation analyses are shown in Figure 1. and 2. In the intrafamilial CSA group, the results revealed a significant indirect effect of CSA on dissociation through fearful-avoidant attachment (indirect = 0.10, 95% CI [0.0284–0.1833]). The direct effect of intrafamilial CSA on dissociation in the presence of mediators was significant ($\beta = 0.232$, $p < 0.01$). Therefore, the data suggest that fearful avoidant attachment partially mediated the relationship between intrafamilial CSA and dissociation. The other indirect effects in both models were not significant.

4. Discussion

The main aim of the current study was to assess the mediating role of secure, preoccupied, dismissing avoidant, and fearful avoidant attachment styles on the relationship between childhood sexual abuse and adult dissociation. More specifically, we hypothesized that insecure attachment styles would play a mediating role in the relationship between childhood sexual abuse and dissociation only among participants who had experienced CSA by someone in their family, i.e., intrafamilial. Our hypothesis derives from betrayal trauma and Bowlby's (1969) attachment theory simultaneously, in which experiencing some form of interpersonal trauma by someone whom the victim trusts and is emotionally close to predisposes an individual to use other mechanisms to deal with the trauma, such as dissociation. This tendency to rely on dissociation can be explained by insecure attachment styles, especially fearful avoidant attachment style. Consistent with our hypothesis, the results showed none of the attachment styles played a mediating role in the relationship between extrafamilial CSA and dissociation. In the intrafamilial group, results showed that fearful avoidant attachment style partially mediated the relationship between intrafamilial CSA and dissociation. However, the results didn't show any mediating effect of preoccupied or dismissing avoidant attachment on the relationship between intrafamilial CSA and dissociation. One plausible explanation for these findings might be that both avoidant and preoccupied attachment styles are considered "organized" in that people with these attachment styles have developed a set of consistent yet maladaptive strategies to increase the possibility of their needs being met. In contrast, individuals with disorganized attachment are unable to develop "organized" strategies, which makes them more likely to use dissociation as a way of coping with stress. Therefore, we found partial support for our hypothesis. Overall, our study is consistent with the wider body of literature that links CSA to dissociation through disorganized (fearful) attachment (Byun et al., 2016; Hébert et al., 2020; Paetzold & Rholes, 2021). Our results in the extrafamilial group showed that the existence of

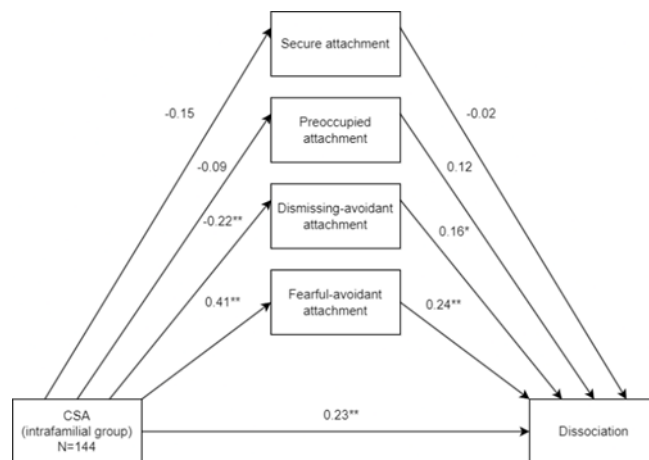
a CSA experience alone isn't sufficient for forming attachment disorganization or dissociation. But our results in the intrafamilial group imply that when perpetrated within the family system, CSA can increase the possibility of attachment disorganization and, consequently, dissociation. Different explanations can account for why relationship to perpetrator might play a role in the consequences of CSA. According to betrayal trauma theory, when abuse is perpetrated by someone close to the victim, it results in overwhelming affect and distress, compared to when the abuser doesn't have a close relationship with the victim (Gewirtz-Meydan & Lahav, 2021). This closeness of the abuser threatens the attachment bonds of the victim; therefore, the isolation of the knowledge of the abuse becomes necessary for survival (Freyd et al., 2001). This necessity might render individuals more susceptible to the development of segregated working models of attachment, which lack mental and behavioral integration, as is present in disorganized attachment (Liotti, 2004). As a consequence of this inability to consolidate one's experiences into a coherent and integrated self, dissociative tendencies may develop, making it easier for victims to block memories of abuse from entering their awareness (Macfie et al., 2001). Other studies highlight the effect of attachment disorganization on emotion regulation strategies (Hébert et al., 2020). Difficulties in adaptively regulating emotions can be a consequence of having early unintegrated working models of self and others. In the case of disorganized attachment, these disruptions of working models can happen as a result of frightened behavior from a parent or frightening parent-child interactions, neglect, or a lack of protection from a parent (or parents) (Fresno et al., 2014). Having such representations of self and others can impede a child from viewing others as reliable and trustworthy in times of stress, thus impairing their capacity to adaptively regulate their emotions, which can render them susceptible to using dissociation as a way of dealing with negative emotions (Calkins & Leerkes, 2004). Moreover, our finding that, even when controlling for age at onset and abuse frequency, fearful avoidant attachment significantly mediated the relation between intrafamilial CSA and dissociation contributes to the previous literature by indicating that despite the intercorrelation that exists between abuse characteristics (e.g., relationship to perpetrator, age at onset, and abuse frequency), the victim-perpetrator relationship can independently play an important role in determining the effects of childhood sexual abuse. To our knowledge, this is the first Persian study that examines the effect of attachment styles in linking CSA to dissociation. Our partial replication of some findings from international studies adds to the wider literature by showing that, even in the presence of major demographic differences, the role of attachment style in linking intrafamilial CSA to dissociation spans cultures and could be considered a universal phenomenon. However, it should be noted that our findings should be considered within the following limitations. First, our sample size was moderate, which can affect the statistical significance and results. It is possible that some differences and effects would have been significant if the sample size had been larger. Second, our study was cross-sectional, and we gathered data for CSA and all the other variables in a self-reported manner. So the possibility of reporting bias was present in our data. Future studies can benefit from using other styles of gathering data, such as interviews. Although using self-report cross-sectional data does not preclude using mediational models, as stated by Hayes (2017), caution should be exercised when concluding about causality. Because, although the assumption of causation is inherent in mediation models, it is eventually subject to human interpretation. For instance, even though it's theoretically assumed that experience of CSA is antecedent to attachment style, there is also a possibility that one's attachment style can affect how a person recalls and interprets their past traumatic experiences retrospectively. Future studies should opt for a longitudinal approach as a means of solving such issue. Also, since levels of dissociation can be different based on their impact (Karpel & Jerram, 2015) and across different groups (Douglass, 2009), future research should investigate the indirect effect

of fearful avoidant attachment on the relationship between intra-familial child sexual abuse and dissociation in functionally diverse populations and across ethnic groups. Our study has several implications for intervention strategies and clinical practice. Firstly, when it comes to conducting therapy with adult survivors of childhood sexual abuse, it's important for mental health specialists to do a thorough assessment of the characteristics of CSA, especially the relationship to the perpetrator, as it can have important implications for the therapy course and outcomes. Also, in working with CSA survivors who struggle with dissociative tendencies, clinicians should focus on the role of one's attachment style on current dissociation, and in the case of a disorganized attachment being present, they should consider whether it can be changed or not.

Table 1. Comparison of Study Variables

	Intrafamilial group (N = 144)		Extrafamilial group (N = 114)		t (df)	p
CSA	13.02	(3.46)	10.61	(3.01)	5.89 (256)	0.00
Secure attachment	2.78	(0.70)	3.04	(0.58)	-3.12 (256)	0.02
Preoccupied attachment	3.24	(0.95)	3.54	(0.76)	-2.76 (256)	0.006
Dismissing-avoidant attachment	3.52	(0.42)	3.60	(0.46)	-1.44 (256)	0.15
Fearful avoidant attachment	3.63	(0.97)	3.05	(0.85)	5.13 (256)	0.00
Depersonalization	10.73	(11.77)	9.24	(11.60)		
Absorption/Imaginative Involvement	25.83	(15.03)	26.67	(16.02)		
Amnesia	10.93	(10.57)	9.84	(10.76)		
Total Dissociation	16.21	(9.92)	16.32	(9.66)	-0.09 (256)	0.92

Values are means (SD), CSA = Childhood Sexual Abuse



*Fig. 1 Path diagram of parallel mediation model indicating the simultaneous effects of attachment styles on the relationship between childhood sexual abuse and dissociation in the intrafamilial group. * $p < .05$, ** $p < .01$*

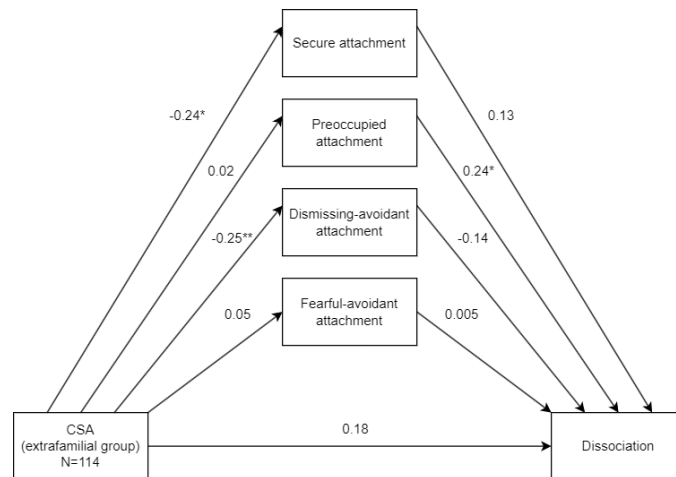


Fig. 2 Path diagram of parallel mediation model indicating the simultaneous effects of attachment styles on the relationship between childhood sexual abuse and dissociation in the extrafamilial group. * $p < .05$, ** $p < .01$

References

- Amini, K., Neshatdoost, H. K., Mazaheri, M. A., & Nadi, M.A. (2016). "Effectiveness of Group play therapy on depression and loneliness feeling in children aged 7-11 years old children with post-traumatic stress disorder PTSD caused by sexual abuse in Tehran." *Journal of Hygiene Education and Health Promotion*, vol. 4(2), pp.131-138. (Persian)
- Bartholomew, K., & Shaver, P. R. (1998). "Methods of assessing adult attachment." *Attachment theory and close relationships*, pp. 25-45.
- Bernstein, D. P., Fink, L., Handelsman, L., & Foote, J. (1998). Childhood trauma questionnaire. *Assessment of family violence: A handbook for researchers and practitioners*.
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., ... & Zule, W. (2003). "Development and validation of a brief screening version of the Childhood Trauma Questionnaire." *Child abuse & neglect*, vol. 27(2), pp. 169-190.
- Bowlby, J. (1969). *Attachment and loss* (No. 79). Random House.
- Bowlby, J. (1973). *Attachment and loss, vol. II: Separation*. Basic Books.
- Bowlby, J. (1980). *Attachment and loss. Vol. III. Loss: Sadness and depression*. Hogarth.
- Bowlby, J. (2008). *A secure base: Parent-child attachment and healthy human development*. Basic books.
- Brenner, I., Bachner-Melman, R., Lev-Ari, L., Levi-Ogolic, M., Tolmacz, R., & Ben-Amitay, G. (2021). "Attachment, sense of entitlement in romantic relationships, and sexual revictimization among adult CSA survivors." *Journal of interpersonal violence*, vol. 36(19-20).
- Byun, S., Brumariu, L. E., & Lyons-Ruth, K. (2016). "Disorganized attachment in young adulthood as a partial mediator of relations between severity of childhood abuse and dissociation." *Journal of Trauma & Dissociation*, vol. 17(4), pp. 460-479.
- Calkins, S. D., & Leerkes, E. M. (2004). "Early attachment processes and the development of emotional self-regulation." *Handbook of self-regulation: Research, theory, and applications*, pp. 324-339.

- Cardena, E., & Carlson, E. (2011). Acute stress disorder revisited. *Annual Review of Clinical Psychology*, 17(1), 245–267. pp.251-252
- Coe, M. T., Dalenberg, C. J., Aransky, K. M., & Reto, C. S. (1995). “Adult attachment style, reported childhood violence history and types of dissociative experiences.” *Dissociation: Progress in the dissociative disorders*.
- Dorahy, M. J., Gold, S. N., & O’Neil, J. A. (Eds.). (2022). *Dissociation and the dissociative disorders: past, present, future*. Taylor & Francis.
- Douglas, A. N. (2009). “Racial and ethnic differences in dissociation: An examination of the dissociative experiences scale in a nonclinical population.” *Journal of Trauma & Dissociation*, vol. 10(1), pp. 24–37
- Edwards, V. J., Freyd, J. J., Dube, S. R., Anda, R. F., & Felitti, V. J. (2012). “Health outcomes by closeness of sexual abuse perpetrator: A test of betrayal trauma theory.” *Journal of Aggression, Maltreatment & Trauma*, vol. 21(2), pp. 133-148.
- Ebrahimi, H., Dejkam, M., & Seghatoleslam, T. (2014). “Childhood traumas and suicide attempt in adulthood.” *Iranian Journal of Psychiatry and Clinical Psychology*, vol. 19(4), pp. 275- 282 (persian)
- Fraley, R. C., & Roisman, G. I. (2019). “The development of adult attachment styles: Four lessons.” *Current opinion in psychology*, vol. 25, pp. 26-30.
- Freyd, J. J. (1996). *Betrayal trauma: The logic of forgetting childhood abuse*. Harvard University Press.
- Freyd, J. J., DePrince, A. P., & Zurbriggen, E. L. (2001). “Self-reported memory for abuse depends upon victim-perpetrator relationship.” *Journal of Trauma & Dissociation*, vol. 2(3), pp. 5-15.
- 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*, 23(2), 128-145.
- Fuller-Thomson, E., Lacombe-Duncan, A., Goodman, D., Fallon, B., & Brennenstuhl, S. (2020). “From surviving to thriving: Factors associated with complete mental health among childhood sexual abuse survivors.” *Social psychiatry and psychiatric epidemiology*, vol. 55, pp. 735-744.
- Gewirtz-Meydan, A., & Lahav, Y. (2021). “Childhood sexual abuse and sexual motivations—the role of dissociation.” *The Journal of Sex Research*, vol. 58(9), pp. 1151-1160.
- Gobin, R. L., & Freyd, J. (2017). “Do participants detect sexual abuse depicted in a drawing? Investigating the impact of betrayal trauma exposure on state dissociation and betrayal awareness.” *Journal of child sexual abuse*, vol. 26(3), pp. 233-245.
- Gobin, R. L., & Freyd, J. J. (2009). “Betrayal and revictimization: Preliminary findings.” *Psychological Trauma: Theory, Research, Practice, and Policy*, vol. 1(3), pp. 242.
- Goodyear-Brown, P. (Ed.). (2011). *Handbook of child sexual abuse: Identification, assessment, and treatment*. John Wiley & Sons.
- Gray, S., & Rarick, S. (2018). “Exploring gender and racial/ethnic differences in the effects of child sexual abuse.” *Journal of child sexual abuse*, vol. 27(5), pp. 570-587.

- Griffin, D. W., & Bartholomew, K. (1994). "The metaphysics of measurement: The case of adult attachment." In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood*, pp. 17–52.
- Hakak, M., Kazemi, & Sh., Kakavand, A. (2019). "The association between childhood traumas and dissociative experiences with internet addiction in university students." *Journal of psychological studies*, vol. 15(1), pp. 23-39 (persian)
- Harryman, A. (2023). *The Effects of Childhood Sexual Abuse Disclosure on Mental Health, Attachment, and Help-Seeking Behavior* (Doctoral dissertation, Alliant International University).
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. 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*, vol. 267, pp. 220-228.
- Hocking, E. C., Simons, R. M., & Surette, R. J. (2016). "Attachment style as a mediator between childhood maltreatment and the experience of betrayal trauma as an adult." *Child abuse & neglect*, vol. 52, pp. 94-101.
- Karpel, M. G., & Jerram, M. W. (2015). "Levels of dissociation and nonsuicidal self-injury: A quartile risk model." *Journal of Trauma & Dissociation*, vol. 16, pp. 303–321.
- Kate, M. A., Jamieson, G., & Middleton, W. (2021). "Childhood sexual, emotional, and physical abuse as predictors of dissociation in adulthood." *Journal of child sexual abuse*, vol. 30(8), pp. 953-976.
- Kong, S. S., Kang, D. R., Oh, M. J., & Kim, N. H. (2018). "Attachment insecurity as a mediator of the relationship between childhood trauma and adult dissociation." *Journal of Trauma & Dissociation*, vol. 19(2), pp. 214-231.
- Lange, B. C., Condon, E. M., & Gardner, F. (2020). Defining Child Sexual Abuse: Perspectives from Mothers Who Experienced this Abuse. *Child Abuse Review*, 29(6).
- Lawson, D. M., & Akay-Sullivan, S. (2020). "Considerations of dissociation, betrayal trauma, and complex trauma in the treatment of incest." *Journal of child sexual abuse*, vol. 29(6), pp. 677-696.
- Liotti, G. (2004). "Trauma, dissociation, and disorganized attachment: three strands of a single braid." *Psychotherapy: Theory, research, practice, training*, vol. 41(4), pp. 472.
- Main, M. (2006). "Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) model of attachment: Findings and directions for future research." *Attachment across the life cycle*, pp. 135-167.
- Mathews, B., & Collin-Vézina, D. (2019). "Child sexual abuse: Toward a conceptual model and definition." *Trauma, Violence, & Abuse*, vol. 20(2), pp. 131-148.
- Mikulincer, M., & Shaver, P. R. (2016). *Attachment in adulthood: Structure, dynamics, and change* (2nd ed.). Guilford Press.
- Mosley, T. L. (2022). *Forever Imprinted: Understanding the Relationship between Betrayal Trauma within Intimate Relationships and Attachment* (Doctoral dissertation, Mercer University).

- Nabizadeh Asl D, ahi Q, Shahabizadeh F, Ahmad M. (2021) "Relationship between Traumatic Childhood Experiences and Schizotypal Personality Traits: The Mediating Role of Dissociative Experiences and Intolerance of Uncertainty." *Iranian Journal of Psychiatric Nursing*, vol. 9 (4), pp. 24-36 (persian)
- Palo, A. D., & Gilbert, B. O. (2015). "The relationship between perceptions of response to disclosure of childhood sexual abuse and later outcomes." *Journal of child sexual abuse*, vol. 24(5), pp. 445-463.
- Paetzold, R. L., & Rholes, W. S. (2021). "The link from child abuse to dissociation: The roles of adult disorganized attachment, self-concept clarity, and reflective functioning." *Journal of Trauma & Dissociation*, vol. 22(5), pp. 615-635.
- Salavati, S., Mootabi, F., Sadeghi, M. (2015). "Validity and reliability of relationship scales questionnaire for the Iranian culture." In the first International Conference on Culture, psychopathology and Education papers
- Tomas-Tolentino, G. H. (2010). The relationship among adult attachment styles, shame, dissociation, and abuse characteristics in women survivors of intrafamilial child sexual abuse perpetrated by a parental-figure.
- Ventus, D., Antfolk, J., & Salo, B. (2017). "The associations between abuse characteristics in child sexual abuse: A meta-analysis." *Journal of sexual aggression*, vol. 23(2), pp. 167-180.
- Wallis, C. R., & Woodworth, M. D. (2020). "Child sexual abuse: An examination of individual and abuse characteristics that may impact delays of disclosure." *Child abuse & neglect*, vol. 107.
- World Health Organization. (2017). Responding to children and adolescents who have been sexually abused: WHO clinical guidelines.
- Zamir, O., Szepeswol, O., Englund, M. M., & Simpson, J. A. (2018). "The role of dissociation in revictimization across the lifespan: A 32-year prospective study." *Child Abuse & Neglect*, vol. 79, pp. 144-153.