

## Pathways from Childhood Sexual Abuse to Trait Anxiety

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## **Pathways from Childhood Sexual Abuse to Trait Anxiety**

### **Abstract**

#### *Background*

Children exposed to sexual abuse are at risk for developing several psychological and behavioral difficulties during adulthood. Here, direct and indirect effects of family conflict, insecurity within the family system (manifested as disengagement and/or preoccupation), and negative feelings provoked by childhood sexual abuse (CSA) on trait anxiety scores were analyzed with structural equation modeling. Both Finkelhor and Browne's traumagenic dynamics model and Davies and Cummings Emotional Security Theory were applied.

#### *Methods*

A total of 168 female college student survivors of CSA participated in this study. Information regarding each participant's abuse was obtained from a self-reported questionnaire. Emotional security was assessed with the Security in the Family System scale. To assess negative feelings regarding abuse and trait anxiety, Children's Impact of Traumatic Events Scale-Revised and State-Trait Anxiety Inventory were applied, respectively.

#### *Results*

Level of family conflict was found to directly relate to emotional insecurity and trait anxiety. In addition, preoccupation strategies were found to be directly related to trait anxiety. Conversely, disengagement strategies were indirectly related to anxiety through the negative feelings provoked by abuse. Experience with other types of abuse and/or neglect was also related to emotional insecurity and feelings provoked by CSA. Meanwhile, continuity of abuse only correlated with feelings provoked by abuse.

### *Conclusions*

Strong relationships between family conflict, emotional insecurity, negative feelings provoked by CSA and trait anxiety were observed. These results suggest that treatment of CSA survivors should focus on improving security within the survivors' family system and reducing negative feelings provoked by abuse.

*Keywords:* Child sexual abuse; family; emotional security; traumagenic dynamics; trait anxiety.

## **Pathways from Childhood Sexual Abuse to Trait Anxiety**

### **Introduction**

Child sexual abuse (CSA) is a significant social problem which has been defined as: “contacts and sexual interactions between a minor and an adult, or between minors if there is a 5-year age difference between them, or if the child/adolescent perpetrator is in a situation of power or control over the victim, even if there is no age difference” (Hartman & Burgess, 1989). Prior research has shown that CSA is a risk factor for several psychological and behavioral difficulties during adulthood. These can include symptoms of depression (Easton, Kong, Gregas, Shen, & Shafer, 2017), post-traumatic stress disorder (Adams, Mrug, & Knight, 2018), sexual difficulties (Tang, Qu, Li, & Tan, 2018), and substance abuse (Almuneef, 2019). One of the most prevalent consequences of CSA in adulthood is anxiety. Many studies have reported that CSA survivors have an increased risk of developing anxious symptomatology during adulthood (e.g., Hu et al., 2018). However, variability in the level of psychosocial adjustment exhibited by CSA survivors has been observed, with some survivors escaping with few, if any, long-term difficulties (Cantón-Cortés & Cortés, 2015). Variables responsible for these differences in adjustment remain elusive. While many studies have focused on abuse-related variables, such as continuity or the type of abuse (Tyler, 2002), more recent studies have investigated flexible and alterable variables (e.g., social and cognitive factors) to better understand the psychological functions of adult survivors of CSA (Santerre-Baillargeon, Vézina-Gagnon, Daigneault, Landry, & Bergeron, 2017). The present study focuses on the effects of family conflict, insecurity within the family system, and negative feelings provoked by childhood sexual abuse on the psychological adjustments exhibited by survivors of CSA, while also controlling for the existence of other types of maltreatment and continuity of abuse.

### **CSA characteristics**

The impact of sexual abuse can be explained, at least in part, by its own characteristics. For example, more severe consequences have been observed when the perpetrator carried out more serious acts, including penetration (Lemieux and Byers, 2008). Although some researches have not identified a relationship between the characteristics of abuse and the psychological adjustments of victims (Quas, Goodman, & Jones, 2003), one of the most consistent variables in predicting CSA symptomatology has been continuity of abuse. For example, the consequences of CSA are more serious when the abuse has occurred more frequently and has extended over a longer period of time (Chromy, 2006).

It has also been observed that many children experience more than one type of abuse. Victims of sexual abuse who have also been subjected to physical, emotional abuse or neglect develop more severe problems (Sala, Goldsteinc, Wanga, & Blanco, 2014). For example, among a sample of psychotic patients, those who had suffered physical or psychological abuse in addition to sexual abuse during their childhood, exhibited more severe symptoms related to auditory hallucinations (Sheffield, Williams, Blackford, & Heckers, 2013). Most of the studies of sexual abuse during childhood which have controlled for these variables have found they induce a significant effect (Hébert, Tremblay, Parent, Daignault, & Piché, 2006). However, a large body of research on mediational factors of CSA have not controlled for these confounding factors.

### **Emotional Insecurity in the Family System**

Emotional Security Theory (EST) was developed by Davies and Cummings (1994) to explain the influence of interparental conflict on child development.

Interparental conflict has been defined as: any major or minor difference of opinion

between parents, regardless of whether the difference was primarily negative or positive, and/or any interaction in which one or both partners felt emotional tension, frustration, or anger (Schermerhorn, Chow, & Cummings, 2010). To date, EST has received much empirical support (Coe, Davies, & Sturge-Apple, 2017; Zhou et al., 2017).

Maintenance of a sense of security within a family is vital for child development, including cases of interparental conflict. When conflicts arise between parents, these can provoke emotional insecurity among their children, especially if children witness destructive conflicts. In the latter cases, the children have an elevated risk of developing high emotional reactivity, maladjusted regulation in response to interparental conflict, and insecure representations of the parental relationship. EST identifies three patterns of child security (Forman & Davies, 2005): secure, disengagement, and preoccupation. Emotional security refers to a child's sense of safety, stability, and well-being within their family. This security manifests itself through children's ability to trust members of their family as sources of predictability and safety. Emotional security develops when family relationships are cohesive, warm, and stable, even in the face of common stressors such as conflicts between parents. This security is related to reduced psychological difficulties in the children (Zhou et al., 2017).

In contrast, when children are exposed to inaccessible or frightening members of their family, or family members whose responses to their distress are not consistent, suffer a diminution in their trust of the family system to provide security. In these cases, children modify reality through disengagement or preoccupation strategies in order to preserve their emotional security (Davies & Cummings, 1994). Disengagement strategies are based on a tendency to emotionally disengage from the family system and downplay the family's significance. Meanwhile, preoccupation strategies involve an

emphasis on the importance of stressful events within a family to preserve a sense of emotional security. EST proposes that the child's psychological and physical resources which are employed to maintain emotional security consumes resources which are necessary for other developmental processes. Thus, children who employ these types of strategies to address their insecurities are at a higher risk of developing psychosocial difficulties (Bi, Haak, Gilbert, & Keller, 2017).

While EST includes some of the same postulates as Bowlby's attachment theory (e.g., secure-based system; Bowlby, 1969), it also has distinct characteristics.

Attachment theory primarily focuses on the dyadic relationships of children with an attachment figure which allow them to preserve their sense of security. On the other hand, a child's emotional security derives from multiple relationships and the family system as a whole (including sibling relationships). Therefore, in contrast to Bowlby's attachment theory, EST highlights that, in addition to child-parent attachment, several characteristics of a family, such as interparental conflicts and intrafamilial violence, can directly compromise a child's ability to preserve their sense of security (Forman & Davies, 2005). Empirical studies have also shown that the sense of security developed in a child-parent attachment relationship is different from the sense of security within a family system in the context of conflict between parents (Cummings & Davies, 2010).

Numerous studies have analyzed the impact of the family environment on the psychological adjustment of CSA survivors (McClure, Chavez, & Agars, 2008). However, to date, only Cantón-Cortés, Cantón, and Cortés (2016) have analyzed the role of emotional security among this population. Furthermore, research on emotional security in the family system has primarily focused on analyzing insecurity in relation to specific family relationships in the context of interparental conflict. However, family process models propose that the relationship between family-level security and

adjustment difficulties derive from more experiences within a family than exposure to conflict between parents (Demby, Riggs, & Kaminski, 2017). Consequently, studies which focus on factors that pertain to the broader family environment in order to identify the relationship between insecurity in the family system and psychosocial difficulties (e.g., general family conflict levels) are lacking (Coe et al., 2017).

### **Feelings Provoked by Abuse**

According to the traumagenic dynamics model (Finkelhor & Browne, 1985), four negative feelings are a consequence of abuse: stigmatization, powerlessness, betrayal, and traumatic sexualization. Stigmatization is a process by which negative connotations concerning abuse (e.g., shame and guilt) are communicated to the child. These negative connotations are subsequently incorporated into the child's self-image. Powerlessness involves the process by which the child's wishes, desires, and sense of efficacy are countered by repeated invasion of the child's body against his or her will. Betrayal involves a child's discovery that someone who is vitally important to their survival has caused them harm. Finally, traumatic sexualization refers to the process by which a child's sexuality is shaped in a dysfunctional and developmentally inappropriate manner as a result of abuse. It is proposed that these four feelings can be used to analyze sexual abuse. In addition, they can mediate the psychological consequences of CSA which include distortion of an individual's worldview, self-concept, and affective state.

The Finkelhor and Browne (1985) model has had a marked impact on the field of CSA research. However, most of the studies which have empirically analyzed this model have solely focused on an isolated traumagenic dynamic (Feiring, Simons, & Cleland, 2009; Kim, Talbot, & Cicchetti, 2009). For example, Kim et al. (2009) observed that feelings of shame in adult CSA survivors could predict family and couple

conflict. Moreover, the few studies which have simultaneously analyzed the effects of several traumagenic dynamics have yielded contradictory results. For example, Coffey, Leitenberg, Henning, Turner, and Bennet (1996) observed that stigmatization was the sole predictor of psychological distress, whereas Hazzard, Celano, Gould, Lawry, and Webb (1995) found that only powerlessness predicted distress.

### **Objectives**

Several studies have examined individual relationships between family conflict, emotional insecurity in the family system, feelings provoked by abuse, and survivor symptomatology (Cantón-Cortés et al., 2016; McClure et al., 2008). However, none of these studies attempted to empirically explain interrelationships among these variables in adults with a history of CSA. Apart from survivor symptomatology, emotional insecurity may be associated with the development of negative feelings after CSA as well. Considering that preoccupation and disengagement strategies have been shown to deplete developmental resources (Forman & Davies, 2005), it is possible that these strategies also impair a child's capacity to interpret trauma in an adaptative manner. As a result, the child may develop the negative feelings inherent to traumagenic dynamics.

The purpose of this study was, using structural equations modelling, to analyze the direct and indirect effects of general family conflict levels, insecurity in the family system, and feelings provoked by abuse on trait anxiety scores for a cohort of female CSA survivors, while also controlling for the effects of other types of maltreatment and continuity of abuse. Family conflict was studied instead of interparental conflict because, to date, most research on emotional security has focused on the effects of the latter. Meanwhile, characteristics of abuse were studied because, as previous research has shown, survivors of CSA who suffer other types of child abuse or neglect are at a higher risk of developing psychological difficulties (Sala et al., 2014). In addition,

continuity of abuse was studied because it has frequently been related to survivor's psychological adjustment (Cantón-Cortés & Cortés, 2015).

This study focused on female CSA survivors because, as previous research has consistently shown (Stoltenborgh, Bakermans-Kranenburg, Alink, & van IJzendoorn, 2015), this population is at significantly higher risk for CSA than males. Li, D'Arcy, and Meng (2016) have also found that self-reported, retrospective research may represent a more reliable method of data collection from survivors of CSA since many survivors do not disclose information about their abuse to others. Moreover, it has been argued that retrospective studies with young adults may avoid distortions and memory problems which can affect older adults (Arata, Langhinrichsen-Rohling, Bowers, & O'Farrill-Swails, 2005).

The specific aims of the present study were to: 1) analyze the relationship of family conflict with emotional insecurity and trait anxiety; 2) analyze the relationship between emotional insecurity and both trait anxiety and negative feelings due to abuse; 3) analyze the relationship between negative feelings provoked by abuse and trait anxiety; and 4) analyze the relationship between other maltreatments and continuity of abuse with emotional insecurity, feelings provoked by abuse, and trait anxiety.

We hypothesized that family conflict would be associated with higher levels of preoccupation and disengagement, as well as greater trait anxiety scores.

Correspondingly, preoccupation and disengagement would be associated with higher trait anxiety scores, both directly and indirectly through negative feelings provoked by abuse. The existence of other maltreatments and continuity of abuse were also predicted to be related to higher levels of emotional insecurity, feelings provoked by abuse, and trait anxiety.

## Methods

### Participants

A total of 2,424 first-year female students attending a university in Spain were invited to participate in this study. Of these students, 344 (14.2%) declined to participate. Thus, 2,080 students aged between 18 and 24 years ( $M = 19.42$ ;  $SD = 1.69$ ) received a survey. Among these participants, 179 (8.6%) reported experiencing some type of sexual abuse prior to age 18 which was defined as “contacts and sexual interactions between a minor and an adult, between minors if there is a 5-year age difference between them, or if the child/adolescent perpetrator is in a situation of power or control over the victim, even if there is no age difference” (Hartman & Burgess, 1989). Eleven of these participants failed to complete all of the questionnaires they received and were removed from the study. Therefore, the final study sample included 168 survivors of CSA (current average age, 19.57;  $SD = 1.69$ ) (Figure 1). This sample size was considered appropriate for the intended analyses according to the observed variables included in the model to be used (Wolf, Harrington, Clark, & Miller, 2013).

Among the CSA survivors ( $n = 168$ ), the mean age of onset of sexual abuse was 9.08 years ( $SD = 3.43$ ). Descriptive data regarding the characteristics of the abuse and the existence of other maltreatments are presented in Table 1. A total of 84.4% of the CSA survivors were from intact families, 8.4% were from families with divorced parents, 2.4% had experienced the death of one or both parents, and 4.8% were from a stepfamily. In addition, 7.7% were an only child; 53% had one sibling; 22% had two siblings; 11.9% had three siblings; 3% had four siblings; 1.2% had five siblings; and 1.2% had six siblings.

### Instruments

CSA and socio-demographic information were anonymously collected from a Childhood Sexual Abuse Questionnaire which was provided to each participant. In addition to assessing age, gender, socioeconomic status, family structure, and number of siblings, the questionnaire provided participants a quoted definition of CSA to identify whether they represent victims. Subsequently, participants were asked to indicate which types of sexual activity they experienced (e.g., no physical contact, touching in erogenous zones, penetration, and/or oral sex); the age at which the abuse occurred, or started (for cases of continued CSA); their relationship with the perpetrator (e.g., non-family member *vs.* family member); and the continuity of abuse (e.g., an isolated incident, several incidents, or continued abuse). The above information was used to evaluate the inclusion/exclusion status of each participant.

The questionnaire also measures other types of abuse and neglect during childhood. There are five questions regarding emotional abuse (e.g., “How often did a parent or caregiver act in a way that made you afraid of being physically hurt?”), physical abuse (e.g., “How often did a parent or caregiver slap or hit you?”), and neglect (e.g., “How often did a parent or caregiver ignore your need for affection?”). These questions were answered with a Likert scale from 1 to 5 which corresponded to “never”, “once or twice”, “sometimes”, “often”, or “very often”, respectively. Participants were identified as being emotionally or physically abused or neglected during childhood if they responded “often” or “very often” to at least one question.

Quality of family relationship functioning was measured by using the Family Environment Scale (FES; Moos, Moos, & Trickett, 1989). This scale is composed of ten subscales, each consisting of nine items presented in a true-false format. Scoring for the scale ranges from 0–9. Only the conflict subscale, where higher scores reflect a greater

amount of openly expressed anger, aggression, and conflict among family members, was used in the current study.

Sanford, Bingham, & Zucker (1999) previously reported that the Conflict Tactics Scale (CTS), which is a self-report instrument frequently used in epidemiological research, produced substantial validity loading in the conflict dimension. In addition, Sanford et al. (1999) reported that the internal consistency of the conflict subscale was  $\alpha = .75$ . In the present study, Cronbach's alpha coefficient for the CTS was .75 as well.

Security in the family system was assessed by using the Security in the Family System (SIFS) scale (Forman & Davies, 2005) with Likert scoring ranging from "strongly disagree" (1) to "strongly agree" (4). For the purpose of the current study, two scales measuring emotional insecurity were used. Briefly, the Disengagement Scale assesses a victim's efforts to disengage from and minimize the importance of family (7 items; e.g., "When I'm upset, there's no one in my family who can make me feel better"). The preoccupation scale addresses the survivor's worries about the future well-being of their family and themselves (8 items; e.g., "I feel like something could go very wrong in my family at any time"). Higher scores reflect a higher preoccupation and disengagement from the family system. Forman and Davies (2005) reported a test-retest reliability of  $r = .75$  for preoccupation and  $r = .80$  for disengagement. Regarding internal consistency, a Cronbach's alpha coefficient of .85 was reported for both preoccupation and disengagement. In the present study, these values were .85 and .83, respectively.

To assess the feelings experienced by survivors in response to CSA, the Children's Impact of Traumatic Events Scale-Revised (CITES-R; modified version of Hazzard et al., 1995) was used. This questionnaire is structured based on the

traumagenic dynamics model of Finkelhor and Browne (1985). CITES-R includes 56 items which are divided into four subscales: powerlessness (e.g., “I do not have much influence on the way things work out”), betrayal (e.g., “If you love someone, sooner or later that person will leave you”), stigma (e.g., “I feel shame when I meet people who know what happened”), and traumatic sexualization (e.g., “It is difficult to distinguish between affection and sexual contact”). Responses range from 0 (“Totally false”) to 4 (“Totally true”), and higher scores reflect more intense feelings. Hazzard et al. (1995) previously reported the following internal consistencies values: stigma, .70; betrayal, .60; traumatic sexualization, .78; and powerlessness, .65. In the present study, Cronbach’s alpha coefficients for these subscales were: .84, .77, .87, and .76, respectively.

Trait anxiety was measured by using the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). This inventory consists of two 20-item scales, one measures state anxiety and the other measures trait anxiety. In the current study, the response options ranged from 1 (“Not at all/almost never”) to 4 (“Very much so/almost always”) and higher scores reflect a predisposition to anxiety in stressful situations.

Vázquez, Vázquez-Morejón, and Bellindo (2013) previously reported a test-retest reliability of  $r = .88$ . Among several populations, internal consistencies have been reported to range from .72 to .88 (Vázquez et al., 2013). In the present study, Cronbach’s alpha value for the STAI was .84.

## **Procedure**

Ethical approval for all of the materials used in this study was obtained from the ethics committee of the participating university. Both male and female students were approached regarding participation in this study as part of their enrollment in a university course. The students were informed that the study was voluntary and

anonymous, and informed consent was obtained. Participants completed provided protocols in a classroom setting with pen and paper and received credit toward fulfilling their course requirements. As in this course were enrolled both female and male students, men were offered an alternative option (to prepare a short dissertation related to any course topic) for earning the extra credit. This alternative was also offered to women who didn't want to participate in the research. Consequently, the voluntary nature of the study was preserved.

Participants who were abused by different perpetrators at different times during their childhood were asked to provide answers regarding their most traumatic experience. Participants were also informed that they could stop answering the questionnaires at any time if they felt uncomfortable. To maintain anonymity of the CSA survivors, non-CSA students completed questionnaires relating to a different negative experience. Counseling was offered to all participants at the end of the study. A Chi-square analysis was performed to compare whether the CSA survivors who failed to complete all of the measures differed in regard to any demographics or abuse characteristics compared with those who did complete all of the questionnaires. No differences were found between these two groups for any of the variables examined.

Statistical analyses were performed based on structural equation modeling (SEM) with IBM AMOS version 23 software. SEM makes it possible to test complex models which are comprised of a substantial number of linear equations. A global fit index is generated which provides a summary assessment of the model. Alternative analyses that might be employed instead of structural equation modelling to test those models would consist on separate tests of the components of the model, carried out equation by equation (e.g., multiple regression; Tomarken & Waller, 2005).

For the purpose of the current study, the four traumagenic dynamics (stigmatization, betrayal, powerlessness, and traumatic sexualization) were combined as latent variable negative feelings due to abuse. Residual Mean Squared Error Approximation (RMSEA) was used to examine model adjustment. An RMSEA value  $\leq$  .05 indicates adequate adjustment. The Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) were also applied. The minimum values of these indexes should be greater than .90, with values greater than .95 recommended for acceptance of the model (Kline, 2015).

## Results

Tables 1 and 2 present descriptive statistics for all of the variables examined in the study. Regarding CSA characteristics, 91 survivors (54.2%) had suffered abuse from a family member, while 34 (20.2%) had suffered continued abuse. Forty-six survivors (24.4%) suffered abuse consisting of oral sex/penetration and 31 survivors (18%) were victims of maltreatment other than CSA.

A correlation matrix was generated to examine the pattern of relationships and to identify excessively high correlations between variables ( $r > .90$ ; Kline, 2015) which indicate collinearity (Table 3). No collinearity was identified, but predicted global relationships between family conflict, existence of other maltreatments, continuity of abuse, emotional insecurity, feelings provoked by abuse, and trait anxiety were observed.

### **Model 1: Initial Model**

Initial analysis included a model of all direct and indirect relationships between family conflict and trait anxiety, through emotional insecurity variables and negative feelings from the abuse. The existence of other maltreatments and continuity of abuse were controlled, including in the model the relationships of these variables with each

mediator (preoccupation, disengagement, and negative feelings provoked by abuse) and trait anxiety. Covariance between other maltreatment and family conflict was also included.

A high level of family conflict was found to be related to high levels of preoccupation ( $\beta = .28; p < .001$ ) and disengagement ( $\beta = .41; p < .001$ ). Disengagement positively correlated with negative feelings provoked by abuse ( $\beta = .31; p < .001$ ), which in turn, positively correlated with trait anxiety scores ( $\beta = .65; p < .001$ ). Meanwhile, preoccupation was directly related to trait anxiety ( $\beta = .16; p < .05$ ). Continuity of abuse significantly correlated with the level of negative feelings provoked by abuse ( $\beta = .21; p < .01$ ), while the existence of other maltreatments was significantly related to preoccupation ( $\beta = .18; p < .05$ ), disengagement ( $\beta = .27; p < .001$ ), and negative feelings provoked by abuse ( $\beta = .20; p < .05$ ). In contrast, there were no significant relationships identified between family conflict, continuity, disengagement, and other maltreatments with anxiety, nor preoccupation with feelings provoked by abuse.

Model fit indices, with  $\chi^2 (df = 21) = 25.93$  and  $p < .209$ , were as follows: RMSEA = .037 (90% confidence interval (CI) from .000 to .079), CFI = .990, and TLI = .978. All values were within the recommended limits (Kline, 2015) and the obtained model predicted 57% of the variance in trait anxiety.

### **Model 2: Final Model**

Through an iterative process, AMOS established non-significant relationships at a value of 0. The consequences of this process on model adjustment was subsequently examined. According to the Browne-Cudeck Criterion (BCC), the best model (BCC0 = .000) should eliminate the relationship of continuity of abuse with emotional insecurity and anxiety, as well as other maltreatments and disengagement with anxiety.

Conversely, the relationship between family conflict and trait anxiety was the only non-significant relationship which should be maintained.

However, before eliminating the above relationships, theoretical implications were considered. Prior studies on CSA have suggested that continuity of abuse, emotional disengagement from family, and the existence of other maltreatment may have an influence on symptomatology since these relationships may be entirely mediated by feelings provoked by abuse. Therefore, the relationship between family conflict and trait anxiety was maintained, while all of the other non-significant relationships were removed from the model.

The final model is shown in Figure 2. In the final model fit index, with  $\chi^2 (df = 26) = 27.04$  and  $p < .407$ , RMSEA improved to .015 (90% CI from .000 to .064) and CFI and TLI were slightly improved to .998 and .996, respectively. Table 4 summarizes the effects of the predictive variables on anxiety in the final model. Eliminating the non-significant relationships did not reduce the strength of the remaining relationships of the model. The obtained model predicted 57% of the variance in trait anxiety.

## **Discussion**

In the present study, relationships between family conflict, insecurity in the family system, feelings provoked by abuse, and trait anxiety were analyzed among a cohort of female CSA survivors.

Regarding the first specific aim of this study which was to analyze the role of family conflict, it was observed that this variable increased preoccupation and, especially, disengagement from the family system. These results are consistent with those of a previous study on emotional security in the family system among survivors of

interpersonal violence (Jobe-Shields, Williams, & Hardt, 2017). However, it should be noted that the latter study analyzed interparental conflict, while the present study analyzed the role of total family conflict. In addition, while a direct relationship of family conflict on trait anxiety was included in the final model of the present study, it was found to be non-significant in the initial model. There are several studies which have demonstrated the importance of the relationship between family environment (including family violence) and psychological adjustment (Fassler et al., 2005; McClure et al., 2008).

With regard to the second specific aim of this study which was to analyze the role of emotional insecurity in the family system, use of preoccupation strategies was found to be directly related to higher trait anxiety scores. In several prior studies conducted among non-CSA survivors (Cummings, Koss, & Davies, 2015; Forman & Davies, 2005), as well as in a previous study of CSA survivors (Cantón-Cortés et al., 2016), a relationship between preoccupation and psychological adjustment was observed. In the present study, no direct relationship between disengagement and trait anxiety was identified. However, disengagement was found to be related to higher levels of negative feelings provoked by abuse, and this in turn predicted higher trait anxiety scores. It has been observed that disengagement strategies exhaust developmental processing resources (Forman & Davies, 2005). Therefore, use of disengagement strategies may impair the capacity of individuals to interpret trauma in an adaptive mode, thereby leading to negative feelings distinctive of traumagenic dynamics. Contrary to expectations, there was no significant effect of preoccupation strategies on negative feelings provoked by abuse. Whereas disengagement from the family system produces an impairment on the capacity to interpret trauma in an adaptive mode, the emphasis on the importance of stressful events within the family

typical of preoccupation strategies does not affect that ability. Therefore, it is possible that detachment from the family system which is characteristic of disengagement, and not of insecurity in the family system per se, is a factor which impairs an individual's capacity to interpret trauma leading to CSA traumagenic dynamics.

The third specific aim of this study addresses the role of negative feelings provoked by abuse. Several studies have examined the relationship between traumagenic dynamics and psychosocial adjustment of CSA survivors, although most of these studies focused on an isolated dynamic (Gómez & Freyd, 2017). There are a few studies which analyzed several traumagenic dynamics simultaneously. However, the latter only explored variables such as psychological distress and social relationships (Kallstrom-Fuqua et al., 2004) or substance addiction (Dufour & Nadeau, 2001). To date, the consequences of traumagenic dynamic variables on trait anxiety have not been investigated. Therefore, the results of the current study are important, and are also in agreement with previous research which identified a relationship between feelings provoked by abuse and survivors' psychosocial adjustment (Kallstrom-Fuqua et al., 2004).

Finally, the existence of other types of maltreatment was found to be directly related to disengagement, preoccupation, and feelings provoked by abuse. It is likely that experiencing other types of maltreatment further decreases a victim's trust in their family, thereby increasing their disengagement and preoccupation within their family system. Conversely, stigma, powerlessness, and betrayal are typical responses to other types of maltreatment (Sloman & Taylor, 2016). However, the direct relationship between other types of maltreatment and trait anxiety in the present study was not significant, and therefore, it was eliminated from the model. Specifically, the latter relationship was found to be completely mediated by emotional insecurity and feelings

provoked by abuse. As a result, the relationships between the existence of other types of maltreatment with these variables outweighed its relationship with trait anxiety. This finding highlights the importance of family and the psychological factors of a victim in understanding the effects of as well as child maltreatment.

We observed no direct relationship between continuity of abuse and emotional insecurity or trait anxiety in the present study. The lack of a relationship between continuity of abuse and emotional security probably reflects that just suffering a single incident of CSA can affect a victim's capacity to effectively cope with feelings of insecurity in the family system, and this effect is not increased by repeated experiences of abuse. However, continuity of abuse was found to be significantly and positively correlated with negative feelings provoked by abuse. This finding suggests that this relationship outweighs the direct relationship of continuity with trait anxiety. Although in the present study, the only CSA severity variable which was analyzed was continuity of abuse, it is likely that greater severity of abuse leads to more adverse psychological consequences, including higher levels of negative feelings, as indicated in previous research (Cantón-Cortés & Cortés, 2015).

Analyzing the role of emotional security in the family system and traumagenic dynamics this research adds important contributions to the current understanding of the psychological adjustments which adult survivors of CSA may undergo. However, there are limitations associated with the present study. First, a cross sectional approach was employed with emotional insecurity, feelings provoked by CSA, and anxiety examined concurrently. As a result, confounding mediators with consequences of abuse may have played a role. Second, while the specific findings of this study are important for better understanding the unique experiences of female college student survivors of CSA, they are not necessarily applicable to all sexual abuse victims. The participants in the current

study may represent a higher functioning sample compared with the general population of CSA survivors (e.g., based on cognitive abilities; Ritchie & Tucker-Drob, 2018). As such, the applicability of the current findings to the general population of CSA survivors is questionable. However, there remains a need for non-clinical sample studies of CSA survivors to be conducted, since only a small percentage of victims disclose their abuse (Cantón-Cortés & Cortés, 2015). Moreover, the number of men in our potential sample was not high enough to carry out necessary analyses. Therefore interrelationships between variables in the present study should also be tested among a cohort of male survivors of CSA to test if the results differ.

### **Clinical implications**

It is anticipated that the present findings will help psychotherapists better understand the pathways which relate family conflict to psychological distress among CSA survivors. Therapeutic approaches should focus on decreasing emotional insecurity. This may involve solving interparental disagreement in a positive way, or explaining the causes and implications of interparental discord to aid in decreasing emotional insecurity and relieving the concerns of survivors (Bi et al., 2017; Zhou et al., 2017).

Conversely, the present results suggest that interventions should be designed to reduce feelings of self-blame, powerlessness, betrayal, and traumatic sexualization. These interventions should progressively expose CSA survivors to negative feelings, help victims to develop their ability to express their emotional expression abilities, and create a secure therapeutic environment in which emotions related to abuse can be discussed (Cantón-Cortés, 2007). Kallstrom-Fuqua et al. (2004) proposed a therapeutic approach to address feelings of betrayal, stigma, and powerlessness. These authors advocated that clinical approaches should help survivors set reasonable goals, and that

successes should be identified to address perceived powerlessness. To address feelings of betrayal, therapy should help CSA survivors identify positive relationships in their life and understand their benefit. To reduce survivors' perceptions associated with stigmatization, it has been proposed that survivors should identify positive personal attributes and strengthen their belief that the CSA was not their fault. Finally, in order to fight the effects of traumatic sexualization, therapy should promote appropriate parent-child communication regarding the topic of sex, while also addressing inappropriate sexual behavior in a non-stigmatizing manner (Cantón-Cortés, 2007).

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Figure 1. Flow chart for recruitment of study participants

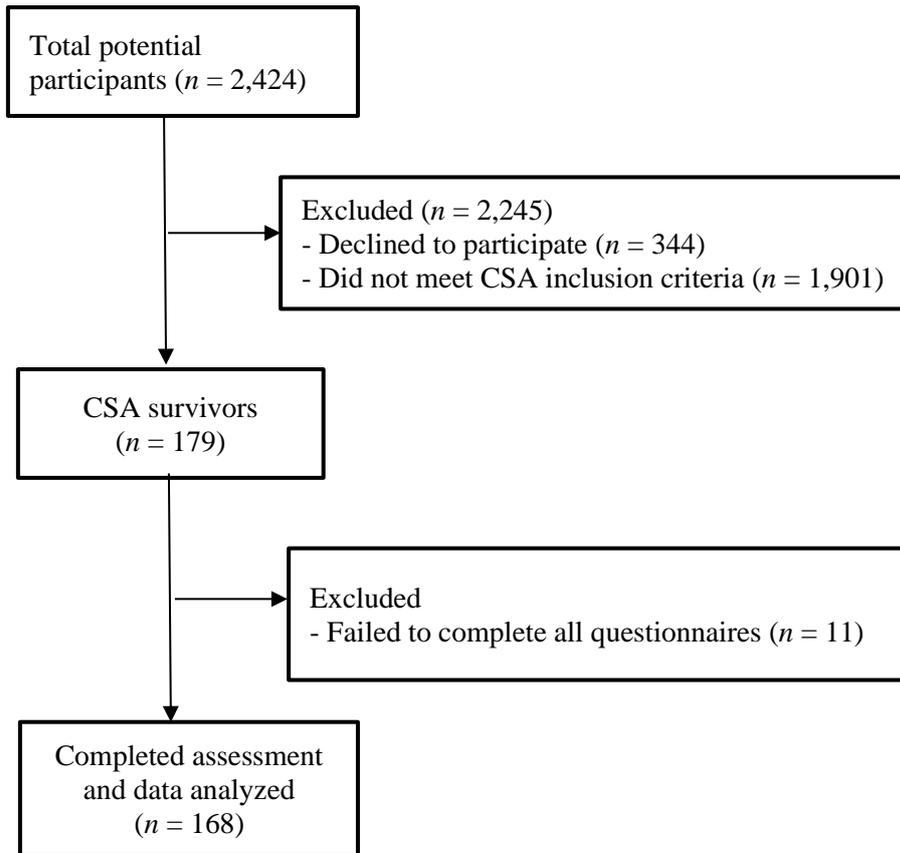


Table 1. Characteristics of abuse and existence of other maltreatments

Variable	<i>n</i>	%
Other Maltreatments	31	18.5
Type of Abuse		
Touching	122	72.6
Oral/Penetration	46	24.4
Relationship with Perpetrator		
Non-Family Member	77	45.8
Family Member	91	54.2
Continuity of Abuse		
Isolated	85	50.6
Several incidents	49	29.2
Continued	34	20.2

Table 2. Descriptive statistics regarding family conflict, emotional insecurity, feelings provoked by abuse, and trait anxiety

Variable	<i>M</i>	<i>SD</i>	Min.	Max.	Asymmetry	Kurtosis
FES Conflict	3.90	2.05	0	9	.53	-.65
SIFS Preoccupation	17.25	5.65	8	31	.26	-.63
SIFS Disengagement	12.54	4.63	3	28	.71	-.01
CITES-R Stigma	37.78	14.34	11	75	.24	-.45
CITES-R Betrayal	15.61	7.03	0	41	.60	.54
CITES-R Powerlessness	13.36	5.86	1	31	.16	-.24
CITES-R T. Sexualization	3.95	4.39	0	22	2.01	3.93
STAI Trait Anxiety	24.54	11.77	3	51	.19	-.82

Table 3. Pearson correlations among all of the variables examined

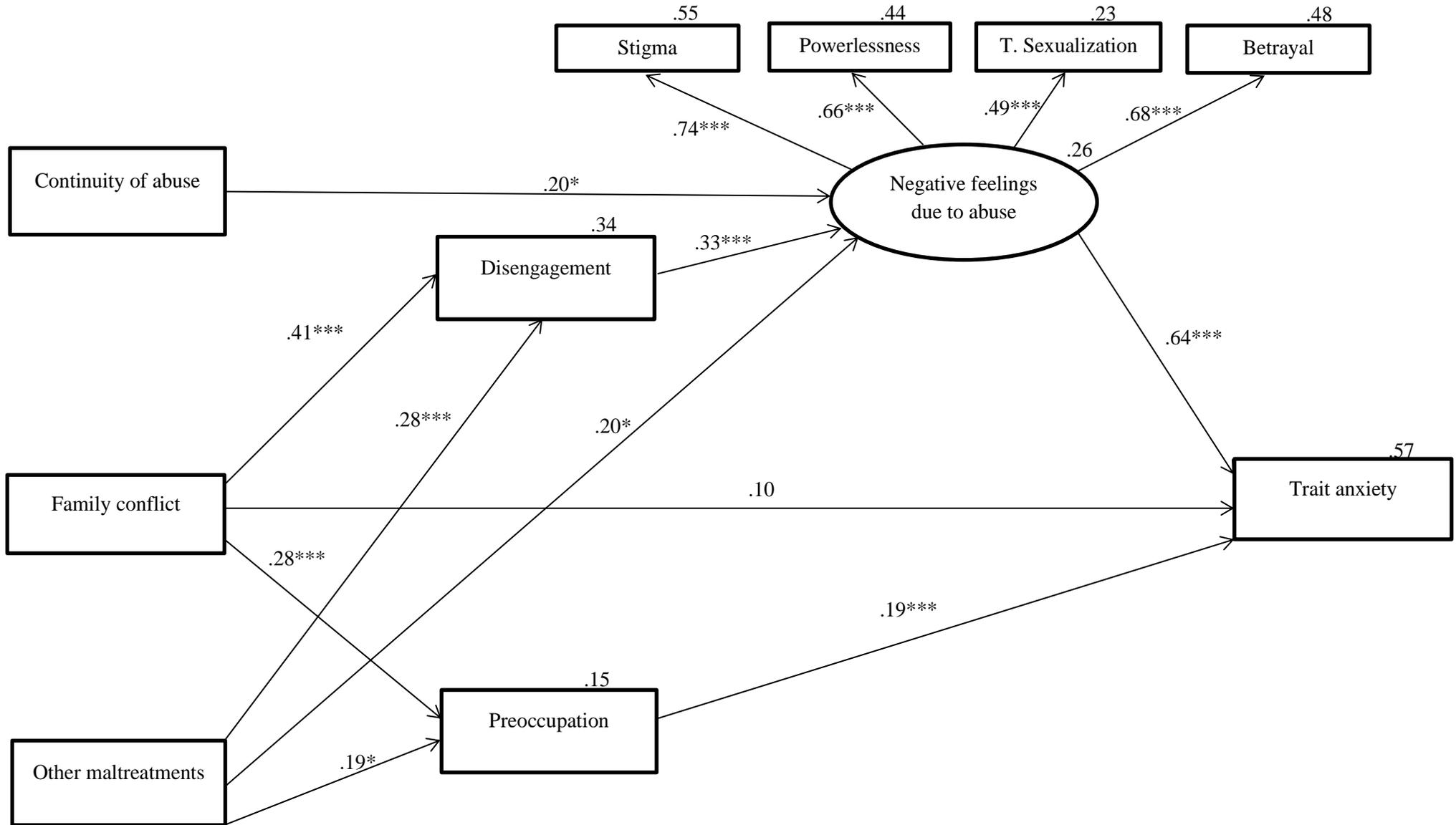
Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Other maltreatments	1									
2. Continuity	.14	1								
3. FES Conflict	.38***	-.02	1							
4. SIFS Preoccupation	.30***	.05	.35***	1						
5. SIFS Disengagement	.44***	.08	.52***	.65***	1					
6. CITES-R Stigma	.29***	.21**	.08	.23**	.27***	1				
7. CITES-R Betrayal	.30***	.14	.27***	.36***	.43***	.47***	1			
8. CITES-R Powerlessness	.18*	.16*	.05	.28***	.29***	.51***	.51***	1		
9. CITES-R T. Sexualization	.19*	.21**	.05	.11	.15*	.40***	.24**	.29***	1	
10. STAI Trait Anxiety	.33***	.15*	.27***	.44***	.47***	.54***	.54***	.44***	.38***	1

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

Table 4. Standardized effects of family conflict, continuity of abuse, emotional insecurity, and negative feelings due to abuse on trait anxiety (Final model)

	Standardized effects		
	Indirect effects	Direct effects	Total effects
Family conflict		.10	.24
Continuity of abuse	.14		.13
Other maltreatments	.13	.22	.22
Disengagement	.21		.21
Preoccupation		.19	.19
Feelings due to abuse		.64	.64

Figure 2. Predictive model of trait anxiety symptomatology among CSA survivors.



Note. \*  $p < .05$ ; \*\*\*  $p < .001$ . Rectangles represent observed variables and ovals represent latent variables. Values listed are standardized coefficients.