A Structural Equation Model of Depression Risk in Young Women with

a History of Child Sexual Abuse

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Abstract

This study aimed to propose and empirically test a model of the role of beliefs and emotions, self-destructive coping, and anxious attachment in the etiology of depression among a sample of 217 female survivors of child sexual abuse (CSA). The structural equation model showed a direct path from feelings of betrayal, self-destructive coping, and major anxious attachment to depression. The model also showed an indirect path (via self-destructive coping and anxious attachment) from feelings of powerlessness—particularly self-blame/stigma—to depression. The present results confirmed the existence of an explanatory model of depression risk in young adult women.

Keywords*: Child sexual abuse, self-destructive coping, anxiety attachment, traumagenic dynamics, depression.

Introduction

A review and meta-analysis of studies on the consequences of sexual abuse during childhood or adolescence (CSA) led to the conclusion that these abuses represent a nonspecific risk factor for a broad range of short- and long-term physical, psychological, behavioral, and sexual disorders and a higher risk for adult revictimization (e.g., Amado, Arce, & Herraiz, 2015; Clevenger, 2016; Maniglio, 2009; McGrath, Abbott, & Kerley, 2011; Ronnenberg, Conrad, Wojciak, & Menninga, 2020; Widom & Osborn, 2021).

The most frequent and well-documented psychological problems for CSA survivors are depression symptoms and disorders, anxiety, and posttraumatic stress disorder (PTSD) (e.g., Almuneef, in press; Rapsey, Scott, & Patterson, 2019). About 17% of cases of depression and anxiety are attributable to sexual abuse (Li, D'Arcy, & Meng, 2016). The link between CSA and depression has been found both in cross-sectional (e.g., Easton & Kong, 2017) and longitudinal studies (e.g., Rapsey et al., 2019), and has been confirmed by literature reviews on CSA (e.g., Li et al., 2016; Selvius, Wijkman, Slotboom, & Hendriks, 2018).

Once the relationship between CSA and psychological disorders was demonstrated, the researchers engaged in a second generation of studies focused on the mechanisms responsible for the variability of consequences, which may therefore have key implications for therapeutic intervention (Maniglio, 2009; Walsh, Fortier, & DiLillo 2010; Whiffen & Macintosh, 2005). However, identifying underlying mechanisms is no easy task, as there seems to be no unique factor or simple model to explain the variability of health problems. Rather, there appears to be a complex interaction among all the variables involved.

Cognitive theories argue that stressful life experiences do not directly lead to psychological consequences; instead, these consequences are the result of dysfunctional

cognitive schemas created by those experiences (Maniglio, 2009; Riggs & Han, 2009). Empirical

evidence confirms that feelings associated with CSA, attributions of blame, responses to the

experience, or internal models for self and others may act as causal mechanisms that are

independent of the objective factors of the experience (e.g., Guerra, Farkas, & Moncada, 2018;

Kennedy & Prock, 2018). The present research focuses on the study of the interrelationships and

combined effects of coping, attachment, and negative emotions due to the abuse on the

psychological adjustment of CSA survivors.

Emotional response to CSA

Following Finkelhor and Browne´s Traumagenic Dynamics Model (Finkelhor & Browne,

1985), victims may have difficulties integrating the traumatic experience into their belief system,

which can lead to cognitive distortion resulting in feelings of self-blame, stigmatization, betrayal,

and powerlessness. Stigmatization is the result of CSA self-blame (internal, stable, and global

attribution style) and the subsequent feeling of shame that prevents adequate processing of the

experience (Held et al., 2015; Karakurt & Silver, 2014). Empirical studies have confirmed the

role of stigmatization in increasing the risk of psychological problems, specifically depression,

for CSA survivors (Kennedy & Prock, 2018).

Stigmatization may also increase the risk that the victim will opt for a maladaptive coping

strategy. In a multidimensional model of trauma-associated blame, Kubany and Watson (2003)

argued that blame cognitions could lead to maladaptive coping strategies. Survivors often

express feelings of anger and hostility. Following the General Strain Theory (GST), strain

increases one's level of negative affect, leading to emotions such as frustration, depression, and

anger (Agnew, 1992). Women tend to direct their aggression inward, for example, via thoughts

of suicide or self-destructive coping (Karakurt & Silver, 2014). Females are just as likely, or even more likely, to respond to stress and strain with anger than are males (Broidy & Agnew, 1997). Conversely, survivors of CSA also have a greater propensity for negative self-evaluation and self-blame, allowing them to continue their close attachment to the abusive figure (Martin, Cromer, DePrince, & Freyd, 2013). As Broidy and Agnew (1997) discuss on gender differences in anger, women's anger, in contrast to men's, is typically accompanied by emotions such as guilt and shame.

Regarding betrayal, the Betrayal Trauma Theory (Freyd, 1996) emphasizes the interpersonal context of the trauma. Trauma types, such as CSA, committed by a caregiver or someone very close to the victim (high degree of betrayal), are associated with more serious symptoms of numerous mental health problems, including depression, anxiety, and PTSD (Martin et al., 2013; Martin, Van Ryzin, & Dishion, 2016). Feelings of betrayal may also be expressed via insecure attachment styles. An environment of inconsistent responses has negative consequences for the victim's sense of self and makes them feel unworthy of love, leading them to develop the extreme dependence and clinginess that are characteristic of an anxious attachment style (Karakurt & Silver, 2014).

Finally, when the victim's efforts to stop the sexual abuse have failed, there is an increase in feelings of powerlessness. Empirical evidence has shown that, in general, there is a higher risk of depression when a person lacks an internal sense of control over life (Karakurt & Silver, 2014). The survivor perceives uncontrollable feelings of anger at the intrusion and emotional pain associated with the abusive experience and may opt for coping mechanisms like self-harm, which provide relief from the emotional pain. For example, Boyle and Rogers found, in a sample of college students who had experienced sexual assault, that participants who identified

themselves as *victims* reported greater negative emotions and depression than those who

identified as *survivors*.

Coping strategies

Strategies chosen by victims to cope with CSA may drive various short- and long-term

results, and have the advantage of being susceptible to change and, therefore, an intervention

objective (Cantón-Cortés & Justicia, 2008; Ullman, Peter-Hagene, & Relyea, 2014; Walsh et al.,

2010). At present, several taxonomies of coping styles have been proposed. Following Thoits

(2009), coping strategies can be divided into three broad types, which could be called emotion-

focused, problem-focused, and meaning-focused strategies.

However, some authors argue that, as operationalized in questionnaires, emotion-focused

coping includes both relatively positive behaviors, such as expressing one's feelings, and more

negative behaviors that could be categorized as defensive responses, such as avoiding thinking

about problems, denial, and self-medicating with drugs (Whiffen &Macintosh, 2005). Whiffen

and Macintosh (2005) concluded in their review that adolescents and young adults with a history

of CSA, overcome by their emotions, often resort to avoidant (e.g., sleeping a lot or trying not to

think about what happened) and self-destructive (e.g., drinking a lot of alcohol, using drugs, or

getting into risky situations) coping strategies. Use of avoidant and, especially, self-destructive

strategies have been repeatedly shown to lead to increased risk of psychological dysfunction,

including general psychological stress, depression, PTSD, and interpersonal problems among

survivors of CSA and other types of trauma (Cantón-Cortés & Justicia, 2008; Compas et al.,

2017; Tian, Chen, & Wu, 2020; Ullman et al., 2014; Walsh et al., 2010).

Attachment style

Theory and research on attachment examine the interactions between mental

constructions, emotion regulation, and risk of psychopathology from stressful events such as

CSA (Karakurt & Silver, 2014). According to Bowlby´s Attachment Theory (1980), children

internalize their experiences with caregivers through internal working models regarding the self

(e.g., whether the self is worthy of love and support) and others (e.g., whether others can be

trusted or will be available when needed). Any traumatic event may cause a child to perceive that

their caregivers cannot or will not protect them, weakening their sense of security. Experiences

of CSA, whether intra- or extra-familiar, may lower the victim's capacity to trust others or to feel

secure in social or intimate relationships because the perpetrator is often someone very close

(Cantón-Cortés, Cortés & Cantón, 2015; Riggs & Han, 2009). Thus, insecure attachment acts as

a mediating variable between CSA and mental health, increasing the risk of emotional stress and

depression (Karakurt & Silver, 2014; Riggs & Han, 2009; Whiffen & Macintosh, 2005).

Research has shown that CSA survivors are more likely to suffer insecure attachment and

that their insecure internal working models are more likely to create dysfunctional biases in their

interpretation and response to stress. They are also more likely to have adjustment problems

(Riggs & Han, 2009). More specifically, CSA has been linked to adult anxious attachment from

a negative sense of self, as well as dependence and fear of losing others (abandonment anxiety),

cognitive distortion, and problems in forming and maintaining stable and satisfactory

relationships, thus increasing the risk of depression (Cantón-Cortés et al., 2015; Dagan,

Facompré, & Bernard, 2018; Hocking, Simons, & Surette, 2016; Riggs & Han, 2009).

The studies and reviews have led us to conclude that CSA is a general or non-specific

risk factor for psychopathology. However, much of the research on the role of feelings provoked

by CSA, coping strategies, and attachment has contributed only a bivariate explanation between each of these factors of CSA and adult adjustment. In general, studies have not considered the complex interaction among multiple factors that may contribute to the problems reported by abuse victims. Comprehensive etiologic multifactor models are needed to explain how all of the risk factors act together in promoting or maintaining psychopathology (Maniglio, 2009; Ullman et al., 2014; Walsh et al., 2010; Whiffen & Macintosh, 2005).

Objectives

Guided by this background, the objective of this study was, using structural equations modeling, to analyze the role of the emotional responses to CSA, coping strategies, and attachment style on the etiology of depression in young adult women survivors of CSA. These variables have been individually evaluated previously (e.g., Martin et al., 2013). However, to our knowledge, the combined effect of the three groups of variables and the specific weight of each one have not been studied. Conversely, none of these studies attempted to empirically explain interrelationships among these variables in adults with a history of CSA. As discussed above, apart from survivor symptomatology, negative feelings after CSA may be associated with the development of insecure attachment and self-destructive coping strategies as well.

Based on the traumagenic dynamics model of Finkelhor and Browne (1985), the betrayal trauma theory of Freyd (1996), and the attachment theory of Bowlby (1980), it was hypothesized that a higher depression score would result directly from feelings of betrayal, self-blame, and powerlessness associated with the CSA experience, as well as indirectly through self-destructive coping and anxious attachment.

Method

Participants

Our initial study sample consisted of 2,633 women (age range: 18-24 years, $M = 19.40$, $SD = 1.66$) who were students at a southern Spanish university. Students who volunteered to participate completed the protocols and were given course credit for their participation.

Among the initial study sample, 276 women (10.5%) reported having suffered sexual abuse before the age of 18 years. There were 42 cases of abuse without physical contact (15.2%). In 167 cases (60.5%), the abuse involved touching of the victim by the aggressor or the aggressor by the victim. In 67 cases (24.3%), victims suffered abuse in the form of oral sex, penetration (anal or vaginal), or both. In our study, those participants who had suffered physical contact (touching, oral sex, or penetration) were considered victims of CSA. Thus, the 42 students who had suffered abuse without contact were excluded from the study sample. Another 17 students were excluded from the sample due to incomplete questionnaires. The final CSA sample included 217 victims ($M = 19.81$ years, $SD = 1.78$), of whom 153 had suffered touching (70.5%) and 64 had suffered oral sex and/or penetration (29.5%).

Instruments

Child Sexual Abuse Questionnaire (CSAQ). Collected sociodemographic information and anonymous CSA experiences using an ad-hoc questionnaire. The instrument recorded aspects of sexual abuse and its characteristics, defining CSA as "sexual contact and interactions between an adult and a minor, or between minors with an age difference of more than 5 years, or if one child/adolescent is in a position of power or control over the victim regardless of age difference" (Hartman & Burgess, 1989, pp. 95–128). Participants were asked to indicate the type of sexual

activity they had experienced, from no physical contact to touching to oral sex and/or

penetration. This information was used to decide whether a participant could be considered a

victim of CSA.

Trauma-Related Beliefs questionnaire (TRB; Hazzard, 1993). This questionnaire

measures the thoughts and feelings of victims in response to CSA, following the traumagenic

dynamic model of Finkelhor and Browne (1985). The TRB consists of 56 items divided into four

subscales. The following three subscales were used: self-blame/stigma (29 items; e.g., "Abuse

happened because I wasn't smart enough to stop it"), betrayal (10 items; e.g., "It is dangerous to

trust people because they will usually betray you"), and powerlessness (10 items; e.g., "It does

not matter what I do, I cannot prevent bad things from happening"). A five-point Likert-type

scale was used for respondents to rate how strongly they agreed or disagreed with each item,

with responses ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). In this study, internal

consistency (Cronbach's alpha) was .85 for Stigma, .75 for Betrayal, and .73 for Powerlessness.

McDonald's Omega was .77 for Stigma, .67 for Betrayal, and .66 for Powerlessness.

How I Deal With Things scale (HIDWT; Burt & Katz, 1987). This 29-item scale

evaluates strategies used by the victim to cope with CSA through 5 subscales. The Self-

Destructive Coping subscale was used in this study (e.g., "Put myself in a dangerous or risky

situation more than I normally would"). The score for each item ranged from 1 (*never*) to 5

(*always*). Internal consistency for Self-Destructive Coping in our study was $\alpha = .74$, and

McDonald's Omega was .70.

Attachment Style Measure (ASM; Simpson, 1990). ASM is a self-reported instrument

developed from the Adult Attachment Styles (AAS) measure of Hazan and Shaver (1987).

Through the AAS, participants classify their attachment style (Secure, Avoidant, and Anxious-

Ambivalent), each one representing a mutually exclusive attachment category. In contrast, the

ASM seeks to establish a more precise measure of an individual's attachment style by breaking

down the three categories of AAS into 13 items. Participants are asked to rate their

agreement/disagreement with each of the statements on a seven-point Likert-type scale, ranging

from 1 (*strongly disagree*) to 7 (*strongly agree*). In our study, the Anxious Attachment subscale

was used (e.g., "I often worry that my partners don't really love me"). Internal consistency

(Cronbach's alpha) for the Anxious Attachment Style scale was $\alpha = .79$. McDonald's Omega was

.71.

      Beck Depression Inventory (BDI; Beck, Rush, Shaw & Emery, 1990). This self-response

questionnaire is among the most frequent instruments to measure depression symptoms. The BDI

evaluates emotional, cognitive, and physiological dimensions of depression and comprises 21

items with four response options (from 0 to 3). In this study, Cronbach's alpha for the scale was

.83, and McDonald's Omega was .86

      Symptom Checklist–90–Revised (SCL–90–R; Derogatis, 1994). This self-response

instrument evaluates adult psychopathology using a 90-item questionnaire. Participants rate the

frequency of each symptom on a five-point Likert-type scale from 0 (*never*) to 4 (*always*). The

SCL-90-R collects information on nine symptomatic dimensions. Only the Depression subscale

was used in this study. Internal consistency (Cronbach's alpha) for this dimension was $\alpha = .89$,

and McDonald's Omega was .90.

Procedure

      Students participated voluntarily in a retrospective study about their self-reported

situations of risk during childhood and adolescence and their present psychological health.

Ethical approval for all of the materials used in this study was obtained from the Ethics

Committee of the 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 the provided protocols in a classroom with pen and paper and received

credit toward fulfilling their course requirements. As in this course, both female and male

students were enrolled, males were offered an alternative option (to prepare a short dissertation

related to any course topic, which would involve a similar amount of time as participating in the

study) to earn the extra credit. This alternative was also offered to females who did not want to

participate in the research. Consequently, the voluntary nature of the study was preserved.

To maintain the anonymity of the CSA survivors, non-CSA volunteers completed

questionnaires relating to a different significant negative experience. Participants were told they

could stop answering questions on the abuse experience at any time (and switch to another

experience) if they felt uncomfortable during the survey. However, every participant identified as

a CSA survivor completed the entire survey. Counseling was offered at the end of the study.

In the first 1-hour session, students responded to the CSAQ, the TRB, and the HIDWT.

In a second session one week later, all participants completed the ASM, the BDI, and the SCL–

90–R. To ensure data confidentiality, each questionnaire was assigned a numeric code that could

be referenced in data analysis.

Data Analysis

After analyzing descriptive data and correlations between study variables, a structural

equation model (SEM) was created using Mplus version 6.11 (Muthén & Muthén, 1998–2011) to

examine the direct paths to depression from thoughts/feelings triggered by abuse (self-blame/stigma, betrayal, and powerlessness), destructive coping, and attachment. A possible mediational model that included destructive coping and anxious attachment as mediators in the relationship between feelings triggered by the abuse and depression was examined.

The full-information maximum likelihood (FIML) estimator was used for all estimates. The FIML is robust to violations of multivariate normality and handles model estimation with missing data by estimating variable means and intercepts. FIML is the default method to handle missing data in Mplus.

To determine whether the indirect effect through mediating variables was significant in predicting the dependent variable, the bootstrap method with 10,000 replications was used. The standard error (*SE*) and confidence interval (*CI*) for each of the model's standardized coefficients were obtained. Goodness of fit between the hypothesized model and our sample data was tested using the following statistics and their corresponding critical values: chi-squared, root mean square error of approximation (RMSEA), comparative fit index (CFI), and standardized root mean squared residual (SRMSR) (Hu & Bentler, 1999; Kline, 2016). Chi-squared: non-significant values indicated good model fit (p > .05) (Kline, 2016). Values of χ^2/df between 1 and 3 indicate acceptable fit. RMSEA values of 0.05 or less indicate very good fit, and values of 0.05 to 0.08 indicate acceptable fit. For CFI, values of 0.95 or greater indicate good fit, and values of 0.90 or greater indicate acceptable fit. For SRMR, values of 0.05 or less indicate good fit, and values of 0.05 to 0.08 indicate acceptable fit (Hu & Bentler, 1999).

Results

Descriptive Statistics and Correlations

Table 1 shows the descriptive statistics (means, standard deviations, and ranges) of all variables in the study. Table 2 shows the zero-order bivariate correlations between all variables, all of which were significant in the expected direction ($p < .001$).

TABLE 1

TABLE 2

Structural Equation Model

Scores from BDI and SCL-90-R were combined into the single latent variable of "depression". The measurement model for the latent variable depression was good, with a standard coefficient of .876 for BDI and of .887 for SCL-90-R (expected coefficients of .7 or above).

FIGURE 1

Figure 1 shows the structural model with standardized coefficients for the direct paths. The results revealed a direct path between feelings of betrayal and depression ($\beta = 0.23$, $SE = 0.080$, $p < .01$), whereas neither self-blame/stigma ($\beta = 0.15$, $SE = 0.078$, $p = .06$) nor powerlessness ($\beta = .14$, $SE = 0.071$, $p = .051$) directly predicted depression. There were significant direct effects of the three feelings (self-blame/stigma, betrayal, and powerlessness) on the strategy of destructive coping ($\beta = 0.37$, $SE = 0.073$, $p < .001$; $\beta = 0.16$, $SE = 0.074$, $p < .05$; $\beta = 0.18$, $SE = 0.063$, $p < .005$). This finding indicates that the more self-blame/stigma, betrayal, or powerlessness that a victim feels, the more the victim utilizes destructive coping strategies. Self-blame/stigma and powerlessness were also positively related to anxious attachment ($\beta =$

0.27, $SE = 0.073$, $p < .001$; $\beta = 0.15$, $SE = 0.075$, $p < .05$), whereas betrayal was not a significant contributor ($\beta = 0.14$, $SE = 0.089$, $p = .10$). Finally, both destructive coping and anxious attachment made direct and significant contributions to depression ($\beta = 0.19$, $SE = 0.082$, $p < .01$; $\beta = 0.27$, $SE = 0.053$, $p < .001$).

TABLE 3

To determine whether the relationship between depression and feelings triggered by abuse are mediated by destructive coping and anxious attachment, a mediational model that eliminated the nonsignificant direct relationships was tested. Table 3 shows the indirect paths tested by the examination of bootstrapped CIs. Fit measures for the final model indicated that the proposed model for depression had an adequate fit to the observed data ($\chi^2 = 22.400$, $df = 8$, $\chi^2/df = 2.8$, $p = .0042$; RMSEA $= 0.091$, CFI $= 0.966$, SRMR $= 0.038$). All indices except RMSEA indicated a good fit. RMSEA exceeded the maximum recommended value of 0.08.

The indirect effect of self-blame on depression was positive and significant, with a standard coefficient of 0.210 ($SE = 0.052$, $p < .001$, 95% CI [0.108, 0.312]). This effect was significantly mediated by destructive coping with a standard coefficient of 0.104 ($SE = 0.040$, $p = .10$, 95% CI [0.025, 0.183]) and by anxious attachment ($\beta = 0.107$, $SE = 0.030$, $p < .001$, 95% CI [0.047, 0.166]).

The total effect of betrayal on depression was likewise positive and significant, with a standard coefficient of 0.366 ($SE = 0.079$, $p < .001$, 95% CI [0.212, 0.520]), although only the direct effect was significant ($\beta = 0.321$, $SE = 0.080$, $p < .001$, 95% CI [0.165, 0.478]). The indirect effect, via destructive coping, was not significant, as indicated by the inclusion of zero in the bootstrap CI.

Finally, the total effect of powerlessness on depression was indirect, positive, and significant, with a standard coefficient of 0.116 ($SE = 0.032$, $p < .001$, 95% CI [0.053, 0.178]). This effect was mediated by destructive coping ($\beta = 0.050$, $SE = 0.022$, $p = .02$, 95% CI [0.006, 0.094]) and anxious attachment ($\beta = 0.066$, $SE = 0.027$, $p = .01$, 95% CI [0.013, 0.119]). The final model accounted for 46% ($R^2 = 0.462$) of the variance in the women's reports of current depressive symptomatology.

Discussion

The results of the present study support the theoretical assumptions of the traumagenic dynamics model (Finkelhor & Browne, 1985), the betrayal trauma theory (Freyd, 1996), and the attachment theory (Bowlby, 1980). This research contributes important data on interactions between the components of these models and possible process mediators, confirming most of our hypotheses.

In accordance with our hypotheses, the structural equation model indicated direct paths to depression from feelings of betrayal, self-destructive coping, and, to a great extent, anxious attachment. The model indicated indirect paths (via self-destructive coping and anxious attachment) from self-blame/stigma and powerlessness to depression. The strongest indirect effect was self-blame/stigma, both via anxious attachment and via coping. In contrast, neither self-blame/stigma nor powerlessness was directly related to depression, nor was there an indirect path from betrayal to depression either via self-destructive coping or anxious attachment.

Betrayal was the only CSA-associated feeling to be related directly to depression. This result agrees with those of other studies (e.g., Martin et al., 2013) and suggests that betrayal has a significant and stable positive effect on depression, even after controlling for other risk factors.

Feelings of betrayal imply the recognition that a very close person could cause damage and/or violate their role of protector. Abuse perpetrated by someone close tends to occur without threats or use of force. Victims frequently find themselves trapped from an early age or believe that they maintain a special relationship (Martin et al., 2016). Also, when the CSA is revealed or discovered, the negative reaction of others, particularly the victim's own family, can exacerbate the feelings of betrayal (Karakurt & Silver, 2014).

Contrary to our expectations, no relationship was found between feelings of betrayal and anxious attachment. If the victim does not receive the necessary love and protection from people important to her, she was expected to develop a pattern of anxious attachment (Karakurt & Silver, 2014). However, in our sample, feelings of betrayal may have been directed towards someone not very close to the victim—especially if the perpetrator was an acquaintance or a stranger. In this case, attachment towards main caregivers should not be very affected by the CSA.

Self-blame/stigma (shame) seemed to play a relevant albeit indirect role, via self-destructive coping and anxious attachment. Following the GST (Broidy & Agnew, 1997), strain increases one's level of negative affect, leading to negative emotions such as anger, which create pressure for corrective action. Our results support the assumptions of GST, as well as the model by Kubany and Watson (2003) on the indirect effects of shame via maladaptive coping, and replicate the reports of some studies (e.g., Held et al., 2015; Kennedy & Prock, 2018). However, our study reveals an additional important indirect effect of self-blame/stigma, via anxious attachment. Feelings of self-blame/stigma can lead to the victim's insecurity about self-value and being deserving of love, and create relationships of dependence and fear of losing others

(anxious attachment). These cognitive distortions and problems in forming and maintaining stable and satisfactory relationships increase the risk of depression (Dagan et al., 2018).

The CSA victim needs to understand, to make sense of an experience that is contrary to her belief in a secure and just world, which implies making causal attributions about responsibility or blame. Specific abuse attributions can become global and stable self-blame for routine negative events. CSA can create a strong sense of shame, which is highly aversive and associated with a negative self-value. This shame can isolate the survivor from relationships that could be very helpful in managing stress and developing a more positive sense of self (Whiffen & Macintosh, 2005). In a study by Dorahy and Clearwater (2012), victims who reported feeling ashamed also felt a sense of failure, low self-esteem, the feeling of being different, doubts about others' authenticity, terror at any revelation, a sense of being unworthy of support, and finally, the suppression of any enjoyable feelings.

Self-blame/Stigmatization may imply a higher risk that the victim will opt for maladaptive CSA coping strategies. Simon et al. (2016) concluded that the pain of stigmatization can exacerbate dysfunctional processing strategies that perpetuate the stigma and prevent constructive processing of the abuse. Victims resort to self-destructive strategies as a form of coping, to relieve, even if temporarily, their self-blame and sense of shame. However, this form of escape may lead to intensification of the very emotions the victim is trying to manage, when the victim realizes that things like alcohol and drugs become harder and harder to control (Held et al., 2015).

Finally, feelings of powerlessness are important contributors to depressive symptomatology, although their impact is indirect via self-destructive coping and anxious attachment. As Dorahy and Clearwater (2012) conclude, survivors describe a sense of

uncontrollability directly related to their history of sexual abuse, which can lead to dysfunctional coping mechanisms. The perception of a lack of control of the situation can be so overwhelming that victims consider self-destructive strategies as the only possible solution. However, resorting to these maladaptive means of managing negative abuse-related emotions leads to higher psychological stress.

Feelings of powerlessness due to abuse may lead to an anxious attachment style in adulthood, associated with fear of rejection and a tendency to seek the proximity of others under a perceived threat of abandonment. This type of attachment is associated with a negative model of the self, a relationship of dependence on others, and cognitive distortions (e.g., distrust), which are characteristic of people prone to depression.

Self-destructive coping and, to a great extent, anxious attachment were directly related to the scores on depression. Research on the role of coping in victims' adjustment to CSA suggested that the use of avoidant and self-destructive strategies may help explain the negative long-term consequences of this type of abuse (Cantón-Cortés & Justicia, 2008). Feelings of self-blame/stigma, betrayal, and powerlessness can become so overwhelming that victims seek self-destructive strategies as the only solution. These strategies are not symptoms of stress, but stress-reducing behaviors that provide relief from the negative emotional state. In summary, the feelings associated with CSA lead to maladaptive coping that, in turn, leads to a higher risk of symptomatology (Compas et al., 2018; Walsh et al., 2010).

On another hand, as indicated by Lowell, Renk, and Adgate (2014), it is important to clarify what role attachment plays in the evolution of people with a history of abuse, to address its prevention and treatment. CSA tends to occur in an environment of intimacy and trust and during a highly vulnerable period of the victim's life. This event may interrupt the normal

evolution of the victim's ability to trust and form stable and secure relationships with others, especially with important people in her life (Whiffen & Macintosh, 2005). The negative cognitive schemas of self and others tend to become stable over the entire lifecycle. Thus, survivors would use them to predict and interpret relationship experiences as adults. CSA survivors with anxious attachment may become hypervigilant to rejection signals in adulthood (Hocking et al., 2016), which may lead to constant thoughts of failure, lack of self-value, and fear of abandonment, contributing to chronic anxiety and depression. The tendency to recreate negative experiences and form a defenseless and desperate self-image in the face of adversity increases the risk of depression (Dagan et al., 2018).

In conclusion, our results confirm the existence of an explanatory model of risk of depression in young adult women, which can help psychotherapists better understand the pathways that relate negative feelings due to CSA to psychological distress among survivors. The present results suggest that, apart from reducing feelings of self-blame, powerlessness, and betrayal, interventions should focus on decreasing the use of self-destructive coping and improving survivors´ attachment style. Survivors' approach to cope with interpersonal experiences can diminish negative outcomes. Therefore, the reduction of avoidant coping strategies appears to have a beneficial effect. Conversely, therapeutic strategies should include building secure and trusting relationships, while diminishing mental models related to anxious attachment.

This study has some limitations. First, as a correlational cross-sectional study, it represents the first step towards future longitudinal studies of causal risk factors. Longitudinal studies with some information about psychological adjustment contributed by informants other than those who provided information about coping, attachment, and negative feelings could

confirm the direction of the relationships between the different variables, as well as the stability of those variables.

Regarding sample selection, the sample chosen for convenience (university women) is not representative of the population as a whole. Moreover, only cases involving physical contact were included in the analyses. This decision affects the generalizability of our results, as we cannot ensure that the analyzed variables have the same effects on non-physical contact survivors' adjustment as on the survivors of our final sample.

Another limitation refers to the fact that the sample of the study did not differentiate between participants who experienced CSA at different ages. In future research, it may be useful to examine whether the relationships found in the present study are influenced by characteristics of the abuse, such as the age of onset of the abuse, the type of abuse (touching vs. penetrative abuse), the relationship with the perpetrator (intrafamilial vs. extrafamilial), or the continuity of abuse (isolated incident vs. continuous abuse). Finally, given that the design involved retrospective self-reporting, the study is subject to the normal problems of forgetfulness and memory bias. However, despite their limitations, retrospective self-reported measures may be the most representative measures of CSA (Li et al., 2016; Lowell et al., 2014).

Disclosure of interest

The authors report no conflict of interest.

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Table 1. Descriptive statistics for study variables

| Instrument	Variable	*M*	*SD*	Minimum	Maximum
TRB	Self-blame/stigma	38.81	15.33	10	88
	Betrayal	15.52	6.74	0	41
	Powerlessness	13.60	6.00	1	31
HIDWT	Self-destructive coping	11.04	4.70	6	28
ASM	Anxious attachment	11.30	2.66	6	19
BDI	Depression	9.00	6.65	0	30
SCL-90-R	Depression	1.04	.71	,0	3.08

TRB = Trauma-Related Beliefs questionnaire; HIDWT = How I Deal With Things scale; ASM = Attachment Style Measure; BDI = Beck Depression Inventory; SCL-90-R = Symptom Checklist–90–Revised.

Table 2. Correlations among all the target variables

Variable	1	2	3	4	5	6
1. Self-blame/stigma	-					
2. Betrayal	.45	-				
3. Powerlessness	.41	.47	-			
4. Self-destructive coping	.52	.41	.41	-		
5. Anxious attachment	.40	.34	.33	.24	-	
6. Depression BDI	.47	.44	.45	.43	.45	-
7. Depression SCL-90-R	.42	.52	.39	.41	.44	.77

BDI = Beck Depression Inventory; SCL-90-R = Symptom Checklist–90–Revised.
Note: All correlations are significant at $p < .001$.
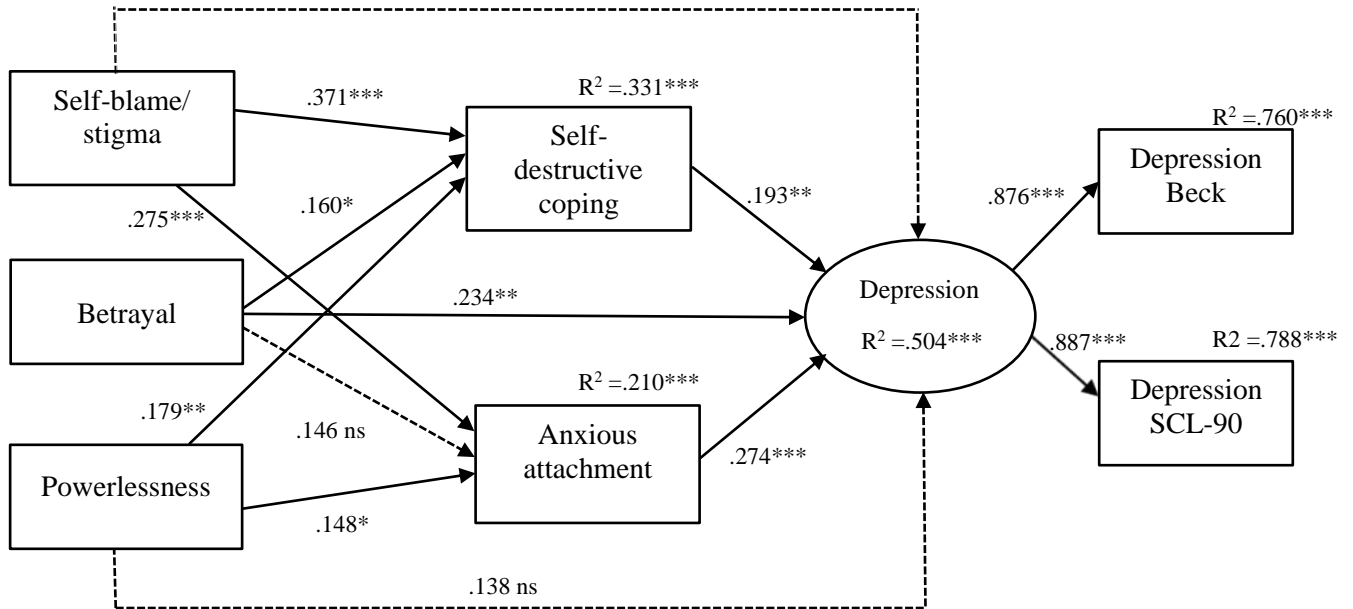
*p < .05; **p < .01; ***p < .001; ns = Nonsignificant*

Figure 1. Structural model for the prediction of depression with standardized path coefficients. Squares represent observable or manifest variables. Circle indicates the latent variable. R^2 = proportion of explained variance.

Table 3. Indirect paths of the Structural Equation Model

Indirect effect	β	95% CI	p
Self-blame/stigma $\longrightarrow$ Self-destructive coping $\longrightarrow$ Depression	**0.104**	**[0.025, 0.183]**	**< .05**
Self-blame/stigma $\longrightarrow$ Anxious attachment $\longrightarrow$ Depression	**0.107**	**[0.047, 0.166]**	**< .05**
Betrayal $\longrightarrow$ Self-destructive coping $\longrightarrow$ Depression	0.045	[-0.003, 0.092]	> .05
Powerlessness $\longrightarrow$ Self-destructive coping $\longrightarrow$ Depression	**0.050**	**[0.006, 0.094]**	**< .05**
Powerlessness $\longrightarrow$ Anxious attachment $\longrightarrow$ Depression	**0.066**	**[0.013, 0.119]**	**< .05**

Note: Significant values are in bold.