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Research paper

The relationship between childhood trauma and the severity of adulthood depression and anxiety symptoms in a clinical sample: The mediating role of cognitive emotion regulation strategies

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ABSTRACT

Background: Childhood trauma is an important factor in adverse mental health outcomes, including depression and anxiety. The purpose of the present study was to evaluate a hypothesized model describing a pathway of childhood trauma and its influence on psychiatric symptoms in patients with depressive disorder. In this model, childhood trauma was positively associated with current depression and anxiety symptoms, which were mediated by a cognitive emotional regulation strategy.

Method: Patients with depressive disorder (n=585, 266 men, 316 women) completed the Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI), Childhood Trauma Questionnaire (CTQ), and Cognitive Emotion Regulation Questionnaire (CERQ). We divided the cognitive emotion regulation strategies into adaptive and maladaptive strategies using a CERQ subscore. We employed structural equation modeling (SEM) and simple/multiple mediation analyses.

Results: The indirect effect of maladaptive strategies was significant in the relationship between overall childhood trauma and depression/anxiety severity, whereas the mediation effect of adaptive strategies was limited to depressive symptoms. With respect to specific types of trauma, maladaptive strategies mediated the association between emotional abuse and current depression/anxiety, while the mediation effect of adaptive strategies was limited to emotional neglect.

Limitations: This study's cross-sectional design does not allow establishment of causal relationships. Childhood trauma recall bias may be possible.

Conclusions: These findings support the hypothesized model in which childhood trauma is associated with adulthood depression/anxiety symptoms in clinical samples, and mediated by emotion regulation strategies. These results suggest that cognitive emotion dysregulation is an important factor affecting depression/anxiety symptoms in patients with childhood trauma.

1. Introduction

A considerable body of evidence suggests that childhood trauma is associated with the onset, symptom severity, and course of depression and anxiety symptoms (Friis et al., 2002; Gibb et al., 2007; Kendler et al., 1999). Despite the well-established relationship between childhood trauma and adulthood mental health problems, the specific mechanism underlying early life trauma relationship to later psychiatric problems is still unclear.

The ability of emotion regulation is a possible mediator of the relationship between childhood trauma and later depression and anxiety symptoms. Although different researchers have used the term "emotion regulation" in different ways (Gross and Thompson, 2007), emotion regulation can be generally defined as "the ability to respond to the ongoing demands of experience with a range of emotion in a manner that is socially tolerable and sufficiently flexible to permit spontaneous reactions as well as the ability to delay spontaneous reactions as needed" (Cole et al., 1994). Previous studies have suggested that emotion regulation ability is developed in early life within the context of interpersonal emotional exchanges between caregiver and child (Feldman and Greenbaum, 1997). The quality of caregiver–child emotional exchanges is an important factor in adult-

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hood emotion regulation capacity (Cole et al., 2004).

It appears that childhood trauma disturbs development of the ability to regulate emotions in a healthy manner. Childhood trauma, especially repeated interpersonal trauma between caregiver and child, interferes with the acquisition of appropriate emotion regulation skills (Burns et al., 2010; Cicchetti and Rogosch, 2009). Several studies have provided empirical evidence that childhood trauma can cause subsequent problems related to emotion regulation. One study described sexually abused girls who had difficulty understanding and regulating their emotions (Shipman et al., 2000). They also expected less emotional support from others and had more interpersonal problems and more negative emotional states. Neglected children were shown to be less able to understand negative emotion and to have fewer adaptive emotion regulation skills. They expected caregivers to respond negatively to their emotions, and attempted to suppress their emotions (Shipman et al., 2005). These findings show that different types of childhood maltreatment can cause various patterns of deficits or difficulties in understanding and regulating emotions. However, it is still unclear how distinctive types of childhood trauma differentially influence the development of emotion regulation ability.

Emotion dysregulation originating from childhood trauma can contribute to the development, maintenance, and treatment of many psychiatric disorders, including depression and anxiety (Berking and Wupperman, 2012; Gross and Muñoz, 1995; Kring and Werner, 2004). Depressed individuals were found to have difficulty identifying, tolerating, and adaptively regulating their negative emotions with respect to stressful events. (Campbell-Sills et al., 2006; Ehring et al., 2008; Gilbert et al., 2006; Honkalampi et al., 1999) Emotion regulation deficits in anxious individuals can lead to maladaptive coping with fear related stimuli, increasing the possibility of chronic avoidance (Cisler et al., 2010). Several prospective studies have revealed that emotion dysregulation predicts later depression and anxiety symptom severity (Berking and Wupperman, 2012). One study suggested that emotion dysregulation predicted depression severity two years later. Other research showed that positive expectations for the ability to manage negative emotion were associated with reduced depression and anxiety (Kassel et al., 2007; Kraaij et al., 2002).

A few studies have investigated emotion regulation as a mediator between childhood trauma and subsequent mental health problems. One study with a low-income African American sample provided support for emotion regulation as a mediator between childhood trauma and adult depression (Crow et al., 2014). In addition, several other studies in children and adolescents showed the negative influence of childhood trauma on psychological adjustment was mediated by emotion regulation deficits (Choi and Oh, 2014; Kim and Cicchetti, 2010). These findings support the role of emotion dysregulation as a mediator between childhood trauma and adulthood depression/anxiety symptoms. However, most participants in these previous studies were adolescents or adults in a community.

To the best of our knowledge, only one recent study with clinical sample provided evidence for the mediating role of emotion regulation in the relationship between childhood trauma and later depression (Hopfinger et al., 2016). Although the study additionally explored whether specific types of emotion regulation were important for explaining the association between childhood trauma and current depression, they did not consider factors such as comorbid anxiety and possible differential effects of various childhood traumas in depressive disorders.

Thus, this study used structural equation modeling (SEM) to characterize the relationships between cognitive emotion regulation strategies, childhood trauma, adulthood depression, and comorbid anxiety symptoms in a clinical sample diagnosed with depressive disorder. Specifically, cognitive emotion regulation strategy use was examined as a mediator of the relationship between childhood trauma and adult depression and anxiety symptoms. We hypothesized that patients with childhood trauma would use more maladaptive and fewer adaptive cognitive emotion regulation strategies. In addition, we hypothesized that these tendencies would influence current depressive and comorbid anxiety symptoms. Further, we explored whether specific types of childhood trauma had differential effects on current depression/anxiety as mediated by cognitive emotion regulation strategies and if specific strategies were significantly important for the relationship between childhood trauma and later depression/anxiety.

2. Methods

2.1. Participants

During the 36-month study period from August 2011 to July 2014, patients who visited the Mood and Anxiety Disorders Unit at Seoul St. Mary's Hospital, The Catholic University of Korea, and who met DSM-IV diagnostic criteria for nonpsychotic depressive disorder as a principal diagnosis were recruited consecutively. Diagnosis was determined by a psychiatrist using semi-structured diagnostic interviews from the Mini-International Neuropsychiatric Interview (M.I.N.I) (Sheehan et al., 1998). Eligibility criteria included being 18–65 years of age and literate in Korean. Exclusion criteria included a lifetime diagnosis of psychotic disorder, bipolar disorder, mental retardation, and any mental disorder due to a general medical condition. We also excluded patients with a primary personality disorder diagnosis and patients who were primarily treated with respect to this personality disorder. A total of 622 outpatients who met inclusion criteria consented to participate in this study. Analyses were restricted to those who completed all study measures, thus the final sample was comprised of 585 patients. All subjects provided written informed consent. Study procedure was approved by the Institutional Review Board of the Ethics Committee of Seoul St. Mary's Hospital at the Catholic University of Korea.

2.2. Measurements

2.2.1. Demographics and psychiatric symptoms

During semi-structured diagnostic interviews from the Mini-International Neuropsychiatric Interview (M.I.N.I) patients were asked about demographic information such as years of formal education, marital status, and employment status.

Regarding psychiatric symptoms, we assessed participant depression and anxiety symptoms using Korean versions of the Beck Depression Inventory (BDI) (Beck et al., 1961) and the State-Trait Anxiety Inventory (STAI) (Spielberger and Luchene, 1970). The Korean versions of the MINI (Yoo et al., 2006), the BDI (Lee et al., 1995) and STAI (Hahn et al., 1996) have been well validated. In the present study, BDI (Cronbach's α=.916) and STAI (Cronbach's α=.963) scores showed good internal consistency.

2.2.2. Childhood trauma

Childhood abuse and neglect were assessed using the Childhood Trauma Questionnaire (CTQ) (Bernstein and Fink, 1998), a 28-item self-report inventory assessing five types of trauma experienced by a child or teenager: emotional, physical, and sexual abuse and emotional and physical neglect. Items are rated on a 5-point frequency scale (1=never true to 5=very often true) and summed to yield a total score for each type of trauma, ranging from 5 to 25, with higher scores indicating greater severity. The Korean version of the CTQ has also been validated (Kim et al., 2011). In the present study, the CTQ total score displayed good internal consistency (Cronbach's α=.923). Cronbach's α for emotional abuse, emotional neglect, physical abuse, physical neglect and sexual abuse were .875, .929, .888, .615 and .847, respectively.

2.2.3. Cognitive emotion regulation strategies

The Cognitive Emotion Regulation Questionnaire (CERQ) was used