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NEUROPSYCHOLOGICAL IMPLICATIONS OF CHILD SEXUAL ABUSE: A LITERATURE REVIEW

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ABSTRACT

As reported in the literature, childhood maltreatment may impair proper cognitive development, which in later years can cause significant and lasting damage. The purpose of this study is to conduct a systematic review of the studies that link alterations in executive functions and sexual abuse in childhood. The sample involved articles indexed in PubMed and Web of Science that were identified through a selection of different keywords. The 430 articles found were finally reduced to nine that met our inclusion criteria. There are few studies presenting results on the impact of this type of maltreatment. Besides, it calls for future studies that include variables that have not been considered in previous *studies.*

Keywords: Child sexual abuse. Childhood development. Psychological stress. Executive function. Child maltreatment.

INTRODUCTION

Child maltreatment can modify both the brain's function and its structure (Cohen, Grieve, Hoth, Paul, Sweet, Tate et al., 2006; Dannlowski, Stuhrmann, Beutelmann, Zwanzger, Lenzen, Grotegerd et al., 2012; De Bellis, 2005; Grassi-Oliveira, Ashy, & Stein, 2008; Grassi-Oliveira, Gomes, & Stein, 2011; Lupien, McEwen, Gunnar, & Heim, 2009; Navalta, Polcari, Webster, Boghossian, & Teicher, 2006; Yates, Carlson, & Egeland, 2008), altering the path of its development, increasing the risk of mental disorders in later years, and impacting on the neurocognitive function (Pluck, Lee, David, Macleod, Spence, & Parks, 2011; Davis, Moss, Nogin, & Webb, 2015). The most common deficits observed refer to language, visuospatial ability, intelligence, motor skills, and executive functions (Davis, Moss, Nogin, & Webb, 2015). These impairments in neurodevelopment may lead to problems of a psychosocial, academic, behavioural, and neuropsychological nature (Pluck, Lee, David, Macleod, Spence, & Parks, 2011; Davis, Moss, Nogin, & Webb, 2015), as well as to affective deficits (De Bellis, Hooper, Spratt, & Woolley, 2009; De Bellis, Woolley, & Hooper, 2013; Vasilevski & Tucker, 2016; Veltman & Browne, 2001). Although there are studies that do not find any kind of cognitive impairment caused by child maltreatment (Jacobs, Kennedy, & Meyer, 1997; Veneziano, Veneziano, LeGrand, & Richards, 2004), the vast majority report a significant relationship between the two variables (De Bellis, Hooper, Spratt, & Woolley, 2009; Spann, Mayes, Kalmar, Guiney, Womer, Pittman et al., 2012). The impact of child maltreatment among adolescents may be seen in tasks that require cognitive flexibility, divided attention, working memory, and planning skills (Spann, Mayes, Kalmar, Guiney, Womer, Pittman et al. 2012, Veneziano, Veneziano, Legrand, & Richards, 2004; Mezzacappa, Kindlon, & Earls, 2001), while this impact among adults is also readily apparent in task-solving problems (Navalta, Polcari, Webster, Boghossian, & Teicher, 2006; Brandes, Ben-Schachar, Gilboa, Bonne, Freedman, & Shalev, 2002; Stein, Kennedy, & Twamley, 2002; Twamley, Hami, & Stein, 2004). The numerous perspectives and findings reported in different studies entail the need to synthesise the evidence in order to reach robust conclusions that encompass information about the state-of-the-art.

The hypothalamic-pituitary-adrenal axis (HPA) is the main system involved in stress response because its activation increases the production of glucocorticoids (GCs), which in turn link up to their specific receptors all over the brain. The activation of the complex of GC receptors acts as a transcription factor that can have a negative effect on the regulation of the gene expression. An increase in GC production due to stress may impact upon the structure and function of the cerebral

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