

Research Article

Effects of Sexual Abuse on Cognitive Function in College student

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ORCIDDewi Rosiana: <https://orcid.org/0000-0002-9221-5361>**Abstract.**

Sexual abuse is a grave societal issue, both due to its prevalence and its long-lasting consequences. In the realm of education, victims of sexual abuse often face obstacles in achieving optimal academic performance. Recently, the effects of sexual abuse on victims have garnered increased attention, particularly concerning cognitive function. In adult sexual abuse victims, deficits in short-term verbal memory have been observed, along with impaired inhibitory capacity and difficulties in verbally mediated higher cognitive abilities. Additionally, distractibility and impaired sustained attention have been identified in abused adults. This article seeks to explore the existing literature and research findings pertaining to the impact of sexual abuse on cognitive function, specifically among college students. College students undergo significant career development tasks, which necessitate robust cognitive function. The review incorporates empirical studies relevant to the effects of sexual abuse on cognitive function, while also considering the implications of these findings for future research.

Keywords: sexual abuse, cognitive function, college student

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1. Introduction

Emerging adults, aged 18 to 25 years old, require education beyond high school to transition to a stable, secure adulthood. Sexual abuse, trauma, and victimization, have been shown to negatively affect academic functioning and educational attainment during childhood and adolescence. Despite this, many emerging adults who have experienced these adverse events also show remarkable resilience. Understanding both maladaptation and resilience among emerging adults will inform efforts to increase academic success and post-secondary educational attainment.

During the period of transition from age 18–25, known as emerging adulthood, academic functioning, educational outcomes, and intellectual, social, and emotional ability combine to lead to life-altering consequences (De Jong et al., 2015). While the transition to college can be risky, new opportunities for success and relationships in

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a new social and academic setting can bring new opportunities for growth and new domains for developing competence (Arnett, 2000).

Attaining a post-secondary credential is increasingly important in preparing for adult roles and developing the skills needed to enter a career that pays well enough to support a household. According to the U.S. Bureau of Labour Statistics (Torpey, 2019), median weekly earnings for those with bachelor's degrees are 40.2% higher than those with only a high school diploma. Median weekly earnings for those with only a high school diploma is 20.6% higher than those with less than a high school education. Unemployment rates also decrease as educational attainment increases, with 1.7% unemployment for those with doctoral degrees and 3.7% unemployment for those with a high school education only. Mitchell, et. Al (2021) synthesize literature on associations between child sexual abuse and academic functioning and educational outcomes in emerging adults and college students, including possible social, emotional, and cognitive mediators. Individuals who are sexually abused as children are less likely to attend and graduate from college, to do poorly academically compared to non-abused peers, and to struggle with adjusting to college. Jordan et al. (2014) found that severity of abuse, as severity of sexual victimization increased, the association between sexual victimization and GPA became more significant. Other research, Himelein (1995) found that abused and non-abused women did not differ significantly on any academic variables.

To our knowledge, there has not been a review of the literature focusing on later cognitive functioning on individuals who are sexually abused during emerging adulthood. Evidence suggests that the early-life disadvantage, in particular psychological problems, is associated with worse cognitive function in late life (Brown, 2010). The positive association observed between sexual abuse in childhood and cognitive function in late life contradicts the evidence of a damaging effect of early adversity on mental health in later years (Feeney et, et.al, 2013). However, little is known about the impact of specific stressful life events on cognitive functioning in emerging adulthood, especially college student.

1.1. Effects of Sexual Abuse

Child sexual abuse (CSA) is a serious social problem, due to both its high incidence and its long-term consequences. A review of the vast array of studies on the long-term effects of CSA reveals numerous psychological, social, and behavioural difficulties in adults, ranging from poor self-esteem and depression to sexual disorders and post-traumatic

stress disorder (PTSD). Cantón-Cortés & Cantón (2010) found that participants who had been victims of CSA showed significantly higher PTSD scores and lower approach coping strategies scores. However, differences in avoidance coping strategies between groups were not consistent and did not always follow the expected direction. Only the use of avoidance coping strategies was related to PTSD, participants who used these showing higher scores. The effects of avoidance strategies were stronger in continued than in isolated abuse, in intrafamilial than in extrafamilial abuse and in CSA victims than in non-victims. Some authors have studied individual differences in the cognitive processing of the abusive experience, such as causal attributions (Feiring, Taska, & Chen, 2002), feelings of stigma (Coffey, Leitenberg, Henning, Turner, & Bennett, 1996), and coping strategies (Spaccarelli, 1994; Wright, Crawford, & Sebastian, 2007), that seem to have an influence on recovery from CSA. The collaborative program between the school and parents in carrying out Islamic sex education should include: (1) objectives; (2) materials; (3) method; (4) media, and (4) child protection from sexual violence so that it can be minimized (Suhardini & Afrianti, 2017).

1.2. Neurologic responses to Abuse

Childhood sexual abuse involve persistent safety and boundary violations, are initiated at young ages, and can span several years, included behaviour and psychological problems such as aggressive behaviour, depression, dissociation, and low self-esteem (Trickett, et.al, 2001).Such conditions are the most stressful that a child can endure. Increasing knowledge through Islamic sex education in early childhood must be learned by teachers (Erhamwilda et al., 2022).

Stress stimulates neurologic responses across both sympathetic and endocrine systems.The physiologic response of children with history of trauma and with PTSD symptoms may be characterized by heightened adrenal activity. The hypothalamic-pituitary-adrenal (HPA) axis has been implicated in the pathophysiology of posttraumatic stress disorder (PTSD). Basal cortisol levels in children exposed to trauma and experiencing PTSD symptoms may contribute to the understanding of the role of this axis in PTSD (Carrion, et. Al, 2022). Cortisol activity, indicating possible dysregulation in these neuroendocrine systems.

There is different Brain activity during the recall of traumatic memories. Schiffer, et. Al (1995) measured auditory probe evoked potential attenuation as an index of hemispheric activity in 10 adults with a history of childhood trauma and 10 matched without such history while they recalled a neutral memory and then a traumatic memory. There were

prominent group differences in degree of cerebral laterality between memory tasks. The trauma group had a significant left dominant asymmetry during the neutral memory, which markedly shifted to the right during the unpleasant memory. Normal control Ss did not display a significant asymmetry during either task, nor did they show a significant shift between tasks.

1.3. Cognitive function

Exposure to childhood sexual abuse may be a significant risk factor for cognitive performance and achievement deficits for victims. Noll et.al (2010) found that receptive language did not differ between participants who experienced childhood sexual abuse and non-abused participants at the initial assessment point in childhood; however, a significant group by time interaction was observed across development with abused females (1) acquiring receptive language at a significantly slower rate throughout development and (2) achieving a lower overall maximum level of proficiency. Significant differences in receptive language scores emerged as early as mid-adolescence.

Deficits in short-term verbal memory have been observed in adults with childhood sexual abuse. Young adults with childhood sexual abuse would have problems with memory recall. Exposure to stress has been associated with alterations in memory function, and we have previously shown deficits in short-term verbal memory in patients with a history of exposure to the stress of combat and the diagnosis of posttraumatic stress disorder (PTSD). Bremner, et. Al (1995) investigates short-term memory function in adult survivors of childhood abuse. Adult survivors of childhood abuse had significantly lower scores on the WMS Logical component for immediate and delayed recall in comparison to normal subjects, with no difference in visual memory, as measured by the WMS or the SRT, or IQ, as measured by the WAIS-R. Deficits in verbal memory, as measured by the WMS, were associated with the severity of abuse, as measured by a composite score on the ETI. The findings suggest that childhood physical and sexual abuse is associated with long-term deficits in verbal short-term memory. These findings of specific deficits in verbal (and not visual) memory, with no change in IQ, are similar to the pattern of deficits that we have previously found in patients with combat-related PTSD.

1.4. College Academic Performance

Sexual victimization, including child sexual abuse and adolescent/adult sexual assault, is a risk factor for poorer college academic performance. There are also relationships between posttraumatic stress disorder (PTSD) symptomatology and college persistence. In fact, there are variations in the results of research on the effects of sexual violence on student academic performance. Research results imply that gender influences how much the impact of sexual violence on academic performance. Male and female college students face sexual violence in different ways, so that the impact of sexual violence on their academic performance is different. Littleton, et. al (2020) studied college men's sexual assault experiences, and found that 43% ($n = 19$) said the sexual assault had a long-term negative impact, whereas 52% ($n = 23$) reported a minimal or neutral impact. Baker, et.al (2016) examined whether exposure to sexual victimization in college women predicted poorer college academic performance. In study 1, sexual victimization predicted poorer cumulative end-of-semester grade point average (GPA) while controlling for well-established predictors of academic performance. In study 2, Sexual victimization predicted students' GPA in their final term at the university above the contributions of well-established academic predictors, and it was the only factor related to leaving college. These findings highlight the importance of expanding the scope of outcomes of sexual victimization to include academic performance, and they underscore the need to assess sexual victimization and other adverse experiences on college campuses to target students who may be at risk of poor performance or leaving college.

Boyratz, et. al (2013), found PTSD symptomatology was not significantly associated with academic achievement or persistence for males. For trauma-exposed females, after controlling for academic and nonacademic factors, higher levels of PTSD symptomatology in the 1st semester of college were associated with increased likelihood of leaving college prior to the end of the 2nd year of college; the relationship between the 2 variables was partially mediated by 1st-year grade point average (GPA). In addition to PTSD symptomatology, for trauma-exposed females, being a student at a predominantly White institution and entering college with low high school GPA were identified as risk factors for low academic achievement and college dropout; on the other hand, involvement in on-campus activities and higher levels of perceived academic integration in the 1st semester were associated with higher 1st-year GPA, which, in turn, was related to increased likelihood of remaining in college.

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