

UPDATE

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The Relationship of Trauma and Intelligence in Troubled Teens

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A recently published study¹ based on a collaborative effort between Four Winds Hospitals and the University of Miami Miller School of Medicine has examined the relationship between a history of abuse and neglect in adolescent psychiatric patients and their intellectual functioning. While prior studies have looked at the relationship between post-traumatic stress disorder (PTSD) and cognitive functioning, traumatic experiences are very common among psychiatric patients but full blown PTSD is a relatively infrequent outcome of these experiences. It is not yet clear what relationship traumatic experiences – even if they do not produce PTSD – might have to a victim’s intellectual functioning. Moreover, the studies that have been conducted have often focused on adult trauma experiences (e.g., combat exposure) and have not specifically examined the kinds of maltreatment to which children are more commonly exposed.



In order to examine this relationship, information was drawn from the records of 733 psychological assessments conducted as part of the standard clinical care of 11-17 year old inpatients at Four Winds Hospitals. Their IQ test performance (WISC/WAIS), achievement test performance (WIAT), and scores on the Childhood Trauma Questionnaire (CTQ) were examined, along with their age, sex, and clinical diagnoses at discharge. The CTQ² is a very widely used and well validated measure of childhood maltreatment that provides separate scores for Physical Abuse, Physical Neglect, Sexual Abuse, Emotional Abuse, and Emotional Neglect that was developed, in part, using data collected at Four Winds. The CTQ² is routinely included in the psychological assessments of adolescent patients at Four Winds.

The principle findings of this study were that self-reported histories of physical and sexual abuse were associated with lower intellectual functioning, but histories of physical neglect, emotional abuse, and emotional neglect were not.

Family histories of substance abuse were associated with greater abuse and neglect, and also associated with lower intellectual functioning, and the association of family substance abuse and lower intellectual functioning was independent of the effects of physical or sexual abuse on intelligence. Interestingly, while a history of abuse was associated with lower intellectual functioning, a diagnosis of PTSD was not.

Like most studies of complex human phenomena, this finding of a correlation between a history of abuse, even if it does not produce PTSD, and poorer intellectual functioning raises more questions than it answers. The most important of these is: What is the reason for this correlation? Is there a simple direct relationship? For example, are less

intellectually capable children more likely to be abused; or, it is possible that being abused interferes with intellectual development? There is also the possibility of a more indirect relationship. Intelligence is one of the most heritable of all human traits. Is it possible that parents that tend to abuse their children are less intellectually capable and they pass this limitation on to their children? Also, intellectual ability is highly correlated with occupational success, income, and the quality of the environment in which one lives. Abusive and traumatic experiences occur more frequently in economically disadvantaged communities, while access to the kinds of resources that might reduce the impact of traumatic experiences (e.g., mental health services) is more limited in those communities.

All of these are plausible explanations and there is currently some research supporting each; however, in each case that support is incomplete and not yet entirely convincing. As is the case for most relationships involving complex human behaviors, it is very likely that all of these explanations play some role and there are likely to be other factors at play that have not yet been considered.

In medicine and the social sciences no finding can be considered meaningful until it has been replicated across multiple settings and

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groups. However, if the relationship between experiences of abuse and intellectual development can be confirmed it may help us to better understand the factors that increase the risk of abuse, identify variables that influence the impact abusive experiences on children's intellectual growth, and develop interventions that reduce or even reverse the effects that abusive experiences have on children.

Until this relationship is confirmed through additional research and the reasons for it are fully understood the following suggestions would appear to be appropriate for those in clinical practice:

- Since intellectual limitations may increase a minor's risk of abuse.
 - Every patient, particularly minors, should always be assessed for a history of physical or sexual abuse.
 - Particular attention should be given to the possibility of abuse when a patient appears to be of below average intellectual abilities or likely to suffer from some cognitive limitation (e.g., learning disability, attentional problem, etc.).
 - This assessment should be conducted with an appreciation of the effect that intellectual or cognitive limitations may have on this process.
- Since it is possible that a history of physical or sexual abuse may adversely affect subsequent intellectual and cognitive development.

- The assessment of patients who are known to have suffered physical or sexual abuse as minors should include an assessment of their intellectual abilities and cognitive functioning.
- This may be limited to a more informal assessment based on interviews and/or a review of school records, but consideration should be given to the feasibility of a more rigorous psychometric assessment.

An appreciation of the relationship between intellectual level and abuse history may aid in the detection of abuse that might otherwise be overlooked; and it is possible that prompt intervention for victims of abuse may limit adverse effects on their intellectual growth and cognitive development that may occur as a result of these experiences.

¹Sadeghpour, A., Pogge, D.L., O'Donoghue, E.O., Bigdeli, T., Rothman, A.O., & Harvey, P.D. (2023) Intellectual performance correlates of trauma exposure in adolescent psychiatric inpatients. *Psychiatry Research*, <https://doi.org/10.1016/j.psychres.2023.115231>

²Bernstein, D., Ahluvalia, T., Pogge, D., & Handelsman, L. (1997). Validity of the Childhood Trauma Questionnaire in an adolescent psychiatric population. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36 (3), 340-348. <https://doi.org/10.1097/00004583-19973000-00012>

About Four Winds . . . *Four Winds Hospitals are located on two serene campuses in New York State. Four Winds Westchester is 50 minutes north of midtown Manhattan. Four Winds Saratoga is located in Saratoga Springs, 30 minutes north of Albany. Four Winds Hospitals is a leading provider of specialized inpatient and outpatient behavioral health services for children, adolescents and adults.*

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