

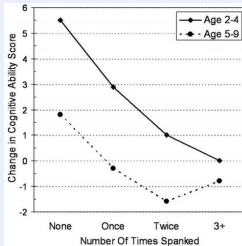
THE SCIENCE

Exposure to harsh corporal punishment over time has been found to decrease the **total gray matter volume** in a child's brain. The three specific areas of the brain found to be affected were: the **dorsolateral prefrontal cortex**, the **right medial frontal gyrus**, and the **right anterior cingulate gyrus**. Damage to these areas has the potential to increase a child's risk of experiencing many things including "depression, aggression and addictive behaviors."

1. Tomoda A, Suzuki H, Rabi K, Sheu YS, Polcari A, Teicher MH. Reduced prefrontal cortical gray matter volume in young adults exposed to harsh corporal punishment. *Neuroimage*. 2009;47 Suppl 2(Suppl 2):T66-T71.

Researchers at the **University of Texas at Austin** and the **University of Michigan** have concluded that there is "**no evidence that spanking is associated with improved child behavior.**" Instead, spanking was found to be associated with more detrimental outcomes for children, such as aggression, decreased cognitive ability, mental health issues, and low self-esteem, among others.

2. Gershoff ET, Grogan-Kaylor A. Spanking and child outcomes: Old controversies and new meta-analyses. *J Fam Psychol*. 2016;30(4):453-469.



In a 4 year research study from the **University of New Hampshire** and the **Prevention Research Center**, scientists found that the more a child is spanked, "the lower the child's cognitive ability score four years later."

3. Straus, M. & Paschall, M.J. Corporal punishment by mothers and development of children's cognitive ability: A longitudinal study of two nationally representative age cohorts. (2009). *J Aggress Maltreat Trauma*. 2009;18(5): 459-485.

Corporal punishment, a common type of physical discipline, is defined as "the use of physical force with the intention of causing a child to experience pain but not injury for the purpose of correction or control of the child's behavior."

4. Straus MA, Sugarman DB, Giles-Sims J. Spanking by parents and subsequent antisocial behavior of children. *Arch Pediatr Adolesc Med*. 1997;151(8):761-767.

TOXIC STRESS is considered to be the "**most dangerous form of stress response**" that our bodies can experience. Examples of behaviors that cause this type of stress are **child abuse, neglect, and parental substance abuse**. Toxic stress has the capability to change the structure and function of a child's brain **for the rest of their lives**.

5. Shonkoff JP, Garner AS; Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*. 2012;129(1):e232-e246.

The effects of spanking have been found to be "highly correlated and reflect a similar underlying process" as the effects of physical and emotional abuse. Additionally, being spanked as a child "was associated with **increased likelihood suicide attempts, moderate to heavy drinking, and street drug use in adulthood.**"

6. Afifi TO, Ford D, Gershoff ET, et al. Spanking and adult mental health impairment: The case for the designation of spanking as an adverse childhood experience. *Child Abuse Negl*. 2017;71:24-31

For alternatives to spanking: www.stopspanking.org
To join the No Hit Zone movement: www.nohitzzone.com
Become a certified No Hit Zone advocate today!

