



HHS Public Access

Author manuscript

Child Abuse Negl. Author manuscript; available in PMC 2021 March 22.

Published in final edited form as:

Child Abuse Negl. 2017 September ; 71: 24–31. doi:10.1016/j.chiabu.2017.01.014.

Spanking and adult mental health impairment: The case for the designation of spanking as an adverse childhood experience

Tracie O. Afifi^{a,*}, Derek Ford^b, Elizabeth T. Gershoff^c, Melissa Merrick^d, Andrew Grogan-Kaylor^e, Katie A. Ports^f, Harriet L. MacMillan^g, George W. Holden^h, Catherine A. Taylorⁱ, Shawna J. Lee^j, Robbyn Peters Bennett^k

^aDepartments of Community Health Sciences and Psychiatry, University of Manitoba, Canada

^bDivision of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, USA

^cDepartment of Human Development and Family Sciences, University of Texas at Austin, USA

^dDivision of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, USA

^eSchool of Social Work, University of Michigan, USA

^fDivision of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, USA

^gDepartment of Psychiatry and Behavioural Neurosciences and Department of Pediatrics, McMaster University, Hamilton, Canada

^hDepartment of Psychology, Southern Methodist University, Dallas, TX, USA

ⁱDepartment of Global Community Health and Behavioral Sciences, Tulane University School of Public Health and Tropical Medicine, USA

^jSchool of Social Work, University of Michigan, USA

^kChild Mental Health Specialist, Psychotherapist Private Practice, Portland, OR, USA

Abstract

Adverse Childhood Experiences (ACEs) such as child abuse are related to poor health outcomes. Spanking has indicated a similar association with health outcomes, but to date has not been considered an ACE. Physical and emotional abuse have been shown in previous research to correlate highly and may be similar in nature to spanking. To determine if spanking should be considered an ACE, this study aimed to examine 1) the grouping of spanking with physical and emotional abuse; and 2) if spanking has similar associations with poor adult health problems and accounts for additional model variance. Adult mental health problems included depressive affect, suicide attempts, moderate to heavy drinking, and street drug use. Data were from the CDC-Kaiser ACE study ($N = 8316$, response rate = 65%). Spanking loaded on the same factor as the physical and emotional abuse items. Additionally, spanking was associated with increased odds of suicide

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

*Corresponding author. tracie.afifi@umanitoba.ca (T.O. Afifi).

attempts (Adjusted Odds Ratios (AOR) = 1.37; 95% CI = 1.02 to 1.86), moderate to heavy drinking (AOR) = 1.23; 95% CI = 1.07 to 1.41), and the use of street drugs (AOR) = 1.32; 95% CI = 1.4 to 1.52) in adulthood over and above experiencing physical and emotional abuse. This indicates spanking accounts for additional model variance and improves our understanding of these outcomes. Thus, spanking is empirically similar to physical and emotional abuse and including spanking with abuse adds to our understanding of these mental health problems. Spanking should also be considered an ACE and addressed in efforts to prevent violence.

Keywords

Spanking; Child abuse; Physical abuse; Emotional abuse; Adverse childhood experiences (ACEs); Alcohol; Suicide attempts; Drug use

1. Introduction

A growing body of literature has examined the long-term impacts of adverse childhood experiences (ACEs) on poor adult health outcomes. The adverse experiences assessed in the original ACEs study included child maltreatment (i.e., physical abuse, emotional abuse, sexual abuse, physical neglect, emotional neglect, and exposure to mother being treated violently) and household challenges (i.e., parental divorce or separation, parental incarceration, and a household member with substance abuse problems, mental illness, and/or suicide attempt). Typically research in this area has used an index that combines both child maltreatment ACEs and ACEs related to household challenges to create a cumulative count of how many ACEs an individual has experienced (Dube et al., 2001; Dube, Felitti, Dong, Giles, & Anda, 2003; Felitti et al., 1998). ACEs are common in North America, with a majority of adults reporting that they experienced at least one ACE (52.1%–67.3%), two or more ACEs (25.6%–41.7%), and even as many as four or more ACEs (6.2%–16.3%) (Afifi et al., 2011; Dong et al., 2004; Dube et al., 2001; Dube, Anda, Felitti, Edwards, & Croft, 2002; Dube, Anda, Felitti, Edwards, & Williamson et al., 2002; Dube, Felitti, Dong, Chapman, Giles, & Anda et al., 2003; Dube, Felitti, Dong, & Giles et al., 2003; Felitti et al., 1998).

Although these studies included questions about exposure to physical abuse, which was defined as pushing, grabbing, shoving, slapping, as well as hitting so hard to leave marks or cause injury; to date, spanking has not been included as an ACE. This is an important limitation because, although spanking is common, normative, and legal in North America (Clément & Chamberland, 2014; Lee et al., 2014; Straus & Stewart, 1999; Zolotor, Robinson, Runyan, Barr, & Murphy, 2011), the practice of spanking as a form of discipline has been found to be potentially harmful (Altschul, Lee, & Gershoff, 2016; American Academy of Child and Adolescent Psychiatry, 2012; Gershoff, 2013; Gershoff & Grogan-Kaylor, 2016; Gershoff, 2002; Lee, Taylor, Altschul, & Rice, 2013; Wolraich et al., 1998) and is now banned in 51 countries or areas worldwide (Global Initiative to End Corporal Punishment of Children, 2016). Further examination of spanking, alongside child maltreatment ACEs, also will help to inform the United Nations Sustainable Development

Goals (SDG), specifically the goals to end all forms of violence against children and to promote well-being for all across the lifespan (United Nations, 2016).

Spanking, is typically defined as the “use of physical force with the intention of causing a child to experience pain, but not injury, for the purpose of correcting or controlling the child’s behavior” (Donnelly & Straus, 2008; p. 3). Reports of spanking have also shown an association with increased risk that a child will be physically abused (Gershoff, 2013; Global Initiative to End Corporal Punishment of Children, 2016; Lee et al., 2013; Zolotor, Theodore, Chang, Berkoff, & Runyan, 2008). Further, child protection investigations have revealed a relation between parents’ attempts to discipline their children with corporal punishment and physical abuse (Durrant, Trocmé, Fallon Barbara, Black, & Knoke, 2006). As such, it is likely that parents who rely on spanking as an acceptable and necessary approach to controlling children’s behavior may be more likely to physically abuse their children. Spanking also is associated with risk for experiencing other forms of maltreatment, including psychological aggression, sexual abuse, as well as acts of physical and emotional neglect (Lee et al., 2014; Taylor, Guterman, Lee, & Rathouz, 2009). Previous research has indicated that harsh physical punishment including pushing, grabbing, shoving, hitting or slapping is associated with increased odds of physical abuse, sexual abuse, emotional abuse, emotional neglect, physical neglect, and exposure to intimate partner violence with the greatest odds found between harsh physical punishment and physical and emotional abuse (Afifi, Mota, Sareen, & MacMillan, under review).

Child maltreatment has been consistently associated with a broad range of mental health problems, including depression or depressed mood (e.g., Afifi, Brownridge, Cox, & Sareen, 2006; Anda et al., 2002; Chapman et al., 2004; Schilling, Aseltine, & Gore, 2007), personality disorders (Afifi et al., 2011), suicidal ideation and/or attempts (e.g., Afifi et al., 2014; Enns et al., 2006; Felitti et al., 1998), and substance use in adulthood (e.g., Afifi, Henriksen, Asmundson, & Sareen, 2012; Afifi et al., 2006; Schilling et al., 2007). Similarly, numerous studies over the past 20 years have also found spanking to be associated with similar mental health problems in childhood and adulthood, including depression or depressed mood (e.g., Fergusson, Boden, & Horwood, 2008; MacMillan et al., 1999; McLoyd, Kaplan, Hardaway, & Wood, 2007), personality disorders (Lynam, Miller, Vachon, Loeber, & Stouthamer-Loeber, 2009), suicidal ideations and/or attempts and self-injurious behaviour (Fergusson et al., 2008), and substance use (Fergusson et al., 2008; Lau et al., 2005). However, some of these studies are limited by not simultaneously accounting for other adverse childhood experiences.

Importantly, there are no studies showing that spanking enhances children’s development or physical or mental health (Durrant & Ensom, 2012; Gershoff & Grogan-Kaylor, 2016). Given that both spanking and physical abuse involve the use of physical force and the infliction of pain and are linked with similar mental health outcomes, it raises the question of whether spanking should be considered another ACE. Previous research has indicated that ACEs can be grouped into a three factor structures: a) Physical/Emotional abuse factor; Sexual Abuse factor; and Household Challenges factor (e.g., parental substance use, parental divorce) (Ford et al., 2014). Spanking may be functionally similar to the Physical/Emotional abuse factor and statistically factor together reflecting underlying processes that have created

the correlations among them Tabachnick and Fidell (2013). As well, spanking may have similar associations as a Physical/Emotional abuse factor with adult mental health impairment while contributing to additional variance in these models as indicated by significant associations over and above what is explained by a Physical/Emotional abuse factor. However, these proposition has never been tested because, to date, studies with ACEs have not included spanking. To determine if spanking should be considered an ACE, it is important to ascertain whether spanking adds to our understanding of the relation between negative childhood experiences and adult mental health impairment. Therefore, the objectives of the present study were to examine: 1) the grouping or factor structure of spanking with physical and emotional abuse; and 2) if spanking has both similar associations as the Physical/Emotional abuse factor with poor adult health problems and accounts for additional variance in the models.

2. Method

2.1. Data and sample

Data for this cross-sectional study were drawn from Wave II of the CDC-Kaiser ACE Study based on self-reports from adult members of a large healthcare maintenance organization in southern California seeking routine health checks at an outpatient clinic ($N = 8316$ ages 19–97 years; response rate 65%) (Felitti et al., 1998). The ACE Study protocol was approved by the Institutional Review Boards of the Southern California Permanente Medical Group (Kaiser Permanente), the Emory School of Medicine, and the Office of Protection from Research Risks, National Institutes of Health.

2.2. Measurements

2.2.1. Spanking.—Respondents were asked “Sometimes parents spank their children as a form of discipline. While you were growing up during your first 18 years of life how often were you spanked?” Spanking was coded as “no” if the respondent indicated that he/she was never spanked or spanked only once or twice throughout childhood; spanking once or twice was grouped with no spanking because some parents spank only once and then decide never to spank again and thus spanking is not a regular part of their parenting. Spanking was coded as “yes” if the respondent reported being spanked a few times per year, many times per year, or weekly or more.

2.2.2. Adverse childhood experiences (ACEs).—Physical and emotional abuse were assessed using the ACE questionnaire (Felitti et al., 1998), which included items from the Childhood Trauma Questionnaire (Bernstein et al., 1994). Respondents were asked “while growing up, during your first 18 years of life, how often did a parent, stepparent, or adult living in your home do the following.” Physical abuse included two questions asking if the adult: a) pushed, grabbed, shoved, slapped you or threw something at you and b) hit you so hard that you had marks or were injured? Emotional abuse included two items asking if an adult: a) swore at you, insulted you, or put you down and b) acted in a way that made you afraid that you might be physically hurt. Physical and emotional abuse were both measured using the ordinal scale of never, once or twice, sometimes, often, and very often.

2.2.3. Adult mental health impairment.

2.2.3.1. Depressed affect.: Depressed affect was assessed using the following item from the Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981): “In the past year, have you had two weeks or more during which you felt sad, blue, or depressed, or lost pleasure in things that you usually cared about or enjoyed?”

2.2.3.2. Moderate to heavy drinking.: Lifetime moderate to heavy drinker status was defined as having consumed 14 or more drinks per week for men and 7 or more drinks per week for women.

2.2.3.3. Street drug use.: Lifetime drug use was defined as responding “yes” to the question, “Have you ever used street drugs?”

2.2.3.4. Suicide attempt.: Lifetime attempted suicide was determined as a “yes” response to the question “Have you ever attempted to commit suicide?”

2.2.4. Sociodemographic covariates.—Several sociodemographic covariates included educational attainment (less than high school, high school graduate, some college, and college graduate), race/ethnicity (White, Black, Hispanic, Asian, and Other), sex (male, female), age (in years), and marital status (married/cohabitating, widowed/divorced/separated, and never married).

2.3. Statistical analysis

First, descriptive statistics and unadjusted odds ratios were computed to examine the distribution of spanking and the relationship between sociodemographic factors and the likelihood of spanking. Next, confirmatory factor analysis (CFA) was used to examine the empirical grouping of the spanking item with ACE items previously demonstrated to be indicators of a latent measure of Physical/Emotional abuse (i.e., the factor of Physical/Emotional abuse comprised of the four physical and emotional abuse items) (Ford et al., 2014). Having spanking load on the same factor as Physical/Emotional abuse would indicate highly correlated variables that reflect a similar underlying process (Tabachnick & Fidell, 2013). A single factor was specified using the spanking item in addition to each of the four physical and emotional abuse items from the ACE questionnaire as indicators in Mplus 7.0 (Muthen & Muthen, 2000), using mean- and variance-adjusted weighted least squares estimation (WLSMV). Model fit was assessed using Root Mean Squared Error of Approximation (RMSEA), Tucker-Lewis Index, (TLI), and Comparative Fit Index (CFI) with 0.08 and 0.95 used as cutoffs to indicate acceptable fit for RMSEA and TLI/CFI, respectively (Bentler, 1990; Browne & Cudeck, 1992; Hu & Bentler, 1999). Using the results from the CFA, a composite score for Physical/Emotional factor (comprised of the four physical and emotional abuse items) were then computed for each respondent in the sample by summing the responses for each of the items comprising the scale. However, the spanking item was excluded from the composite score in this analysis even though it loaded with the physical abuse and emotional abuse items. This was done in order to examine the contribution of additional variance spanking may add in the models above and beyond physical and emotional abuse in the subsequent analyses. As such, a series of nested

sequential adjusted logistic regression models were estimated to examine: 1) the associations among spanking and each of the four adult mental health impairment outcomes (Model 1); 2) the associations of Physical/Emotional abuse factor (without the inclusion of the spanking item) with the four adult mental health impairment outcomes (Model 2); and 3) if both spanking and Physical/Emotional abuse factor were found to be individually associated with an outcome. That is, when both were entered simultaneously into the same model, does spanking remain significantly associated with the adult mental health impairment problem over and above the variance accounted for by Physical/Emotional abuse (Model 3)? These models will help us to understand both the shared and unique variance spanking and Physical/Emotional abuse contribute to the models and our understanding of adult mental health problems. All models were adjusted for the respondent's age, race/ethnicity, educational attainment, and marital status.

3. Results

In the study sample, 54.8% of respondents reported being spanked. Table 1 provides the distribution of sociodemographic characteristics among those who were and were not spanked. Men compared to women were more likely to experience spanking in childhood. Compared to White respondents, Black respondents and respondents indicating other ethnicity were more likely to report being spanked, while spanking was less likely among Asian respondents. Spanking was prevalent across all education levels. A history of childhood spanking was not associated with marital status in adulthood.

Results from the CFA are found in Table 2. Examination of the fit statistics and factor loadings suggested adequate fit of the model to the data (RMSEA=0.052; CFI=0.996; TLI=0.992) and acceptable factor interpretability for the physical abuse, emotional abuse, and spanking factor. Inspection of the factor loadings revealed that the spanking item was strongly related to the construct ($\lambda = 0.57$).

Table 3 displays the relations of spanking and Physical/Emotional abuse with the four adult mental health impairment outcomes, namely, depressed affect, suicide attempts, moderate to heavy drinking, and use of street drugs. Respondents reporting exposure to spanking compared to those reporting no spanking had increased odds of depressed affect, suicide attempts, moderate to heavy drinking, and street drug use while statistically adjusting for sociodemographic characteristics (Model 1). Physical/Emotional abuse (without the inclusion of the spanking item) was associated with adult impairment across the four mental health outcomes examined: depressed affect, suicide attempts, moderate to heavy drinking, and street drug use after adjusting for sociodemographic characteristics (Model 2). Given that both a history of spanking and of Physical/Emotional abuse were found to be individually associated with adult mental health problems, we next tested whether spanking maintained its association with these outcomes when adjusting for Physical/Emotional abuse factor and sociodemographic characteristics. Spanking remained significantly associated with suicide attempts, moderate to heavy drinking, and street drug use and accounted for additional variance in the model above and beyond Physical/Emotional abuse (Model 3). Further, Physical/Emotional abuse was also found to remain statistically significant in these fully adjusted model. The result from the nested sequential models indicate that spanking

and Physical/Emotional abuse have overlapping or shared variance, but also both contribute to additional unique variance indicating statistically improved models when both spanking and Physical/Emotional abuse are included.

4. Discussion

This study compared the extent to which a childhood history of spanking and a childhood history of physical and emotional abuse are linked with mental health impairments in adulthood. The first main finding is that spanking loaded on the same factor as the physical and emotional abuse items indicated these experiences are highly correlated and reflect a similar underlying process. Second, a childhood history of spanking was associated with increased likelihood suicide attempts, moderate to heavy drinking, and street drug use in adulthood, over and above their childhood experiences of Physical/Emotional abuse indicating that our understanding of adult mental health impairments is better when we consider the experience of spanking along with Physical/Emotional abuse.

These findings are consistent with the previous work indicating that spanking and physical abuse are on a continuum of violence against children (Gelles & Straus, 1988) and that there is a strong relationship between harsh physical punishment and physical as well as emotional abuse (Afifi et al., under review; Taylor et al., 2009). Additionally, the link between spanking and these other child maltreatment ACEs suggests that preventing the use of spanking may correspond with reductions in child maltreatment, which help to inform efforts for the United Nations SDG of ending all violence against children (United Nations, 2016).

Importantly, spanking empirically loaded with physical and emotional abuse items indicating similar underlying construct. Also, spanking remained associated with increased odds of adult mental and behavioral health impairment including suicide attempts, moderate to heavy drinking, and street drug use even after accounting for the experiences of Physical/Emotional abuse. Taken together, these findings show that spanking has shared variance with Physical/Emotional abuse, but also accounts for additional unique variance for understanding the relationships with suicide attempts, moderate and heavy drinking, and street drug use. Therefore, including a spanking with Physical/Emotion abuse experiences would increase our understanding of these adult mental health problems.

Spanking was associated with depressed affect, but inconsistent with previous depression research, (Fergusson et al., 2008; MacMillan et al., 1999; Taillieu & Brownridge, 2013) when adjusting for Physical/Emotional abuse this finding was no longer statistically significant. It is important to note that depressed affect is not the same as a diagnosis of depression; hence any association or lack thereof between spanking and major depression cannot be determined using these data.

On the basis of the CFA findings and the associations of spanking and suicide attempts, moderate to heavy drinking, and street drug use in adulthood, spanking should be considered as an additional childhood adversity that has the potential to negatively affect mental health outcomes. Spanking and child physical abuse have been thought to exist along a continuum

of violence against children rather than as separate constructs (Coontz & Martin, 1988; Dussich & Maekoya, 2007; Österman, Björkqvist, & Wahlbeck, 2014), and the findings from this study provide evidence for such a continuum. In our sample, spanking was found to have similarities with physical and emotional abuse as indicated by significantly loading together on one statistical factor. In addition, spanking was related to similar poor outcomes as the Physical/Emotional abuse factor and the relationships between spanking and suicide attempts, moderate to heavy drinking, and street drug use remained above and beyond the effects of also experiencing Physical/Emotional abuse. This means that in addition to the shared variance of spanking and Physical/Emotional abuse in these models, spanking also accounts for additional and unique variance in these models. Therefore, the inclusion of spanking along with Physical/Emotional abuse in these models furthers our understanding of the relationships with poor adult mental health impairment. The current findings add to the evidence that spanking is potentially harmful and should be considered an ACE.

Despite the strengths of the present study, particularly the inclusion of spanking with Physical/Emotional abuse, four mental health outcomes, and a large sample, it also has several limitations. First, the data are cross-sectional and retrospective, precluding any findings about temporal or causal relationships. However, evidence suggests that retrospective recall of adverse events in survey data can be valid and reliable (Hardt, Sidor, Bracko, & Egle, 2006; Hardt, Vellaisamy, & Schoon, 2010; Hardt & Rutter, 2004). Second, both spanking exposure and mental health outcomes were based upon single self-report and retrospective items. For example, depressive affect was assessed using one item rather than a series of questions necessary to generate an algorithm of depression. More comprehensive assessment of mental health conditions using several items, for example, in the context of diagnostic assessments would have been preferable. Similarly, information on spanking was limited. Third, the data were collected in 1997 (Felitti et al., 1998) making the data approximately 20 years old. Nevertheless, these data are unique in that they are of high quality as they were sampled from a large HMO, have a large sample size and good response rate, and assess several ACEs along with spanking and poor mental health outcomes. These data provide a unique opportunity to address important knowledge gaps. In addition, the use of spanking and the debate regarding the safety of spanking continues today, making these data topical and of current interest. Our focus has been on the relationships among spanking and exposures previously identified as ACEs, as well as the association between spanking and poor mental health outcomes – independent of the era within which the spanking occurred.

In summary, these findings provide strong support that spanking can be considered yet another form of early adversity, based on the loading on the same factor structure with physical and emotional abuse items and the fact that spanking was significantly related to adult health impairments above and beyond Physical/Emotional abuse. The relationship between reports of being spanked in childhood and mental and behavioral health impairment in adulthood are similar in direction to the associations between Physical/Emotional abuse and adult suicide attempts, moderate to heavy drinking, and street drug use. Therefore, these results provide strong support for consideration of spanking as an ACE. Researchers have noted that expanding the types of ACEs included in research could increase our understanding of poor outcomes and strengthen ACE studies (Finkelhor, Shattuck, Turner, &

Hamby, 2013). The association between spanking and mental health outcomes has been examined in prior studies (Durrant & Ensom, 2012; Gershoff & Grogan-Kaylor, 2016; Gershoff, 2002), but the current study advances knowledge with the use of a large sample, and the ability to examine the factor structure of spanking, physical abuse, and emotional abuse, and the relationships between spanking and adult mental health impairment while adjusting for Physical/Emotional abuse factor and sociodemographic characteristics.

Despite the high prevalence of spanking and continued support for its use among some sectors in the US, the use of spanking as a form of child discipline has been heavily scrutinized over the past several years. The findings from this study along with the preponderance of research evidence (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Afifi et al., 2006; Altschul et al., 2016; Durrant & Ensom, 2012; Gershoff & Grogan-Kaylor, 2016; Gershoff, 2002) indicate that spanking is associated with an increased likelihood of important mental health and behavioral problems in adulthood. For this reason, it is important to help parents avoid physical punishment and instead use safe and effective ways to discipline and guide their children (see for example Chavis et al., 2013; Durrant, 2007; Sanders, 2008).

One implication of this work is that it reminds us that it is important to prevent not just child maltreatment, but also harsh parenting before it occurs. This can be achieved by promoting evidence-based parenting programs and policies designed to prevent early adversities, and associated risk factors. Prevention should be a critical direction for public health initiatives to take. This includes a need to promote positive parenting through education and legislation to reduce the use of corporal punishment, which includes spanking (Fortson, Klevens, Merrick, Gilbert & Alexander, 2016). Assuring safe, stable, nurturing relationships and environments for all children is essential for healthy growth and development, effective parenting in the future parents, safer communities, and stronger economies (The Centers for Disease Control and Prevention, 2014; Fortson et al., 2016).

Acknowledgements

We would like to thank Ms. Sarah Turner and Ms. Tamara Taillieu for assistance with this manuscript.

References

- Afifi TO, Brownridge DA, Cox BJ, & Sareen J (2006). Physical punishment, childhood abuse and psychiatric disorders. *Child Abuse & Neglect*, 30(10), 1093–1103. 10.1016/j.chiabu.2006.04.006 [PubMed: 17010436]
- Afifi TO, Mather A, Boman J, Fleisher W, Enns MW, MacMillan H, & Sareen J (2011). Childhood adversity and personality disorders: Results from a nationally representative population-based study. *Journal of Psychiatric Research*, 45(6), 814–822. 10.1016/j.jpsychires.2010.11.008 [PubMed: 21146190]
- Afifi TO, MacMillan H, Boyle M, Taillieu T, Cheung K, & Sareen J (2014). Child abuse and mental disorders in Canada. *Canadian Medical Association Journal*, 186(9), E324–E332. 10.1503/cmaj.131792 [PubMed: 24756625]
- Afifi TO, Mota N, Sareen J & MacMillan H (under review). The relationship between harsh physical punishment of children and further violence in childhood and adulthood.

- Afifi TO, Henriksen CA, Asmundson GJ, & Sareen J (2012). Childhood maltreatment and substance use disorders among men and women in a nationally representative sample. *Canadian Journal of Psychiatry*, 57(11), 677–686. 10.1177/070674371205701105 [PubMed: 23149283]
- Afifi TO, Mota NP, Dasiewicz P, MacMillan H, & Sareen J (2012). Physical punishment and mental disorders: results from a nationally representative US sample. *Pediatrics*, 130(2), 184–192 [10.1542/peds.2011-2947]. [PubMed: 22753561]
- Altschul I, Lee SJ, & Gershoff ET (2016). Hugs, not hits: Warmth and spanking as predictors of child social competence. *Journal of Marriage and Family*, 78(3), 695–714. 10.1111/jomf.12306
- American Academy of Child and Adolescent Psychiatry. (July 30, 2012). Policy statement on corporal punishment. Retrieved from https://www.aacap.org/aacap/policystatements/2012/Policy_Statement_on_Corporal_Punishment.aspx.
- Anda R, Whitfield C, Felitti V, Chapman D, Edwards V, Dube S, & Williamson D (2002). Alcohol-impaired parents and adverse childhood experiences: The risk of depression and alcoholism during adulthood. *Psychiatric Services*, 53(8), 1001–1009. [PubMed: 12161676]
- Bentler PM (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238–246. 10.1037/0033-2909.107.2.238 [PubMed: 2320703]
- Bernstein DP, Fink L, Handelsman L, Foote J, Lovejoy M, Wenzel K, ... & Ruggiero J (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *The American Journal of Psychiatry*, 151(8), 1132–1136. [PubMed: 8037246]
- Browne MW, & Cudeck R (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, 21(2), 230–258. 10.1177/0049124192021002005
- Chapman DP, Whitfield CL, Felitti VJ, Dube SR, Edwards VJ, & Anda RF (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, 82(2), 217–225. [PubMed: 15488250]
- Chavis A, Hudnut-Beumler J, Webb MW, Neely JA, Bickman L, Dietrich MS, & Scholer SJ (2013). A brief intervention affects parents' attitudes toward using less physical punishment. *Child Abuse & Neglect*, 37(12), 1192–1201. [PubMed: 23859768]
- Clément M, & Chamberland C (2014). Trends in corporal punishment and attitudes in favour of this practice: toward a change in societal norms? *Canadian Journal of Community Mental Health*, 33(2), 13–29.
- Coontz PD, & Martin JA (1988). Understanding violent mothers and fathers: assessing explanations offered by mothers and fathers of their use of control punishment. In Hotaling GT, Finkelhor D, Kirkpatrick JT, & Straus MA (Eds.), *Family abuse and its consequences: new directions in research* (pp. 77–90). Thousand Oaks, CA: Sage Publications.
- Dong M, Anda RF, Felitti VJ, Dube SR, Williamson DF, Thompson TJ, ... & Giles WH (2004). The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse & Neglect*, 28(7), 771–784. [PubMed: 15261471]
- Donnelly M, & Straus M (2008). *Corporal punishment of children in theoretical perspective*. New Haven: Yale: University Press.
- Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, & Giles WH (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: Findings from the adverse childhood experiences study. *JAMA*, 286(24), 3089–3096. [PubMed: 11754674]
- Dube SR, Anda RF, Felitti VJ, Edwards VJ, & Croft JB (2002). Adverse childhood experiences and personal alcohol abuse as an adult. *Addictive Behaviors*, 27(5), 713–725. [PubMed: 12201379]
- Dube SR, Anda RF, Felitti VJ, Edwards VJ, & Williamson DF (2002). Exposure to abuse, neglect, and household dysfunction among adults who witnessed intimate partner violence as children: Implications for health and social services. *Violence and Victims*, 17(1), 3–17. [PubMed: 11991154]
- Dube SR, Felitti VJ, Dong M, Chapman DP, Giles WH, & Anda RF (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics*, 111(3), 564–572. 10.1542/peds.111.3.564 [PubMed: 12612237]
- Dube SR, Felitti VJ, Dong M, Giles WH, & Anda RF (2003). The impact of adverse childhood experiences on health problems: Evidence from four birth cohorts dating back to 1900. *Preventive Medicine*, 37(3), 268–277. [PubMed: 12914833]

- Durrant J, & Ensom R (2012). Physical punishment of children: Lessons from 20 years of research. *Canadian Medical Association Journal*, 184(12), 1373–1377. 10.1503/cmaj.101314 [PubMed: 22311946]
- Durrant JE, Trocmé N, Fallon Barbara MC, Black T, & Knoke D (2006). Punitive violence against children in Canada [CECW information sheet #41E]. Toronto, ON: University of Toronto, Faculty of Social Work.
- Durrant J (2007). *Positive discipline: What it is and how to do it*. Bangkok: Southeast Asia and Pacific Region: Save the children Sweden.
- Dussich JP, & Maekoya C (2007). Physical child harm and bullying-related behaviors: A comparative study in Japan, South Africa, and the United States. *International Journal of Offender Therapy and Comparative Criminology*, 51(5), 495–509. 10.1177/0306624X06298463 [PubMed: 17615440]
- Enns MW, Cox BJ, Afifi TO, De Graaf R, ten Have M, & Sareen J (2006). Childhood adversities and risk for suicidal ideation and attempts: A longitudinal population-based study. *Psychological Medicine*, 36(12), 1769–1778. [PubMed: 16999880]
- Felitti M, Vincent J, Anda M, Robert F, Nordenberg M, Williamson M, ... & Edwards B (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [PubMed: 9635069]
- Fergusson DM, Boden JM, & Horwood LJ (2008). Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect*, 32(6), 607–619. <http://dx.doi.org.proxy1.lib.umanitoba.ca/10.1016/j.chiabu.2006.12.018> [PubMed: 18565580]
- Finkelhor D, Shattuck A, Turner H, & Hamby S (2013). Improving the adverse childhood experiences study scale. *JAMA Pediatrics*, 167(1), 70–75. [PubMed: 23403625]
- Ford DC, Merrick MT, Parks SE, Breiding MJ, Gilbert LK, Edwards VJ, ... & Thompson WW (2014). Examination of the factorial structure of adverse childhood experiences and recommendations for three subscale scores. *Psychology of Violence*, 4(4), 432–444. 10.1037/a0037723 [PubMed: 26430532]
- Fortson BL, Klevens J, Merrick MT, Gilbert LK, & Alexander SP (2016). Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities. Atlanta, GA: National Center for Injury Prevention and Control. Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/can-prevention-technical-package.pdf>.
- Gelles RJ, & Straus MA (1988). *Intimate violence: The definitive study of the causes and consequences of abuse in the American family*. New York: Simon & Schuster.
- Gershoff ET, & Grogan-Kaylor A (2016). Spanking and child outcomes: old controversies and new meta-analyses [Advance online publication]. *Journal of Family Psychology*, 30(4), 453–469. 10.1037/fam0000191 [PubMed: 27055181]
- Gershoff ET (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, 128(4), 539–579. 10.1037//0033-2909.128.4.539 [PubMed: 12081081]
- Gershoff ET (2013). Spanking and child development: We know enough now to stop hitting our children? *Child Development Perspectives*, 7(3), 133–137. [PubMed: 24039629]
- Global Initiative to End Corporal Punishment of Children. (2016). States which have prohibited all corporal punishment of children. [Retrieved from <http://www.endcorporalpunishment.org/progress/prohibiting-states/>]
- Hardt J, & Rutter M (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology & Psychiatry*, 45(2), 260–273. 10.1111/j.1469-7610.2004.00218.X [PubMed: 14982240]
- Hardt J, Sidor A, Bracko M, & Egle UT (2006). Reliability of retrospective assessments of childhood experiences in Germany. *Journal Nervous and Mental Disease*, 194(9), 676–683.
- Hardt J, Vellaisamy P, & Schoon I (2010). Sequelae of prospective versus retrospective reports of adverse childhood experiences? *Psychological Reports*, 107(2), 425–440. [PubMed: 21117468]
- Hu L, & Bentler PM (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. 10.1080/10705519909540118

- Lau JT, Kim JH, Tsui H, Cheung A, Lau M, & Yu A (2005). The relationship between physical maltreatment and substance use among adolescents: A survey of 95,788 adolescents in Hong Kong. *Journal of Adolescent Health, 37*(2), 110–119.
- Lee SJ, Taylor CA, Altschul I, & Rice JC (2013). Parental spanking and subsequent risk for child aggression in father-involved families of young children? *Children and Youth Services Review, 35*(9), 1476–1485. [PubMed: 24019558]
- Lee SJ, Grogan-Kaylor A, & Berger LM (2014). Parental spanking of 1-year-old children and subsequent child protective services involvement. *Child Abuse & Neglect, 38*(5), 875–883. [PubMed: 24602690]
- Lynam DR, Miller DJ, Vachon D, Loeber R, & Stouthamer-Loeber M (2009). Psychopathy in adolescence predicts official reports of offending in adulthood. *Youth Violence and Juvenile Justice, 7*(3), 189–207. [PubMed: 22661910]
- MacMillan HL, Boyle MH, Wong MY-, Duku EK, Fleming JE, & Walsh CA (1999). Slapping and spanking in childhood and its association with lifetime prevalence of psychiatric disorders in a general population sample. *Canadian Medical Association Journal, 161*(7), 805–809. [PubMed: 10530296]
- McLoyd VC, Kaplan R, Hardaway CR, & Wood D (2007). Does endorsement of physical discipline matter? Assessing moderating influences on the maternal and child psychological correlates of physical discipline in African American families. *Journal of Family Psychology, 21*(2), 165–175. [PubMed: 17605539]
- Muthen B, & Muthen LK (2000). Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory Cclasses. *Alcoholism: Clinical and Experimental Research, 24*(6) 10.1111/j.1530-0277.2000.tb02070.x [882–891]
- Österman K, Björkqvist K, & Wahlbeck K (2014). Twenty-eight years after the complete ban on the physical punishment of children in Finland: Trends and psychosocial concomitants. *Aggressive Behavior, 40*(6), 568–581. 10.1002/ab.21537 [PubMed: 24810710]
- Robins LN, Helzer JE, Croughan J, & Ratcliff KS (1981). National institute of mental health diagnostic interview schedule: Its history characteristics, and validity. *Archives of General Psychiatry, 38*(4), 381–389. [PubMed: 6260053]
- Sanders MR (2008). Triple P-positive parenting program as a public health approach to strengthening parenting. *Journal of Family Psychology, 22*(4), 506–517. [PubMed: 18729665]
- Schilling EA, Aseltine RH Jr., & Gore S (2007). Adverse childhood experiences and mental health in young adults: A longitudinal survey. *BMC Public Health, 7*, 30 [1471–2458–7-30]. [PubMed: 17343754]
- Straus MA, & Stewart JH (1999). Corporal punishment by American parents: national data on prevalence chronicity, severity, and duration, in relation to child and family characteristics. *Clinical Child and Family Psychology Review, 2*(2), 55–70. [PubMed: 11225932]
- Tabachnick B, & Fidell L (2013). *Using multivariate statistics* (6th ed.). Pearson.
- Taillieu TL, & Brownridge DA (2013). Aggressive parental discipline experienced in childhood and internalizing problems in early adulthood. *Journal of Family Violence, 28*(5), 445–458.
- Taylor CA, Guterman NB, Lee SJ, & Rathouz PJ (2009). Intimate partner violence, maternal stress, nativity, and risk for maternal maltreatment of young children. *American Journal of Public Health, 99*(1), 175–183. 10.2105/AJPH.2007.126722 [PubMed: 19008518]
- The Centers for Disease Control and Prevention. (2014). *Essentials for childhood: Steps to create safe, stable nurturing relationships and environments*. [Retrieved from http://www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf]
- United Nations. (2016). Sustainable development knowledge platform. Retrieved from <https://sustainabledevelopment.un.org/sdgs>.
- Wolraich ML, Aceves J, Feldman HM, Hagan JF, Howard J, & Richtsmeier AJ (1998). Guidance for effective discipline. American academy of pediatrics committee on psychosocial aspects of child and family health. *Pediatrics, 101*(Pt. 1 (4)), 723–728. [PubMed: 9521967]
- Zolotor AJ, Theodore AD, Chang JJ, Berkoff MC, & Runyan DK (2008). Speak softly and forget the stick: Corporal punishment and child physical abuse. *American Journal of Preventive Medicine, 35*(4), 364–369. 10.1016/j.amepre.2008.06.031 [PubMed: 18779030]

Zolotor AJ, Robinson TW, Runyan DK, Barr RG, & Murphy RA (2011). The emergence of spanking among a representative sample of children under 2 years of age in North Carolina. *Frontiers in Psychiatry*, 236 10.3389/fpsy.2011.00036

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 1

Sociodemographic variables among childhood adversity groups.

	Not Spanked % (95% CI)	Spanked % (95% CI)	OR (95% CI)
Gender			
Female	50.95 (49.48, 52.41)	49.05 (47.59, 50.52)	1.0
Male	39.27 (37.73, 40.82)	60.73 (59.18, 62.27)	1.61 (1.47, 1.75)
Education			
Less than HS	51.97 (48.00, 55.93)	48.03 (44.07, 52.00)	1.0
HS Graduate	48.91 (46.13, 51.69)	51.09 (48.31, 53.87)	1.13 (0.93, 1.37)
Some College	43.86 (42.18, 45.53)	56.14 (54.47, 57.82)	1.38 (1.17, 1.65)
College Graduate	44.84 (43.09, 46.60)	55.16 (53.40, 56.91)	1.33 (1.12, 1.58)
Marital Status			
Married/Cohabiting	45.75 (44.49, 47.00)	54.25 (53.00, 55.51)	1.0
Widowed/Divorced/Separated	45.94 (43.52, 48.36)	54.06 (51.64, 56.48)	0.99 (0.89, 1.11)
Never Married	42.86 (38.90, 46.81)	57.14 (53.19, 61.10)	1.12 (0.95, 1.33)
Race/Ethnicity			
White	44.95 (43.71, 46.19)	55.05 (53.81, 56.29)	1.0
Black	29.91 (25.12, 34.70)	70.09 (65.30, 74.88)	1.91 (1.52, 2.43)
Hispanic	45.67 (42.44, 48.90)	54.33 (51.10, 57.56)	0.97 (0.84, 1.12)
Asian	62.29 (58.60, 65.98)	37.71 (34.02, 41.40)	0.49 (0.42, 0.58)
Other	36.84 (30.30, 43.38)	63.16 (56.62, 69.70)	1.40 (1.06, 1.87)

Note: OR=Odds Ratio; CI=Confidence Interval

Table 2

Standardized factor loadings from the CFA model.

Item Content	Physical/Emotional Abuse (λ)
Act in a way that made you afraid that you might be physically hurt?	0.90
Hit you so hard that you had marks or were injured?	0.90
Actually push, grab, shove, slap you or throw something at you?	0.87
Swear at you, insult you, or put you down?	0.80
How often were you spanked?	0.57

Model Fit: RMSEA=0.052 (CI90%: 0.044, 0.060) CFI=0.996 TLI=0.992.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 3

The associations of spanking and Physical/Emotional abuse with poor mental health outcomes.

Mental Health Outcome	Predictor	Model 1		Model 2		Model 3	
		AOR	CI95%	AOR	CI95%	AOR	CI95%
Depressed Affect	Spanking	1.25	1.11, 1.42	–	–	1.00	0.88, 1.15
	Physical/Emotional Abuse	–	–	1.23	1.18, 1.28	1.23	1.18, 1.29
Suicide Attempt (lifetime)	Spanking	2.27	1.73, 3.00	–	–	1.37	1.02, 1.86
	Physical/Emotional Abuse	–	–	1.57	1.45, 1.70	1.51	1.38, 1.65
Moderate to Heavy Drinking ¹ (lifetime)	Spanking	1.38	1.22, 1.58	–	–	1.23	1.07, 1.41
	Physical/Emotional Abuse	–	–	1.16	1.11, 1.21	1.13	1.08, 1.19
Drug Use (lifetime)	Spanking	1.65	1.44, 1.89	–	–	1.32	1.14, 1.52
	Physical/Emotional Abuse	–	–	1.26	1.21, 1.32	1.22	1.17, 1.28

Note: CI=Confidence Interval; Model 1=logistic regression model with spanking as a predictor; Model 2=logistic regression model with Physical/Emotional abuse as a predictor; Model 3=full logistic model with both spanking and emotional abuse; AOR=odds ratios adjusted for education, ethnicity, sex, age, and marital status;

¹Threshold for moderate to heavy drinking varied by gender; males=14 or more drinks per week; female=7 or more drinks per week.