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Physical punishment, childhood abuse and psychiatric disorders[☆]

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Abstract

Objectives: Physical punishment, as a means of disciplining children, may be considered a mild form of childhood adversity. Although many outcomes of physical punishment have been investigated, little attention has been given to the impact of physical punishment on later adult psychopathology. Also, it has been stated that physical punishment by a loving parent is not associated with negative outcomes; however, this theory has not been empirically tested with regard to psychiatric disorders. The main objective of the present study was to investigate three categories of increasing severity of childhood adversity (no physical punishment or abuse, physical punishment only, and child abuse) to examine whether the childhood experience of physical punishment alone was associated with adult psychopathology, after adjusting for sociodemographic variables and parental bonding dimensions.

Methods: Data were drawn from the nationally representative National Comorbidity Survey (NCS, $n=5,877$; age 15–54 years; response rate 82.4%). Binary logistic and multinomial logistic regression models were used to determine the odds of experiencing psychiatric disorders.

Results: Physical punishment was associated with increased odds of major depression (AOR=1.22; 95% CI=1.01–1.48), alcohol abuse/dependence (AOR=1.32; 95% CI=1.08–1.61), and externalizing problems (AOR=1.30; 95% CI=1.05–1.60) in adulthood after adjusting for sociodemographic variables and parental bonding

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dimensions. Individuals experiencing physical punishment only were at increased odds of adult psychopathology compared to those experiencing no physical punishment/abuse and at decreased odds when compared to those who were abused.

Conclusions: Physical punishment is a mild form of childhood adversity that shows an association with adult psychopathology.

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Introduction

The relationship between severe forms of childhood adversity (sexual abuse, physical abuse) and adult psychopathology has been well established in the literature (Kessler, Davis, & Kendler, 1997; Levitan, Rector, Sheldon, & Goering, 2003; McHolm, MacMillan, & Jamieson, 2003; Molnar, Berkman, & Buka, 2001; Molnar, Buka, & Kessler, 2001; Weiss, Longhurst, & Mazure, 1999). However, there is controversy over whether physical punishment used to discipline children is associated with negative outcomes (Andero & Stewart, 2002; Benjet & Kazdin, 2003; Gershoff, 2002; Larzelere, 2000; Straus, 1999). Some believe that physical punishment by a loving parent has no ill consequences for children (Larzelere, 2000; Rosemond, 2005), while others believe that physical punishment is a minor form of assault and may be associated with negative outcomes (Ateah, Secco, & Woodgate, 2003; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998).

Research has demonstrated that an association exists between physical punishment and dimensions of poor psychological well-being (Bachar, Canetti, Bonne, DeNour & Shalev, 1997; Straus & Kantor, 1994; Turner & Muller, 2004). These studies have made important contributions to the literature but are unable to describe the impact that physical punishment may have on the occurrence of psychiatric disorders since diagnoses of psychiatric disorder were not assessed. To date, the most comprehensive examination of the relationship between physical punishment and psychiatric disorders was conducted in a general population sample of 4,888 individuals aged 15–64 years (MacMillan et al., 1999). Psychiatric disorders were divided into anxiety disorders, major depression, alcohol abuse or dependence, and one or more externalizing problem(s). The results indicated that individuals who were physically punished sometimes or often were more likely to have an anxiety disorder, alcohol problems, and one or more externalizing disorders compared to those who were never physically punished and after adjusting for age, gender, income, and parental education. However, a limitation of the study was the inability to adjust for quality of parental relationships when investigating the association between physical punishment and lifetime prevalence of psychiatric disorders.

Several limitations exist in the research on physical punishment and psychiatric disorders. First, most samples are restricted to one or a few psychiatric disorders (Holmes & Robins, 1988). Also, few studies consider the confounding effect that child physical or sexual abuse may have on the relationship between physical punishment and psychiatric disorders. It is possible that a child who is physically punished may also experience child abuse. Fergusson and Lynskey (1997) investigated physical punishment and abuse together in a composite measure labeled physical punishment/maltreatment. While informative, this measure does not allow the impact of physical punishment or child abuse to be readily isolated. It is important to include measures of physical punishment and the co-occurrence of physical or sexual child

abuse to account for the impact child abuse may have on our understanding of psychopathology. As well, studies are often limited to small sample sizes that are not nationally representative (Holmes & Robins, 1988). Finally, some researchers suggest in the physical punishment literature that physical punishment by a loving parent is not associated with negative outcomes for the child (Larzelere, 2000; Rosemond, 2005). However, to date no study has investigated parental warmth in relation to physical punishment and the development of psychiatric disorders in adulthood.

To the best of our knowledge, this is the first study to examine physical punishment in a nationally representative sample that included standardized assessment of physical punishment (Straus, 1979), assessment of a broad range of mental disorders, and a well-established instrument to assess the quality of the parent-child relationship (Parker, Tupling, & Brown, 1979; Wilhelm, Niven, Parker, & Hadzi-Pavlovic, 2005). The main objective of the present study was to extend the current literature by investigating three categories of increasing severity of childhood adversity (no physical punishment or abuse, physical punishment only, and child abuse) to determine whether physical punishment was associated with adult psychopathology, even after adjusting for sociodemographic factors and the quality of parental relationships.

Methods

Participants

The sample was selected from the National Comorbidity Survey (NCS, $n = 5,877$), a landmark mental health study of the US general population conducted in the early 1990s (Kessler et al., 1994). The NCS assessed individuals aged 15–54 years (response rate = 82.4%) and was representative of the American population on several census indicators (i.e., age, gender, race, education, marital status, region) (Kessler et al., 1994). The University of Michigan provided ethical approval for the primary data collection of the NCS. (R.C. Kessler, personal communication, 14 March 2006). The present study was part of a program of secondary data analytic research conducted by the third author using the NCS public use dataset, and this research program has been considered exempt from institution review by the Chair of the University of Manitoba Psychology/Sociology Ethics Review committee. Details of the design of the survey have been published elsewhere (Kessler et al., 1994).

Measures

Physical punishment and child abuse. The sample was divided into three childhood adversity groups: those who did not experience physical punishment or child abuse, those who were physically punished only, and those who were physically and/or sexually abused within childhood (with or without experiencing physical punishment).

To create the three varying severity of childhood adversity groups, questions regarding physical punishment, child physical abuse, rape, and sexual molestation were asked of all the respondents. Physical punishment was measured by the minor physical assault or physical punishment item from the Conflict Tactic Scales (CTS). The CTS has been widely used and is a reliable and valid measure of family violence (Straus, 1979). Straus et al. (1998) referred to the subscale of the CTS which included: having something thrown at the individual, being pushed, grabbed, shoved, and being slapped or spanked as minor assault or corporal punishment. The respondent was asked to indicate if a parent did any of the aforementioned

actions often, sometimes, rarely, or never. Individuals with a response of often, sometimes, or rarely were considered to have experienced physical punishment as a child. These individuals were compared to those who indicated they had never been physically punished. Child physical abuse was measured by the CTS item that asked the respondents if a parent did any of the following to them: kicked, bit, hit with a fist, hit or tried to hit with something, beat up, choked, burned, or scalded. The respondent indicated whether any of the severe acts of abuse occurred never, rarely, sometimes, or often. Individuals indicating that the severe abuse occurred rarely, sometimes, or often were categorized as having experienced physical abuse during childhood. The respondents were also asked if they had been raped or sexually molested. Individuals who indicate that they had been raped or sexually molested at age 18 or younger were categorized as having experienced sexual abuse during childhood. Physical punishment, physical abuse and sexual abuse variables were combined together to create a measure of childhood adversity. The total sample size for the current analysis was 5,838, with 1,941 individuals who were not physically punished or abused during childhood, 2,744 individuals who were physically punished only as children, and 1,153 individuals who were physically and/or sexually abused. Thirty nine individuals had missing information with regard to physical punishment and/or abuse and, therefore, had to be excluded from the analysis.

Parental bonding index (PBI). The parental bonding index is a tool that assesses adult perceptions of maternal and paternal bonding experiences (Parker et al., 1979). The PBI has been proven as a valid measure of perceived parenting (Wilhelm et al., 2005). Confirmatory factor analysis was conducted on the PBI items included in the NCS and showed that a three-factor model for maternal and paternal bonding experiences was the best fit (Cox, Enns, & Clara, 2000). Reliability and robustness of the factor structures were confirmed in the analysis. The three dimensions, which were measured separately for the mother and the father, included parental warmth, protectiveness, and authoritarianism. Dichotomous variables for each of the maternal and paternal PBI factors were computed based on one standard deviation from the mean.

Psychiatric disorders. Trained interviewers using the Composite International Diagnostic Interview 1.1 (CIDI) assessed the presence of psychiatric disorders based on the criteria of the Diagnostic and Statistical Manual 3rd edition (DSM III-R). The CIDI has confirmed validity and reliability (Wittchen & Hofler, 1999; World Health Organization, 1990). Psychiatric disorders were divided into 4 groups: (1) major depression; (2) any anxiety disorder (including generalized anxiety disorder, simple phobia, social phobia, panic disorder, post traumatic stress disorder, and agoraphobia); (3) alcohol abuse or dependence; and (4) one or more externalizing problems (including drug abuse or dependence, conduct disorder in those age 15–17 years, and antisocial personality disorder or antisocial behavior in those 18 years and older). This grouping of psychiatric disorders was a replication of the categorization of the psychiatric disorders by MacMillan et al. (1999). A variable counting the overall number of psychiatric disorders was computed by adding the presence or absence of all disorders together. Based on the distribution of the number of disorders, the variable was trichotomized into no disorders, one disorder, and two or more disorders.

Sociodemographic variables. The age of the respondent was measured in years. Education was defined as the number of years of formal education. Low education was defined as less than high school. Household income was measured in US dollars. Marital status was recorded as married, separated/divorced/widowed, and never-married. Ethnicity was recorded as: White, Black, Hispanic, or other.

Statistical procedure

The NCS used a stratified, multistage sampling design. The complex sample design of the NCS requires Taylor series linearization to perform the necessary estimation of design-based standard errors (Shah, Barnswell, & Bieler, 1995). This analysis was done using the statistical weight and stratification information within the NCS part II public use dataset and SUDAAN software. The NCS statistical weight helps to ensure the data are representative of the general US population according to a number of federal census indicators.

Descriptive statistics were used to understand the sample and prevalence of childhood adversity, parental bonding, and psychiatric disorders. Binary logistic regressions were used to determine the associations between physical punishment only and child abuse relative to individuals experiencing no physical punishment or child abuse with regard to psychiatric disorders when all other variables in the model were controlled. Multinomial logistic regressions were conducted to investigate the association between childhood adversity and number of psychiatric disorders. The no physical punishment or abuse category was the reference group for the analysis.

Results

Among the 5,838 respondents, 35.5% of the sample reported no physical punishment or child abuse, 48% reported experiencing physical punishment only, and 16.5% indicated they had experienced child abuse. The sociodemographic profiles for each group are presented in Table 1. When investigating sociodemographic variables and childhood adversity, differences were found among the childhood adversity groups for gender, age, marital status, and ethnicity. No differences among the childhood adversity groups were found for education or income. Table 2 contains the prevalence of the three dimensions of parental bonding for each childhood adversity group. Results indicate that differences do exist with regard to parenting variables by each childhood adversity group. For example, low maternal warmth became more prevalent as level of childhood adversity increased from no physical punishment or abuse, to physical punishment only, to child abuse (15%, 21%, to 43%, respectively). The same pattern for low paternal warmth was also noted.

Table 3 contains the prevalence of psychiatric disorders by each childhood adversity group. The prevalence of psychiatric disorders progressively increased as the severity of childhood adversity increased. Table 3 also contains the odds ratios for psychiatric disorders after adjusting for sociodemographic variables and quality of parental relationships. In a model adjusting for sociodemographic variables and parental bonding dimensions, physical punishment was associated with increased odds of major depression (AOR = 1.22; 95% CI = 1.01–1.48), alcohol abuse or dependence (AOR = 1.32; 95% CI = 1.08–1.61), and externalizing problems (AOR = 1.30; 95% CI = 1.05–1.60) in adulthood. A separate analysis was conducted and found that the odds ratios for those experiencing physical punishment only were significantly lower compared to those who experienced child abuse (results not shown). Also in Table 3 are the results from the multinomial logistic regressions, which used an overall count of the number of disorders (no disorders, one disorder, or two or more disorders) to produce an omnibus test of the associations between multiple disorders and childhood adversity. The results showed that having one disorder (AOR = 1.30; 95% CI = 1.04–1.63) and having two or more disorders (AOR = 1.34; 95% CI = 1.11–1.60) were significantly associated with physical punishment, even after adjusting for sociodemographic variables and

Table 1
Sociodemographic characteristics and childhood adversity groups

	Characteristic		
	No physical punishment or abuse (<i>n</i> = 1,941) (%)	Physical punishment only (<i>n</i> = 2,744) (%)	Child abuse (<i>n</i> = 1,153) (%)
Gender*			
Female	48.2	47.3	62.1
Age*			
15–24 (years)	29.4	23.2	19.8
25–34 (years)	30.1	29.1	34.7
35–44 (years)	24.8	29.8	27.7
45–54 (years)	15.7	17.9	17.8
Marital status*			
Married	50.0	57.4	53.7
Separated/widowed/divorced	12.7	12.9	19.2
Never-married	37.3	29.7	27.1
Education			
Less than high school	24.1	18.8	24.2
High school or greater	75.9	81.2	75.8
Income (US dollars)			
0–19,999	29.3	19.7	33.7
20,000–34,999	24.6	25.4	21.6
35,000–69,999	33.2	39.3	31.6
70,000+	12.9	15.6	13.2
Ethnicity*			
White	71.0	79.4	74.5
Black	13.7	10.5	9.9
Hispanic	11.3	6.6	12.9
Other	4.0	3.4	2.6

**p* < .05.

Table 2
Parental bonding index by childhood adversity groups

	Parental bonding index		
	No physical punishment or abuse (<i>n</i> = 1,941) (%)	Physical punishment only (<i>n</i> = 2,744) (%)	Child abuse (<i>n</i> = 1,153) (%)
Maternal			
Low warmth*	15.0	20.7	43.3
High protectiveness*	20.2	14.7	11.5
High authoritarianism*	16.9	15.2	20.0
Paternal			
Low warmth*	14.5	16.7	46.7
High protectiveness*	26.8	17.1	18.4
High authoritarianism*	18.5	16.9	27.1

**p* < .05.

Table 3
Prevalence, adjusted odds ratios (AOR) and 95% confidence (CI) intervals for psychiatric disorders

Dependent variable		No physical punishment or abuse (n = 1,941)	Physical punishment only (n = 2,744)	Child abuse (n = 1,153)
Major depression	%	12.2	15.6	31.0*
	AOR (95% CI)	1.00 (–)	1.22 (1.01–1.48)	1.97 (1.59–2.44)
Any anxiety disorder	%	23.0	25.7	48.5*
	AOR (95% CI)	1.00 (–)	1.16 (.99–1.36)	2.39 (1.84–3.11)
Alcohol abuse/dependence	%	19.1	24.1	31.2*
	AOR (95% CI)	1.00 (–)	1.32 (1.08–1.61)	1.98 (1.50–2.61)
Externalizing problems	%	11.7	13.9	27.0*
	AOR (95% CI)	1.00 (–)	1.30 (1.05–1.60)	2.63 (2.08–3.34)
One disorder	%	19.8	23.5	20.4*
	AOR (95% CI)	1.00 (–)	1.30 (1.04–1.63)	1.57 (1.11–2.24)
Two or more disorders	%	21.3	25.2	48.1*
	AOR (95% CI)	1.00 (–)	1.34 (1.11–1.60)	3.04 (2.22–4.15)

Adjusted odds ratios (AOR) adjusted for age, gender, ethnicity, education, income, marital status, maternal warmth, maternal protectiveness, maternal authoritarianism, paternal warmth, paternal protectiveness, and paternal authoritarianism. Bold adjusted odds ratios indicates statistical significance.

* $p < .05$.

quality of parenting relationships. Statistical significance was also found between the number of psychiatric disorders and child abuse.

Discussion

The current investigation found that individuals who were physically punished only compared to those who were not physically punished or abused had greater odds of experiencing major depression, alcohol abuse or dependence, and externalizing problems in adulthood after adjusting for all variables in the model. These significant odds ratios for the physical punishment only group were statistically lower compared to individuals who experienced child abuse. When investigating the number of psychiatric disorders to produce an omnibus test of the associations, it was found that physical punishment was significantly associated with both one disorder and two or more disorders relative to having no psychiatric disorders.

Consistent with past research, the current findings indicate that individuals who were physically punished compared to those who were not physically punished or abused were more likely to experience low parental warmth (Sheline, Skipper, & Broadhead, 1994). Low parental warmth was more prevalent as the severity of childhood adversity increased. Overall, individuals who were physically punished only and those who were abused perceived their parental bonding experiences as being less warm and less protective compared to individuals who were not physically punished or abused.

The current findings indicate that the prevalence of psychiatric disorders progressively increases as the severity of childhood adversity increases. Consistent with past research, individuals who were physically punished only had increased odds of having psychiatric disorders relative to individuals who did not experience physical punishment (MacMillan et al., 1999). In addition, the magnitude of the adjusted odds

ratios in the current analysis was similar to those found by MacMillan et al. (1999). The size of the effects for physical punishment only after adjusting for sociodemographic variables and quality of parenting relationships in the present analysis were not large, but odds ratios remained statistically significant ranging in size from 1.22 to 1.34. These findings are especially important when considering that the models controlled for several important variables and that all standard errors were adjusted using Taylor series linearization to account for the complex sampling design of the NCS.

Similar to MacMillan et al. (1999), alcohol abuse or dependence and having externalizing problems were more likely among individuals exposed to physical punishment only compared to those not experiencing physical punishment or child abuse and after adjusting for other variables in the model. However, the current findings also determined that individuals who were physically punished compared to those who were not physically punished or abused were more likely to experience major depression. This was not found in the previous investigation by MacMillan et al. (1999), but was similar to findings from earlier research by Holmes and Robins (1988) and Hallstrom (1987). A reason for the failure to find a significant relationship between physical punishment and major depression in MacMillan et al.'s (1999) research may have been more of an issue of statistical power, rather than the non-existence of an association. That is, the prevalence of major depression was much lower compared to the prevalence of other disorders in the study and may partly explain why the positive odds ratio found for major depression was unable to reach the level of significance. Replication of the current findings is required before certain conclusions can be made.

Controversy exists as to whether or not physical punishment should be used on children (Andero & Stewart, 2002; Benjet & Kazdin, 2003; Gershoff, 2002; Larzelere, 2000; Straus, 1999). Individuals supporting the use of physical punishment have stated that physical punishment by a loving parent does not have ill consequences (Larzelere, 2000; Rosemond, 2005), while those opposed to the use of physical punishment state that this is a myth (Straus, 2005). The current findings indicate that children experiencing physical punishment only are at increased odds of adult psychopathology compared to children experiencing no physical punishment and at decreased odds of adult psychopathology when compared to children experiencing child abuse. This finding is similar to past research that used a continuum of increasing severity of physical punishment/maltreatment and found a dose/response relationship between increasing severity of childhood adversity corresponding with poorer mental health outcomes (Fergusson & Lynskey, 1997).

A number of possible mechanisms may explain the relationship between physical punishment and adult psychopathology. First, a direct relationship may exist between physical punishment and psychiatric disorders in adulthood. For example, physical punishment in childhood may lead to an increased risk of poor mental health in adulthood. Conversely, the reverse direction of this relationship is also possible. Childhood disorders such as conduct disorder may lead to increased adult psychopathology, but also, conduct disorder may lead to the use of physical punishment in childhood as a means to deal the difficult child behavior. Research has indicated that difficult child behavior is a predictor of physical punishment (Woodward & Fergusson, 2002).

In addition, an indirect relationship between physical punishment and adult psychopathology may exist. For example, the relationship between physical punishment and psychopathology may be mediated by personality factors. The use of physical punishment may alter the development of a child's personality, which may in turn have an impact of adult psychopathology. Research has found that self-esteem and mastery mediated the relationship between angry physical punishment and depressive symptoms (Turner & Muller, 2004).

Research has suggested that genetic factors may also play a role in the relationship between physical violence and its negative associations (Caspi et al., 2002; Jaffee et al., 2004). Therefore, an underlying mechanism in the relationship between physical punishment and psychopathology may be genetics. Genetic make-up may predispose an individual to psychiatric problems, which could be unmasked by adverse environmental factors such as physical punishment. Conversely, a certain genotype may be protective against poor mental health outcomes providing an explanation for why some individuals who experience physical punishment develop psychiatric disorders while others do not. Therefore, it is possible that genotypes can moderate negative outcomes associated with environmental adversity (Caspi et al., 2002).

Finally, shared environmental risk factors may predispose individuals to both physical punishment and adult psychopathology. Examples of shared environmental risk factors are poverty and large family size. Resources may be limited or inadequate in large families, which may influence the odds of the use of physical punishment and poor mental health (Wagner, Schubert, & Schubert, 2001).

The findings from the current investigation should be considered in light of the study's limitations. The reliance on cross-sectional design prevents inferences about causal relationships. It cannot be concluded that physical punishment causes psychiatric disorders, but rather, it can only be determined that an association between physical punishment and adult psychopathology does exist. In addition, the cross-sectional retrospective design of the survey may introduce a recall and reporting bias. An individual may have trouble recalling events that occurred in the past, which may bias the sample. However, it has been stated that although retrospective research may introduce some sampling error, there is evidence that supports the validity of accurate recall of adverse childhood events (Hardt & Rutter, 2004). As well, reporting bias may also occur if those experiencing psychiatric disorders are more prone to report childhood adversity. A longitudinal study would help to overcome some of the limitations of a cross-sectional retrospective design. In addition, the lack of a longitudinal survey prevents examination of possible covariates such as childhood behavior problems and patterns of discipline as long-term determinants of later psychopathology. Finally, assessments of physical punishment and child physical abuse were each determined by amalgamated items from an earlier version of the CTS. Although using one item to assess violent acts has been employed in previous efforts (MacMillan et al., 1999), using a full version of the most recently revised CTS would be ideal.

Future research in the area of physical punishment and psychiatric disorders should investigate why parents use physical punishment and why some individuals who are physically punished experience poor mental health while others do not. Some children who experience physical punishment and/or abuse do not develop poor psychopathology later in life. Further exploration of the resiliency of these individuals may be useful when trying to help physically punished or abused individuals who experience poor mental health.

In conclusion, physical punishment during childhood was found to be positively associated with adult psychopathology (major depression, alcohol abuse or dependence, and externalizing problems). Physical punishment is a mild form of childhood adversity that shows an association with psychopathology similar to more severe childhood adversities. Mental health researchers and clinicians may want to include the assessment of physical punishment when inquiring about more severe childhood adversity.

References

- Andero, A. A., & Stewart, A. (2002). Issue of corporal punishment: Re-examined. *Journal of Instructional Psychology*, 29, 90–96.

- Ateah, C. A., Secco, M. L., & Woodgate, R. L. (2003). The risks and alternatives to physical punishment use with children. *Journal of Pediatric Health Care, 17*, 126–132.
- Bachar, E., Canetti, L., Bonne, O., DeNour, A. K., & Shalev, A. Y. (1997). Physical punishment and signs of mental distress in normal adolescents. *Adolescence, 32*, 945–959.
- Benjet, C., & Kazdin, A. E. (2003). Spanking children: The controversies, findings, and new directions. *Clinical Psychology Review, 23*, 197–224.
- Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., Taylor, A., & Poulton, R. (2002). Role of genotype in the cycle of violence in maltreated children. *Science, 297*, 851–854.
- Cox, B. J., Enns, M. W., & Clara, I. P. (2000). The parental bonding instrument: Confirmatory evidence for a three-factor model in a psychiatric clinical sample and in the National Comorbidity Survey. *Social Psychiatry and Psychiatric Epidemiology, 35*, 353–357.
- Fergusson, D. M., & Lynskey, M. T. (1997). Physical punishment/maltreatment during childhood and adjustment in young adulthood. *Child Abuse & Neglect, 21*, 617–630.
- Frias-Armenta, M. (2002). Long-term effects of child punishment on Mexican women: A structural model. *Child Abuse & Neglect, 26*, 371–386.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analysis and theoretical review. *Psychological Bulletin, 128*, 539–579.
- Hallstrom, T. (1987). Major major depression, parental mental disorder and early family relationships. *Acta Psychiatrica Scandinavica, 75*, 259–263.
- Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry, 42*, 260–273.
- Heim, C., Newport, D. J., Heit, S., Graham, Y. P., Wilcox, M., Bonsall, R., Miller, A. H., & Nemeroff, C. B. (2000). Pituitary-adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. *Journal of American Medical Association, 284*, 592–597.
- Holmes, S. J., & Robins, L. N. (1988). The role of parental disciplinary practices in the development of major depression and alcoholism. *Psychiatry, 51*, 24–36.
- Jaffee, S. R., Caspi, A., Moffitt, T. E., Polo-Tomas, M., Price, T. S., & Taylor, A. (2004). The limits of child effects: Evidence for genetically mediated child effects on corporal punishment but not on physical maltreatment. *Developmental Psychology, 40*, 1047–1058.
- Kessler, R. C., Davis, C. G., & Kendler, K. S. (1997). Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. *Psychological Medicine, 27*, 1101–1119.
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H.-U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51*, 8–19.
- Larzelere, R. E. (2000). Child outcomes of nonabusive and customary physical punishment by parents: An updated literature review. *Clinical Child and Family Psychology Review, 3*, 199–221.
- Levitan, R. D., Rector, N. A., Sheldon, T., & Goering, P. (2003). Childhood adversities associated with major major depression and/or anxiety disorders in a community sample of Ontario: Issues of co-morbidity and specificity. *Major Depression and Anxiety, 17*, 34–43.
- MacMillan, H. L., Boyle, M. H., Wong, M. Y.-Y., Duku, E. K., Fleming, J. E., & Walsh, C. A. (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*, 805–809.
- MacMillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E., Boyle, M. H., Jamieson, E., Duku, E. K., Walsh, C. A., Wong, M. Y.-Y., & Beardslee, W. R. (2001). Childhood abuse and lifetime psychopathology in a community sample. *American Journal of Psychiatry, 158*, 1878–1883.
- McHolm, A. E., MacMillan, H. L., & Jamieson, E. (2003). The relationship between childhood physical abuse and Suicidality among depressed women: Results from a community sample. *American Journal of Psychiatry, 160*, 933–938.
- Molnar, B. E., Berkman, L. F., & Buka, S. L. (2001). Psychopathology, childhood sexual abuse and other childhood adversities: Relative links to subsequent suicidal behavior in the US. *Psychological Medicine, 31*, 965–977.
- Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health, 91*, 753–760.

- Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, *52*, 1–10.
- Rosemond, J. (2005). Proper socialization requires powerful love and equally powerful discipline. In D. R. Loseke, R. J. Gelles, & M. M. Cavanaugh (Eds.), *Current controversies on family violence* (pp. 131–136). Thousand Oaks, CA: Sage Publications.
- Shah, B. V., Barnswell, B. G., & Bieler, G. S. (1995). *SUDAAN user's manual: Software for analysis of correlated data* (40th ed.). Research Triangle Park, NC: Research Triangle Institute [release 6].
- Sheline, J. L., Skipper, B. J., & Broadhead, W. E. (1994). Risk factors for violent behavior in elementary school boys: Have you hugged your child today? *American Journal of Public Health*, *84*, 661–663.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family*, *41*, 75–88.
- Straus, M. A. (1999). Is it time to ban corporal punishment of children? *Canadian Medical Association Journal*, *161*, 821–822.
- Straus, M. A. (2000). *Beating the devil out of them: Corporal punishment in American families and its effects on children* (2nd ed.). New Brunswick, NJ: Transaction Publishers.
- Straus, M. A. (2005). Children should never, ever, be spanked no matter what the circumstances. In D. R. Loseke, R. J. Gelles, & M. M. Cavanaugh (Eds.), *Current controversies on family violence* (pp. 137–157). Thousand Oaks, CA: Sage Publications.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the parent-child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, *22*, 249–270.
- Straus, M. A., & Kantor, G. K. (1994). Corporal punishment of adolescents by parents: A risk factor in the epidemiology of depression, suicide, alcohol abuse, child abuse, and wife beating. *Adolescence*, *29*, 543–561.
- Turner, H. A., & Muller, P. A. (2004). Long-term effects of child corporal punishment on depressive symptoms in young adults. *Journal of Family Issues*, *25*, 761–782.
- Wagner, M. E., Schubert, H. J. P., & Schubert, D. S. P. (2001). Family size effects: A review. *The Journal of Genetic Psychology*, *146*, 65–78.
- Weiss, E. L., Longhurst, J. G., & Mazure, C. M. (1999). Childhood sexual abuse as a risk factor for major depression in women: Psychosocial and neurobiological correlates. *American Journal of Psychiatry*, *156*, 816–828.
- Wilhelm, K., Niven, H., Parker, G., & Hadzi-Pavlovic, D. (2005). The stability of the Parental Bonding Instrument over a 20-year period. *Psychological Medicine*, *35*, 387–393.
- Wittchen, H.-U., & Hofler, M. (1999). Toward the identification of core psychopathological processes? *Archives of General Psychiatry*, *56*, 929–931.
- Woodward, L. J., & Fergusson, D. M. (2002). Parent, child, and contextual predictors of childhood physical punishment. *Infant and Child Development*, *11*, 213–235.
- World Health Organization. (1990). *Composite international diagnostic interview*. Geneva, Switzerland: Author.