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## Corporal Punishment and Externalizing Behaviors in Toddlers: The Moderating Role of Positive and Harsh Parenting

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### Abstract

This study investigated whether corporal punishment when the child was two years old predicted child externalizing behaviors a year later, and whether or not this association was moderated by parents' observed behavior towards their child. Data came from 218 couples and their first born child. The frequency of fathers' corporal punishment when the child was two years old predicted child externalizing behaviors a year later, while controlling for initial levels of child externalizing behaviors. Also, observed positive and harsh parenting moderated the relationship between corporal punishment and child externalizing behaviors. These results highlight the importance of continuing to examine the effects of a commonly used form of discipline (i.e., corporal punishment) and the parental climate in which it is used.

### Keywords

corporal punishment; externalizing behavior; moderation; observed behavior; parenting

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Controversy continues regarding the appropriateness and usefulness of corporal punishment. Twenty-four countries have institutionalized no-spanking laws and other countries are in the process of banning corporal punishment (Zolotor & Puzia, 2010). However, in the United States most parents continue to use corporal punishment to discipline their children (MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011;). The social learning theory suggests that when parents use aggressive forms of discipline, children learn through modeling to be more aggressive themselves (Gámez-Guadix, Straus, & Hershberger, 2011). Indeed, children who receive physical punishment by their parents may learn to use similar tactics to control their environment (Graziano, 1994) and corporal punishment may change the way children perceive social information creating a tendency to access aggressive

responses as solutions (Weiss, Doge, Bates, & Pettit, 1992). Although an earlier meta-analysis suggested that corporal punishment was associated with numerous negative child outcomes (e.g., lack of effective internal regulation, aggression, delinquent and antisocial behavior; Gershoff, 2002), a more recent meta-analytic review of longitudinal and multivariate studies suggested that corporal punishment may only have a minimal impact on child outcomes (Ferguson, 2013). Thus, although a debate about the use of corporal punishment continues, research on the effects of corporal punishment on child outcomes is inconclusive.

Therefore, understanding the effect of corporal punishment on child development is important. In general, studies have shown that frequent use of corporal punishment on children is positively associated with negative child outcomes. Despite these findings, it is important to take a more nuanced approach by identifying under what conditions frequency of corporal punishment in toddlers has the most deleterious effects, and under what, if any, conditions the effects of corporal punishment are less negative. For example, parents may use corporal punishment in the context of harsh parenting or positive parenting with differing effects on future child behavior. Children who experience a harsher parental environment may learn to act in unkind ways to others. On the other hand, parents who provide a warm, supportive, and engaging parental environment may teach their child more positive behaviors, even in the presence of corporal punishment (Simons, Wu, Lin, Gordon, & Conger, 2000). Thus, the current investigation examined the extent to which positive and harsh parental practices moderate the association between frequency of corporal punishment when children are two years of age and externalizing behaviors when children are three years of age. We begin with a review of the evidence for the association between corporal punishment and children's externalizing behavior. Next, we review evidence of how the effects of corporal punishment may vary by the gender of the child receiving the corporal punishment, and vary by the gender of the parent administering the corporal punishment. We also consider the possibility that harsh and positive parenting may moderate this association.

## Corporal Punishment and Children's Externalizing Behaviors

A common definition for corporal punishment is “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 a child's behavior” (Straus, 2001, p. 4). Spanking and slapping are two of the most common forms of corporal punishment (Straus & Stewart, 1999). Recent studies using nationally representative samples report that 24% of one-year-old children and over 55% of three-year-old children are spanked in a given month (MacKenzie, Nicklas, Waldfogel, & Brooks-Gunn, 2012). Studies also show that a higher frequency of corporal punishment is positively related to negative child outcomes (Gromoske & Maguire., 2012). For example, Brenner and Fox (1998) found that parental use of corporal punishment is one of the strongest predictors of children's behavioral problems. More recently, Lorber et al. (2011) found that corporal punishment was associated with externalizing behavior in children ages three and seven years, even after controlling for child's age and gender, parent's age, family income, and race. Moreover, a meta-analysis revealed that even though corporal punishment in children as young as two years of age was effective in securing short term compliance, it increased the likelihood of negative child outcomes later in life (Gershoff, 2002). Indeed,

Taylor, Manganello, Lee, and Rice (2010) found that after controlling for harsh parenting and child initial levels of aggression, maternal corporal punishment at age three was uniquely predictive of child behavioral problems at age five. Finally, spanking children as early as one year of age was related to externalizing behavior at age two or three (Berlin, Ispa, Fine, Malone, Broks-Gunn, Brady-Smith, Ayoub, & Bai 2009; Gromoske & Maguire, 2012, Maguire-Jack & Gromoske, 2012).

There is evidence to suggest that the gender of both the child and parent should be taken into consideration when examining the association between corporal punishment and externalizing behaviors. Studies suggest that the frequency of spanking is higher for boys than girls (Straus & Stewart, 1999). Girls are less likely to experience corporal punishment than boys, and girls are also less likely to exhibit externalizing behavior than are boys (Taylor et al., 2010). However, regardless of the differences in frequency of corporal punishment and externalizing behaviors in boys and girls, the influence harsh discipline such as spanking and slapping has on child aggression may not differ by gender of the child (Weiss et al., 1992).

Research findings on the effect of gender of the parent are inconsistent. A study found that harsh discipline by mothers was more strongly correlated with externalizing problems for daughters, whereas harsh discipline by fathers was more strongly related to externalizing problems for sons (Deater-Deckard & Dodge, 1997). A later study found that fathers' and mothers' physical discipline was similarly related to daughters' and sons' externalizing problems (McKee, Roland, Coffelt, Olson, Forehand, Massari, & Zens, 2007). Others, however, have found that mothers' high frequency of spanking was more strongly related to children's externalizing problems than fathers' frequency of spanking, after controlling for externalizing behaviors at baseline (MacKenzie et al., 2012). Regardless of who implements corporal punishment (mother or father) and who the recipient of the punishment (son or daughter) is, in general, studies have shown that corporal punishment is associated with higher levels of negative child behaviors (Gershoff, 2002).

### **Harsh and Positive Parenting Behaviors as Moderators**

There is evidence to suggest that parenting behavior may modify the impact of corporal punishment on child outcomes. For example, positive parenting may weaken the relationship between corporal punishment and child negative behaviors, whereas harsh parenting may intensify this relationship. Indeed, when parents demonstrate low parental warmth (as measured by low levels of positive verbal statements, positive affective expression and positive physical contact with the child), their use of harsh physical discipline was strongly associated with child externalizing behaviors (Deater-Deachard & Dodge, 1997). However, among parents with high parental warmth, the relationship between harsh physical discipline and negative child externalizing behaviors was non-significant. Similarly, McLoyd and Smith (2002) found that in the context of observed low levels of maternal emotional support, spanking by mothers was associated with an increase in behavior problems over time for preschoolers. In addition, McKee et al. (2007) found that warm maternal parenting served as a buffer in the relationship between paternal harsh physical discipline and child problem

behaviors. Specifically, when high levels of maternal warmth were present, fewer child problem behaviors were associated with high levels of parental harsh physical discipline.

Both positive and harsh parenting seems to play a pivotal role in the relationship between corporal punishment and children's behavior problems. The impact of corporal punishment on a child's behavior may be influenced by other parenting actions such as anger, rejection, negative criticism, insensitivity, and threats. Some of the prior studies have focused on how child anger perception influences child conduct problems (Fine, Trentacosta, Izard, Mostow, Campbell, 2004) and how the child's ability to recognize negative parenting emotions moderate the relationship between harsh physical punishment and externalizing behaviors (Berzenski & Yates, 2013). Another study found that corporal punishment did not have an effect on child negative outcomes, unless children felt rejected and experienced hostility by their parents (Rohner, Bourque, & Elordi, 1996). Straus and Mouradian (1998) found that when spankers felt irritated and frustrated, children were more likely to act aggressively than when spankers were under emotional control. The current study adds to the literature by examining observed harsh parenting and positive parenting as moderators of the relationship between corporal punishment and externalizing behaviors during the toddler period.

## The Present Investigation

The aim of this study was to add to the scarce literature on the relationship between corporal punishment and child externalizing behavior for toddlers (Ferguson, 2013) by utilizing longitudinal data to determine the effects that corporal punishment at age two has on child externalizing behaviors at age three. In order to better understand the predictive potential of corporal punishment on externalizing behaviors at age three, externalizing behaviors were controlled at age two. Moreover, we examined the unique effect of both parent's use of corporal punishment on child externalizing behaviors. Also we examine the effect child gender has on child externalizing behavior. It was expected that parental use of corporal punishment at age two would be significantly associated with child externalizing at age three, even after controlling for child externalizing behavior at age two. In terms of gender differences, it was expected that frequency of use between mother and father would not differ, however boys were expected to receive more corporal punishment than girls.

In response to suggestions that most studies evaluating the impact of corporal punishment are methodologically flawed due to failure to differentiate the impact of corporal punishment from other dimensions of parenting (Rohner et al., 1996), the relationship between corporal punishment and externalizing behaviors was evaluated within the context of harsh parenting and positive parenting. It was expected that the strength of the relationship between corporal punishment at age two and child externalizing behaviors at age three would be amplified by harsh parenting and attenuated by positive parenting practices at age two. Finally, to reduce shared method variance, observed parenting behaviors in addition to mothers' and fathers' self-report of corporal punishment were used.

## Method

### Participants

Data from 559 target youth and their families came from the Family Transition Project (FTP), which is an extension of two earlier studies: The Iowa Youth and Families Project (IYFP) and the Iowa Single Parent Project (ISPP). The IYFP started in 1989 and the sample was primarily Caucasians (1% non-white), lower-middle or middle-class, and lived in households with an average of 4.95 members. The ISPP began in 1991, with participants being primarily Caucasian, lower-middle or middle-class in the same geographic area. Both studies shared identical measures and procedures, with the exception that in ISPP the fathers did not participate. Families from the ISPP and the IYFP were combined in 1994 to create the Family Transition Project (FTP). Beginning in 1995, each target adolescent (1 year after completion of high school) participated in the study with a romantic partner or friend. In 1997, the study was expanded to include the first-born child of the target adolescent, now a young adult. The child was at least 18 months of age. Thus, the FTP has followed the target adolescent from as early as 1989 through 2008 ( $M_{\text{target age}} = 30.3$  years), with a 90% retention rate.

The present report includes 218 couples with an eligible child. Eligible children were the first biological child of the target participant who participated in the study at least once by 2007. The report also includes the target's romantic partner (spouse or cohabitating partner) who was the other biological parent, step-parent, or parental figure to the target's child. Assessments occurred during two developmental periods. Time 1 (T1) included 218 children at two years of age (boys = 116). Time 2 (T2) included 186 children at three years of age. For the purpose of this study, the data were classified as mother- and father-report rather than by status of target- and romantic-partner report. Therefore, the mother in this report could be either the target or the target's romantic partner. At T1, there were 218 mothers and 195 fathers, whereas at T2 there were 186 mothers and 167 fathers. The majority of the spouses or cohabitating partners were the other biological parent of the child.

### Procedure

Families were visited once in their homes each year by a trained interviewer. During the visit, mothers and fathers completed questionnaires on individual characteristics, parenting, and quality of family interactions, and participated in observer-rated family interaction tasks with their first born child.

### Measures

**Child externalizing behaviors**—The Child Behavioral Checklist (CBCL; Achenbach & Rescorla, 2000) for 1.5 to 5 year olds was completed by mothers and fathers at T1 (i.e., age 2) and T2 (i.e., age 3) to assess child externalizing behaviors. The CBCL yields two broadband scales, internalizing and externalizing behaviors. For this study, the outcome measure, externalizing behaviors, was composed of two subscales: (a) aggressive behaviors (19 items), and (b) attention problems (5 items). Example descriptions of aggressive behaviors included: acting defiant, destroying things, being disobedient, being stubborn, sullen, or irritable, displaying temper tantrums or hot temper, and being uncooperative.

Examples of attention problems included: can't concentrate, can't pay attention for long, can't sit still or is restless, and quickly shifts from one activity to another. Mothers and fathers, individually, reported on their children's externalizing behaviors at age two and three. Responses were recorded from 0 = *not true*, to 2 = *very true or often true*. Items were coded so that higher scores represented more externalizing behaviors in the child. Mothers' and fathers' ratings on both aggressive and attention problem behaviors were summed to compute a single measure of externalizing behaviors. The internal consistency of externalizing behavior was .83 at T1, and .84 at T2.

**Corporal punishment**—At T1, mothers and fathers were each asked the single-item question, “How often do you spank or slap your child when your child does something wrong?” Responses were scaled from 1 = *never* to 5 = *always*.

**Harsh parenting and positive parenting**—Harsh parenting and positive parenting was measured from the observed behavior of mothers and fathers with the child utilizing the family interaction puzzle completion task (Melby, Conger, Book, Rueter, Lucy, & Repinski, 1998). In this task, the child is asked to complete a puzzle that was too difficult for the child to complete alone. As in other studies using similar tasks for observing parent–child interaction (e.g., van der Mark, Bakermans- Kranenburg, & van IJzendoorn, 2002), parents were instructed to let children complete as much of the puzzle on their own as possible, but to offer any assistance they felt was necessary. This task was designed to evaluate how parents interact with their child when the child is engaged in a situation likely to generate difficulty and frustration for the child. The task lasted 5 minutes. It was expected that skillful and nurturing parents would remain supportive towards the child, whereas less skillful parents may become more irritable as the child completed the puzzle. Trained observers coded the quality of these interactions using the Iowa Family Interaction Rating Scale (Melby et al., 1998). Ratings were discussed between coders to compute consensus scores and 25% of the cases were double coded for reliability. These scales have been shown to demonstrate adequate reliability and validity (Melby & Conger, 2001).

Harsh parenting at T1 was constructed by individual ratings of both parents' hostility, antisocial behavior, and angry coerciveness towards their two year old child during the puzzle task. Each rating was scored on a 9-point scale, ranging from 1 (*no evidence of the behavior*) to 9 (*the behavior is highly characteristic of the parent*). The hostility scale measured hostile, angry, critical, disapproving, and/or rejecting behaviors. The antisocial scale measured resistance, defiance, and insensitivity. Angry coercion measured demands, hostile commands, refusals, and threats. Ratings on these three behavior scales were summed to compute a single measure of harsh parenting. The scores for harsh parenting were internally consistent (.91) and interrater reliability was substantial (.94).

Positive parenting at T1, was constructed by the use of individual ratings of both parents' communication, listener responsiveness, and assertiveness towards their two year old child during the same puzzle task used to assess harsh parenting. Each rating was scored on a 9-point scale, ranging from 1 (*no evidence of the behavior*) to 9 (*the behavior is highly characteristic of the parent*). Communication measured reason, explanation, and solicitation of the child's point of view in a neutral or positive manner. Listener responsiveness involved

the parents' attention to and validation of the child through the use of nonverbal and verbal acceptance. Assertiveness was the parents' manner and style of expressing themselves confidently and positively, while exhibiting patience with the child. These three observed behaviors were summed to create a measure for positive parenting. The scores for positive parenting were internally consistent (.81) and interrater reliability was substantial (.91).

### Analysis Plan

Two multiple regression analyses were used to test study hypotheses. These analyses were estimated using AMOS 22 with Full Information Maximum Likelihood (FIML) estimation (Arbuckle, 1997, 2003). FIML was used because it is one of the least biased approaches for dealing with missing data in longitudinal studies (Widaman, 2006). Model 1 included mothers' and fathers' harsh parenting measures, whereas Model 2 included mothers' and fathers' positive parenting. These models were also used to test the difference between the levels of externalizing behaviors based on the gender of the child, and to test if a significant difference existed in the effect that mothers' and fathers' corporal punishment had on child externalizing behaviors. Finally, these models tested the extent to which positive and harsh parental practices moderated the association between frequency of corporal punishment when the children were two years of age and externalizing behaviors when children were three years of age, while controlling for child externalizing behavior at age two, and gender of the child. In order to test moderation, variables were standardized and interaction terms were created. Before analyzing the models, frequency and descriptive statistics, as well as preliminary correlations were conducted to examine the association between fathers' and mothers' use of corporal punishment when the child was two years old and child externalizing behavior when the child was two and three years old. In addition, a *t*-test was performed to determine if there was a difference between the levels of corporal punishment based on the gender of the child. The following sections describe the results.

## Results

### Frequencies and Descriptive Statistics

At T1 the average score for the frequency parents slapped or spanked their children was 1.87 (*SD* = .72) for mothers and 1.91 (*SD* = .79) for fathers. In this sample, 67% of mothers and 68% of fathers reported spanking or slapping their children at least occasionally. The average scores for harsh parenting behaviors were relatively low for most parents, at 6.85 (*SD* = 4.60) for mothers and 6.54 (*SD* = 4.30) for fathers. The average scores for positive parenting were relatively high, at 15.74 (*SD* = 4.21) for mothers and 16.24 (*SD* = 3.99) for fathers. Child externalizing behaviors at T1 had a mean of 21.14 (*SD* = 10.02) and child externalizing behaviors at T2 had a mean of 19.50 (*SD* = 9.79). Levels of skewness and kurtosis for each variable were within acceptable range to proceed with further analyses.

### Bivariate Analysis

Table 1 provides the descriptive information and correlation coefficients for the variables used in the two regression analyses. Results indicated that higher frequencies of mothers' and fathers' corporal punishment at T1 were significantly associated with higher scores on child externalizing behaviors at T1 and at T2. Mothers' frequency of corporal punishment at

T1 had a moderate to modest association with child externalizing behavior at T1 ( $r = .30, p < .01$ ) and at T2 ( $r = .21, p < .05$ ). Fathers' frequency of corporal punishment also had a moderate to modest association with child externalizing behavior at T2 ( $r = .32, p < .01$ ) and at T1 ( $r = .21, p < .01$ ). In general, mothers' and fathers' reports of corporal punishment were also linked with their own and their partners' observed harsh and positive parenting.

### Gender Comparison

A  $t$ -test was used to compare the potential difference the gender of the parent and child had on frequency of corporal punishment, and the difference that gender of the child had on the child's level of externalizing behaviors at T2. The homogeneity of variance between gender groups was evaluated with a Levene's test, and results indicated that the variance between the groups was equal. Thus,  $t$ -test results are presented where equal variances were assumed. The results of a  $t$ -test showed that even though boys ( $M = 3.61, SD = 1.46$ ) received corporal punishment more frequently than girls ( $M = 3.30, SD = 1.4$ ), the difference was not significant,  $t(222) = 1.60, p = .11$ . Similarly, a paired sample  $t$ -test showed that there was no significant difference between mothers' and fathers' frequency of corporal punishment,  $t(186) = -1.15, p = .25$ . Finally, levels of externalizing behaviors at T2 by gender of the child were examined. Externalizing behaviors were shown to be higher for boys than for girls,  $t(153) = 2.53, p < .05$ .

### Multivariate Analyses

Table 2 and Table 3 show the results from both analyses, examining the impact of mothers' and fathers' frequency of corporal punishment at T1 on parents' reports of child externalizing behaviors at T2. Additionally, observed positive and harsh parenting variables and parenting  $\times$  corporal punishment interaction terms at T1 were used to predict child externalizing behaviors at T2, while controlling for gender of the child and child externalizing behaviors at T1. These tests were accomplished in two separate models to preserve statistical power. Model 1 was specified where child externalizing behaviors at T2 was predicted by mothers' and fathers' reports of corporal punishment, observed harsh parenting, and interaction terms between harsh parenting and corporal punishment. Model 2 was specified where child externalizing behaviors at T2 were predicted by mothers' and fathers' reports of corporal punishment, observed positive parenting, and interaction terms between positive parenting and corporal punishment.

### Harsh Parenting Analysis

In Model 1 (see Table 2), after controlling for mothers' and fathers' harsh parenting behaviors, child gender, and child externalizing behaviors at T1, fathers' corporal punishment predicted child externalizing behaviors at T2 ( $\beta = .23, p < .01$ ). Mothers' corporal punishment and mothers' and fathers' harsh parenting did not significantly predict child externalizing behaviors. Child gender was not significantly associated with child externalizing behaviors. However, child externalizing behaviors at T1 predicted child externalizing behaviors at T2 ( $\beta = .57, p < .001$ ). The model explained 46% of the variance of child externalizing behaviors at T2.



**Harsh parenting as a moderator**—A total of four interaction terms were tested in Model 1 (see Table 2), to examine if mothers' and fathers' harsh parenting could moderate the strength of the relationship between mothers' and fathers' corporal punishment and child externalizing behaviors. Significant interaction terms were interpreted by computing predicted values of externalizing behaviors at 1 standard deviation above and below the mean on the predictor (i.e., corporal punishment) and the moderator (i.e., harsh parenting). The predicted values obtained from this process were then used to create a figure summarizing the form of the moderation test, and tests of simple slopes conducted (e.g., Frazier, Tix, & Baron, 2004).

Mothers' harsh parenting at T1 moderated the relationship between mothers' corporal punishment at T1 and child externalizing behaviors at T2 ( $\beta = -.25, p < .01$ ). Under the condition where mothers were one standard deviation low on maternal harsh parenting, as mothers' corporal punishment increased, there was a trend towards more externalizing behaviors of the child, albeit the test of simple slopes revealed this to be a non-significant trend ( $b = 1.90, p = .17$ ). In the other condition, mothers one standard deviation high in harsh parenting, tests of the simple slopes revealed that mothers' corporal punishment was marginally negatively associated with child externalizing behaviors ( $b = -2.73, p = .08$ ). From another perspective, the two conditions with the lowest child externalizing behavior was (a) low corporal punishment and low harsh parenting, and (b) high corporal punishment and high harsh parenting.

Additionally, mothers' harsh parenting moderated the relationship between fathers' corporal punishment at T1 and child externalizing behaviors at T2 (see Figure 1,  $\beta = -.24, p < .01$ ). Under the condition where mothers were one standard deviation low in observed harsh parenting, child externalizing behaviors stayed fairly stable, regardless of fathers' frequency of corporal punishment. The test of simple slopes revealed a nonsignificant association between corporal punishment and externalizing when mothers were low in harsh parenting ( $b = -.21, p = .88$ ). In the other condition, mothers one standard deviation high in harsh parenting, tests of the simple slopes revealed that fathers' corporal punishment was significantly positively associated with child externalizing behaviors at age 3 ( $b = 4.69, p < .01$ ). Fathers' harsh parenting did not moderate the relationship between mothers' corporal punishment at T1 and child externalizing behaviors at T2, nor did it moderate the relationship between fathers' corporal punishment at T1 and child externalizing behaviors at T2.

### Positive Parenting Analysis

In Model 2 (see Table 3), after controlling for mothers' and fathers' positive parenting behaviors, child gender, and child externalizing behaviors at T1, fathers' corporal punishment predicted child externalizing behaviors at T2 ( $\beta = .26, p < .01$ ). Mothers' corporal punishment and mothers' and fathers' positive parenting did not significantly predict child externalizing behaviors. Child gender was not significantly associated with child externalizing behaviors. However, child externalizing behaviors at T1 predicted child externalizing behaviors at T2 ( $\beta = .61, p < .001$ ). This model explained 44% of the variance of child externalizing behaviors at T2.

**Positive parenting as moderator**—A total of four interaction terms were tested in Model 2, to examine if positive parenting could moderate the strength of the relationship between corporal punishment and child externalizing behaviors. Mothers' positive parenting moderated the relationship between fathers' corporal punishment at T1 and child externalizing behaviors at T2 (see Figure 2,  $\beta = .19, p < .05$ ). Under the condition where mothers were one standard deviation high on positive parenting, expected levels of child externalizing behaviors stayed fairly stable, regardless of the frequency of fathers' corporal punishment (test of simple slope  $b = .53, p = .69$ ). In the other condition, mothers one standard deviation low in positive parenting, child externalizing behaviors increased as fathers' corporal punishment increased (test of simple slope  $b = 4.56, p < .01$ ). Mothers' positive parenting did not moderate the relationship between mothers' corporal punishment at T1 and child externalizing behaviors at T2. Also, fathers' positive parenting did not moderate the relationship between fathers' or mothers' corporal punishment and child externalizing behaviors at T2.

### Is Fathers' Corporal Punishment more Predictive than Mothers'?

Because fathers' corporal punishment (CP) was statistically significant in predicting externalizing behaviors and mothers' corporal punishment was not, it is common to incorrectly conclude that the relationship between corporal punishment and externalizing is stronger for fathers than mothers. To directly test for this possibility, we conducted a chi-square difference test ( $\chi^2$ ), with only these two predictors in the model, to determine if the relationship was stronger for fathers than mothers. In order to test for this difference, these two path coefficients were constrained to be equal (i.e., mothers' CP  $\rightarrow$  child externalizing behaviors, constrained to be equal with fathers' CP  $\rightarrow$  child externalizing behavior). Then  $\chi^2$  for the model fit was evaluated to determine if the model fit to the data became significantly worse than when these paths were freely estimated. There was not a significant difference between the strength of the association between mothers' corporal punishment and externalizing and the strength in the association between fathers' corporal punishment on child externalizing behaviors,  $\chi^2(1) = 2.58, p = .11$ .

## Discussion

This study examined the effect of corporal punishment at age two on child externalizing behaviors at age three, within the context of a harsh or positive parenting environment. Consistent with nationally representative studies (Straus & Stewart, 1999; MacKenzie et al. 2012), most parents, approximately two-thirds of mothers and fathers in this study spanked or slapped their two-year-old children when they did something wrong. Consistent with expectations (Gershoff, 2002), our results show that children who are more frequently spanked or slapped at two years of age are more likely to display aggression and attention problems at age two, as well as a year later. However, this association was shown to vary by levels of maternal harsh parenting and maternal positive parenting.

We found that young toddler boys and girls are spanked and/or slapped at similar rates, with no gender differences in frequency. Even though Fine and colleagues (2004) also found boys and girls received physical discipline at similar rates, other research has found that boys tend

to display more externalizing behaviors than girls, and that parents tend to think that it is more acceptable to use corporal punishment on boys than girls (McKee et al. 2007; Simons et al. 2000; Straus & Stewart, 1999). The reason for the similar rates of corporal punishment found in this sample may be explained by the age of the children. It is possible that when children are younger, the frequency of corporal punishment may not be significantly different for boys and girls. For example, a study which examined rate of spanking with toddlers found that mothers spank boys and girls at similar rates (MacKenzie et al., 2012). Perhaps children are spanked at similar rates in the toddler years, but parents may reduce the amount they spank daughters as they get older. Future research could examine this question more closely. This sample was also from a more rural area, and rural parenting practices may differ somewhat from more urban settings. A simple comparison of means in this study corroborated previous research (Taylor et al., 2010) that boys exhibited more externalizing behaviors than girls.

Two models were tested to determine if a higher frequency of mothers' and fathers' corporal punishment at age two would predict higher scores on child externalizing behaviors at age three, while controlling for harsh and positive parenting at age two, child gender, and child externalizing behaviors at age two. Results showed that fathers' use of corporal punishment at age two predicted higher levels of child externalizing behaviors a year later, even after accounting for covariates. Father's corporal punishment appeared to be especially important in this model because mothers' corporal punishment and mothers' and fathers' harsh and positive parenting at age two did not predict child externalizing behaviors at age three. This study addresses the issue that some authors (e.g., Baumrind, Larzelere, & Cowan, 2002) have raised regarding the lack of appropriate control variables in some studies evaluating the effects of corporal punishment on child behavior. This study moves past simplistic associations between corporal punishment and child behavior, by incorporating a longitudinal design with reports of both parents' corporal punishment, and the observed parenting in the child's home, providing more information about the emotional climate of the home environment. Thus, results suggest that fathers' corporal punishment may be an important factor to consider, due to its salience after accounting for many other notable predictors of child behavior.

A follow-up analysis was conducted to determine if the magnitude of the association between corporal punishment and externalizing behaviors differed between mothers and fathers. No significant difference in strength was found. This study speaks to the similar negative influence mothers' and fathers' spanking has on children's behavior also found in previous research (e.g., McKee et al., 2007). Other studies have hypothesized that when the parent and the child are of the same gender, the effects of corporal punishment are magnified. For example, boys are more negatively affected by paternal punishment than girls (Chang, Schwartz, Dodge, McBride-Chang, 2003). However, this hypothesis has not always been confirmed (McKenzie et al., 2012). It remains unclear if gender of the parents has an effect on the relationship between corporal punishment and child negative outcomes (Gershoff, 2002). Further nuanced research is needed to examine if the strength of the relationship between early corporal punishment and later child externalizing behaviors differs for mothers and fathers.

Perhaps the most interesting findings are in response to the moderating effects of observed harsh and positive parenting behaviors on the effects of corporal punishment to externalizing behaviors. As some previous research showed (Deater-Deachard & Dodge, 1997, McKee et al., 2007, McLoyd and Smith, 2002), the effects of mothers' and fathers' corporal punishment on child externalizing behaviors would vary according to the parenting context. Specifically, we predicted that the strength of the relationship would be amplified by observed harsh parenting practices at age two, and would be attenuated by observed positive parenting practices at age two.

Mothers' harsh parenting had an unexpected influence in the relationship between mothers' corporal punishment and child externalizing behaviors. When mothers displayed high levels of observed harsh parenting, children's levels of externalizing behaviors tended to decrease as mothers' corporal punishment increased. On the other hand, when mothers displayed low levels of harsh parenting, children's levels of externalizing behaviors tended to increase as mothers' corporal punishment increased. Although this interaction effect was significant, the test of these two simple slopes were non-significant. Thus, extra caution should be used when interpreting or making generalizations from this particular interaction. We tentatively speculate that children may display less externalizing behaviors as mothers consistently use not only corporal punishment, but also as they display high levels of anger, hostility, and other harsh parenting behaviors. Perhaps this consistency of intense negativity in mothers' parenting is effective at repressing toddlers' externalizing behavior, but may have other undesirable effects on child outcomes, such as lower confidence, self-esteem, higher fear, and a weaker attachment bond to the parent. Nevertheless, these findings seem contradictory to previous research which suggests that harsh parenting and corporal punishment increase the likelihood of child externalizing behavior (Bourque, & Elordi, 1996, Straus & Mouradian, 1998). More research is needed to clarify this issue.

We found that in certain situations, harsh parenting behaviors moderated the relationship between corporal punishment at age two and child externalizing behaviors at age three. For example, mothers' harsh parenting behaviors amplified the relationship between fathers' corporal punishment and child externalizing behaviors. Thus, when a father more frequently spansks or slaps a child, and the mother is also high in observed harsh parenting towards this same child, this cumulative parenting effect is associated with expectedly higher externalizing behaviors (e.g., acting out) a year later, when the child is age three. Similarly, prior research also found that when children perceive the parents physical punishment as hostility and rejection they are more likely to show problem behaviors (Rohner et al., 1996). Also, it is suggested that the child's ability to perceive anger and hostility are moderating factors in the relationship between corporal punishment and negative child outcomes (Berzenski & Yates, 2013). This study adds to the current literature by using observer's perception of the parenting behavior instead of measures of children's perception of harsh parenting.

Positive parenting behaviors also moderated the relationship between corporal punishment and child externalizing behaviors. Results showed that mothers' positive parenting behaviors attenuated the relationship between father's corporal punishment and child externalizing behaviors. Simply put, when mothers are observed to be very high in providing clear,

assertive and responsive guidance to a child, their responsive behavior toward the child largely protects the child from the expected increase in externalizing behaviors of the toddler that would typically be associated with fathers' corporal punishment. In contexts where a father more frequently hits a child, mothers' positivity towards the child may play an important protective role for the toddler. Overall, results from this study support previous research (McKee et al., 2007) that it may not just be a matter of whether one uses corporal punishment or not, rather it may depend on the emotional positive climate created by both of the parents' behaviors in which corporal punishment is used. Also, in each of the three situations described above, the moderating factor was for mothers' harsh or positive parenting, opposed to fathers. From the studies which tested the moderating effects of mothers and fathers parenting separately, McKee and colleagues (2007) also found that maternal warmth and not paternal warmth was the moderating factor. Future research should examine if mothers' parenting is a more influential moderator than fathers' parenting, in respect to the associations between corporal punishment and child behavior.

### **Strengths, Limitations and Future Research**

Several limitations should be noted. First, this study did not measure child maltreatment. We asked one question which included two behaviors (i.e., spank or slap). Asking several questions would allow researchers to measure different levels of frequency and also the severity of corporal punishment. Future research should assess physical abuse or severe violence to partial out physical abuse in a statistical analysis or to remove abused children from the sample. Second, in order to reduce same-source bias, rates of corporal punishment and child behaviors should not be reported by parents only. Third, future research should continue investigating the relationship between mothers and fathers use of corporal punishment and child externalizing behaviors for boys and girls separately. A multi-group comparison analysis may examine what parenting behaviors are more important to consider in boys and girls. Due to the relatively small sample size, group comparison was not possible in this study. Finally, although this study contributes to the literature by examining the relationship between corporal punishment and child externalizing behaviors a year later in the context of observed parental climate, other important moderating factors such as child ability to recognize parenting anger and hostility (Berzenski & Yates, 2013;) should be included. It seems that it is not only a matter of weather parents behave in harsh or positive ways, but also the child's ability to perceive changes in the parental climate.

Several strengths should also be noted. Even though an experimental design would be the preferred method to establish causal explanations, this study is helpful as it modeled the predictor and outcome at different time points (Baumrind et al., 2002). It is usually said that children who misbehave (i.e., use frequent externalizing behavior) get disciplined more often. However, the longitudinal design of this study, in addition to controlling for initial levels of child externalizing behaviors, suggests that frequent use of corporal punishment is a risk factor for increasing child externalizing behaviors. Studies usually suffer from shared method variance or lack of important control variables. This study utilized observed parenting variables, to reduce self-report bias, and to reduce shared method variance. It also controlled for other important parenting behaviors that play a role in child externalizing behaviors. In addition to control variables, this study utilized parenting behaviors as

interaction terms to test under which conditions the relationship between corporal punishment and child externalizing behaviors is stronger or weaker. This is the first study to examine the impact that harsh observed parenting behaviors has in the relationship between corporal punishments and externalizing behaviors. This study adds to the literature on the effects of corporal punishment in younger children and challenges the idea that negative effects of corporal punishment are minimal in younger children.

In conclusion, results from this study challenge those (e.g., Ferguson, 2013) who suggest that corporal punishment has only a minimal impact on child outcomes for young children when multivariate longitudinal designs are utilized. The longitudinal effect of fathers' corporal punishment is notable, as are the positive and harsh parenting conditions that moderate the expected effect of corporal punishment to child behavior. This study also highlights the importance of considering fathers' use of corporal punishment as a primary contributor to children's anger and attention problems, and how this association can be amplified by mothers' harsh parenting, and minimized by mothers' positive parenting.

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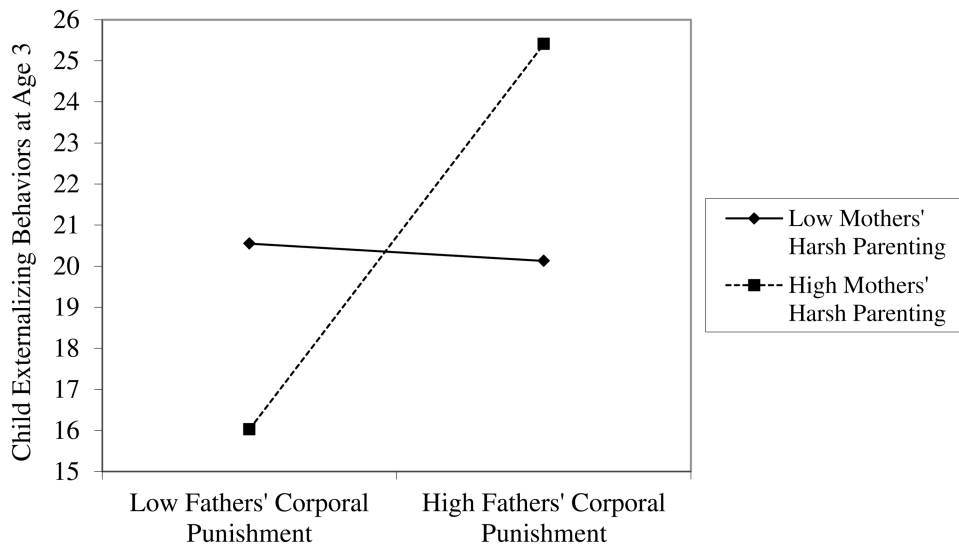
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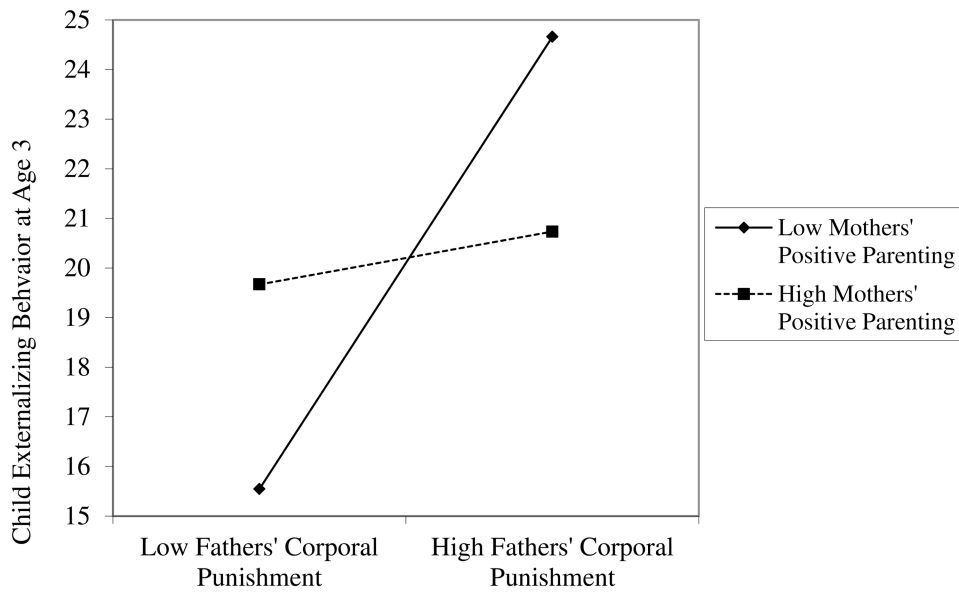
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**Figure 1.** Fathers' frequency of corporal punishment on child externalizing behaviors by level of observed mothers' harsh parenting.



**Figure 2.** Fathers' frequency of corporal punishment on child externalizing behaviors by level of observed mothers' positive parenting.

**Table 1**  
**Parents Report of Corporal Punishment and Child Externalizing Behaviors and Observed Harsh and Positive Parenting: Correlations and Descriptive Statistics (N = 218 families)**

Variables	1	2	3	4	5	6	7	8
1. Mother's corporal punishment T1	–							
2. Father's corporal punishment T1	.58**	–						
3. Mother' harsh parenting T1	.22**	.18**	–					
4. Father's harsh parenting T1	.16*	.25**	.21**	–				
5. Mother's positive parenting T1	-.10	-.16*	-.46**	-.14	–			
6. Father's positive parenting T1	-.18*	-.23**	-.29**	-.35**	.51**	–		
7. Externalizing behaviors at T1	.30**	.21**	.14*	.14*	-.16*	-.28**	–	
8. Externalizing behaviors at T2	.21*	.32**	.17*	.13	-.13	-.13	.60**	–
<i>M</i>	1.87	1.91	6.85	6.54	15.74	16.24	21.14	19.50
<i>SD</i>	.72	.79	4.60	4.30	4.21	3.99	10.02	9.79
Range	1 – 4	1 – 4	3 – 26	3 – 25	4 – 27	4 – 26	1 – 50	1 – 50

Note: T1 = Time 1 (age 2), T2 = Time 2 (age 3).

\*  $p < .05$ .

\*\*  $p < .01$  (two-tailed).

**Table 2**  
**Regression Analysis Summary for Variables Predicting Child Externalizing Behaviors at T2 (N = 218 families)**

Variable	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Mothers' corporal punishment T1	-0.42	0.79	-.04
Fathers' corporal punishment T1	2.24**	0.78	.23
Mothers' harsh parenting T1	0.19	0.68	.02
Fathers' harsh parenting T1	-0.28	0.72	.03
Mothers' CP T1 $\times$ Mothers' harsh parenting T1	-2.32**	0.72	-.25
Mothers' CP T1 $\times$ Fathers' harsh parenting T1	0.55	0.80	.06
Fathers' CP T1 $\times$ Fathers' harsh parenting T1	-0.80	0.76	-.09
Fathers' CP T1 $\times$ Mothers' harsh parenting T1	2.45**	0.79	-.24
Externalizing behaviors T1	5.67***	0.61	.57
Gender of child	-0.33	1.24	-.02
Intercept	20.53	1.90	
<i>R</i> <sup>2</sup>	.46		

Note: T1 = Time 1 (age 2), T2 = Time 2 (age 3), CP = corporal punishment.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$  (two-tailed).

**Table 3**  
**Regression Analysis Summary for Variables Predicting Child Externalizing Behaviors at T2 (N = 218 families)**

Variable	Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$
Mothers' corporal punishment T1	-1.03	0.80	-.10
Fathers' corporal punishment T1	2.55**	0.81	.26
Mothers' positive parenting T1	0.05	0.073	.01
Fathers' positive parenting T1	0.43	0.76	.04
Mothers' CP T1 $\times$ Mothers' positive parenting T1	0.75	0.91	.07
Mothers' CP T1 $\times$ Fathers' positive parenting T1	0.35	1.02	.04
Fathers' CP T1 $\times$ Fathers' positive parenting T1	1.07	1.00	.11
Fathers' CP T1 $\times$ Mothers' positive parenting T1	-2.01*	0.91	-.19
Externalizing behaviors T1	6.04***	0.64	.61
Gender of child	-0.20	1.24	-.01
Intercept	20.15	1.93	
$R^2$	.44		

Note: T1 = Time 1 (age 2), T2 = Time 2 (age 3), CP = corporal punishment

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$  (two-tailed).