

## Longitudinal Links Between Fathers' and Mothers' Harsh Verbal Discipline and Adolescents' Conduct Problems and Depressive Symptoms

Ming-Te Wang  
*University of Pittsburgh*

Sarah Kenny  
*University of Michigan*

This study used cross-lagged modeling to examine reciprocal relations between maternal and paternal harsh verbal discipline and adolescents' conduct problems and depressive symptoms. Data were from a sample of 976 two-parent families and their children (51% males; 54% European American, 40% African American). Mothers' and fathers' harsh verbal discipline at age 13 predicted an increase in adolescent conduct problems and depressive symptoms between ages 13 and 14. A child effect was also present, with adolescent misconduct at age 13 predicting increases in mothers' and fathers' harsh verbal discipline between ages 13 and 14. Furthermore, maternal and paternal warmth did not moderate the longitudinal associations between mothers' and fathers' use of harsh verbal discipline and adolescent conduct problems and depressive symptoms.

Parental harsh verbal discipline can have a dramatic impact on the behavioral and emotional development of adolescents. Harsh verbal discipline refers to the use of psychological force with the intention of causing a child to experience emotional pain or discomfort for the purposes of correction or control of misbehavior (Straus & Field, 2003). Harsh verbal discipline can vary in severity, ranging from yelling and shouting at a child to using words to humiliate him or her. Parents normatively shift from physical to verbal discipline as their children enter adolescence (Sheehan & Watson, 2008) and harsh verbal discipline is not uncommon. In a nationally representative survey (Straus & Field, 2003), approximately 90% of American parents reported one or more instances of harsh verbal discipline toward children of all ages. Strikingly, the rate of severe verbal discipline (e.g., swearing and cursing, calling a name) directed at adolescents was 50%. However, extant studies have primarily focused on the effects of physical discipline in childhood (see Gershoff, 2002, for a review), and the potential risks posed to adolescents who are exposed to harsh verbal discipline have received scant attention. Given its prevalence, understanding the impact of harsh verbal discipline on adolescent development is especially pressing.

Due to numerous limitations, extant research on parents' use of harsh verbal discipline fails to offer an adequate developmental account of how harsh verbal discipline unfolds over time to adversely influence adolescent development. Although some research has linked harsh verbal discipline to behavioral and psychological maladjustment in children (Donovan & Brassard, 2011; Vissing, Straus, Gelles, & Harrop, 1991), studies have failed to identify and isolate harsh verbal discipline as a specific disciplinary tactic. Studies have also sampled homogeneously, focusing on clinical populations or on either male or female children or parents, thus conferring limited generalizability. Furthermore, recent theory and research tend to support the view that parent and child behaviors mutually influence one another in a bidirectional interplay of both parent and child effects (Jang & Smith, 1997; Laird, Pettit, Bates, & Dodge, 2003; Lansford et al., 2011; Patterson, Reid, & Dishion, 1992; Sameroff, 1975; Sheehan & Watson, 2008; Wang, Dishion, Stormshak, & Willett, 2011). However, most studies have employed a cross-sectional research design and therefore critically fail to consider the transactional nature of the parent-child relationship. Finally, it has been suggested that harsh discipline may occur within the context of varying degrees of positive parenting behaviors. Parental warmth thus may moderate the link

---

We thank Jacqui Hinchey for her feedback on the earlier version of this manuscript. This project was supported by Grant DA034151-02 from the National Institute on Drug Abuse at the National Institute of Health to Ming-Te Wang.

Correspondence concerning this article should be addressed to Ming-Te Wang, 230 South Bouquet Street, Pittsburgh, PA 15260. Electronic mail may be sent to mtwang@pitt.edu.

© 2013 The Authors

Child Development © 2013 Society for Research in Child Development, Inc. All rights reserved. 0009-3920/2014/8503-0007

DOI: 10.1111/cdev.12143

between harsh verbal discipline and adolescent adjustment. However, no studies have tested the buffering effect of parental warmth yet.

To address these limitations, we refer to harsh verbal discipline as a specific disciplinary strategy that a parent uses following a misbehavior on the part of the child, characterized by (a) verbal intimidation (shouting, yelling, or screaming at the child), (b) vulgarity (swearing or cursing at the child), and (c) humiliation (calling the child dumb, lazy, or something similar). We examine the bidirectional effects of mothers' and fathers' harsh verbal discipline on the conduct problems and depressive symptoms of adolescents in a longitudinal study following a community youth sample from ages 13 to 14. In addition, we investigate whether the longitudinal association between harsh verbal discipline and adolescent adjustment is moderated by parental warmth.

#### *Parental Harsh Verbal Discipline and Youth Conduct Problems and Depressive Symptoms*

Parental harsh verbal discipline has been linked with conduct problems in children and adolescents (Evans, Simons, & Simons, 2012; Pagani et al., 2004; Patterson, 1982; Vissing et al., 1991). For example, in a nationally representative sample of 3,346 American parents with a child under 18 living at home, Vissing et al. (1991) found that children who experienced frequent parental verbal aggression, such as swearing and insults, exhibited higher levels of physical aggression, delinquency, and interpersonal problems. A recent twin study by Burt, McGue, Iacono, and Krueger (2006) also found that verbal criticism and corporal punishment at age 11 influenced adolescent misbehavior at age 14, even when controlling for genetic characteristics.

Adolescents are likely to interpret harsh verbal discipline as being indicative of parental hostility or rejection (Evans et al., 2012), behaviors that are defined by the absence of affection and emotional support and by the presence of a variety of physically and psychologically harmful behaviors and affects (Rohner, 2004). Parental hostility or rejection has been found to influence problematic adolescent behavior by enhancing negative emotions and negative views of social relationships (Gottfredson & Hirschi, 1990). For example, parental hostility increases the risk of delinquency by lowering inhibition and fostering anger, irritability, and belligerence (Agnew, 1992, 2001; Berkowitz, 1990; Mazerolle & Piquero, 1998). Indeed, Evans et al. (2012) found anger and frustration to be the

primary mediators between parental verbal abuse and conduct problems in adolescent females, and to a lesser extent in male adolescents. In addition, parental hostility may contribute to conduct problems by leading young people to develop a hostile and biased view of the parent-child relationship (Bowlby, 1969/1982; Dodge & Pettit, 2003). If parents are perceived to be exploitative and untrustworthy by the adolescent, there is an increased likelihood that he or she will feel the need to be suspicious and aggressively defend himself or herself. In support of this argument, studies have found that parental hostility and rejection could lead to a hostile view of parent-child relationships, which in turn increases adolescents' engagement in conduct problems (Dodge, Bates, & Pettit, 1990; Dodge, Pettit, Bates, & Valente, 1995; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990; Lyons-Ruth, Repacholi, McLeod, & Silva, 1991).

Harsh verbal discipline has also been linked with internalizing disorders in youth. Recent studies have shown that adolescents whose mothers engage in high levels of insults or verbal aggression report more depressive symptoms across the middle school years, regardless of gender or socioeconomic status (Donovan & Brassard, 2011; Moore & Pepler, 2006). Parents' use of insults and criticism may contribute to adolescent internalizing problems by influencing the development of a self-critical cognitive style (Sachs-Ericsson, Verona, Joiner, & Preacher, 2006) and a negative view of the self (Miller-Perrin, Perrin, & Kocur, 2009; Ney, Moore, McPhee, & Trought, 1986). A young person may develop a negative self-schema as a result of negative self-cognitions supplied to them by the caretaker (e.g., "You are stupid"); this in turn may lead him or her to feel worthless and inferior (Sachs-Ericsson et al., 2006). Indeed, Sachs-Ericsson et al. (2006) found that self-criticism fully mediated the relation between childhood verbal abuse and adult internalizing symptoms. Miller-Perrin et al. (2009) also found that negative self-perceptions mediated the relation between parental psychological aggression (e.g., behavior that conveys to children that they are worthless, unloved, and unwanted) and maladaptive psychological symptoms.

While these studies offer some insight into the effects of parental harsh verbal discipline on adolescent outcomes, the majority of this research has examined verbal discipline within the context of daily patterns of parent-child interactions and not as a specific parental disciplinary tactic. In addition, most of these studies confound harsh verbal discipline with other constructs such as psychological

aggression, verbal aggression, and even physical discipline, making comparison and integration of the literature on harsh verbal discipline difficult.

*A Transactional Perspective on Parental Harsh Verbal Discipline and Youth Development*

Sameroff's (1975) transactional model may provide insight into how harsh verbal discipline unfolds between parents and youth. In line with research showing that the behaviors and behavioral reactions of parents and children mutually influence one another (Jang & Smith, 1997; Laird et al., 2003; Lansford et al., 2011; Patterson et al., 1992; Sameroff, 1975; Sheehan & Watson, 2008; Wang et al., 2011), the transactional model underlines this dynamic interplay and suggests that a bidirectional relation exists between parents' and children's behaviors. According to the model, parents' harsh verbal discipline in response to youth problem behavior may further elicit youth's future problem behaviors, which in turn elicit future parental harsh verbal discipline. Patterson's (1982, 1986) social coercive model gives further support of a transactional view by pointing out the escalating nature of this interplay, suggesting that parents' aversive reactions to children's antisocial behavior provoke increasing levels of antisocial behavior. Social coercive theory posits that parental use of harsh discipline causes children to respond by becoming more belligerent and disobedient. In return, parents may escalate harsh disciplinary measures, further driving their children's antisocial behaviors, resulting in a coercive cycle of hostile behavior and hostile responses between parents and children (Gershoff, 2002; Lansford et al., 2011). Adolescence is a period of central concern to this transactional process given that there is generally an increase in children's problem behavior (Hipwell et al., 2008). Focusing on both parent and child effects will enable us to develop a greater understanding of the dynamic interaction between parental harsh verbal discipline and the emergence and course of conduct problems and depressive symptoms in adolescents.

Despite widespread agreement as to the conceptual importance of reciprocal parent-child relations, few empirical studies have examined bidirectionality in the relation between harsh verbal discipline and adolescent adjustment. Within the limited studies carried out, Sheehan and Watson (2008) found that mothers' use of aggressive discipline (physical and verbal aggression combined) predicted an increase in child aggression at all ages, and child aggression at 7–13 years predicted an increase in

mothers' use of aggressive discipline. From the perspective of the transactional model, this reciprocal effect is explained by the likelihood that higher levels of aggressive behavior lead parents to resort to aggressive discipline and, in turn, that higher levels of aggressive discipline lead to further aggression on the part of the child. Accordingly, in this study we expect to find a reciprocal effect between parents' harsh verbal discipline and youth's conduct problems.

In another recent study, Hipwell et al. (2008) found that over time, harsh punishment (physical and verbal punishment combined) and low parental warmth predicted conduct problems and depression in 7- to 12-year-old girls and that conduct problems in girls predicted harsh punishment. However, they did not find that depressed mood predicted harsh punishment. Although depression in young people may elicit stress in interpersonal relationships (Hammen, 2006), it is possible that it provokes a different type of response from parents than do conduct problems. For example, externalizing problems may lead to a harsh disciplinary response from parents, whereas internalizing problems may instead lead parents to withdraw and show less affection (Hipwell et al., 2008; Pettit & Arsiwalla, 2008). Therefore, although we expect to find a parent effect in the relation between harsh verbal discipline and internalizing behaviors in youth, we do not expect to find a child effect on parent harsh verbal discipline behaviors. Notably, none of the studies referred to above measured harsh verbal discipline specifically, but rather employed composites of harsh discipline including measures of both physical and verbal discipline. In addition, the Hipwell et al. (2008) study focused on girls only, limiting its generalizability. The Sheehan and Watson (2008) study used maternal report measures for all of the key variables, including maternal harsh discipline and child problem behaviors, which raised the concern of shared method variance.

*Moderation Effect of Parental Warmth*

Harsh parenting may occur alongside positive parenting. The extent to which a parent is warm may play a role in how their use of harsh verbal discipline influences their adolescent's adjustment. Warmth involves concern, comfort, affection, and responsiveness (Amato, 1990; Rohner, 2004). A parenting style characterized by warmth is thought to foster appropriate child behavior as it increases the child's desire to interact with his or her parents with a similar degree of warmth. Research has

shown that maternal warmth is associated with fewer child problem behaviors (Lac, Alvaro, Crano, & Siegel, 2009; Suchman, Rounsaville, Decoste, & Luthar, 2007) and more positive adjustment (Gray & Steinberg, 1999; Trentacosta et al., 2011; Wang, Brinkworth, & Eccles, 2013; Wang & Eccles, 2012). Parental warmth may also function as a buffer against the negative effects of harsh discipline. For example, in the context of a loving and trusting parent-child relationship, a child may not feel rejected when harshly disciplined, but instead may internalize the values and behaviors endorsed by his or her parents (see Grusec & Goodnow, 1994).

Numerous studies have investigated the moderation effect of parental warmth on physical discipline, but the findings have been mixed. Some of these studies find that parental physical discipline is not associated with increased adolescent behavior problems when it is administered in the context of parental warmth (Deater-Deckard, Ivy, & Petrill, 2006; Roher, Borque, & Elordi, 1996; Simons, Wu, Lin, Gordon, & Conger, 2000), whereas others indicate that parental warmth does not alleviate the stress of frequent corporal punishment on youth and may even exacerbate the negative impact of physical punishment (e.g., Stacks, Oshio, Gerard, & Roe, 2009; Straus, Sugarman, & Giles-Sims, 1997; Turner & Finkelhor, 1996). We located only one study that investigated the possibility that parental warmth might buffer against the potential negative effects of harsh *verbal* discipline on adolescent outcomes. McKee et al. (2007) found that parental warmth buffered fifth and sixth graders from the detrimental impacts of harsh physical discipline, but not from the impacts of harsh verbal discipline. They suggest that the finding might be due to the relatively high frequency of harsh verbal discipline encountered in their sample. Harsh verbal discipline may also be more psychologically intrusive than physical discipline and is likely to be indicative of scorn and rejection (Evans et al., 2012), thus making the association between harsh verbal discipline and adolescent internalizing and externalizing behaviors more difficult to moderate. Furthermore, the use of cross-sectional data in the McKee et al. study precludes examination of transactional processes that are known to occur between parents and children. Their sample was also socioeconomically homogenous (98% White middle-class families), limiting its generalizability.

#### *Mothers' and Fathers' Harsh Verbal Discipline*

Parent gender may play a role in the transactional relation between harsh verbal discipline and

adolescent adjustment given that mothers and fathers assume different roles and relationships with their children (Larson & Richards, 1994). While most research on harsh discipline tends to focus on mothers (Donovan & Brassard, 2011; Hipwell et al., 2008; Moore & Pepler, 2006; Sheehan & Watson, 2008), research involving both parents indicates that mothers engage in higher numbers of disciplinary acts than fathers (Straus & Stewart, 1999). This difference is generally attributed to the fact that mothers typically spend more time with their children than do fathers. Although mothers appear to administer more harsh discipline (physical discipline at least), it is possible that maternal and paternal harsh discipline may have differential effects on the behavioral outcomes of youth. For example, Bender et al. (2007) found that both maternal and paternal physical discipline were related to greater adolescent depression and behavioral problems at age 16, but maternal physical discipline was associated with depressive symptoms over and above paternal physical discipline. A recent study (McKee et al., 2007) found that both mothers' and fathers' harsh discipline was associated with child externalizing behaviors, but only fathers' harsh verbal discipline was associated with child internalizing behaviors. As such, preliminary findings point to the importance of examining the roles of both mothers and fathers in the relation between harsh verbal discipline and adolescent adjustment.

#### *The Current Study*

In this study, we examine reciprocal relations between parental harsh verbal discipline, and adolescent conduct problems and depressive symptoms both within and across time. We include both mother and father reports of harsh verbal discipline to determine the differential effects of maternal and paternal harsh discipline on adolescents. In addition, we examine whether parental warmth moderates these longitudinal relations. We first hypothesize that parental harsh verbal discipline predicts increased conduct problems and depressive symptoms over time. On the basis of recent findings where children's conduct problems, but not depression, predicted increased levels of parental harsh discipline (Hipwell et al., 2008), we hypothesize that conduct problems, but not depressive symptoms, predict harsh verbal discipline. Finally, given the psychologically intrusive nature of harsh verbal discipline, we hypothesize that parental warmth cannot moderate the association between harsh verbal discipline and problematic adolescent outcomes.



This study builds on the prior literature in several ways. First, the study expands the harsh discipline literature to focus on verbal discipline in a large community-based, socioeconomically diverse sample that includes 976 adolescents from ages 13 to 14 and their parents. The use of cross-lagged modeling incorporates the transactional nature of the associations between verbal discipline and conduct problems and depressive symptoms over time. The model takes into account initial levels of problem behaviors and harsh verbal discipline and focuses on change in the longitudinal associations. Second, harsh verbal discipline during adolescence and its interaction with parental warmth has been significantly understudied. To the best of our knowledge, this is the first study to examine parental warmth as a moderator of these cross-lagged relations over time and thus will make an important contribution to the field. Third, the use of ratings of harsh verbal discipline from both fathers and mothers and ratings of conduct problems and depressive symptoms from adolescents enables us to compare fathers and mothers with respect to the impact of harsh verbal discipline on adolescent outcomes, while avoiding concerns of shared method variance. Fourth, focusing on parents' use of verbal disciplinary strategies in response to children's misbehavior instead of on patterns of daily parent-child interaction characterized by verbal aggression will allow us to isolate harsh verbal discipline and its effects on adolescents. Finally, the model controls for several important confounds in the association between parental verbal discipline and adolescent outcomes, including demographic variables that have been found to predict both parental use of harsh discipline and adolescent problem behaviors (e.g., child gender, ethnicity, family income, and education). Since the parent-child relationship develops in the context of overall parental functioning, we also control for parenting stress and parental depression—factors that may increase parental use of harsh verbal discipline and child behavior problems (Baer, 1999; Gross, Shaw, Burwell, & Nagin, 2009; Hipwell et al., 2008; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Most importantly, we include parental physical discipline as a covariate. The inclusion of physical discipline in the models will enable us to examine whether the effects of harsh verbal discipline on child adjustment are due to verbal discipline or are a function of its co-occurrence with physical discipline.

## Method

### *Participants*

The families in this study were participants in a longitudinal study of family socialization and adolescent development. Two-parent families with children were recruited through 10 public middle schools in Pennsylvania. In this study, we examined two waves of data: Wave 1, collected when the adolescents were in seventh grade ( $M_{\text{age}} = 13.3$ , range = 12.8–13.5) and Wave 2, collected when the adolescents were in eighth grade ( $M_{\text{age}} = 14.4$ , range = 13.6–14.4). During the first assessment at age 13, data were collected from 976 families (51% males; 54% European American, 40% African American, 6% other ethnic backgrounds). The sample is broadly representative of varying socioeconomic levels, with a mean pretax family annual income of \$41,000. Eighty-nine percent of families reported employment of at least one parent. Seventy-one percent of fathers and 69% of mothers were high school graduates, of which 50% of fathers and 46% of mothers were college graduates. The mean age for mothers was 38.3 years old and for fathers was 40.6 years old.

The initial sample of adolescents in the first wave of data collection included 976 adolescents from the 985 total consenting seventh graders. At Wave 2 of collection, the sample comprised 873 adolescents of the 976 total participating seventh graders (90% retention rate). To ascertain whether the adolescents who dropped out of the study between these waves differed from the adolescents who participated in both, a series of independent sample contingency table analyses and *t* tests were conducted with all study variables at Wave 1. Results revealed that those who participated in the study for both waves were not significantly different from those who dropped out of the study after Wave 1 on the measures used in this study. Moreover, we created a variable for each participant representing the number of missing values from variables included in the model. We then tested correlations between the number of missing values and the score obtained on each of the variables. The relations between each study variable and missingness were found to be not statistically significant.

All participants received a letter through their participating middle schools. Informed consent was obtained from parents and adolescents each year. The voluntary nature of participation and the fact that adolescents and their parents could withdraw at any time without penalty was emphasized.

Adolescents and their parents completed questionnaires at both waves. This data collection process took place in adolescents' homes. Questionnaires for adolescents and parents took approximately 40 min to complete. At each wave, adolescents were offered \$20 and parents were offered \$40 for their participation. A review conducted by the Institutional Review Board approved the study to be consistent with the protection of the rights and welfare of human subjects and to meet the requirements of the Federal Guidelines.

### Measures

*Depressive symptoms.* Adolescents' depressive symptoms were assessed at ages 13 and 14 based on the 14 items from the Children's Depression Inventory (CDI; Kovacs, 1992). Adolescents were presented with 14 sets of three-response choices (increasing in symptom frequency) and asked to select the one that best described their feelings during the previous 4 weeks. This scale began with the phrase "In the past 4 weeks, how often have you had these feelings?" Example items were "I am sad," "I feel like crying," "I feel like I hate myself," "I feel like nothing will ever work out for me," and "I am worthless." All items were rated on a 3-point scale ranging from 1 (*once in a while*) to 3 (*all the time*). The 14 items were averaged to measure adolescents' depressive symptoms at Wave 1 and Wave 2, with higher scores reflecting more depressive symptoms. The CDI has been used extensively with adolescents, and reliability and validity with populations in middle school and high school have been established (Kovacs, 1992). In this study, this measure demonstrated good internal consistency at the two time points ( $\alpha$ s = .84 and .82).

*Conduct problems.* Adolescents' conduct problems were assessed at ages 13 and 14 through adolescent self-reports on five items based on the work of Elliott, Huizinga, and Menard (1989). Example items were "In the past year, how often have you: (a) been disobedient in school, (b) lied to your parents, (c) stolen from a store, (d) been involved in a gang fight, and (e) damaged public or private property for fun?" The response format ranged from 1 (*never*) to 5 (*10 or more times*). The scores of the five items were averaged to form the construct of conduct problems on each occasion, with higher scores reflecting higher levels of conduct problems. The measure has good estimated internal consistency reliability and has been used in previous research to measure problem behavior in youth (Gutman, Sameroff, & Cole, 2003). In this study, the conduct

problem measure yielded good internal consistency at the two time points ( $\alpha$ s = .78 and .76).

*Harsh verbal discipline.* The harsh verbal discipline construct was assessed at adolescent ages 13 and 14 by three items completed by the mother and the father, respectively. These items were adapted from the Conflict Tactics Scale (Straus, 1979). Items were: "In the past year, after your child has disobeyed you or done something wrong, how often have you: (a) shouted, yelled, or screamed at the child; (b) swore or cursed at the child; and (c) called the child dumb or lazy or some other name like that?" Items were rated on a 5-point scale, ranging from 1 (*never*) to 5 (*always*). The three items were averaged together to create the constructs of mothers' and fathers' harsh verbal discipline. The constructs demonstrated good internal consistency at each time point (mother:  $\alpha$ s = .77 and .78; father:  $\alpha$ s = .75 and .77).

*Mothers' and fathers' warmth.* Four items were used to assess maternal and paternal warmth at child age 13. Items involved the degrees of love, emotional support, affection, and care between parents and adolescents in the past year. This scale began with the phrase "How true are the following statements for you and your parents?" with respondents answering on a 5-point scale ranging from 1 (*never true*) to 5 (*always true*). Example items were "My mother/father really cares about me" and "I can depend on my mother/father when I have personal problems." Responses to these four items were averaged to create the construct of each mother's and father's expressions of warmth, with higher scores reflecting more warmth. The constructs of mothers' and fathers' warmth yielded good internal consistency (mother:  $\alpha$  = .86; father:  $\alpha$  = .84).

*Parental psychological risk factors.* Parents' stress and depression were assessed when adolescents were age 13 as control variables. Six items from the Parenting Stress Scale (Abidin, 1995) were used to measure mothers' and fathers' parenting stress. An example item was "Being a mother/father is harder than I thought it would be." Responses were reverse coded and averaged to create the construct of parenting stress (mother:  $\alpha$  = .79; father:  $\alpha$  = .78). Depression for both mothers and fathers was measured by an abbreviated form of the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D Short Form contains 10 items with each item coded on a 4-point scale between 0 and 3 (mother:  $\alpha$  = .82; father:  $\alpha$  = .80).

*Physical discipline.* Parental physical discipline was assessed at Wave 1 when the child was age 13

by two items completed by the mother and the father, respectively. They were asked: "In the past year, if your child has disobeyed you or done something wrong, how often did you (a) push, grab, or shove him/her and (b) slap or spank him/her?" Items were scaled using a 5-point answer format ranging from 1 (*never*) to 5 (*always*). The two items were averaged to create the physical discipline construct ( $r = .42, p < .001$ ).

*Socioeconomic and demographic variables.* Socioeconomic and demographic characteristics of adolescents and their families were used as statistical controls. These covariates included adolescent gender (male: 0 = girl, 1 = boy), ethnicity (White: 0 = African American, 1 = European American, 2 = other), parent education (highest level of educational attainment), and family income.

### Analytic Strategy

We conducted cross-lagged and multigroup analyses in Mplus 6.1 (Muthén & Muthén, 2010). Missing data were accounted for through full information maximum likelihood estimation. Models were estimated with a procedure (CLUSTER) designed to address violations of independence assumptions related to the multilevel nature of the data (students nested in schools), thereby achieving robust standard errors. All models controlled for a set of covariates, including adolescent gender, ethnicity, parent education, family income, parental physical discipline, parental depression, and parenting stress. To assess model fit, we examined the chi-square test, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR; Hu & Bentler, 1999).

## Results

Means, standard deviations, and bivariate correlations among the key variables are shown in Table 1. At child age 13, 45% of mothers and 42% of fathers reported that they had used harsh verbal discipline toward their child in the past year. At age 14, 46% of mothers and 43% of fathers reported using harsh verbal language to discipline their child. At both ages 13 and 14, mothers reported greater use of harsh verbal discipline than fathers: mother = 3.35, father = 3.13,  $t(1,950) = 3.72, p < .001$  at age 13; mother = 2.96, father = 2.74,  $t(1,950) = 3.78, p < .001$  at age 14. Despite these mean level differences in harsh verbal discipline

between mothers and fathers, there were moderate positive correlations between mothers' and fathers' use of harsh verbal discipline (ranging from .31 to .40; see Table 1). Taken together, these findings suggest that while mothers reported greater use of harsh verbal discipline than fathers, adolescents whose mothers reported using harsh verbal discipline also tended to have fathers using harsh verbal discipline.

### Cross-Lagged Model

We used cross-lagged panel analysis to examine whether there were reciprocal relations between mothers' and fathers' use of harsh verbal discipline and adolescents' adjustment from ages 13 to 14, controlling for stability in each construct over time, and also parental psychosocial risk factors, parental physical discipline, and demographic variables. We fit the models simultaneously for conduct problems and depressive symptoms, but we presented the results by adolescent conduct problems and depressive symptoms separately for clarity (see Figures 1 and 2). A key aspect of these models is that for each path of interest, we controlled for the initial levels of the dependent variable, and thus the focus is on predicting change in the dependent construct, over and beyond initial levels.

The model fit the data well,  $\chi^2(32) = 21.54, ns$ , CFI = .99, RMSEA = .01, SRMR = .02 (see Figures 1 and 2; all paths were estimated in the same model but results were presented in two figures for clarity). According to  $R^2$ , the constructs in the model did a better job explaining the variance in conduct problems than depressive symptoms at age 14, but did not explain much of the variance in parental harsh discipline at age 14.

As shown in Figure 1, higher levels of mothers' and fathers' harsh verbal discipline at age 13 predicted increases in adolescents' conduct problems between ages 13 and 14 ( $\beta_s = .12$  and  $.11, p < .001$ ). Higher levels of adolescents' conduct problems at age 13 also predicted increases in mothers' and fathers' harsh verbal discipline between ages 13 and 14 ( $\beta_s = .10$  and  $.09, p < .001$ ). Each of the cross-lagged paths was significant and nearly equal to each other in magnitude. To determine where these cross-lagged paths between parent and child effects were significantly equal, we compared the model with a second model in which the four cross-lagged paths (from verbal discipline to adolescent behavior and from adolescent behavior to verbal discipline) were constrained to be equal. We found no significant difference,  $\chi^2(2) = 3.35, ns$ , suggesting that the

Table 1  
Means, Standard Deviations, and Correlations Among Parental Harsh Verbal Discipline and Adolescent Conduct Problem and Depressive Symptom Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Maternal HVD: age 13	1.00																
2. Paternal HVD: age 13	0.32***	1.00															
3. Maternal HVD: age 14	0.33***	0.24***	1.00														
4. Paternal HVD: age 14	0.31***	0.48***	0.40***	1.00													
5. Conduct: age 13	0.25***	0.24***	0.19***	0.16***	1.00												
6. Depression: age 13	0.32***	0.30***	0.10***	-0.07	0.18***	1.00											
7. Conduct: age 14	0.20***	0.17***	0.20***	0.21***	0.36***	-0.04	1.00										
8. Depression: age 14	0.25***	0.22***	0.30***	0.32***	0.09*	0.30***	0.23***	1.00									
9. Maternal warmth: age 13	-0.06	0.04	-0.07	-0.05	-0.17***	-0.24***	-0.14**	-0.20***	1.00								
10. Paternal warmth: age 13	-0.04	-0.05	0.03	-0.06	-0.13**	-0.20***	-0.11**	-0.16**	0.29***	1.00							
11. Maternal PD: age 13	0.21***	0.14**	0.15**	0.08	0.31***	0.24***	0.20***	0.16***	-0.20***	-0.03	1.00						
12. Paternal PD: age 13	0.13**	0.23***	0.06	0.19***	0.33***	0.26***	0.21***	0.18***	-0.07	-0.25***	0.15**	1.00					
13. Mother parenting stress: age 13	0.27***	0.05	0.16***	0.02	0.15***	0.17***	0.11**	0.12**	-0.12**	-0.04	0.18***	0.05	1.00				
14. Father parenting stress: age 13	0.07	0.29***	0.02	0.20***	0.14**	0.19***	0.10*	0.11**	-0.05	-0.15***	0.09*	0.15***	0.21***	1.00			
15. Maternal depression: age 13	0.34***	0.08	0.20***	0.03	0.04	0.29***	0.01	0.19***	-0.14***	-0.04	0.19***	0.02	0.28***	0.15**	1.00		
16. Paternal depression: age 13	0.04	0.30***	0.01	0.22***	0.05	0.20***	0.02	0.13**	-0.05	-0.12**	0.03	0.11**	0.19***	0.21***	0.20***	1.00	
17. Male M	-0.09**	0.10**	-0.08*	-0.02	0.17***	-0.06*	0.18***	-0.10**	-0.03	-0.10**	0.09**	0.15***	0.07	0.08	-0.04	0.03	1.00
SD	1.28	0.98	1.21	1.07	0.68	0.62	0.71	0.48	0.82	1.02	1.13	1.01	0.47	0.84	0.96	0.91	—
Range	1-5	1-5	1-5	1-5	1-5	1-3	1-5	1-3	1-5	1-5	1-3	1-3	1-5	1-5	0-3	0-3	—

Note. HVD = harsh verbal discipline; PD = physical discipline.  
\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



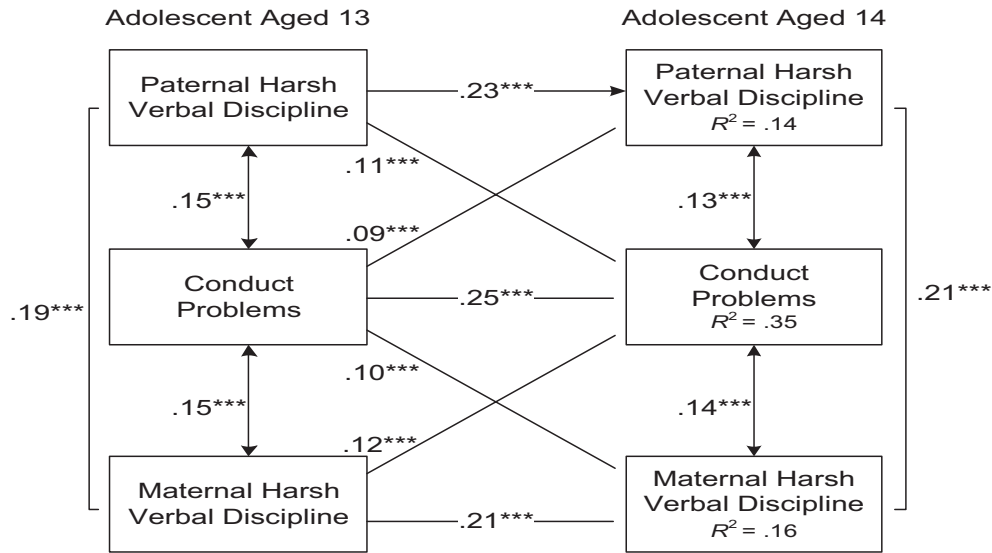


Figure 1. Cross-lagged associations between parents' harsh verbal discipline and adolescent conduct problems across two waves. Standardized path coefficients are presented. The model controlled for adolescents' gender, ethnicity, parental physical discipline, parenting stress, parental depression, parent education, family income, and parental warmth. We fit the models simultaneously for conduct problem and depressive symptoms but presented the results separately for clarity. \*\*\* $p < .001$ .

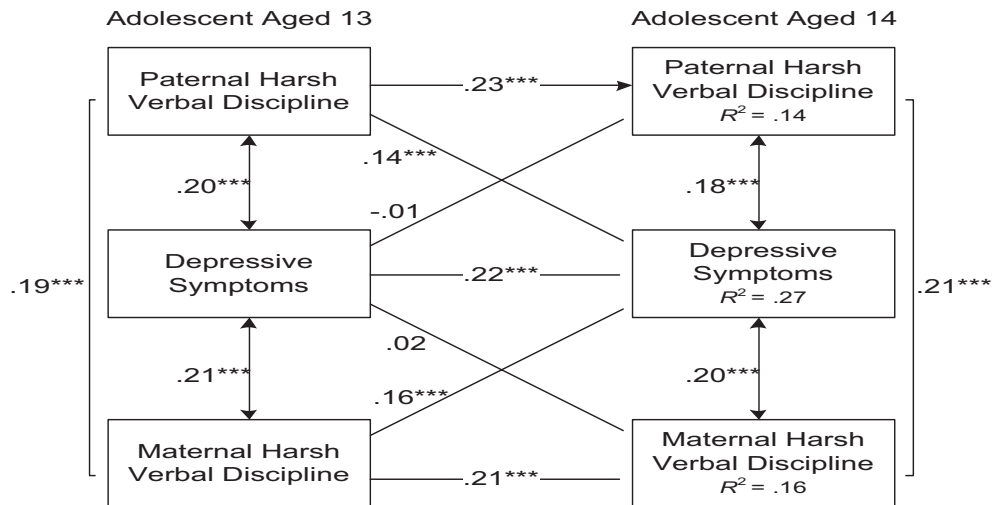


Figure 2. Cross-lagged associations between parents' harsh verbal discipline and adolescent depressive symptoms across two waves. Standardized path coefficients are presented. The model controlled for adolescents' gender, ethnicity, parental physical discipline, parenting stress, parental depression, parent education, family income, and parental warmth. We fit the models simultaneously for conduct problem and depressive symptoms, but presented the results separately for clarity. \*\*\* $p < .001$ .

parent (i.e., mother and father) and child effects could be treated as equal. In addition, we examined parent gender differences by comparing the fit of models in which paths between parental harsh verbal discipline and adolescent conduct problems were free to differ across parent gender with the fit of models in which the structural paths were constrained to be equal across parent gender. The fit of

the constrained models was not significantly worse than the unconstrained models,  $\chi^2(1) = 2.03, ns$ . The findings suggest that the relation between parental harsh verbal discipline and adolescent adjustment did not differ across mothers and fathers.

In Figure 2, high levels of mothers' and fathers' use of harsh verbal discipline at age 13 predicted increased adolescents' depressive symptoms between

ages 13 and 14 ( $\beta_s = .16$  and  $.14$ ,  $p < .001$ ). However, adolescents' depressive symptoms at age 13 did not predict mothers' and fathers' use of harsh verbal discipline between ages 13 and 14. Furthermore, we examined whether the relation between parental harsh verbal discipline and adolescent depressive symptoms differed across parent gender. The fit of the constrained models was not significantly worse than the unconstrained models,  $\chi^2(1) = 1.86$ , *ns*, suggesting that the relation between parental harsh verbal discipline and adolescent depressive symptoms did not differ across mothers and fathers.

#### *Moderation Effect of Parental Warmth*

We next tested whether paternal and maternal warmth moderated the relations between harsh verbal discipline and adolescent conduct problems and depressive symptoms. We conducted multigroup analyses of the cross-lagged models, which involved fitting the cross-lagged model separately for different levels of parental warmth and examining whether doing so led to a significant decrease in the model fit by using chi-square difference. For the multigroup analyses in which models were compared across mothers' and fathers' warmth levels, mothers and fathers were divided into three groups.

The *high-warmth* group included mothers and fathers who had levels of parental warmth 0.5 *SD* above the mean. The group means were 4.38 for mothers' warmth ( $n = 266$ ) and 4.33 for fathers' warmth ( $n = 242$ ). The *low-warmth* group included mothers and fathers who had levels of parental warmth 0.5 *SD* below the mean. The group means were 3.56 for mothers' warmth ( $n = 255$ ) and 3.31 for fathers' warmth ( $n = 297$ ). The *moderate-warmth* group included mothers and fathers who had levels of parental warmth within 0.5 *SD* of the mean. The group means were 3.97 for mothers' warmth ( $n = 455$ ) and 3.82 for fathers' warmth ( $n = 437$ ). The three groups differed from each other significantly in the means of mothers' warmth and fathers' warmth. We removed the moderate-warmth group and ran the multigroup analysis between the high- and low-warmth groups to increase confidence in the findings.

To determine whether maternal and paternal warmth were significant moderators, we compared the fit of models in which cross-lagged paths were free to differ across parental warmth with the fit of models in which the cross-lagged paths were constrained to be equal across parental warmth. Two

separate sets of constraints were imposed. First, we tested the moderation effect of maternal warmth between parental harsh verbal discipline and adolescent conduct problems and depressive symptoms, finding the fully constrained model was not different from the fully free model,  $\Delta\chi^2(7) = 11.43$ , *ns*. This indicates that constraining all of the paths to be the same across groups did not reduce the model fit. The fully constrained model, in which all of the cross-lagged paths were set to be equal across the two maternal warmth groups, was accepted as the best fitting model,  $\chi^2(71) = 73.11$ , CFI = .98, RMSEA = .02, SRMR = .03. We then tested the moderation effect of paternal warmth between parental harsh verbal discipline and conduct problems and depressive symptoms. There was no significant difference between the fully constrained model and the fully free model,  $\Delta\chi^2(7) = 13.01$ , *ns*. The fully constrained model was thus accepted as the best fitting model,  $\chi^2(71) = 84.45$ , CFI = .98, RMSEA = .02, SRMR = .03. In summary, the multigroup findings suggest that harsh verbal discipline predicted an increase in adolescent conduct problems and depressive symptoms over time, and adolescent conduct problems elicited more parental harsh verbal discipline over time equally across the two levels of maternal and paternal warmth.

## Discussion

This study used cross-lagged modeling to examine the reciprocal relations between maternal and paternal harsh verbal discipline and adolescents' conduct problems and depressive symptoms, accounting for stability in both harsh verbal discipline and adolescent problem behaviors over time. We found that mothers' and fathers' harsh verbal discipline at age 13 predicted an increase in adolescent conduct problems and depressive symptoms between ages 13 and 14. A child effect was also present, with adolescent conduct problems at age 13 predicting increases in mothers' and fathers' harsh verbal discipline between ages 13 and 14. The patterns of findings between harsh verbal discipline and adolescent conduct problems and depressive symptoms were similar across mothers and fathers. Furthermore, maternal and paternal warmth did not moderate the reciprocal associations between mothers' and fathers' use of harsh verbal discipline and adolescent conduct problems and depressive symptoms over time.

It appears from our sample of 976 American families with adolescents that harsh verbal discipline

remains a common practice. Nearly half of the mothers and fathers reported that they had directed harsh verbal discipline at their adolescent children in the past year. These figures corroborate nationally representative findings reported by Straus and Field (2003). As hypothesized, we found that mothers reported greater use of harsh verbal discipline than fathers, but there was moderate concordance between mothers' and fathers' harsh verbal discipline. This consistency in parenting may be explained by the fact that individuals who share similar attitudes and values are likely to self-select into relationships with one another (Buss, 1984), and that once in a relationship, parents are likely to influence each other and adopt each other's disciplinary techniques (Fletcher, Steinberg, & Sellers, 1999).

#### *Parental Harsh Verbal Discipline and Youth Conduct Problems and Depressive Symptoms*

Discipline is a means by which children are informed of both the standards of acceptable behavior and the repercussions of not adhering to such standards. Children apply this information during their continuous quest for independence. Using a large sample of socioeconomically and ethnically diverse parents and adolescents, we found that harsh parental verbal discipline did not lessen or eliminate the manifestation of adolescent conduct problems, but rather increased conduct problems and depressive symptoms over time. Although mothers appear to administer harsh verbal discipline more frequently than fathers, this form of discipline is shown to be related to both conduct problems and depressive symptoms in adolescents, irrespective of which parent administers it. During adolescence, and particularly during the early years of adolescence on which we have focused, young people engage in a great deal of identity work (Kerr & Bowen, 1988; Steinberg & Morris, 2001). Capable of reasoning with caregivers and about caregiver behavior (Collins, Madsen, & Susman-Stillman, 2002), adolescents are likely to interpret harsh verbal discipline as indicative of rejection or scorn (Evans et al., 2012). This interpretation is likely to result in numerous negative youth outcomes through various mechanisms, such as the development of a hostile view of the parent-child relationship, a negative view of the self, or low self-control (Evans et al., 2012; Miller-Perrin et al., 2009). For example, verbal aggression may lead to declines in self-confidence that in turn contribute to declines in self-directed social behavior and increased social

avoidance. Such detriment to the process of individuation and to the development of a strong sense of personal identity can be devastating to adolescents, leading to outcomes such as depression or problematic social interactions (Donovan & Brassard, 2011).

In the models examining the reciprocal relation between parental harsh verbal discipline and adolescent problem behavior, we found evidence of both parent and child effects in relation to adolescent conduct problems. The finding suggests that a coercive cycle of parenting is operating, in which a parent might react to adolescents' conduct problems with hostile and demeaning verbal discipline, and these verbal assaults may thus provoke the adolescent to further engage in disruptive behavior. These findings are consistent with overarching theoretical models that have emphasized the transactional nature of parent-child relationships (Bell, 1968; Patterson, 1982; Sameroff, 1975; Stice & Barrera, 1995) and underline the importance of taking into account both child and parent effects, particularly the development of adolescents' conduct problems. Furthermore, we found no evidence of a bidirectional relation between harsh verbal discipline and adolescent depressive symptoms. This finding is in line with a previous study conducted by Hipwell et al. (2008) who found that depression in 7- to 12-year-old girls did not predict harsh discipline in parents (but did predict a decrease in parental warmth). As hypothesized, depressive symptoms in children are less likely to provoke a harsh disciplinary reaction from parents than are conduct problems (Pettit & Arsiwalla, 2008). Depression in adolescents may lead to difficulties in the parent-child relationship; however, instead of eliciting harsh discipline, it may weaken the affective bond between the parent and child, in turn lessening parental feelings and expressions of warmth toward the child.

#### *Moderation Effect of Parental Warmth*

Our findings indicate that parental warmth did not buffer against the effects of harsh verbal discipline on adolescent problem behavior. Harsh verbal discipline was associated with increased conduct problems and depressive symptoms regardless of whether parenting style was characterized by low, moderate, or high levels of maternal and paternal warmth. Warmth constitutes one of the components of the authoritative parenting style, and enhances academic and psychosocial development (Gray & Steinberg, 1999). It is plausible that parents use harsh discipline in conjunction with demonstrations

of affection and concern. There exists some degree of conventional wisdom promoting the notion that harsh discipline is not harmful to children or, at least, that the detrimental effects of harsh discipline may be offset when used in the context of a warm and loving parent-child relationship. Indeed, some studies on physical discipline tend to support this notion (e.g., Deater-Deckard et al., 2006; McLoyd & Smith, 2004; Simons, Johnson, & Conger, 1994). However, the results of our study cast doubt on the effectiveness of harsh verbal discipline as a disciplinary approach, even in the context of positive parenting styles. Even in a warm and loving parent-child relationship, harsh verbal discipline reinforces the child's misbehaviors and depressive symptoms, which are often the very behaviors that parents aim to ameliorate. While parental warmth creates trust and reciprocity between parent and child (Amato, 1990), harsh verbal discipline may compromise those bonds and thus contribute to coercive processes that reinforce the child's use of problem behaviors. As previously suggested, adolescents exposed to harsh verbal discipline may suffer from a lack of confidence (Donovan & Brassard, 2011) and it may be particularly difficult to moderate the effects that parental insults or threats have on the adolescent's developing sense of self. Research on child abuse has found verbal abuse to have a negative effect on children's perceptions of themselves and of the world around them, also making them more angry and pessimistic about the future (Ney et al., 1986). Furthermore, intentionally demeaning and scornful comments by parents may be particularly psychologically intrusive and signal rejection (Evans et al., 2012). Taken together, our findings suggest that parental warmth is not sufficient to buffer against the detrimental effects of parental cursing, yelling, or insults, which appear to be particularly psychologically damaging for the developing adolescent.

It is noteworthy that the correlations between parental harsh verbal discipline and warmth were nonsignificant. The lack of significant positive or negative correlation corresponds to our statement and prior findings (Deater-Deckard et al., 2006; Grusec & Goodnow, 1994) that harsh discipline may occur within the context of varying degrees of positive parenting behaviors, like parental warmth. In other words, parental use of harsh verbal discipline may not necessarily mean that parents show more or less warmth toward their children. However, differences in measuring and defining harsh verbal discipline and parental warmth among other studies may also contribute to the nonsignificant

correlation. For example, many extant harsh discipline studies included items that could be characterized as severe verbal abuse or combined verbal and physical discipline. This study focuses specifically on parental use of verbal disciplinary strategies in response to children's misbehavior, not on patterns of daily parent-child interaction characterized by verbal aggression or verbal abuse.

#### *Limitations and Implications for Interventions and Future Research*

This study is limited in a few ways. First, given concerns of social desirability, it is possible that the use of parent self-reports may have led to an underreporting of levels of harsh verbal discipline. However, harsh verbal discipline predicted both forms of problem behaviors, suggesting that even if the level of harsh verbal discipline was underreported, an association exists and might be strengthened with more accurate and truthful reporting. Furthermore, the frequency of harsh verbal discipline reported by parents is similar to, and further validates, results from other recent nationally representative studies (i.e., Straus & Field, 2003). Second, our analyses began at age 13 and, as such, we do not capture the beginning of the developmental trajectory of problem behaviors or the origins of the parent and child influence. Future research is needed to test the reciprocal model at different periods of development so that we may better understand whether the results will generalize to developmental periods other than early adolescence. Third, our findings reflect only the occurrence of harsh verbal discipline in two-parent families. Adolescents from single-parent families characterized by socioeconomic disadvantage tend to have higher rates of problem behaviors (Wang et al., 2011). While studies indicate that appropriate parenting (e.g., parental emotional support and monitoring) could buffer this relation, negative parenting such as harsh verbal discipline may make it worse (Murry, Bynum, Brody, Willert, & Stephens, 2001). Future research is necessary to investigate the interaction effects of family structure and parental harsh verbal discipline on adolescent development. Finally, we tested maternal and paternal warmth as an individual moderator of the link between harsh verbal discipline and adolescent adjustment. However, it is possible that warmth from one parent may buffer the child from the other parent's harsh verbal discipline. Future research needs to investigate whether maternal and paternal warmth interacts to influence adolescent adjustment.



Our findings have several implications for intervention and future research. This study supports theoretical models that posit transactional relations between parental harsh verbal discipline and adolescents' conduct problems (e.g., Hipwell et al., 2008; Sheehan & Watson, 2008) and highlights the strengths of using longitudinal methods with measures from multiple informants to model these transactional relations over time. Harsh verbal discipline deserves greater attention in both research and practice. The majority of research conducted on harsh discipline has focused on physical discipline in early childhood. However, given that parents tend to resort to verbal discipline as their children mature (Sheehan & Watson, 2008), it is important that researchers and parents are aware that harsh verbal discipline is ineffective at reducing conduct problems and, in fact, leads to increased adolescent conduct problems and depressive symptoms. It is also important that parents recognize that insulting or profusely criticizing their child is likely to interfere with the process of individuation, and the development of a strong sense of identity, which are critical during adolescence. At the same time, adolescents with higher levels of conduct problems may elicit more harsh verbal discipline. And even in the context of a warm and loving parent-child relationship, harsh verbal discipline predicts increased conduct problems and depressive symptoms in adolescents.

Given that both mothers' and fathers' harsh verbal discipline is shown to influence problem behavior in adolescents, it is important that intervention programs target the parental dyad, ensuring that the role fathers play in disciplining their children is not neglected. Furthermore, the role of the child must not be ignored. Our results support a transactional model of parent-child interaction and suggest that any intervention efforts to reduce both harsh verbal discipline and conduct problems will need to target both the parents and the child. Although parenting programs may have a more receptive audience, schools also have the potential to educate young people about the influence their own behavior has on their parents' disciplinary techniques. With the appropriate resources, schools have a great opportunity to target conduct problems in youth and also to reach parents through the messages they send home with their children. Increasing efforts in both academic and practical fields to investigate and raise awareness about the negative outcomes associated with this form of discipline will benefit both parents and children alike.

## References

- Abidin, R. R. (1995). *Parenting Stress Index: Professional manual* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, *30*, 47–87. doi:10.1177/0022427894031003001
- Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency*, *38*, 319–361. doi:10.1177/0022427801038004001
- Amato, P. (1990). Dimensions of the family environment as perceived by children: A multidimensional scaling study. *Journal of Marriage and the Family*, *52*, 613–620.
- Baer, J. (1999). Family relationships, parenting behavior and adolescent deviance in three ethnic groups. *Families in Society*, *80*, 279–285.
- Bell, R. Q. (1968). A reinterpretation of the direction of effects in studies of socialization. *Psychological Review*, *75*, 81–95.
- Bender, H. L., Allen, J. P., McElhaney, K. B., Antonishak, J., Moore, C. M., Kelly, H. O., et al. (2007). Use of harsh physical discipline and developmental outcomes in adolescence. *Development and Psychopathology*, *19*, 227–242. doi:10.1017/S0954579407070125
- Berkowitz, L. (1990). On the formation and regulation of anger and aggression: A cognitive-associationistic analysis. *American Psychologist*, *45*, 494–503. doi:10.1037/0003-066X.45.4.494
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. attachment*. New York: Basic Books. (Original work published 1969)
- Burt, S. A., McGue, M., Iacono, W. G., & Krueger, R. F. (2006). Differential parent-child relationships and adolescent externalizing symptoms: Cross-lagged analyses within a monozygotic twin differences design. *Developmental Psychology*, *42*, 1289–1298. doi:10.1037/0012-1649.42.6.1289
- Buss, D. M. (1984). Toward a psychology of person-environment (PE) correlation: The role of spouse selection. *Journal of Personality and Social Psychology*, *47*, 361–377.
- Collins, W. A., Madsen, S. D., & Susman-Stillman, A. (2002). Parenting during middle childhood. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 3: Being and becoming a parent* (2nd ed., pp. 73–101). Mahwah, NJ: Erlbaum.
- Deater-Deckard, K., Ivy, L., & Petrill, S. A. (2006). Maternal warmth moderates the link between physical punishment and child externalizing problems: A shared environment mechanism. *Parenting, Science, and Practice*, *6*, 59–78.
- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. *Science*, *250*, 1678–1683.
- Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, *39*, 349–371.

- Dodge, K. A., Pettit, G. S., Bates, J. E., & Valente, E. (1995). Social information-processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology, 104*, 632–643. doi:10.1037/0021-843X.104.4.632
- Donovan, K. L., & Brassard, M. R. (2011). Trajectories of maternal verbal aggression across the middle school years: Associations with negative view of self and social problems. *Child Abuse & Neglect, 35*, 814–830. doi:10.1016/j.chiabu.2011.06.001
- Elliott, D. S., Huizinga, D., & Menard, S. (1989). *Multiple problem youth: Delinquency, drugs and mental health problems*. New York: Springer.
- Evans, S. Z., Simons, L. G., & Simons, R. L. (2012). The effect of corporal punishment and verbal abuse on delinquency: Mediating mechanisms. *Journal of Youth and Adolescence, 41*, 1095–1110. doi:10.1007/s10964-012-9755-x
- Fletcher, A., Steinberg, L., & Sellers, E. (1999). Adolescents' well-being as a function of perceived inter-parental consistency. *Journal of Marriage and the Family, 61*, 599–610.
- Gershoff, E. T. (2002). Corporal punishment and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin, 128*, 539–579. doi:10.1037//0033-2909.128.4.539
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Gray, M., & Steinberg, L. (1999). Unpacking authoritative parenting: Reassessing a multi-dimensional construct. *Journal of Marriage and the Family, 61*, 574–587.
- Gross, H. E., Shaw, D. S., Burwell, R. A., & Nagin, D. S. (2009). Transactional processes in child disruptive behavior and maternal depression: A longitudinal study from early childhood to adolescence. *Development and Psychopathology, 21*, 139–156. doi:10.1017/S0954579409000091
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology, 30*, 4–19. doi:10.1037/0012-1649.30.1.4
- Gutman, L. M., Sameroff, A. J., & Cole, R. (2003). Academic growth curve trajectories from 1st grade to 12th grade: Effects of multiple social risk factors and pre-school child factors. *Developmental Psychology, 39*, 777–790. doi:10.1037/0012-1649.39.4.777
- Hammen, C. (2006). Stress generation in depression: Reflections on origins, research, and future directions. *Journal of Clinical Psychology, 62*, 1065–1082.
- Hipwell, A., Keenan, K., Kasza, K., Loeber, R., Stouthamer-Loeber, M., & Bean, T. (2008). Reciprocal influences between girls' conduct problems and depression, and parental punishment and warmth: A six year prospective analysis. *Journal of Abnormal Child Psychology, 36*, 663–677. doi:10.1007/s10802-007-9206-4
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. doi:10.1080/10705519909540118
- Jang, S., & Smith, C. A. (1997). A test of reciprocal causal relationships among parental supervision, affective ties, and delinquency. *Journal of Research in Crime and Delinquency, 34*, 307–336. doi:10.1177/0022427897034003002
- Kerr, M., & Bowen, M. (1988). *Family evaluation*. New York: Norton.
- Kovacs, M. (1992). *Children's Depression Inventory*. New York: Multi-Health Systems.
- Lac, A., Alvaro, E. M., Crano, W. D., & Siegel, J. T. (2009). Pathways from parental knowledge and warmth to adolescent marijuana use: An extension to the theory of planned behavior. *Prevention Science, 10*, 22–32. doi:10.1007/s11121-008-0111-z
- Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003). Parents' monitoring-relevant knowledge and adolescents' delinquent behavior: Evidence of correlated developmental changes and reciprocal influences. *Child Development, 74*, 752–768.
- Lansford, J. E., Criss, M. M., Laird, R. D., Shaw, D. S., Pettit, G. S., Bates, J. E., et al. (2011). Reciprocal relations between parents' physical discipline and children's externalizing behavior during middle childhood and adolescence. *Development and Psychopathology, 23*, 225–238. doi:10.1017/S0954579410000751
- Larson, R., & Richards, M. (1994). *Divergent worlds: The emotional lives of mothers, fathers, and adolescents*. New York: Basic Books.
- Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical Psychology Review, 20*, 561–592. doi:10.1016/S0272-7358(98)00100-7
- Lyons-Ruth, K., Connell, D. B., Grunbaum, H. U., & Botein, S. (1990). Infants at social risk: Maternal depression and family support services as mediators of infant development and security of attachment. *Child Development, 61*, 85–98.
- Lyons-Ruth, K., Repacholi, B., McLeod, S., & Silva, E. (1991). Disorganized attachment behavior in infancy: Short-term stability, maternal and infant correlates and risk-related sub-types. *Development and Psychopathology, 3*, 377–396.
- Mazerolle, P., & Piquero, A. (1998). Linking exposure to strain with anger: An investigation of deviant adaptations. *Journal of Criminal Justice, 26*, 195–211. doi:10.1016/S0047-235200085-8
- McKee, L., Roland, E., Coffelt, N., Olson, A. L., Forehand, R., Massari, C., et al. (2007). Harsh discipline and child problem behaviors: The roles of positive parenting and gender. *Journal of Family Violence, 22*, 187–196. doi:10.1007/s10896-007-9070-6
- McLoyd, V. C., & Smith, J. (2004). Physical discipline and behavioral problems in African American, European American, and Hispanic children: Emotional support as a moderator. *Journal of Marriage and Family, 64*, 40–53. doi:10.1111/j.17413737.2002.00040.x

- Miller-Perrin, C. L., Perrin, R. D., & Kocur, J. L. (2009). Parental physical and psychological aggression: Psychological symptoms in young adults. *Child Abuse & Neglect*, 33, 1–11. doi:10.1016/j.chiabu.2008.12.001
- Moore, T. E., & Pepler, D. J. (2006). Wounding words: Maternal verbal aggression and children's adjustment. *Journal of Family Violence*, 21, 89–93.
- Murry, V. M., Bynum, M. S., Brody, G. H., Willert, A., & Stephens, D. (2001). African American single mothers and children in context: A review of studies on risk and resilience. *Clinical Child and Family Psychology Review*, 4, 133–155.
- Muthén, B. O., & Muthén, L. (2010). Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and Experimental Research*, 24, 882–891.
- Ney, P. G., Moore, C., McPhee, J., & Trought, P. (1986). Child abuse: A study of the child's perspective. *Child Abuse & Neglect*, 10, 511–518.
- Pagani, L. S., Tremblay, R. E., Nagin, D., Zoccolillo, M., Vitaro, F., & McDuff, P. (2004). Risk factor models for adolescent verbal and physical aggression toward mothers. *International Journal of Behavioral Development*, 28, 528–537. doi:10.1080/01650250444000243
- Patterson, G. (1982). *A social learning approach: Vol. 3. Coercive family process*. Eugene, OR: Castalia.
- Patterson, G. R. (1986). Performance models for antisocial boys. *American Psychologist*, 41, 432–444.
- Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *Antisocial boys*. Eugene, OR: Castalia.
- Pettit, G. S., & Arsiwalla, D. D. (2008). Commentary on special on "bidirectional parent-child relationships": The continuing evolution of dynamic, transactional models of parenting and youth behavior problems. *Journal of Abnormal Child Psychology*, 36, 711–718.
- Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rohner, R. P. (2004). The parental "acceptance-rejection syndrome": Universal correlates of perceived rejection. *American Psychologist*, 59, 830–840. doi:10.1037/0003-066X.59.8.830
- Rohner, R. P., Bourque, S. L., & Elordi, C. A. (1996). Children's perceptions of corporal punishment, caretaker acceptance, and psychological adjustment in a poor, biracial southern community. *Journal of Marriage and the Family*, 58, 842–852.
- Sachs-Ericsson, N., Verona, E., Joiner, T., & Preacher, K. (2006). Parental verbal abuse and the mediating role of self-criticism in adult internalizing disorders. *Journal of Affective Disorders*, 93, 71–78. doi:10.1016/j.jad.2006.02.014
- Sameroff, A. (1975). Transactional models in early social relations. *Human Development*, 18, 65–79.
- Sheehan, M. J., & Watson, M. W. (2008). Reciprocal influences between maternal discipline techniques and aggression in children and adolescents. *Aggressive Behavior*, 34, 245–255. doi:10.1002/ab.20241
- Simons, R. L., Johnson, C., & Conger, R. D. (1994). Harsh corporal punishment versus quality of parental involvement as an explanation of adolescent maladjustment. *Journal of Marriage and Family*, 56, 591–607.
- Simons, R. L., Wu, C. I., Lin, K. H., Gordon, L., & Conger, R. D. (2000). A cross-cultural examination of the link between corporal punishment and adolescent antisocial behavior. *Criminology*, 38, 47–79.
- Stacks, A. M., Oshio, T., Gerard, J., & Roe, J. (2009). The moderating effect of parental warmth on the association between spanking and child aggression: A longitudinal approach. *Infant and Child Development*, 18, 178–194. doi:10.1002/icd.596
- Steinberg, L., & Morris, A. (2001). Adolescent development. *Annual Review of Psychology*, 52, 82–110.
- Stice, E., & Barrera, M., Jr. (1995). A longitudinal examination of the reciprocal relations between perceived parenting and adolescents' substance use and externalizing behaviors. *Developmental Psychology*, 31, 322–334.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *Journal of Marriage and the Family*, 41, 75–88.
- Straus, M. A., & Field, C. J. (2003). Psychological aggression by American parents: National data on prevalence, chronicity, and severity. *Journal of Marriage and Family*, 65, 795–808. doi:10.1111/j.1741-3737.2003.00795.x
- Straus, M. A., & Stewart, J. H. (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 Psychological Review*, 2, 55–70.
- Straus, M. A., Sugarman, D. B., & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of Pediatric Adolescent Medicine*, 151, 761–767.
- Suchman, N. E., Rounsaville, B., Decoste, C., & Luthar, S. (2007). Parental control, parental warmth, and psychosocial adjustment in a sample of substance-abusing mothers and their school-aged and adolescent children. *Journal of Substance Abuse Treatment*, 32, 1–10.
- Trentacosta, C. J., Criss, M. M., Shaw, D. S., Lacourse, E., Hyde, L. W., & Dishion, T. J. (2011). Antecedents and outcomes of joint trajectories of mother-son conflict and warmth during middle childhood and adolescence. *Child Development*, 82, 1676–1690. doi:10.1111/j.1467-8624.2011.01626.x
- Turner, H. A., & Finkelhor, D. (1996). Corporal punishment as a stressor among youth. *Journal of Marriage and the Family*, 58, 155–166.
- Vissing, Y. M., Straus, M. A., Gelles, R. J., & Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. *Child Abuse & Neglect*, 15, 223–238.
- Wang, M. T., Brinkworth, M., & Eccles, J. S. (2013). Moderating effects of teacher-student relationship in adolescent trajectories of emotional and behavioral

- adjustment. *Developmental Psychology*, 49, 690–705. doi:10.1037/a0027916
- Wang, M. T., Dishion, T. J., Stormshak, E. A., & Willett, J. B. (2011). Trajectories of family management practices and early adolescence behavioral outcomes in middle school. *Developmental Psychology*, 47, 1324–1341. doi:10.1037/a0024026
- Wang, M. T., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development*, 83, 877–895. doi:10.1111/j.1467-8624.2012.01745.x