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Violence Exposure and the Association between Young African American Mothers' Discipline and Child Problem Behavior

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Abstract

Objective—Children of adolescent mothers are at increased risk of violence exposure and behavior problems, which have been linked to mothers' disciplinary practices. This study examines how the effect of young African American mothers' discipline on their preschool-age children's externalizing and internalizing behavior varies by mother and child violence exposure.

Participants and Methods—A sample of 230 African American mothers who gave birth as adolescents and their 3- to 6-year-old children were recruited from community-based day care and primary health care sites in the Washington, DC metropolitan region. In-person interviews were conducted by trained research assistants using standard survey instruments.

Results—Hierarchical regression models revealed an interaction effect such that adolescent mothers' harsh disciplinary practices, specifically physical discipline strategies, were positively associated with young children's internalizing and externalizing behavior in the context of high or moderate but not low maternal violence exposure.

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There are no conflicts of interest.

Conclusions—As compared to less violence-exposed mothers, the harsh disciplinary practices of young African American mothers who have been exposed to high levels of violence are more strongly associated with their children's problem behavior. Practitioners should screen mothers for violence exposure in order to address potential issues of discipline and behavior problems.

Keywords

violence exposure; child behavior; adolescent mothers; harsh discipline

INTRODUCTION

Low-income, minority children born to adolescent mothers are at risk for developing behavior problems, such as aggression,^{1–3} which are associated with adverse outcomes later in life.^{4, 5} A substantive body of research suggests discipline that is physically or verbally harsh is associated with children's aggressive behavior.^{6, 7} However, this association is not consistently observed among African American children.^{8, 9} To better understand the underpinnings of behavior problems in children born to young African American mothers, the proposed study examines the interplay between both maternal and child violence exposure and mothers' disciplinary practices.

Minority youth living in low-income, inner-city neighborhoods are especially vulnerable to community violence exposure.^{10, 11} Children's own violence exposure as well as maternal victimization has been linked to young children's externalizing (e.g., aggression) and internalizing (e.g., anxiety) problems.^{12–14} However, the potential buffering role of parenting behavior has not been clarified. Some studies report a protective-reactive moderation effect in which parental monitoring predicts fewer negative child outcomes (e.g., depression, early substance use) only when community violence exposure is low.¹⁰ This may be because high violence exposure is so overwhelming that parents cannot buffer its effect on child behavior.¹⁵ On the other hand, Krenichyn and colleagues report that children exposed to the highest levels of community violence and harsh parenting scored lowest on social competence, while children exposed to less harsh parenting in the context of high community violence scored highest on social competence.¹⁶

The current study integrates and builds upon these bodies of research by examining the complex relationship between discipline, violence exposure, and young children's behavior. In doing so, it draws upon ecological theories of development, which emphasize the reciprocal influences of different systems in a child's environment, in this case the neighborhood and family, on child development.¹⁷ Specifically, we address the following research questions: (i) how do maternal and child violence exposure moderate the association between discipline and children's externalizing and internalizing behavior, and (ii) in the context of violence exposure, how are verbal versus physical discipline associated with children's behavior?

In answering these questions, we extend existing research on violence exposure and parenting to preschool-age children, which is important because early experiences can have long-lasting implications for developmental outcomes.^{4, 5, 7} We explore the moderating effects of mothers' violence exposure in addition to children's exposure because there is evidence that maternal violence exposure indirectly affects children through maternal distress and parenting.^{18–20} We also explore the effects of verbal versus physical discipline on child behavior^{8, 9, 21} and because disciplinary practices may be modified with appropriate interventions.^{22, 23}

METHODS

To address our research questions we draw on data from an IRB approved cross-sectional study of young mothers living in violence-prone neighborhoods of Washington, DC.²⁴

Procedure

To recruit participants, we employed convenience sampling methods, specifically distributing flyers with information about the study's purpose, age requirements, and contact information at 90 community-based sites selected because they serve a general population of mothers and children, not exclusively adolescent mothers, clinically referred patients, or families receiving services related to violence exposure. We recruited from numerous sites because our narrow eligibility requirements made it necessary to screen a large number of mothers to enroll an adequate sample size. Out of 2,349 mothers who contacted the research staff about participating, 262 (11%) were eligible based on the following inclusion criteria: mother 18–24 years old, self-identified as African American and non-immigrant with legal and physical custody of child; and child age 3–5 years without serious, chronic health problems. If eligible mothers had more than one child between 3–5 years old the oldest was selected as the focal child.

The overwhelming majority of eligible mothers (97%) agreed to participate, but 8% failed to attend their scheduled appointment and did not reschedule. Most participants were recruited from community-based health care clinics (21%) or Women, Infant, and Children (WIC) agencies (22%). The final analytic sample consisted of 230 mothers who gave written informed consent and completed in-person interviews. Interviews were scheduled at a time and place convenient to the mothers (usually their homes) and conducted in English by trained research assistants. The interviews consisted of standard survey instruments and lasted 1.5–2 hours. For their participation mothers were given a \$50 gift certificate redeemable at a local store.

Measures

Child behavior—Mothers completed the Child Behavior Checklist,²⁵ a commonly used and validated 113-item measure of children's emotional and behavioral functioning. For each item, mothers reported how frequently their child exhibited the behavior during the past six months on a 3-point scale from never (0) to frequently (2). After summing responses across items, raw scores for externalizing and internalizing behavior were converted to T-scores thereby adjusting for age and gender.

Harsh discipline—The Parent Practices Interview,²³ adapted from the Oregon Social Learning Center Discipline Questionnaire, was used to measure mothers' disciplinary actions. For the primary analyses we focused on the 14-item harsh discipline subscale ($\alpha = .67$). Mothers reported how frequently they used four different parenting strategies (e.g., 'raise your voice', 'threaten to punish him/her but not really punish him/her') in response to their child's misbehavior and how often two particular disciplinary situations arise (e.g., how often do arguments with your child build up and you do or say things you don't mean to?) on a 7-point scale from 1 (never) to 7 (always). They also reported the likelihood they would utilize four disciplinary strategies in each of two hypothetical situations ('if [child] hit another child'; 'if [child] refuses to do what you wanted him/her to do') using a 7-point Likert scale from 1 (not at all likely) to 7 (extremely likely). *Harsh discipline* scores were created by summing responses across items.

We also created subscales for verbally and physically harsh discipline. The *verbal discipline* subscale ($\alpha = .54$) consisted of four items asking how frequently mothers 'threaten to punish', 'raise [one's] voice', 'show anger', and 'say things [you] don't mean' in response to their

child's misbehavior and four items asking how likely they would be to 'threaten to punish' or 'raise one's voice' in response to the two hypothetical misbehaviors. The *physical discipline* subscale ($\alpha = .72$) was based on a total of six comparable items asking about spanking and slapping/hitting.

Violence exposure—Mothers completed the Survey of Exposure to Community Violence: Self Report Version which was developed in a low-income, ethnic minority sample.²⁶ Participants responded to 27 items asking how frequently they had directly experienced (e.g., been hit or slapped, sexually assaulted) or witnessed (e.g., heard gunfire while in home, seen others get attacked/stabbed) types of violence on a 5-point scale from 0 (never) to 4 (many times). Subscale composite scores were created by summing responses across items, with higher scores reflecting more numerous exposures to violence. The current analyses highlight mothers' experienced violence ($\alpha = .74$).

Mothers also completed the Violence Exposure Scale for Children, which assesses parents' perceptions of children's exposure to violence and has been found reliable among primary caregivers of minority preschoolers living in urban areas.¹⁴ For each violent event, mothers reported how often their child had witnessed (12 items; e.g., 'seen a person steal from or rob another person') or been the victim (8 items; 'a person chased your child where your child was scared') using a 4-point scale from 0 (never) to 3 (lots of times). Responses were summed to create subscale composite scores. Parallel with our measure of maternal violence exposure, the current analyses focused on child experienced violence ($\alpha = .57$). Because the experience of one violent event does not necessarily increase the likelihood that a child will experience a different event, the child experienced violence subscale was not expected to have higher internal reliability.

Family demographics—Maternal education, employment, and household composition were included as control variables because of their linkages to young children's behavior.^{28, 29} *Mothers' education* was measured by asking participants the highest grade or level of school they had completed with response categories ranging from 0 (never attended school) to 5 (at least some college). *Mothers' employment* was measured by asking all participants how many hours per week they typically worked for pay ($M = 14.92$, $SD = 18.92$, range 0–84). Mothers were asked to name family members who lived in their home with *household composition* classified as either 0 (single mother with children, no other adults), 1 (co-resident romantic partner), or 2 (multi-family, living with at least one family member, with or without a romantic partner).

Analytic Strategy

To examine how maternal and child violence exposure moderate the association between harsh discipline and children's behavior, we conducted two series of hierarchical multiple regressions for externalizing and internalizing behaviors, respectively. First, we entered control variables, harsh discipline, maternal and child violence exposure simultaneously to test their main effects on child behavior. Next, following Baron and Kenny's²⁹ steps for testing moderation, we created mean-centered scores for harsh discipline and maternal and child violence exposure, then multiplied these scores to create interaction terms. Each interaction term was alternatively entered on the second step of the hierarchical models. If the interaction term significantly predicted children's externalizing or internalizing behavior (dependent variables) above and beyond the main effects of harsh discipline and maternal and child violence exposure, then mean scores on the dependent variable for groups who were low ($\leq -1 SD$), medium ($-1 < 1 SD$), and high ($\geq 1 SD$) on harsh discipline and the particular moderating variable were plotted to examine the pattern of moderation.

When there was evidence that maternal or child violence exposure significantly moderated the effect of harsh discipline on children's behavior, additional regression models were conducted to examine which form of harsh discipline explained the interaction. This procedure was repeated for both verbal and physical discipline.

RESULTS

Participants

The mothers participating in this study were, on average, 22 years old ($SD = 1.50$), and the target children, 49% of whom were male, were on average 50.3 months old ($SD = 10.59$). Most mothers (69%) had at least graduated from high school or earned their GED, and 43% were employed. The majority of young mothers (61%) lived with their own mothers and/or grandmothers, and 17% lived alone with their children.

Descriptive Results

Table 1 presents additional descriptive statistics for the variables of interest in this study. On average, this sample of mothers reported employing harsh discipline strategies "sometimes" ($M = 3.07$, $SD = .74$) with more frequent use of verbal compared to physical discipline. Just over half of the young mothers reported 'often' threatening their child with punishment or showing anger while disciplining their child; whereas 14% reported spanking their child often, and only two mothers admitted slapping or hitting their child often. Mothers also reported relatively few occurrences of directly experienced violence for themselves ($M = 4.70$, $SD = 4.90$) and for their children ($M = 2.15$, $SD = 2.14$)^a. On the other hand, most mothers (62%) had been hit or slapped at least once, and 28% had been sexually assaulted. Most children (71%) had been yelled at at least once while only 10% had been chased. Approximately 17% of children had t-scores above the borderline clinical cut-off for externalizing problems ($M = 53.41$, $SD = 10.34$), and 12% were above cut-off for internalizing problems ($M = 51.43$, $SD = 11.32$).

Before conducting multivariate analyses, we examined bivariate associations among the variables. One-way ANOVA results indicated that mothers' education was only significantly associated with child internalizing behavior ($F = 5.08$, $p < .01$); mothers who completed some high school had children with greater internalizing behavior than mothers who completed at least some college. Mothers' employment was significantly associated with child externalizing ($r = -.14$, $p < .05$) and internalizing ($r = -.16$, $p < .01$) behavior. Household composition was not significantly associated with harsh discipline, maternal or child violence exposure, or child internalizing or externalizing behavior. Based on significant associations with child problem behavior, only mothers' education and employment were controlled in the final models.

All zero-order correlations among the predictor and outcome variables were significant and in the expected directions. Among the predictor variables, harsh discipline ($r = .25$, $p < .001$) and maternal violence exposure ($r = .16$, $p < .05$) were significantly correlated with child violence exposure but not with each other ($r = .10$, $p = .14$). All of the predictors were significantly correlated with child externalizing ($r = .27-.44$) and internalizing ($r = .14-.38$) behavior, except the subscale of physical discipline was not significantly correlated with child internalizing behavior.

^aBoth maternal violence exposure and child violence exposure were positively skewed. However, the significance of results of regression models including log-transformed variables did not differ from models including non-transformed variables. Thus, the presented results include non-transformed variables for maternal and child violence exposure.

How do maternal and child violence exposure moderate the association between discipline and children's behavior?

Child externalizing behavior—The first model in the top of Table 2 shows that harsh discipline, maternal violence exposure, and child violence exposure independently predicted increased externalizing behavior in children. The second model in the top of Table 2 shows that there was no significant interaction between child violence exposure and harsh discipline. However, as indicated in the third model, there was a significant interaction between maternal violence exposure and harsh discipline.

To examine this significant moderation effect, group means on child externalizing behavior were plotted for mothers who were high, medium or low on violence exposure and on harsh discipline. In Figure 1, the slope of the line for mothers exposed to low levels of violence indicates their harsh discipline had little effect on their children's externalizing behavior. The slopes of the lines for mothers exposed to medium and high levels of violence show their harsh discipline was significantly associated with their children's increased externalizing behavior.

Child internalizing behavior—The first model shown in bottom of Table 2 reveals that child violence exposure independently and significantly predicted children's increased internalizing behavior, but harsh discipline and maternal violence exposure did not. The second model shows there was no significant interaction effect for child violence exposure and harsh discipline. However, the third model reveals a significant interaction between maternal violence exposure and harsh discipline on child internalizing behavior that probably obscured the main effects in the first model.

Group means on internalizing behavior are plotted in Figure 2 to represent the pattern of moderation. The slopes of the respective lines suggest that children's internalizing behavior is not associated with mothers' harsh discipline when mothers have been exposed to low or medium levels of violence. However, when mothers have been exposed to high levels of violence, their use of harsh discipline is positively associated with their children's internalizing behavior.

In the context of violence exposure, how are verbal versus physical discipline associated with children's behavior?

Results of the hierarchical regression models predicting children's externalizing behavior suggest that the previously reported moderation effect was primarily accounted for by a significant interaction between maternal violence exposure and physical discipline ($\beta = .26$, $p < .001$). The interaction between maternal violence exposure and harsh verbal discipline was only significant at the trend level ($\beta = .10$, $p = .07$). Plotting the significant interaction revealed similar patterns to those shown in Figure 1. The positive association between frequency of physical discipline and children's externalizing behavior was found for children whose mothers were exposed to either medium ($\beta = .20$, $p = .02$) or high ($\beta = .55$, $p < .001$) but not low ($\beta = -.03$, $p = .84$) levels of violence exposure.

Results of the hierarchical regression models predicting children's internalizing behavior also suggest that the previously reported moderation effect was mostly accounted for by a significant interaction between maternal violence exposure and physical discipline ($\beta = .16$, $p < .01$). There was no significant interaction between maternal violence exposure and verbal discipline ($\beta = .08$, $p = .20$). The positive association between physical discipline and children's internalizing behavior was strongest (but nonsignificant) for children of mothers exposed to high levels of violence ($\beta = .33$, $p = .07$) compared to low ($\beta = .13$, $p = .15$) and medium ($\beta = -.06$, $p = .61$) levels of maternal violence exposure.

DISCUSSION

This study of young African American mothers and their preschool-age children found that, while children's violence exposure consistently predicts increased externalizing and internalizing behavior, the association between harsh discipline and child behavior depends on mothers' violence exposure. These findings build on those reported among older children¹⁶ by suggesting *mothers'* violence exposure can influence the association between discipline and child outcomes. Within our sample, there was only a positive association between harsh discipline, particularly physical discipline (i.e., slapping, hitting and spanking), and children's externalizing behavior when mothers had been exposed to at least moderate levels of violence. Consistent with prior research,³⁰ we found weaker associations between harsh discipline and child internalizing behavior. However, we expanded on this research by uncovering a significant association under conditions of high maternal violence exposure.

We propose three possible explanations for our interaction findings. First, while the frequency of using a particular form of harsh discipline is similar for mothers across degrees of violence exposure, there may be differences in terms of the quality or the context of their harsh discipline. Research on the neurological impact of traumatic experiences has found neuroanatomic changes in traumatized individuals.³¹ These changes correspond to behavioral changes including greater emotionality and decreased rationality. It is possible that highly violence exposed mothers are more intensely emotional or perhaps less predictable in their physical discipline as compared to mothers exposed to less violence. Similarly, research suggests that harsh physical discipline is less detrimental to African American children than their White counterparts in part because African American mothers who use physical discipline are more likely to also display warmth.⁸ However, this may not be true of mothers who have been exposed to high levels of violence. Additional research is needed to explore these aspects of the context of physical discipline in explaining the associations between violence exposure, harsh discipline and child behavior.

A second explanation is that children may react to their mothers' harsh physical discipline differently in the context of high versus low maternal violence exposure. Social learning theory³² proposes that children display behavior that has been modeled for them. This idea is supported by our finding of a main effect of child violence exposure on externalizing and internalizing behavior. Children whose mothers have been victimized may model their mothers' anxiety and depression by exhibiting internalizing behavior when aggressed against themselves (i.e., when their mothers slaps, hits or spansks them). Morrel and colleagues reported that depression and verbal aggression mediate the association between maternal victimization and child internalizing behavior.¹⁸ However, they did not explore potential interactions between verbal aggression and depression among victimized mothers which would be an interesting direction for future research.

Finally, mothers who have been exposed to high levels of violence may respond to their children's externalizing and internalizing behavior with more harsh discipline than mothers who have been less violence exposed. When their children display externalizing (e.g., aggressive) behavior, mothers who have often been victimized may respond more harshly because they want to prevent their children from becoming perpetrators of violence or because they perceive obedience as necessary for protection in violent communities.³³ Additionally, these more violence-exposed mothers may react to their children's internalizing behavior harshly in order to "toughen them up" for an environment they perceived as threatening.

There are limitations of the current study that should be noted when interpreting our findings. First, our sample is a select group of young, African American mothers who volunteered to participate in our time-intensive study, thus our findings may not necessarily generalize to the

larger population. Second, because the data are cross-sectional we cannot determine the causal direction of the association between harsh discipline and children's behavior among young mothers exposed to more violence. As Patterson proposed, there is probably a coercive cycle between parents and children such that a child's problem behavior and a parent's harsh disciplinary practices continuously reinforce each other.³⁴ Third, our parenting measure was based on mothers' self-report in response to hypothetical situations, which may explain its lower reliability and precludes determination of how often mothers actually employ the harsh discipline strategies they espoused. Although observational measures are also limited in their ability to capture "real life" experience, the authors of this self-report measure reported significant correlations with observed parental behavior in support of their instrument's validity.²³ Additionally, the demands of social desirability might mean mothers underreported their harsh discipline. Finally, there is shared variance among the variables, which may be particularly problematic for child violence exposure which mothers tend to underreport.³⁵ However, it remains uncertain whether preschoolers can accurately report their violence exposure.¹⁶

In conclusion, the findings of the present study suggest that young African American mothers' use of harsh physical discipline is associated with their children's externalizing and internalizing behavior primarily when mothers have been exposed to moderate or high levels of violence. Based on these findings, pediatricians should screen young African American mothers for violence exposure when assessing family histories. It is particularly important to discuss disciplinary issues with this group as their use of discipline strategies, such as slapping and spanking, may be most detrimental for children's social development. More detailed anticipatory guidance or counseling about discipline may be warranted for these mothers; in addition, referrals to classes or counselors who could work more intensively with those violence exposed mothers without a repertoire of disciplinary skills beyond harsh physical and verbal discipline could be useful and protective.

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Figure 1.
Harsh Discipline and Maternal Violence Exposure Interact to Predict Child Externalizing Behavior

Figure 2.
Harsh Discipline and Maternal Violence Exposure Interact to Predict Child Internalizing Behavior

Table 1

Control Variables, Harsh Discipline, Mother and Child Violence Exposure, and Child Behavior

Variables (<i>N</i> = 230)	Mean (<i>SD</i>)	%	Scale Range
Family Demographics			
Mothers' Education			
Less than HS diploma		31	
HS diploma or GED		39	
Some college		30	
Mothers' Employment (hours per week)	14.92(18.92)		
Unemployed		57	
Household Composition			
Single mother		17	
Co-resident romantic partner		22	
Multiple family		61	
Harsh Discipline	3.07(.74)		1 –7
Verbally harsh discipline	3.71(.90)		
Physically harsh discipline	2.23(.96)		
Violence Exposure (experienced)			
Maternal	4.70(4.90)		0 – 36
Child	2.15(2.14)		0 – 24
Child Behavior			
Child Externalizing (t-score)	53.41(10.34)		
Problem cut-off ($t \geq 64$)		17	
Child Internalizing (t-score)	51.43(11.32)		
Problem cut-off ($t \geq 64$)		12	

Table 2

Predictors of Child Problem Behavior

<i>Child Externalizing Behavior</i>	Model 1: Main Effects		Model 2: Harsh × Child Exposure		Model 3: Harsh × Mom Exposure	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Mother Education	-.12	.05	-.13	.05	-.12	.06
Mother Employment	-.06	.33	-.06	.36	-.06	.31
Harsh Discipline	.18	.002	.19	.002	.19	.001
Maternal Violence Exposure	.20	.001	.20	.001	.23	<.001
Child Violence Exposure	.36	<.001	.37	<.001	.36	<.001
<i>Moderation</i>						
Harsh × Child Exposure			-.04	.55		
Harsh × Maternal Exposure					.22	<.001
	R^2	.28		.29		.33
<i>Child Externalizing Behavior</i>						
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Mother Education	-.26	<.001	-.27	<.001	-.25	<.001
Mother Employment	-.02	.73	-.01	.83	-.02	.72
Harsh Discipline	.11	.08	.12	.06	.12	.06
Maternal Violence Exposure	.08	.17	.07	.24	.10	.10
Child Violence Exposure	.34	<.001	.37	<.001	.34	<.001
<i>Moderation</i>						
Harsh × Child Exposure			-.10	.11		
Harsh × Maternal Exposure					.16	.01
	R^2	.23		.24		.25