Young Children’s Adjustment as a Function of Maltreatment, Shame, and Anger

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Maltreated children are at increased risk for behavior problems. This study examines a model in which shame mediates the potential relation between maltreatment and anger, and anger mediates the potential relation between shame and behavior problems. Participants were 177 children (ages 3 to 7 years) and their mothers, 90 of whom had histories of perpetrating neglect and/or physical abuse. Physical abuse, but not neglect, was related to increased shame during an evaluative task; shame was related to increased anger; and anger to teacher ratings of total behavior problems and externalizing problems. Age moderated the relation between physical abuse and adjustment, as abuse was related to more total problems only among the younger children. Anger was a significant mediator of shame and both behavior problems and externalizing problems. Shame, anger, age, and type of maltreatment appear to be important factors in explaining variance in behavioral adjustment following a history of maltreatment.

Keywords: maltreatment; physical abuse; shame; anger; behavior problems

Children with histories of physical abuse or neglect are at risk for a variety of behavior problems, including externalizing and internalizing problems (Egeland, Sroufe, & Erickson, 1983; Kaufman, 1991; Knutson, DeGarmo, & Reid, 2004; National Research Council, 1993; Shields, Ryan, & Cicchetti, 2001; Strassberg, Dodge, Pettit, & Bates, 1994). However, our understanding of the processes by which children are adversely affected by maltreatment is poor as explanatory models of individual variation are still rare. Some evidence suggests that individual differences in response to maltreatment vary as a function of the severity of abuse (Manly, Kim, Rogosch, & Cicchetti, 2001). However, the link between maltreatment severity and outcomes is weak and inconsistent, providing only limited explanatory power in accounting for adjustment following maltreatment (Feiring, Taska, & Lewis, 1998). In the area of physical abuse and neglect, research on the question of what determines adjustment is hampered considerably by the diversity of outcomes observed as well as by problems in defining maltreatment itself (Cicchetti & Manly, 2001).

One potential model to account for the diversity of outcomes in maltreatment is through the mediation of emotional processes. Maltreated children’s behavior problems may develop through their somewhat unique emotional responses not only to maltreating events but to the normative challenges of daily life. Because they were and may continue to be treated harshly, maltreated children’s self-conscious evaluative emotions, and possibly other emotions as well, may

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differ in quantity from those of nonmaltreated children. In particular, shame may be affected by maltreatment and by parental negativity/authoritarian parenting (Alessandri & Lewis, 1993, 1996; Belsky & Domitrovich, 1997; Lewis, 1992; Mills, 2003; Stuewig & McCloskey, 2005[this issue]). If children are severely punished, criticized, treated with hostile rejection, or ignored by their primary caregiver, they are likely to believe that they are unwanted and unlovable. Just as young children may hold the belief that failure implies “badness” (Burhans & Dweck, 1995), the use of harsh parenting also may give children the message that they are “bad.” Such global, negative self-beliefs are primary elicitors of shame (Lewis, 1992). Consistent with this view, parents’ negative evaluative feedback has been associated with shame among preschool children (Alessandri & Lewis, 1993; Kelley, Brownell, & Campbell, 2000). Furthermore, the secretiveness that often accompanies maltreatment, along with the child’s recognition that such experiences reflect negatively on both the self and the family, may perpetuate feelings of shame (Deblinger & Runyon, 2005[this issue]). In short, the shaming of children is believed to be a core aspect of child maltreatment, especially of physical abuse (Loader, 1998).

Shame’s role in behavioral adjustment has received increasing attention recently (Lewis, 1992, 2000; Tangney & Dearing, 2002). When experiencing shame, the core self is threatened and attention is focused inward. When shamed, people may try to avoid this highly negative, painful state either by externalizing blame and displacing shame with anger, or by suppressing aversive feelings, which may lead to sadness and, ultimately, internalizing problems such as depression (H. B. Lewis, 1971, 1987; Lewis, 1992; Miller, 1985). Shame-prone individuals may be particularly likely to exhibit anger in response to interpersonal conflicts, as exposure of their perceived defects may elicit anger toward the individuals they believe to be judging them. However, shame-prone individuals also may be likely to exhibit sadness or withdrawal in such interpersonal contexts (Lewis, 1992; Tangney & Dearing, 2002), perhaps related to the type of attributions (i.e., external vs. internal) made in response to the shaming event.

Children and adults who are shame-prone have been found to exhibit more anger and aggression (Andrews, Brewin, Rose, & Kirk, 2000; Bryceland & Strayer, 1999; Dutton, van Ginkel, & Starzomski, 1995; Harper & Arias, 2004; Tangney, Wagner, Burggraf, Gramzow, & Fletcher, 1991; Tangney, Wagner, Fletcher, & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996), as well as more sadness and internalizing problems (Ferguson, Stegge, Eyre, Vollmer, & Ashbaker, 2000; Harper & Arias, 2004; Mills, 2003; Stuewig & McCloskey, 2005; Tangney, 1991; Tangney, Wagner, & Gramzow, 1992). Hence, shame-proneness is associated with both externalizing and internalizing problems, both of which are commonly observed among maltreated children.

This study presents a model in which shame mediates the hypothesized relation between maltreatment and behavioral adjustment. This model has successfully accounted for adjustment following childhood sexual abuse (Feiring & Taska, 2005[this issue]; Feiring, Taska, & Lewis, 1998, 1999, 2002) but has not yet been applied to other groups of maltreated children, nor to young children. Several studies suggest that the relation between maltreatment and shame extends beyond children with histories of sexual abuse. Alessandri and Lewis (1996), for example, found that maltreated (i.e., neglected, physically abused, emotionally abused, or sexually abused) 4- and 5-year-old girls exhibit more shame when they fail and less pride when they succeed than their nonmaltreated peers. In contrast, maltreated boys tended to exhibit less shame and pride than nonmaltreated boys, suggesting an important gender difference. Moreover, Mills (2003) found that preschool-age girls were more likely to exhibit shame when their parents used an authoritarian parenting style, which has been related to harsh physical punishment (Frias-Armenta & McCloskey, 1998). Examining older children, harsh parenting at age 9 was found to predict parental rejection at 15 (Stuewig & McCloskey, 2005). This, in turn, was related to increased shame proneness at 15, which predicted depression at 17 years (Stuewig & McCloskey, 2005). Parental emotional abusiveness in childhood, measured retrospectively among college students, also has been related to increased shame (Hoglund & Nicholas, 1995). In turn, shame was related to covert hostility and unexpressed anger (Hoglund & Nicholas, 1995), providing further support for shame as a possible mediator of maltreatment and anger. Finally, Andrews (1995) found women’s bodily shame to mediate the relation between child abuse (a retrospective measure of physical and sexual abuse) and adult depression. Collectively, these studies suggest that physical abuse and neglect may be related to increased shame and that shame may mediate the relation between maltreatment and adjustment.

As shown in Figure 1, maltreatment is hypothesized to directly (arrow A) and indirectly (arrows B through D) relate to increased behavior problems. Maltreatment, particularly physical abuse, is hypothesized to elicit increased shame (B). This shame, in
turn, is hypothesized to elicit increased anger (C). Finally, increased anger is hypothesized to elicit increased behavior problems (D). In addition to maltreatment having an indirect effect on anger through shame, maltreatment is hypothesized to have a direct effect on increased anger (E). Likewise, shame is hypothesized to have a direct effect on behavior problems (F), as well as an indirect effect through anger.

The type of maltreatment, child age, and gender need to be considered when testing process models of the relation between maltreatment, shame, and adjustment. Negative, authoritarian parenting, as noted above, is related to increased shame among children. Given that such parenting may be more closely related to physical abuse (e.g., Frias-Armenta & McCloskey, 1998) than to neglect, a stronger relation is expected between physical abuse and shame than between neglect and shame. Further support for this hypothesis comes from research showing that physically abused, but not neglected, children have a more negative self-representation (the coding of which includes shame themes) than do nonmaltreated children (Toth, Cicchetti, Macfie, & Emde, 1997). In addition, although there is no clear evidence that particular types of maltreatment are specific to particular adjustment problems (Crittenden, Claussen, & Sugarman, 1994; Kinard, 2004), there is some evidence that physical abuse may be more consistently related to anger and externalizing problems (Bousha & Twentyman, 1984; Elliott, Briere, McNeil, Cox, & Bauman, 1995; Hoffman-Plotkin & Twentyman, 1984; Manly et al., 2001), and neglect to internalizing problems (Fantuzzo, Weiss, Atkins, Meyers, & Noone, 1998; Hoffman-Plotkin & Twentyman, 1984; Lynch & Cicchetti, 1998; Manly et al., 2001). Exceptions, however, exist as physically abused children have been found to report more depressive symptoms than neglected or control children (Finzi et al., 2001) or to be elevated on both internalizing and externalizing symptoms (Johnson et al., 2002). But, collectively, there is some suggestion that physical abuse is both particularly shaming (Loader, 1998) and somewhat specific to anger and externalizing problems.

The preschool years are an important period in which to examine the relation between maltreatment, emotions, and adjustment as the rate of maltreatment is highest among young children (U.S. Department of Health & Human Services, 2004) and children physically maltreated prior to age 5 are at increased risk of future behavior problems compared to those maltreated at a later age (Keiley, Howe, Dodge, Bates, & Pettit, 2001). Physical abuse also has been found to predict externalizing problems among children abused during the preschool, but not school-age, years (Manly et al., 2001). Moreover, self-evaluative emotions begin to appear between age 2 ½ and 3 following the emergence of self-recognition (Lewis, Alessandri, & Sullivan, 1992; Lewis, Sullivan, Stanger, & Weiss, 1989; Stipek, Recchia, & McClinton, 1992). Self-evaluative emotions, which include shame, guilt, and pride, are a unique class of emotions originally described by Darwin (1872/1965). They require the self as a referent and a basic awareness of rules and expectations for one’s personal behavior. Shame, for example, occurs when a child compares his or her behavior to a standard and perceives that the self has
failed because a rule has been violated. Children normally develop a rudimentary understanding of such standards during the preschool period (Barrett & Campos, 1987; Lewis, 1995). By age 4, children already show individual differences in the amount of negative emotion shown in response to failure (Alessandri & Lewis, 1996; Dweck, Chiu, & Hong, 1995). Thus, young children do experience self-evaluative emotions and, especially if maltreated, may develop a bias toward negative self-beliefs about their abilities and self-worth, particularly when they experience failure.

Gender differences also need to be considered as girls exhibit more shame than boys (Barrett, Zahn-Waxler, & Cole, 1993; Ferguson & Eyre, 2000; Lewis, Sullivan, Ramsay, & Alessandri, 1992). Furthermore, gender differences have been reported for the emotional consequences of maltreatment, physical punishment, and coercive parenting as girls have been found to exhibit more shame and internalizing problems and boys more aggression (Alessandri & Lewis, 1996; Crockenberg & Lourie, 1996; Strassberg et al., 1994). In contrast, it has been suggested that the replacement of shame for anger is more common among males than females (Lewis, 1992).

This study tested the following hypotheses: (a) maltreatment predicts increased shame, (b) shame predicts anger, (c) anger predicts increased behavior problems, (d) shame mediates the relation between maltreatment and anger, and (e) anger mediates the relation between shame and behavior problems. The relation between maltreatment and shame was hypothesized to be greatest for physical abuse (vs. neglect), and the relation between maltreatment and behavior problems was hypothesized to be greatest for the younger children (i.e., 3- and 4-year-olds) in the sample. In testing these hypotheses, teacher ratings of children’s behavior problems were used as they have been found to be better predictors than parent ratings of future child problems (Verhulst, Koot, & Van der Ende, 1994). Furthermore, maternal report may have questionable validity when mothers are perpetrators of maltreatment (Knutson, 1995). Maternal reports also have particularly poor agreement with teacher ratings among maltreated children (Culp, Howell, Culp, & Blankemeyer, 2001).

METHOD

Sample

Participants were 177 children (93 boys, 84 girls; ages 3 to 7; \( M = 5.0, SD = .8 \)) enrolled in publicly funded preschool or therapeutic programs known to include children referred by Child Protective Services (CPS). Review of CPS records indicated that mothers of 90 children had a history of one or more substantiated incidents of maltreatment. Among this group, 44 had a history of neglect, 21 a history of physical abuse, and 25 a history of both physical abuse and neglect when both substantiated and unsubstantiated allegations were coded from CPS records. Unsubstantiated allegations were included in the total number of allegations for participants with substantiated cases because research has indicated that unsubstantiated cases are related to increased risk of behavior problems (Gracia, 1995). Mothers’ ethnicity was as follows: 66.5% African American, 18.8% European American, 11.2% Latino, and 3.5% other. Before enrolling, mothers were informed that this was a study of emotional development among children with CPS histories, and mothers signed consents permitting the research team to review CPS records for maltreatment allegations involving themselves and/or their child. Children with a substantiated history of sexual abuse and children with known histories of mental retardation were excluded from the study. This study was approved by institutional review boards at the University of Medicine and Dentistry of New Jersey and MCP Hahnemann University (now Drexel University College of Medicine).

Procedure

A female examiner who was blind to the child’s maltreatment status conducted the procedures at the child’s preschool or at the research program’s office. Mothers signed a permission form allowing teachers to complete the Teacher Report Form (TRF; Achenbach, 1991), which was mailed to teachers prior to the end of the current school year and was completed, on average, 41 days after the child assessment of self-evaluative emotions. Mothers received $15 for participating.

Measures

Maltreatment. Maltreatment history was extracted by reviewing mother and child names in CPS databases (the Division of Youth and Family Services for New Jersey participants; Department of Human Services for Philadelphia participants). The number of neglect and physical abuse allegations on file for each substantiated case served as the measures of maltreatment.

Assessment of self-evaluative emotions: Success and failure tasks. A reaction to success and failure task, which has been previously used to elicit shame and anger among preschool-age children (Lewis, Alessandri, & Sullivan, 1992; Sullivan, Lewis, & Bennett, 1999), was
administered. Further support for the validity of these tasks comes from research showing that preschool-age children who choose global reasons for their failure, who report not enjoying the tasks, and who are relatively unhappy following the tasks exhibit more shame following failure and less pride following success (Lewis & Sullivan, 2005). In addition, hypothesized gender differences also have been observed, as girls exhibit more shame in response to the failure tasks (Lewis & Sullivan, 2005). During the tasks, children were given a series of four color matching games and four puzzles. In the color matching games, children were shown a key and told, “Here is a dog, and it lives in a blue house” (examiner points to a blue sticker beneath a drawing of a dog). “A chicken lives in a yellow house, a fish lives in a red house, and a cat lives in a green house. Each animal lives in a different color house.” The examiner then pointed to a sheet of paper containing drawings of the four animals, randomly arranged, with empty circles beneath each picture. The child was then told, “The cat’s house has no color. What’s the right color house for the cat?” and prompted to place a green sticker beneath the cat. After correctly completing several practice trials, the child was then given a new page containing more randomly arranged animals and was instructed to “put the right color house (i.e., sticker) under each animal all by yourself.” After completing the four color matching games, the four puzzles were individually administered. For each puzzle, the child was told, “Look, here is a puzzle that has already been done. It is a picture of (e.g., a boy). Take a good look at it and remember how it goes.” The examiner then mixed up the pieces and asked the child to put the puzzle together. For all tasks, the examiner was silent, maintained a neutral expression, and sat at a 90° angle to the child.

The color matching and puzzle tasks each contained two success (one easy, one difficult) and two failure (one easy, one difficult) conditions. Easy conditions contained either fewer animals to match (color matching) or fewer pieces (puzzles) than the difficult conditions. In addition, children were told, “This is a very easy game. Most children your age can finish it in 2 minutes,” for the easy conditions. In contrast, for the difficult conditions, children were told, “This is a very hard game. Most children your age cannot finish it in 2 minutes.” For each condition, children were then told, “I am going to set my clock for 2 minutes. When time is up, the bell will ring like this” (the examiner rang the bell to demonstrate the sound). Success and failure was manipulated by the examiner, who hid the bell beneath the testing table or her clipboard. On success conditions, the examiner rang the bell 5 seconds after the child finished. On failure conditions, the examiner rang the bell when there were still three color matching items or puzzle pieces left. Tasks were arranged so that the first and last conditions were always success conditions. At the completion of all eight tasks, the examiner quizzically looked at the timer and told the child, “Hmm, the clock did not work right for some of the games. You really did work fast. Some of the color matching games and puzzles you have worked on are very hard for kids your age, but you have learned how to do them faster than most children your age.”

Shame, anger, and sadness were coded from videotape using children’s facial, body, and vocal behaviors, rated in three 10-s blocks for the 30-s period following the bell (failure conditions) and the 30-s period following task completion (success conditions). Shame was defined as body collapsed; corners of mouth turned downward; lower lip tucked up; eyes lowered or askance, or withdrawal from the task situation; and negative self-evaluations (e.g., “I’m too slow”). Three of the criterion behaviors had to be present to score shame as occurring (see Lewis, Sullivan, et al., 1992). Anger was coded as occurring if either a verbal expression of annoyance, scowling brows, banging of test materials, or other visible signs of displeasure directed toward the experimenter or toward the self were observed. Sadness was coded as mouth movements consistent with sadness expressions in the Maximally Discriminative Facial Movement Coding System (MAX; Izard, 1995). Shame, anger, and sadness were rarely observed following success, so only those instances that occurred following failure conditions were used. Scores for each emotional behavior could range from 0 to 12, as there were 4 failure tasks and 3 coding blocks per task. Five raters were trained using sample tapes from a prior study of African American children (Sullivan & Lewis, 2001). All raters achieved preliminary interrater agreement of 80% before working with study tapes. Thereafter, reliability was checked on a random sample of 15 tapes. Average interrater reliability calculated over each pair of coders across emotions was 93% (range = 85-97%). Raters agreed above chance with kappa averaging .73 (ranging from .62 to .82).

Behavior problems. The TRF (Achenbach, 1991) was completed by children’s teachers following each child’s participation in the study. The TRF contains 118 problem behaviors or symptoms rated as not true (0), somewhat or sometimes true (1), or very often or often true (2). The TRF total problem, externalizing problem, and internalizing problem scores were used for this study. The externalizing problem factor includes
items from the aggressive behavior and the delinquent behavior subscales. The internalizing problem factor includes items from the anxious/depressed, withdrawn, and somatic complaints subscales. The TRF has satisfactory reliability and validity (Achenbach, 1991).

RESULTS

Overview

Means and standard deviations are presented for all variables as a function of maltreatment group. However, in all subsequent analyses, physical abuse and neglect scores reflect continuous variables (number of allegations) as opposed to a dichotomous group membership. Zero-order correlations were used to examine the relations between the frequency of either abuse or neglect allegations, shame, anger, and behavior problems. The model shown in Figure 1 was tested separately for physical abuse and for neglect. Demographic variables of maternal age, maternal education, and maternal occupational status (Watt, 1976) were found to be unrelated to both abuse and neglect and thus were not controlled for in subsequent analyses. Regression analyses were used to examine (a) whether child gender moderated the potential relation between abuse or neglect with either shame, anger, and total behavior problems; and (b) whether child age (dichotomized at the median age of 4.9 years) moderated the potential relation between maltreatment with either shame, anger, or total behavior problems (these regressions were conducted separately for abuse and neglect, and for shame and anger). The number of maltreatment allegations (abuse or neglect), shame or anger, and child age were entered in step 1 of each regression, and the interaction terms between maltreatment (abuse or neglect allegations) and age, and between shame or anger and age, were entered in step 2. Finally, the model was tested to examine whether shame mediated the potential relation between maltreatment and anger, and whether anger mediated the potential relation between shame and behavior problems. The significance of any indirect effects was examined using Goodman II tests (Goodman, 1960). Descriptive statistics for study variables are shown in Table 1.

Relations Between Maltreatment, Emotional Behaviors, and Behavior Problems

Comparing groups of children, there was not a significant difference between children with histories of physical abuse, neglect, both abuse and neglect, and controls on any measure of emotional behavior or behavior problems. However, as seen in Table 1, findings were in the expected direction (e.g., although not significant, children in the abuse with neglect and abuse only groups exhibited the most shame).

Correlations between the variables are shown in Table 2. Mothers who had more physical abuse allegations also had more neglect allegations. Physical abuse and neglect allegations, however, were not directly related to total behavior problems. Physical abuse but not neglect allegations were related to more shame. Shame was related to more anger (and sadness) but was not directly related to behavior problems. In contrast, anger was related to more total behavior problems and to more externalizing problems. Male gender was related to more anger and more total behavior problems. It is interesting that both abuse and shame were related to age such that the older children had more abuse allegations and exhibited more shame. Sadness was unrelated to all behavior problem measures and thus was not included in further analyses.

Table 1: Means and Standard Deviations of Study Variables by Maltreatment Status

<table>
<thead>
<tr>
<th>Maltreatment</th>
<th>Controls</th>
<th>Neglect</th>
<th>Abuse</th>
<th>Abuse/Neglect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical abuse (# of allegations)</td>
<td>0.00 (0.00)</td>
<td>0.00 (0.00)</td>
<td>1.50 (0.69)</td>
<td>1.75 (0.90)</td>
</tr>
<tr>
<td>2. Neglect (# of allegations)</td>
<td>0.00 (0.00)</td>
<td>6.19 (4.75)</td>
<td>0.00 (0.00)</td>
<td>7.00 (5.35)</td>
</tr>
<tr>
<td>Emotional behaviors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Shame</td>
<td>1.02 (1.66)</td>
<td>1.07 (1.57)</td>
<td>1.58 (1.74)</td>
<td>1.89 (2.50)</td>
</tr>
<tr>
<td>4. Anger</td>
<td>0.79 (1.30)</td>
<td>0.74 (1.15)</td>
<td>0.68 (1.25)</td>
<td>1.37 (2.08)</td>
</tr>
<tr>
<td>5. Sadness</td>
<td>0.86 (1.26)</td>
<td>1.41 (1.67)</td>
<td>0.89 (1.55)</td>
<td>0.84 (1.12)</td>
</tr>
<tr>
<td>Outcomes (T-scores)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Total behavior problems</td>
<td>50.72 (9.70)</td>
<td>49.57 (10.17)</td>
<td>54.81 (9.77)</td>
<td>52.33 (13.80)</td>
</tr>
<tr>
<td>7. Externalizing problems</td>
<td>53.49 (9.12)</td>
<td>52.57 (8.89)</td>
<td>55.38 (9.10)</td>
<td>54.50 (11.59)</td>
</tr>
<tr>
<td>8. Internalizing problems</td>
<td>48.77 (9.88)</td>
<td>47.83 (9.82)</td>
<td>52.00 (10.56)</td>
<td>50.94 (12.58)</td>
</tr>
</tbody>
</table>

NOTE: Assignment to control, abuse, neglect, or abuse/neglect groups is based on the number of both substantiated and unsubstantiated allegations in the case record for each substantiated case. Subsequent analyses use continuous measures of abuse and of neglect (i.e., the number of allegations). Standard deviations are in parentheses.
Maltreatment, Shame, and Anger as Predictors of Total Behavior Problems

Figure 2 shows physical abuse (panel A) and neglect (panel B) allegations, shame, and anger as predictors of total behavior problems. Standardized $\beta$ weights from the regressions are shown. The direct relation between physical abuse allegations and total problems was not significant (see panel A). However, physical abuse allegations were related to more shame ($\beta = .15$, $p < .05$). In turn, shame was related to more anger ($\beta = .22$, $p < .01$, controlling for the effects of abuse on anger in a simultaneous regression; overall model $R^2 = .06$, $p < .01$). Anger was related to more total problems ($\beta = .20$, $p < .01$, controlling for the effects of shame on total problems; overall model $R^2 = .04$, $p < .05$). In contrast to the model for abuse, neglect allegations were unrelated to shame (see panel B).

Gender and age were examined as moderators of the relation between maltreatment and shame, maltreatment and anger, and maltreatment and total behavior problems. Gender was not a significant moderator of any relation. However, age interacted with physical abuse (but not with neglect) allegations in predicting total problems ($t = 2.31$, $p < .05$; overall model $R^2 = .09$, $p = .08$). Among younger children, physical abuse allegations were directly related to more total problems ($\beta = .30$, $p < .01$), whereas there was no such relation for older children. The other relations in the model did not vary between younger and older children, with the exception that anger predicted total problems only for the younger children ($\beta = .25$, $p < .01$). Thus, somewhat different patterns of relations were observed for younger children, who showed the hypothesized direct effect between abuse and total problems, than for older children.

The interaction term between physical abuse and neglect allegations also was examined to test for the presence of a moderation effect, as some research has found children with histories of both physical abuse and neglect to have more behavior problems than children with histories of abuse only or neglect only (e.g., Kurtz, Gaudin, Howing, & Wodarski, 1993). Stepwise regressions were conducted with the number of abuse and the number of neglect allegations both entered in the first step, with their interaction term entered in the second step. Children with histories of both physical abuse and neglect had more problems when the interaction term was included, as it added significant variance to the prediction of total behavior problems ($\beta = .29$, $p < .05$), externalizing problems ($\beta = .26$, $p < .05$), and internalizing problems ($\beta = .24$, $p < .05$). The interaction term did not add significant variance to the prediction of shame or anger.

Prediction of Externalizing and Internalizing Problems

The model was examined for the more specific domains of externalizing problems and internalizing problems. As reflected by the bivariate correlations, abuse and neglect allegations were unrelated to externalizing problems. Anger, however, was related

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**TABLE 2: Correlations Between Variables**

<table>
<thead>
<tr>
<th>Maltreatment (# of allegations)</th>
<th>Emotions</th>
<th>Behavior Problems</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse</td>
<td>Neglect</td>
<td>Abuse</td>
<td>Anger</td>
</tr>
<tr>
<td>Maltreatment</td>
<td>1. Physical abuse —</td>
<td>2. Neglect ($\beta = .24$)</td>
<td>—</td>
</tr>
<tr>
<td>Emotional behaviors</td>
<td>3. Shame ($\beta = .15$)</td>
<td>.06</td>
<td>—</td>
</tr>
<tr>
<td>4. Anger</td>
<td>.10</td>
<td>.03</td>
<td>.23**</td>
</tr>
<tr>
<td>5. Sadness</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Outcomes</td>
<td>6. Total problems</td>
<td>.12</td>
<td>.02</td>
</tr>
<tr>
<td>7. Externalizing problems</td>
<td>.11</td>
<td>.01</td>
<td>—</td>
</tr>
<tr>
<td>8. Internalizing problems</td>
<td>.05</td>
<td>.05</td>
<td>—</td>
</tr>
<tr>
<td>Demographics</td>
<td>9. Gender</td>
<td>.07</td>
<td>.15***</td>
</tr>
<tr>
<td>10. Age (dichotomized)</td>
<td>.15*</td>
<td>.02</td>
<td>.21**</td>
</tr>
</tbody>
</table>

**NOTE:** Spearman correlations are reported for gender (1 = boys, 2 = girls) and age (1 = 3.5 to 4.8 years, 2 = 4.9 to 7.1 years). Pearson correlations are reported for all other correlations.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .10$. 

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The model was examined for the more specific domains of externalizing problems and internalizing problems. As reflected by the bivariate correlations, abuse and neglect allegations were unrelated to externalizing problems. Anger, however, was related

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to more externalizing problems ($\beta = .20, p < .05$) but not to more internalizing problems. The relation observed for anger and total problems thus appears to be determined primarily by the relation between anger and externalizing problems, given the lack of relation between anger and internalizing problems.

Age was again examined as a moderator of the relation between maltreatment (abuse and neglect allegations) and both externalizing and internalizing problems.

**Shame as a Mediator of Maltreatment and Anger**

To examine whether shame mediates the relation between maltreatment and anger, further analyses were conducted. The two essential steps for mediation are that (a) the predictor is related to the problems. The overall equations including the interaction terms, however, were not significant for either externalizing or internalizing problems.

**FIGURE 2:** Model Predicting Anger and Total Behavior Problems as a Function of Physical Abuse (Panel A) and Neglect (Panel B)  
*NOTE: Standardized $\beta$ weights are listed for each relation.*  
$^*p < .05. **p < .01.$

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tial mediating variable, and (b) the potential mediating variable is related to the outcome (Kenny, Kashy, & Bolger, 1998); it is not necessary to test for a relation between the initial predictor (i.e., maltreatment) and outcome (i.e., adjustment) when these variables are temporally distal (Shrout & Bolger, 2002). As shown in Figure 2, the two criteria are satisfied for physical abuse as (a) it is related to shame and (b) shame is related to anger. In testing the significance of shame as a mediator of physical abuse and anger, a trend was found (Goodman II test = 1.80, \( p = .07 \)). Shame, however, did not mediate neglect and anger.

**Anger as a Mediator of Shame and Behavior Problems**

Next, anger was examined as a mediator of shame with total problems, externalizing problems, and internalizing problems. As shown in Figure 2, panel A, shame was related to increased anger, which in turn was related to increased total problems. The mediation effect was significant for total problems (Goodman II = 2.17, \( p < .05 \)). This analysis was conducted separately for externalizing and internalizing problems, and it was found that anger mediated shame and externalizing problems (Goodman II = 2.04, \( p < .05 \)) but not internalizing problems.

**DISCUSSION**

These findings support the proposed model for physical abuse. Physical abuse but not neglect allegations were related to shame, and shame to anger. A trend was found for shame to mediate the indirect effect between abuse and anger. Children’s anger, in turn, was related to more total behavior problems. This relation between anger and adjustment was found for externalizing but not internalizing problems, consistent with prior research indicating a relation between anger and externalizing problems (Keltner, Moffitt, & Stouthamer-Loeber, 1995; Strayer & Roberts, 2004). For both total behavior problems and externalizing problems, anger mediated the indirect effects between shame and problems. These findings were specific to anger. Sadness, although related to shame, did not predict total behavior problems, externalizing problems, or internalizing problems. Thus, anger appears to be an important emotional behavior linking physical abuse and behavior problems. Furthermore, the lack of a strong relation between maltreatment and behavior problems is consistent with some prior research (see Kolko, 1996) and suggests the presence of individual differences in emotion regulation following maltreatment, including in the expression of shame and anger.

Although anger can be an adaptive emotion, in association with shame it may reflect hostility, a maladaptive, antisocial emotion. This form of unfocused, hostile anger has been characterized as rage (H. B. Lewis, 1971; Lewis, 1993; Morrison, 1989; Retzinger, 1987). According to Retzinger, among the ways rage differs from adaptive anger is that anger is associated with feelings of righteousness or feeling justified, whereas in rage, the feelings are of powerlessness and a drive to lash out at others. Rage is also unfocused as it is not goal-directed, as is adaptive anger, and may have an explosive quality. This occurs because of rage’s link to shame and humiliation. Individuals who feel shamed or humiliated respond with rage in what has been called the shame/rage spiral (Scheff, 1987).

Our model assumes that a maltreatment history provides a setting context for the emergence of a shame/rage association, especially for physical abuse (see Lewis, 1993). Furthermore, we propose that anger mediates between shame and behavior problems, especially externalizing problems, and may be more strongly predictive than maltreatment history itself. The indirect effects found in this study support this model.

A trend was observed for shame to mediate between physical abuse allegations and anger. Shame was not directly related to behavior problems, despite its significant relation to anger. Prior studies that reported a relation between shame and adjustment have generally assessed shame using self-report, which is more likely to indicate felt or experienced shame (e.g., Feiring et al., 1998; Ferguson, Stegge, et al., 2000; Stuewig & McCloskey, 2005; Tangney, Wagner, Fletcher, et al., 1992) rather than observing expressed shame. The absence of a direct relation between shame and behavior problems raises the possibility that maltreatment leads some children to feel shame but not to express it. Emotional suppression, when extreme, is thought to be detrimental as it impairs physical health, psychological health, and cognitive functioning (Gross & Levenson, 1993, 1997; Mendes, Reis, Seery, & Blascovich, 2003; Pennebaker, 1993; Richards & Gross, 1999). If some maltreated children suppress their expression of shame whereas others do not, then the direct relation between expressed shame, examined in this study, and behavior problems may be attenuated. For ethical reasons, the failure procedures used in this study are mild and so elicit relatively modest levels of shame; hence, many children do not express any shame, making the identification of children who may have suppressed felt shame difficult. When the expression of shame is suppressed, felt shame may still exist (Retzinger, 1987) and may lead to increased anger. Although
expressed shame is not directly associated with behavior problems in this study, unexpressed but felt shame may still function indirectly through its relation to anger. Although some maltreated children may suppress shame, they may be less likely to suppress anger, and thus the mediating relation between anger and behavior problems may be more readily observed.

In examining whether the model is affected by age, gender, or type of maltreatment, differences in age and the type of maltreatment were observed. Specifically, the direct effect from physical abuse to total behavior problems was moderated by age such that abuse predicted behavior problems only among the youngest children. In contrast, neglect was unrelated to behavior problems for either age group. This is consistent with prior research indicating that physical abuse is more strongly associated with poor psychosocial adjustment (Kurtz et al., 1993) but contrasts Kinard (2004), who found the frequency of neglect but not physical abuse to predict teacher ratings of behavior problems. Of note, the age effect is consistent with research indicating that children maltreated prior to age 5 are at increased risk of future behavior problems compared to those maltreated at a later age (Keiley et al., 2001) and underscores the need to consider relatively small age differences when examining process models of the relation between maltreatment and adjustment.

These results are particularly striking and perhaps conservative given the nature of the study design. First, this sample was made up primarily of children still residing with their biological mothers. Hence, the most severe cases of physical abuse in which the child is removed from the home were not included. Inclusion of such severe cases might reveal a greater relation between maltreatment and adjustment for both physical abuse and neglect. In addition, the use of CPS records as the sole index of maltreatment is widely recognized to be imperfect (English, 1999; Kinard, 1994). Many parents without a CPS record exhibit high rates of maltreatment (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), which also may restrict the true relation between maltreatment and child adjustment. For both of these reasons, the relation between maltreatment and behavior problems may have been underestimated in this study.

This model is based on prior research and theory suggesting that shame precedes anger. Although it is possible that anger may precede shame, existing literature supports shame as an antecedent of anger (Covert, 2004; Ferguson et al., 2000; Lewis, 1992). Direct tests of the temporal relation between shame and anger are needed, as our data do not lend themselves to such sequential analyses. In addition, although our measures of emotional behaviors and adjustment were collected at different time points, a longitudinal design with measures of maltreatment, emotional behaviors, and behavior problems collected across multiple time periods would provide a stronger test of this model. Further research also should use multiple raters of child adjustment, as teachers may underreport internalizing problems (Epkins, 1993). Such underreporting could attenuate the relations between shame and anger with internalizing problems.

In summary, this study observed actual emotional responses to mild failure experiences among a large sample of maltreated children and controls. The hypothesized relation between physical abuse and shame was present, as well as relations between shame and anger, and between anger and behavior problems. These findings suggest that intervention programs that include activities to either decrease shame-proneness or, perhaps more important, help abused children better manage their shame may subsequently decrease their anger and behavior problems. Research has yet to examine the efficacy of interventions that target shame among abused children, with the exception of case studies (e.g., Namka, 1995). The nature of such intervention activities (e.g., encouraging verbalization of feelings; self-esteem-building activities to buffer against shame) is currently unclear and may vary with developmental period (e.g., older children may benefit from cognitive interventions aimed at better recognizing the automatic thoughts associated with feelings of shame). It also should be noted that individual differences exist, as some maltreated children do not show evidence of shame-proneness or elevated behavior problems. This study suggests that shame and anger, as well as the type of maltreatment and child age, are important factors in explaining such individual variation in behavioral adjustment following a history of maltreatment.

REFERENCES


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