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The Student-Teacher Relationship Quality of Abused Children

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Abstract

Considering the association between children's quality of relationships with teachers and their academic adjustment, information pertaining to how abused children are functioning in their relationships with teachers could be useful in promoting their academic success—yet there has been limited research in this area. The purpose of this study was to use cluster analyses to explore within-group differences in relational schemas and quality of student-teacher relationships for 70 abused children. Two clusters of abused children emerged, and as hypothesized, there were significant differences in student-teacher relationships for the two clusters. The cluster with more positive relational schemas had less conflict and less dependency reported by their teachers compared to the cluster with negative relational schemas. However, there were no differences between the clusters in terms of closeness with teachers. Implications for practice in schools is discussed.

In 2012 there were 603,854 reported individual victims of child maltreatment in the United States (Annie E. Casey Foundation, 2012). Children who have experienced maltreatment tend to have greater social, behavioral, and academic difficulties in school compared to their matched non-maltreated peers. Specifically, maltreated children are more likely to repeat a grade (Eckenrode, Laird, & Doris, 1993), less likely to complete high school (Lansford, Miller-Johnson, Berlin, Dodge, Bates & Pettit, 2007; Mersky & Topitzes, 2010) and less likely to attend a four year university (Mersky & Topitzes, 2010). Further, maltreated children obtain lower scores on standardized tests of achievement and cognitive functioning (Crozier & Barth, 2005; Shonk & Cicchetti, 2001; Viesel, Freer, Lowell & Castillo, 2015), have higher referral rates for special education services, and exhibit lower school attendance rates (Shonk & Cicchetti, 2001). In a sample of children ages 6 and 8, history of maltreatment was a stronger predictor of children's academic performance and adaptive functioning than were demographic factors (Zolotor, Kotch, Dufort, Winsor, Catellier, & Bou-Saada, 1999). Additionally, Zingraff, Leiter, Johnson, and Myers (1994) found academic functioning (i.e., GPA, absenteeism and teacher reported behavioral problems) mediated the association between physical abuse and juvenile delinquency; when academic functioning was controlled, the association between physical abuse and juvenile delinquency

was no longer significant. This suggests that increasing the academic success of physically abused children could potentially reduce the rate of juvenile delinquency and other behavior problems that commonly occur among these children. Clearly, maltreated children deserve the attention of school mental health professionals, especially school psychologists (Viezel & Davis, 2015).

This paper serves to provide a closer look at the individual differences among children who have experienced maltreatment and how those differences are relevant to their success in school. Child maltreatment encompasses four subtypes which include physical abuse, emotional abuse, neglect and sexual abuse. The current study focuses on physical abuse, however a large portion of the existing research focuses on efforts to understand causes and consequences of maltreatment as a whole because the subtypes have been found to frequently coexist (Manly, Kim, Rogosch & Cicchetti, 2001). For this reason, the following review of the literature encompasses the broader definition of maltreatment unless specified as physical abuse.

Children's academic success is related to their relationships with their teachers such that a more positive student-teacher relationship is associated with better academic functioning (Baker, 2006; Birch & Ladd, 1997; Hamre & Pianta, 2001). To illustrate, Pianta, Nimetz, and Bennett (1997) found children with more positive student-teacher relationships had higher overall competence than did children who had less positive student-teacher relationships. Additionally, higher student-teacher conflict scores were associated with poorer child work habits and lower frustration tolerance. Likewise, Birch and Ladd (1997) found kindergarten children who had positive relationships with their teachers performed better academically, felt less lonely in school, and had more positive school attitudes than did children with poor relationships with teachers. The quality of children's relationships with their teachers can be especially important for children who are at-risk for academic failure (Baker, 2006). Student-teacher relationship quality has been linked to later engagement in risky behaviors. For example, Rudasill, Reio, Stipanovic and Taylor (2010) found that student-teacher conflict at grades four through six mediated the relation between child temperament (at preschool age) and risky behavior in sixth grade as well as the links between family income and risky behavior in sixth grade. Similarly, student-teacher conflict in kindergarten through second grade mediated the relation between preschool child temperament and peer relationship functioning in third grade (Rudasill, Niehaus, Buhs & White, 2013).

Given these links between academic performance and students' relationships with their teachers, one potential path to improved school success for abused children might be through high-quality relationships with teachers. Attachment theory offers guidance in terms of understanding links between parenting and student-teacher relationships of abused children. Specifically, children's early relationships with their caregivers lead to the formation of relational schemas which serve in the process of regulating the self as well as interpreting and predicting the behaviors of others (Bowlby, 1973; Bretherton & Munholland, 1999). Mental schemas can be defined as the lens through which children view the world (Bowlby, 1973). Initial formation of relational schemas is largely influenced by children's attachment to their caregiver at an early age. A secure attachment relationship,

fostered by sensitive and consistent caregiving practices, is associated with a positive or adaptive schema in which children expect future relationships to be safe and predictable. In contrast, less sensitive, harsh or inconsistent caregiving practices can lead to the formation of an insecure attachment relationship; insecure attachment, in turn, predicts a negative or maladaptive schema (Bretherton & Munholland, 1999; Moss, Bureau, Béliveau, Zdebik & Lépine, 2009). The harsh, inconsistent and unresponsive parenting characteristic of the physically abusive environment is linked to the development of insecure attachment in children (Baer & Martinez, 2006; Stronach, Toth, Rogosch, Oshri, Manly & Cicchetti, 2011). In turn, compared to their non-maltreated peers, maltreated children tend to have more negative or maladaptive schemas (Stronach et al., 2011; Toth, Cicchetti, Macfie, Maughan & Vanmeenen, 2000; Toth, Cicchetti, Macfie & Emde, 1997).

Commonalities in the quality of children's relationships with their mothers and teachers have been examined in a few extant studies, and findings are consistent with attachment theory. Among a high-risk preschool population, Pianta and colleagues (1997) found children who displayed warmth and affective sharing during a mother-child interaction task had more secure, less conflicted relationships with their preschool teachers. In contrast, children who displayed control issues during the mother-child interaction task had conflicted, insecure, and dependent relationships with their teachers. Similarly, Page and Bretherton (2001) found preschoolers whose representations of the mother figure were positive, (i.e., protective, comforting and supportive) enjoyed a low-conflict student-teacher relationship.

Little is known about maltreated children's quality of relationships with teachers and other non-familial adults, but one study did indicate potential difficulty in this area of social adjustment. In their investigation of maltreated preschoolers' relational schemas and relationships with adults, Toth and colleagues (1997) measured children's behavior towards an adult examiner during administration of a story stem task and found maltreated preschoolers, compared to matched non-maltreated children, were more controlling in their interactions with the examiner and evidenced a less positive relationship with the examiner.

In spite of strong evidence that abused children's schemas tend to include themes of high conflict and low affiliation; poor coherence; and negative representations of the self and parents, there is also evidence of individual differences in their schemas. An investigation of individual differences in schemas of abused children (reference omitted for blind review) was designed to determine whether subgroups of abused children, clustered on the basis of their schemas, would differ in social-emotional adjustment at school. Two subgroups, established using cluster analysis, were labeled "Positive Schema" and "Negative Schema." Children in the Negative Schema cluster were rated by their teachers as exhibiting greater internalizing and externalizing behavior problems, which provides evidence for meaningful differences between the subgroups. Our aim was to further investigate within-group differences by examining the quality of student-teacher relationships of abused children in the Positive Schema and Negative Schema clusters identified in the prior investigation. We hypothesized that teachers of children in the two clusters would differ significantly in their perceptions of the quality of their relationships with the children and that the differences would be strong enough to suspect functional differences in the classroom.

Method

Participants

The sample included a subset of physically abused children from a larger study of 94 parent-child dyads. The larger study was a longitudinal design in which children were assessed at preschool, kindergarten and first grade. Criteria for inclusion in the larger study included: (a) a substantiated report of physical abuse within the last 12 months, (b) the absence of child sexual abuse, (c) the families' primary language was English, (d) confirmation that the parent-child dyad resided in the same home at time of enrollment and (e) the absence of untreated parental substance abuse. Participants for this study were a subset previously established by [reference omitted for blind review] which included 74 children who had completed measures of relational schemas and teacher reports of children's adjustment from one time point. Four children in that sample were not included in the current study because of missing student-teacher relationship data. The 70 participants for this investigation included 18 children in kindergarten and 52 in first grade within a mid-sized, urban school district in the southeastern United States. They were between ages 5–7 ($M = 5.94$, $SD = .54$) and were predominately Black (70% Black; 30% European American) males (66%). The mean family SES (Hollingshead, 1975) was 3.67 ($SD = 1.07$) on a scale of 1 (lowest) to 5 (highest).

Procedures

Participants were identified by a Child Protective Services staff member who reviewed the child protection registry for substantiated cases of physical abuse that met the inclusionary criteria. Parents of the identified children were sent a letter informing them of the study and providing them with the research office contact information. Interested parents called the research office and completed a voluntary interview with a research project staff member to ensure their eligibility for the study. If a family met the criteria for inclusion, the first three-hour data collection session was scheduled. Families were asked to complete one three-hour data collection meeting each year for three years. Parents received a financial incentive and were provided transportation to and from the data collection site and child care during data collection. Parents provided informed consent and children provided verbal assent for participation. Following the families' data collection session, teachers were asked to complete measures pertaining to the child's behavior and quality of the student-teacher relationship and were given a small financial incentive for participation. The university IRB granted approval for the study.

Measures

Student Teacher Relationship Scale—The STRS (Pianta, 2001) is a teacher report measure designed to assess the quality of the student-teacher relationship on the basis of three subscales: Closeness, Conflict and Dependency. To complete the 28-item measure, teachers indicate the degree to which each item applies to the child using a 5-point Likert scale ranging from 1 (definitely does not apply) to 5 (definitely does apply). A total score is derived from the three subscale totals that represent the overall quality of the student-teacher relationship, with higher Total scores indicating lower dependency and conflict and higher closeness. There are subscale scores derived for Closeness (11 items; $\alpha = .86$), Conflict

(12 items; $\alpha = .92$) and Dependency (5 items; $\alpha = .64$). Some example items include: “I share an affectionate, warm relationship with this child” (Closeness), “This child reacts strongly to separation from me” (Dependency) and “This child becomes easily angry with me” (Conflict). Raw scores were converted to percentile scores established by a large normative sample, based on child gender for all three subscales and Total scores. Percentile scores below 25 on the Total score and Closeness subscale and percentile scores above 75 on the Conflict and Dependency subscales represent low relationship quality. Psychometric properties of the STRS are strong, with four-week test-retest correlations ranging from .76 to .89. In terms of validity, Hamre and Pianta (2001) found a significant correlation between kindergarten STRS scores and future academic outcomes in first through eighth grade. Doumen Verschuere, Buyse, De Munter, Max, and Moens (2009) found children’s, peers’, and observers’ views of the teacher-child relationship were significantly correlated with teachers’ views as measured by the Conflict and Closeness subscales.

MacArthur Story Stem Battery—Children’s relational schemas were measured using a story-stem completion task based on the MacArthur Story Stem Battery (Bretherton, Oppenheim, Buschbaum & Emde 1990; Bretherton, Ridgeway & Cassidy, 1990). Stories portrayed family interactions relevant to young children. Six stories were administered; content included child making a mess, child injury, parental conflict, child fear, parent-child separation, and parent-child reunion. Using standard procedures for administration, the research assistant told the beginning of the story and acted it out using dolls and doll-sized furniture. At the conclusion of the story stem, the child was asked to “show and tell me what happens now.”

Each story was coded using the MacArthur narrative coding manual–Rochester Revision (Robinson, Mantz-Simmons, Macfie & the MacArthur Narrative Working Group, 1996) for presence/absence of representations of self (positive, negative, and false representations) and representations of caregivers (positive, negative, controlling, and incongruent representations). In addition, stories were coded for presence/absence of themes including affection, affiliation, compliance, empathy/helping, reparation/guilt, aggression, verbal conflicts, and escalation of conflict. Independent coders completed training until at least 80% inter-rater agreement was established. Inter-rater reliability of codes ranged from .72 to 1.00 and was assessed for 25% of the sample by two independent coders. Scores for Positive Child Representations, Negative Child Representations, Positive Parent Representations, Negative Parent Representations, Conflictual Themes, and Moral-Affiliative Themes were generated using Toth and colleagues’ (2000) procedures and described in [reference omitted for blind review]. Prior research provides evidence to support reliability of scores ($\alpha = .70$ to $.81$) and validity of composite scores; maltreated and non-maltreated children obtained significantly different scores on Child and Parent Representation composites, and scores on the Conflictual composite mediated the relation between maltreatment status and externalizing disorders (Buschbaum, Toth, Clyman, Cicchetti & Emde, 1992; Oppenheim, Emde & Warren, 1997; Toth, et al., 2000).

In the previous study [reference omitted], children’s scores for positive child representations, negative child representations, positive parent representations, negative parent representations, moral affiliative themes, and conflictual themes were used in a clustering

procedure to form subgroups of the sample of children. Ward's minimum variance method was used to fuse clusters. Support for a two-cluster solution was found based on the change in agglomeration coefficients and visual inspection of the dendrogram. Everitt, Landau, Leese, and Stahl (2001) suggest it is best practice to use multiple cluster distance measures to confirm the cluster solution. Thus, to confirm the cluster structure found via Ward's method, the average-linkage method was applied to the data. All methods were consistent with a two-cluster solution. The previous study [reference omitted] found the Positive cluster ($N=46$) had significantly more occurrences of affiliation themes and positive representations (self and parent) in their narrative stories. The Negative cluster ($N=28$) had significantly more conflictual themes and negative self-representations. In sum, the clusters differed on every aspect of schemas (i.e., parent representations, self-representations, moral-affiliative themes and conflictual themes) except negative parent representations. The current study included 44 children in the Positive Schema cluster and 26 children in the Negative Schema cluster.

Results

The Positive Schema cluster included 44 children (20 girls, 24 boys) and the Negative Schema cluster included 26 children (3 girls, 23 boys). A Chi Square analysis showed there was a significantly greater proportion of girls than boys in the Positive Schema cluster ($\chi^2 [1, 70] = 8.52, p < .004, \phi = .35$). It was necessary, therefore, to include gender as a covariate in subsequent analyses. Sample and cluster means and standard deviations for study variables are provided on Table 1.

A MANCOVA, using gender as a covariate, was completed to test our hypotheses. The two levels of cluster membership (Positive and Negative) served as the independent variable (between subjects) and the three STRS subscale variables (Closeness, Conflict and Dependency) served as the dependent (within-subjects) variables for the MANCOVA. As hypothesized, there was a significant main effect for cluster membership ($F[3, 65] = 5.20, p = .003$, partial $\eta^2 = .193$).

To follow up on the significant interaction effect, a series of ANCOVAs, controlling for gender, was conducted (see Table 1). The Positive Schema cluster had significantly lower mean Conflict and Dependency scores than the Negative Schema cluster but the clusters did not significantly differ in mean Closeness scores. In terms of overall student-teacher relationship quality, an ANCOVA revealed the Negative Schema cluster had a significantly lower mean Total score than the Positive Schema cluster.

To investigate the functional meaning of the significant differences in STRS scores between clusters, new dichotomous variables were created for each of the STRS scales to identify individuals as either (a) in the clinically significant range (below 25% on the Total score and Closeness subscale; above 75% on the Conflict and Dependency subscales) or (b) not in the clinical range. A series of Chi Square 2×2 tests for independence were used to determine if one cluster had a greater proportion of children falling in the clinically significant range for each of the STRS variables. The results (see Table 2) aligned well with the results of the ANCOVA's; specifically, a significantly greater proportion of children in the Negative

Schema cluster had scores in the clinically significant range for Dependency, Conflict, and Total scales. There was no cluster difference in the proportion of children in the clinically significant range on Closeness.

Discussion

This investigation is one of the few published studies of the quality of relationships between teachers and young children who have experienced physical abuse. As a whole group, these children appeared to be experiencing relationships with their teachers that were similar in relational closeness, dependency, and conflict to that of the general population of children when compared using whole group mean STRS scores. However, important individual differences emerged. In particular, children in a subgroup characterized by relationship schemas that included high conflict, low affiliation, and negative self- and parent-representations had more challenging relationships with teachers. Specifically, teachers of those children rated them as more dependent and viewed the relationship as higher in conflict. As expected, children with relatively positive relational schemas had significantly less conflict with their teachers, less dependency on their teachers and a better overall relationship with their teachers. These findings are consistent with the literature on the relevance of children's schemas as a lens by which they view the world, impacting their relationships with others on a daily basis.

Interestingly, teachers reported they felt just as close to children with relatively adaptive and maladaptive relational schemas, despite differences reported in the conflict and dependency aspects of the relationship. Considering the negative trajectory children with a history of abuse often experience in school adjustment, this closeness regardless of high conflict and dependency could be beneficial to some of these children and act as a protective factor. In fact, Baker (2006) reported that having a positive teacher relationship acted as a protective factor against poor academic adjustment for children who were academically at-risk.

This trend of closeness in the relationship despite high levels of conflict and dependency has been discussed by Pianta (2001), who reported this pattern was unusual but not impossible. For abused children this may not be that unusual considering previous research reported maltreated children longed to be closer to their teachers but often behaved in less positive ways towards their teachers (Lynch & Cicchetti, 1992). Lynch and Cicchetti (1992) investigated differences in self-reported relatedness to teachers between maltreated children and a matched sample of non-maltreated children. They found maltreated children, compared to non-maltreated children, reported significantly higher psychological proximity seeking. Maltreated and non-maltreated children reported similar levels of teacher-related positive emotion. This increased psychological proximity seeking could be influencing the teachers ratings of closeness to these abused children explaining why the two schema groups did not differ on this domain of teacher relationship functioning.

The cluster of children with relatively maladaptive relational schemas included a greater proportion of children exhibiting clinically significant levels of conflict and dependency in their teacher relationships. Additionally, the cluster of children with relatively maladaptive schemas included a greater proportion of children who experienced clinically significant

overall poor relationship with their teachers. This affirms the fact that differences in quality of student-teacher relationships between the clusters was not only statistically significant but was functionally relevant in the classroom as well.

The fact that teachers of the children in our sample rated the quality of their relationships as satisfactory (i.e., scores on the STRS were at the mean for the general population) was a bit surprising considering that past research on abused children's relationships indicates they tend to have problematic relationships, at least in terms of relationships with peers (Bolger & Patterson, 2001; Shields et al., 2001; Toth, Cicchetti, Macfie & Emde, 1997). Examining the inclusion criteria for the present study might provide some insight into this finding. Although all children included in this study had a substantiated case of physical abuse within the last year, all were residing with their parent(s). Children who remain in their homes might have experienced less severe and/or chronic maltreatment; perhaps children who experience more severe abuse might have more dysfunctional relationships with their teachers. It is also possible that the teachers suspected the children had experienced abuse and made a concerted effort to have a close relationship with them in spite of the children's difficult behavior in school.

Implications for School Psychologists

Children with relatively negative schemas might benefit from interventions aimed at increasing the quality of the student-teacher relationship. Warm and nurturing teachers have the potential to serve as a protective factor for these high-risk children (Baker, 2006). By training teachers on the importance of building relationships in conjunction with giving them tools to manage disruptive classroom behaviors that do not compromise these vital student-teacher relationships, school psychologists could help the teachers reach that potential. Several current school-based intervention frameworks such as School Wide Positive Behavior Supports (SW-PBIS) and multi-tiered systems of support (MTSS) provide an avenue for school psychologists to promote the development of positive student-teacher relationships (Batsche, Graden, Grimes, Kovalski, Prasse, et al., 2005; George Sugai & Horner, 2009). Through SW-PBIS, students should experience more positive interactions with teachers and staff because of the focus on rewarding, recognizing, and modeling positive behaviors for all students across multiple contexts (Sugai & Horner, 2009). In MTSS, at tier one, universal class wide interventions such as Teacher Child Interaction Training (TCIT; Garbacz, Zychinski, Feuer, Carter & Budd, 2014; Greshenson, Lyon, & Budd, 2010) could be used to promote the development of positive relationships with teachers. The core components of universal TCIT include positive reinforcement (e.g., praise, encouragement), teacher modeling of appropriate behavior, and positive classroom management strategies. At tier two, children identified as at-risk for negative relationships with their teachers could participate in small group social emotional learning interventions that promote general social skill and emotion regulation development. At tier three, intensive, individualized interventions targeted at improving the student-teacher relationship could be used. Banking Time is one such intervention that involves the use of non-directed, child-centered activity time as a means of increasing the relationship quality between students and their teachers (Driscoll & Pianta, 2010; Pianta, 1999). Essentially, Banking

Time is a metaphor for “saving up” positive experiences so the relationship can withstand conflict and tension when those difficulties arise between students and teachers.

By supporting teachers in developing positive relationships with all students, school psychologists can work toward meeting the needs of children who have experienced maltreatment. Because school psychologists are often not aware of all children in their school who have experienced maltreatment, this prevention model and tiered approach to intervention provides school psychologist the opportunity to meet the needs of maltreated children in the absence of individual identification.

Limitations and future directions

Although this study makes an important contribution to the literature, it is not without limitations. The sample was predominantly male and African American and although that was expected given African Americans are overrepresented in CPS caseloads (Lu et al., 2004; Shaw et al., 2008) it is difficult to generalize our findings to females and other races. Participants were required to have a substantiated case of physical abuse within the last year but the researchers were unaware of their full abuse history or if the abuse continued during their participation in the study. Additionally, children who participated in the study were still residing with the parent who perpetrated the abuse. Some studies have found significant differences in adjustment of children who experience differing types and levels of severity and chronicity of maltreatment (Manly, Kim, Rogosch & Cicchetti, 2001), although not every study has replicated that finding (Stronach et al., 2011). Future studies could provide additional information related to individual differences in adjustment of abused children by obtaining a more comprehensive history of abuse.

This study was cross-sectional in design, thus, a question remains as to how relevant individual differences in relational schemas might be for later relationships with teachers. We examined the quality of the student-teacher relationship only from the teacher’s perspective. Using a multi-method, multi-informant assessment could provide a clearer picture of this relationship—as the two perspectives of the same relationship have been found to differ in the existent literature. For example, Hughes (2013) found that teachers and students tended to agree in terms of level of conflict in the relationship, but they disagreed in perceptions of the level of support.

In closing, as a whole, physically abused children in this sample were functioning well in their teacher relationships, but when separated on the basis of their relational schemas, children with a less adaptive schemas were experiencing a more conflictual and dependent overall teacher relationship. Despite these differences, the children in both clusters were equally close to their teachers, which is promising for this at-risk population of students. Based on these results, children with more negative schemas would likely benefit from interventions designed to improve their interpersonal relationships, especially with teachers. This investigation speaks to the important role of school psychologists in supporting young abused children with relatively maladaptive schemas to form less conflictual and dependent relationships with their elementary school teachers; this support could promote school success for this vulnerable population of children.

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Table 1
Mean (SD) and Range of Cluster Percentile Scores for each STRS Scale and Results of ANCOVAs for Cluster Differences

	Full Sample		Clusters		F
	<i>M (SD)</i>	Range	Positive Cluster	Negative Cluster	
Closeness	46.63 (27.52)	5–99	50.02 (27.10)	40.88 (27.79)	1.81
Conflict	45.41 (29.59)	1–99	34.93 (24.41)	63.15 (29.51)	15.91**
Dependency	53.07 (30.11)	1–99	46.86 (28.76)	63.58 (29.93)	6.22*
Total	49.77 (30.14)	1–99	59.05 (27.72)	34.08 (27.80)	10.70**

* $p < .05$;

** $p < .0005$

Table 2

Proportion of Children within the Clinical Range on the STRS and Chi-Square Results

	Positive Cluster (N= 44)	Negative Cluster (N= 26)	χ^2
Closeness	27.3%	38.5%	.50
Conflict	11.4%	53.8%	12.84 **
Dependency	27.3%	53.8%	3.87 *
Total	15%	33.3%	6.11 *

*
 $p < .05$;**
 $p < .005$