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Links between Mental and Behavioral Health among Children Affected by HIV/AIDS and Teachers' Assessments of Children

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Abstract

Teachers are considered to be one of the most important influences in the lives of students. Teachers' assessments of students may be a primary source of information on children's mental and behavioral health; however, this topic has received little attention in research. We examined this issue through linking teachers' ratings of students and mental and behavioral outcomes of children affected by HIV. The hypothesis is that teacher ratings will be predictive of specific child mental and behavioral health outcomes. A quantitative cross-sectional design with self-administered paper-and-pencil instruments was used. The sample included 1221 children (ages 6-18, grades 1-11) affected by HIV including 755 orphans who lost one or both parents to AIDS and 466 vulnerable children living with HIV-infected parents in a central province of China. The corresponding teacher sample included 185 participants. Each child completed an assessment inventory of demographic information, mental and behavioral health measures. Teachers completed a questionnaire about children's school performance. SEM analyses revealed a good model fit according to all fit indices, CFI = .93, RMSEA = .07, SRMR = .04. Structural equation modeling revealed that problem ratings by teachers were positively associated with child loneliness and behavioral problems, social competence ratings by teachers were negatively related to child depression, and personal growth and social interaction ratings by teachers were negatively related to child loneliness, depression, and trauma. The current study represents a unique contribution to the field, in that it recognizes that teachers can be a valuable source of information

on children's psychological health. Results from this study have implications for health prevention and intervention for children and families suffering from HIV /AIDS.

Keywords

AIDS/HIV; teacher ratings; children; mental health; behavioral health

Introduction

Global literature has shown that children's psychosocial adjustment is profoundly affected by parental HIV/AIDS (Chi & Li, 2013). Children from HIV-affected families demonstrate poorer psychological and physical health than children from non-affected families in the same communities (Cluver, Orkin, Gardner, & Boyes, 2012). These results have also been reported in children affected by HIV in China, where there were at least 100,000 AIDS orphans by the end of 2004 in China (Zhao et al., 2007). In the location of the current study, the agricultural province of Henan in central China, people were affected disproportionately with HIV from selling blood to supplement their low wages (Fang et al., 2009). Many of these HIV-infected individuals in Henan province have died, leaving their children orphaned, while others are still parenting with the disease (Ji, Li, Lin, & Sun, 2007).

AIDS orphans and vulnerable children have been found to consistently demonstrate poorer psychosocial adjustment than comparison children (Fang, et al., 2009). However, it is a challenge for health care providers to determine how best to evaluate the mental and behavioral health of school-aged children. Most previous studies examined this issue through children's self-report measures, or proxy measures from parents and family members (Cluver, et al., 2012; Du, Li, Chi, Zhao, & Zhao, 2014; Li, Barnett, et al., 2009; Sherr, Mueller, & Varrall, 2009). Few studies have investigated the role of teachers, though teachers could be an important informant of students' health status. By only examining one context (e.g., child or family), as research in this area has done in the past, we overlook other sources of information about children's mental and behavioral health. Consistent with the multi-informant (e.g., parents, teachers, others) approach, the addition of teacher feedback could potentially increase the detection of child mental distress and behavioral problems (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). For example, one study revealed that teachers identified the educational expectations of children affected by HIV in China as significantly lower than comparison children; however, such differences were not observed in students' self-reports (Tu et al., 2009). In another study of mental disorders, Goodman et al. (2000) found that teachers provided more useful information than students' parents for detecting conduct disorders of students. Thus, the current study provides an example of how teachers' assessments of children can be a useful source of information on children's mental and behavioral health. By examining how teacher ratings compare to students' self-ratings of mental and behavioral health, this study significantly contributes to the ecological study of HIV-affected children, and represents a new and emerging area of research.

Teachers are considered to be one of the most important influences in the lives of children, as children typically spend the majority of their day in school. Multiple studies have shown that teacher-child relationships are important and that teachers can accurately assess and profoundly impact student academic outcomes (Barile et al., 2012; Decker, Dona, & Christenson, 2007; Südkamp, Kaiser, & Möller, 2012; Tu, et al., 2009). Little attention, however, has been paid to teachers' ability to recognize and contribute to the mental and behavioral health of their students. Teacher are theorized to have an understanding of student outcomes beyond academics for children in the current study, as the relationship between teachers and students is argued to be more salient because children have parents with HIV/AIDS, with more than half having lost one or both parents to the disease. The current study examines the link between teacher ratings and students' self-ratings of mental and behavioral health.

While limited in number, some studies have suggested the potential link between teacher ratings and students' self-ratings of psychosocial outcomes (Chen, Li, Li, Li, & Liu, 2000; Luthar & Cushing, 1997; Olin et al., 1998; Rubin & Mills, 1988), yet none with vulnerable students (e.g., HIV-affected children). Teacher ratings were found to be correlated with children's self-reported depression (Chen, et al., 2000; Chen, Rubin, & Li, 1995). Furthermore, teacher ratings of internalizing behaviors in a sample of Canadian elementary-aged children (ages 6-11 years) were related to peer assessments of child withdrawal and teacher ratings of externalizing behaviors were related to active isolation of children, as measured by trained observers (Rubin & Mills, 1988). In the Chen et al. study (Chen, et al., 2000), teacher ratings of urban Chinese middle school students (mean age = 12 years) were related to children's self-reports of loneliness. Moreover, teacher ratings have been used with children who have experienced trauma in order to assess various outcomes, including the development of mental disorders, behavioral problems, and academic difficulties (Greenberg, Domitrovich, & Bumbarger, 2001).

Teacher ratings are also related to self-reported behavior problems in students (Chen, et al., 2000; Dubow & Tisak, 1989; Luthar & Cushing, 1997). In one study, teacher ratings are specifically related to students' self-reported substance use in a longitudinal study of inner-city American high school adolescents (mean age = 15 years) (Luthar & Cushing, 1997). Findings from this study indicate that teacher ratings at baseline were correlated with students' self-reported substance use six months later. In another study, teacher ratings were related to parental assessments of problem behaviors, including conduct problems, aggression, attention problems, anxiety, hyperactivity, and psychotic behaviors in a sample of American elementary school children (Dubow & Tisak, 1989). Furthermore, in the Chen et al. study (Chen, et al., 2000), teacher ratings were related to self-reported externalizing problems in students in urban Chinese middle school students.

To the best of our knowledge, however, there is a dearth of empirical research focusing on teacher assessments of mental and behavioral health among children affected by HIV. Compared with children from non-affected families, children affected by HIV are more likely to demonstrate mental and behavioral health problems (Betancourt et al., 2011; Chi & Li, 2013; Cluver, et al., 2012; Sherr, et al., 2009). In China, because of potential stigma and discrimination against children affected by HIV (Ji, et al., 2007) and limited disclosure of

parental HIV (Qiao, Li, & Stanton, 2011), teachers at school may or may not be aware of children's parental HIV-infection or the true cause of parental loss. Therefore, it remains unclear whether teacher's assessments of students can accurately predict health outcomes among children affected by HIV. The current study uses an ecological framework to expand the research on HIV-affected children, in order to better capture those factors that impact the well-being of these children. According to ecological theory (Earls & Carlson, 2001; Lippman, Moore, & McIntosh, 2011; Trickett, Kelly, & Vincent, 1985), teacher ratings would significantly correlate with students' self-reports of mental and behavioral health outcomes. Based on ecological theory and empirical studies, we propose a conceptual model (Figure 1) to study the interrelationships among teacher ratings and child mental and behavioral health outcomes among children affected by HIV. We hypothesize that teacher ratings will be associated with specific child self-report ratings of health outcomes: depression, loneliness, trauma, and behavioral problems.

Methods

Participants

For this study, 1221 children between the ages of 6-18 years were recruited from two rural counties in a central province of China between 2006 and 2007. The sample included 755 orphans who lost one or both of their parents to AIDS and 466 vulnerable children who were living with HIV-infected parents. The central province has high HIV/AIDS prevalence due to unsanitary commercial blood collection during the late 1980's and mid-1990's (Rosenthal, 2002). These two counties have the highest prevalence of HIV infection in this area. The procedures of recruitment and data collection have been described in detail elsewhere (Li et al., 2009). In brief, the orphan sample was recruited from government-funded orphanages, small group homes, and family or kinship care (i.e., extended family care). Single orphans were all in family or kinship care. Vulnerable children were recruited from the same villages. The total number of teachers included in the current study was 185. Teachers recruited for this study are the classroom teachers who had frequent interactions with the child participants in the sample.

Procedure

Each participating child in the study completed an assessment inventory, including measures of demographic information, scales of school performance, and psychosocial scales. The interviewers were trained graduate students in psychology and education from the local university. The interviewers administered the child survey individually or in small group. For children who were too young or had limited literacy, interviewers read the questions to them and the children indicated their responses on the questionnaire. The entire assessment inventory typically took about 75-90 minutes to complete, depending on the age of the child. Children between the ages of 5-8 years were offered a 10-15 minute break after every 30 minutes of assessment. Each child received a gift at completion of the assessment as a token of appreciation. Teachers were asked to participate by providing independent evaluations of children. They answered the provided questionnaires at their preferred place and return the questionnaires back to the research staff in a required time. The research protocol, including

consenting procedure, was approved by the Institutional Review Boards at both Wayne State University in the U.S. and Beijing Normal University in China.

Measures

Children's health outcomes—Children affected by HIV tend to feel lonely and show depressive and post-traumatic symptoms (Atwine, Cantor-Graae, & Bajunirwe, 2005; Cluver & Gardner, 2007; Li, Fang, et al., 2009). In the current study, psychosocial scales administered to children included the 20-item Center for Epidemiological Studies Depression Scale for Children ($\alpha = .81$) (Fendrich, Weissman, & Warner, 1990), the 16-item Children's Loneliness Scale ($\alpha = .75$) (Asher, Hymel, & Renshaw, 1984; Zhao et al., 2011), a 27-item measure of children's behavioral problems ($\alpha = .65$) (two dimensions: smoking and alcohol use; violent behavior and suicidality) (Zhao, et al., 2011), and the 54-item Trauma Symptom Checklist for Children (TSCC) ($\alpha = .96$) (Briere, 1996; Li, Barnett, et al., 2009). The TSCC includes six sub-dimensions: anxiety, traumatic depression, anger, posttraumatic stress, dissociation, and sexual concerns.

Teacher ratings—Teachers completed the 38-item Teacher-Child Rating Scale (TCRS) (Hightower et al., 1986). The TCRS consists of 2 subscales: Problems ($\alpha = .91$) (acting out, shy & anxious, learning) and Social Competence ($\alpha = .94$) (frustration tolerance, assertive social skills, task orientation, peer social skills). Higher scores on the TCRS indicate that teachers rated children as having more problems and stronger social competence.

In addition, teachers completed a 5-item measure of evaluating students compared to their classmates, which indicates two aspects of teachers' evaluation: Personal Growth and Social Interactions ($\alpha = .85$). Higher scores on the supplemental measure indicate teachers rating children as having more personal growth and social interactions.

All scales in the current study have been validated for use with Chinese populations (Lee et al., 2008; Li, Fang, et al., 2009; Tu, et al., 2009; Zhao, et al., 2011). All scales/subscales showed acceptable reliability. The reliability of each factor in the structural model was presented in Table 1. In addition, we collected demographic information of children, including age, gender, and parental HIV status.

Statistical analysis

Initial descriptive analyses were performed to describe the percentage of female and male participants and average age. Bivariate analyses were performed to examine the associations between demographic variables (i.e., age, gender, parental HIV status) and children's outcomes. Structural equation models were tested using Mplus 5.1 (Muthén & Muthén, 2008). For structural equation modeling, we first examined the measurement model with the latent variables that describes the relationships between the latent constructs and their indicator variables. The high number of items for the Depression Scale and the Loneliness Scale was a concern in this procedure. A factor with more than five indicators would lead to unsatisfactory fit in the measurement model (Bagozzi & Heatherton, 1994). To address this issue, the items in the scales were aggregated to form item parcels as indicators (Little, Cunningham, Shahar, & Widaman, 2002). As recommended by Little et al. (2002), parcels

were created by randomly grouping items into two parcels for each scale, through which parcels would have roughly equal common factor variance.

In the structural model, we examined the model fit and tested the effects of teacher ratings on children's psychosocial and behavioral outcomes. Moreover, we included three significant demographic factors (i.e., age, gender, orphans vs. non-orphans) as covariates in the model. We evaluated the model fit with three goodness-of-fit indices: the Comparative Fit Index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). CFI values close to or greater than .95, RMSEA values close to or less than .06, and SRMR values close to or less than .08 indicate adequate fit of a model to the observed data (Hu & Bentler, 1998).

Results

Preliminary analyses were performed to examine the characteristics of the study sample. Half of the children were male (50.9%) and the mean age of the children was 12.86 ($SD = 2.25$). Correlational analyses revealed that boys reported more behavioral problems than girls ($p < .001$); older children reported a lower level of loneliness ($p < .001$) but more behavioral problems ($p < .001$) than younger children; and orphans reported a higher level of depression ($p < .001$) and more behavioral problems ($p < .001$) but a lower level of loneliness ($p < .001$) than non-orphans. We included gender, age, and orphanage as covariates in the structural model.

Table 1 shows the means, standard deviations, and bivariate correlations for the manifest indicator variables. The measurement model, including teacher ratings and children's loneliness, depression, trauma, and behavioral problems, indicated a good fit, $\chi^2 = 1142.20$, $df = 168$, $\chi^2/df = 6.80$, $p < .001$, CFI = .94, RMSEA = .07, SRMR = .04. All factor loadings were significant ($p < .001$). We then tested the relationships between teacher ratings, and children's health outcomes with the structural model.

Figure 2 presents the structural model with standardized path coefficients. The overall model fit was good ($\chi^2 = 1427.21$, $df = 210$, $\chi^2/df = 6.80$, $p < .001$, CFI = .93, RMSEA = .07, SRMR = .04). Consistent with our hypotheses, teachers' problem ratings were associated with higher child loneliness, depression, and more behavioral problems. Moreover, teachers' peer comparisons were associated with lower child loneliness, depression, and trauma. However, teachers' problem ratings were not associated with child trauma, and teachers' peer comparisons were not associated with child behavioral problems. Unexpectedly, teachers' social competence ratings were positively associated with child depression. Social competence was not associated with loneliness, trauma, and behavioral problems.

Three demographic characteristics also showed associations with children's psychosocial outcomes. Boys reported more behavioral problems than girls ($\beta = -.20$, $p < .001$). Younger children reported a higher level of loneliness ($\beta = -.22$, $p < .001$) and demonstrated more behavioral problems ($\beta = -.16$, $p < .001$). Finally, orphans reported higher levels of depression ($\beta = .17$, $p < .001$) and trauma ($\beta = .17$, $p < .05$), but a lower level of loneliness ($\beta = -.10$, $p < .001$).

Discussion

The purpose of our study was to examine whether teachers' assessments of children affected by HIV accurately were associated with children's mental health and behavioral problems. We found support for our hypotheses, specifically that teacher assessments were associated with more loneliness, depression, and behavior problems in HIV-affected children. These findings are consistent with a previous study that utilized a sample of Chinese students who were not affected by HIV (Chen, et al., 2000).

In addition, we found that teachers' peer comparisons of personal growth and social interaction were related to child loneliness, depression, and trauma. This result indicates that HIV-affected children who report more loneliness, depression, and/or trauma are noticed by teachers to be different from their classmates. This finding is critical, as it provides preliminary evidence that it is possible to identify at-risk children through teacher-conducted peer comparisons. With all indications that early indication and intervention is important in reducing the long-term consequences of psychosocial problems in children (Wade, Johnston, Campbell, & Littlefield, 2007), our study highlights an important finding.

There are some unexpected findings to note. First, problem ratings by teachers were not associated with trauma. It is likely that trauma is expressed through less noticeable behavioral problems, whereas the problem behaviors measured in the current study captured externalizing problems. Furthermore, peer comparisons by teachers were not associated with behavioral problems. One explanation for this finding is that the behavior problems in this sample are not those that occur in the classroom. For example, substance abuse may not directly exhibit as a classroom behavior problem. Lastly, teachers' ratings of social competence were positively associated with depression, though this link was marginally significant. This findings was not consistent with previous literature suggesting that social competence acts as a buffer against emotional difficulties (e.g., depression) (Chan, 1997; Chen, et al., 2000). Future research is needed to resolve this controversy.

The current study contributes to this emerging area of research in several ways. First, our findings suggest that teachers' assessments are a valuable source of information about vulnerable children's mental health and behavioral problems. Teachers' assessments may be strongly linked to children's health status, which provides research with an additional source of evidence when researching the psychosocial impact of HIV on children. Health care providers may involve teachers in health prevention and intervention programs in which teachers can be not only a practitioner in facilitating health care, but also an informant in understanding children's well-being and behavioral changes.

Second, by adding trauma to the model, we have identified an important outcome in child mental health. The children in the current study are impacted by parental HIV/AIDS, with many having lost one or both parents to the disease. As indicated in the literature review above, past research on teacher-student relationships has not included trauma as a factor. Yet trauma research indicates that this is an important construct to examine (Li et al., 2009), and findings from the current study substantiates that trauma is a significant outcome for children our sample. Thus, this represents an essential area for future research.

While past research has shown that family is a significant context for intervention for children affected by HIV (Hong et al., 2014; Hosegood & Madhavan, 2010; Richter, Manegold, & Pather, 2005), the current study reveals that schools reflect another influential ecosystem for these children as well. Our study suggests that teacher assessments of student's mental health and behavioral problems may impact the evaluation of children's health status. Because students often spend the majority of their day with teachers, it is important to examine the role of teachers. This study represents the first step in examining this relationship. Other recent studies have begun to examine how school-based interventions can be run by teachers in limited resource areas to better serve the mental health needs of students (e.g., Liber, De Boo, Huizenga, & Prins, 2013; Wolmer, Hamiel, & Laor, 2011). Although they do not directly focus on the relationship between teachers and students or the specific impact of HIV/AIDS, these studies do show that teachers are an effective resource for delivering psycho-educational curriculum, teaching stress management, and promoting positive social skills and peer relationships. Thus, combined with the results of the current study, there is growing evidence that school-based interventions may be developed that build on teachers' strong relationships with students and ability to identify problem behaviors early on to promote well-being for children affected by HIV.

Some limitations are worth noting in the current study. A common limitation to studies such as this one is reliance on self-report. With factors such trauma, mental health, and behavioral problems included in the child assessments, self-report measures may be unreliable (Li, Fang, et al., 2009). Observational assessments in classrooms, which can provide more accurate information about students' health status (Kendall & O'Gara, 2007), should be used in future. In addition, the influence of peers and family may differ at different development periods. Thus, additional study of this topic using longitudinal or cross-sectional methods to examine differences across age groups could further enhance our understanding. Furthermore, there is limited generalizability in the current study. Teacher-student interactions are expected to be somewhat specific to children affected by HIV in the current study. Our findings may not represent the experiences of vulnerable children in China or in other parts of the world. The current study adopted a cross-sectional design and caution must be exercised in drawing causal inferences.

Despite these limitations, this study makes unique contributions to the field. First, the current study highlights the specific needs of a marginalized student population, those impacted by parental HIV/AIDS in rural China. Current research in this field endeavors to identify risk and protective factors, which can then inform evidence-based interventions for this vulnerable group. The current study highlights teachers as a unique source for understanding health needs of vulnerable children. With the inclusion of multiple systems that are important to children in interventions, we may better foster psychosocial functioning in children affected by HIV/AIDS.

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Figure 1.
Hypothesized model of teacher ratings and students' health outcome relationships

Figure 2.

Structural model of teacher ratings and students' health outcome relationships. $\chi^2/df = 6.80$, $p < .001$, CFI = .93, RMSEA = .07, SRMR = .04. ⁺ $p < .06$; ^a $p < .05$; ^b $p < .01$; ^c $p < .001$.

Table 1
Bivariate correlations among indicators of teacher ratings and children's health outcomes

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. TCB1	1																				
2. TCB2	0.47 ^c	1																			
3. TCB3	0.73 ^c	0.54 ^c	1																		
4. TCS1	–	–	–	1																	
	0.27 ^c	0.10 ^c	0.37 ^c																		
5. TCS2	–	–	–	0.69 ^c	1																
	0.23 ^c	0.18 ^c	0.43 ^c																		
6. TCS3	–	–	–	0.74 ^c		1															
	0.42 ^c	0.08 ^a	0.53 ^c																		
7. TCS4	–	–	–	0.72 ^c	0.72 ^c	0.81 ^c	1														
	0.34 ^c	0.07 ^a	0.39 ^c																		
8. TPC1	–	–	–	0.41 ^c	0.46 ^c	0.51 ^c	0.50 ^c	1													
	0.36 ^c	0.19 ^c	0.47 ^c																		
9. TPC2	–	–	–	0.41 ^c	0.48 ^c	0.48 ^c	0.53 ^c	0.73 ^c	1												
	0.34 ^c	0.19 ^c	0.45 ^c																		
10. CL1	0.04	0.02	0.09 ^b	–	–	–	–	–	–	1											
	0.09 ^b	0.07 ^a	0.13 ^c	0.07 ^a	0.13 ^c	0.07 ^a	0.08 ^a	0.14 ^c													
11. CL2	0.06 ^a	0.03	0.13 ^c	–0.06	–	–	–0.05	–	–	0.69 ^c	1										
	0.06 ^a	0.11 ^c	0.06 ^a	0.11 ^c	–	–	–	0.11 ^c	0.15 ^c												
12. CD1	0.05	0.09 ^b	0.10 ^c	–0.02	–	–0.04	–0.03	–	–	0.24 ^c	0.29 ^c	1									
	0.07 ^a	0.07 ^a	0.07 ^a	0.07 ^a	–	–	–	0.08 ^a	0.08 ^a												
13. CD2	0.07 ^a	0.10 ^c	0.11 ^c	0.01	–0.01	–0.01	0.00	–	–	0.26 ^c	0.27 ^c	0.67 ^c	1								
	0.06 ^a	0.06 ^a	0.06 ^a	0.06 ^a	–	–	–	0.06 ^a	0.08 ^b												
14. CTS1	0.037	0.06 ^a	0.05	0.01	–0.02	0.01	–0.01	–0.04	–0.06	0.16 ^c	0.18 ^c	0.51 ^c	0.54 ^c	1							
	0.041	0.09 ^b	0.08	–0.02	–0.04	–0.03	–0.04	–	–	0.18 ^c	0.21 ^c	0.55 ^c	0.61 ^c	0.80 ^c	1						
15. CTS2	0.041	0.09 ^b	0.08	–0.02	–0.04	–0.03	–0.04	0.09 ^b	0.10 ^c												
	0.10 ^b	0.05	0.11 ^c	–	–0.03	–	–0.06	–	–	0.26 ^c	0.25 ^c	0.45 ^c	0.47 ^c	0.71 ^c	0.73 ^c	1					
16. CTS3	0.10 ^b	0.05	0.11 ^c	–	–0.03	–	–0.06	–	–	0.26 ^c	0.25 ^c	0.45 ^c	0.47 ^c	0.71 ^c	0.73 ^c	1					
	0.07 ^a	0.07 ^a	0.07 ^a	0.07 ^a	0.07 ^a	0.08 ^b	0.09 ^c	0.09 ^c	0.10 ^c												
17. CTS4	0.03	0.05	0.04	0.02	0.02	0.02	0.01	–0.04	–0.05	0.15 ^c	0.17 ^c	0.54 ^c	0.55 ^c	0.84 ^c	0.81 ^c	0.72 ^c	1				
	0.03	0.05	0.04	0.02	0.02	0.02	0.01	–0.04	–0.05	0.15 ^c	0.17 ^c	0.54 ^c	0.55 ^c	0.84 ^c	0.81 ^c	0.72 ^c	1				

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18. CTS5	0.06	0.04	0.06 ^a	-0.02	-0.02	-0.03	-0.03	-0.07	0.08 ^a	0.16 ^c	0.18 ^c	0.52 ^c	0.53 ^c	0.81 ^c	0.81 ^c	0.75 ^c	0.84 ^c	1			
19. CTS6	0.09 ^b	0.02	0.09 ^b	-0.05	-0.04	0.09 ^b	-0.04	0.10 ^c	0.09 ^b	0.26 ^c	0.26 ^c	0.44 ^c	0.44 ^c	0.69 ^c	0.70 ^c	0.81 ^c	0.69 ^c	0.71 ^c	1		
20. CBP1	0.15 ^c	0.04	0.17 ^c	-	-	-	-	-	0.09 ^b	0.08 ^b	0.11 ^c	0.09 ^b	0.08 ^b	0.07 ^a	0.08 ^b	0.21 ^c	0.09 ^c	0.12 ^c	0.19 ^c	1	
21. CBP2	0.11 ^c	0.01	0.11 ^c	-0.02	-0.00	-0.05	-0.05	-0.06	0.06 ^a	0.10 ^c	0.14 ^c	0.14 ^c	0.14 ^c	0.15 ^c	0.18 ^c	0.23 ^c	0.17 ^c	0.19 ^c	0.20 ^c	0.35 ^c	1
Mean	1.62	1.90	2.07	2.68	2.65	2.93	3.16	3.38	3.47	2.52	2.51	0.96	0.99	0.58	0.58	0.39	0.61	0.57	0.39	1.42	1.13
SD	0.68	0.60	0.88	0.77	0.90	1.01	0.96	0.71	0.76	0.78	0.73	0.44	0.49	0.48	0.48	0.47	0.50	0.48	0.46	0.53	0.29
α	0.86	0.69	0.91	0.71	0.79	0.87	0.87	0.73	0.79	0.67	0.62	0.66	0.71	0.79	0.81	0.83	0.82	0.82	0.84	0.59	0.60

TCB = teacher ratings in children's behavior; TCS = teacher ratings in children's social competence; TPC = teacher evaluation in peer comparisons; CL = children's loneliness; CD = children's depression;
CTS = children's traumatic symptoms; CBP = children's behavioral problems;

^a $p < .05$

^b $p < .01$

^c $p < .001$.