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CONGRUENCE IN PARENT-TEACHER RELATIONSHIPS

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The Role of Shared Perceptions

ABSTRACT

Parental engagement is an important avenue for supporting student achievement. Positive relationships between parents and teachers are increasingly recognized as vital in this process. Most studies consider parents' and teachers' perceptions separately, and it is unknown whether shared perceptions of relationship quality matter with respect to child outcomes. This study investigated the role of relationship congruence in predicting child academic, social, and behavioral outcomes in 175 elementary students referred for behavioral consultation. Results indicated that teacher, but not parent, ratings of child social skills and externalizing behaviors were more favorable in the presence of a shared, positive view of the relationship. Furthermore, parents who reported higher levels of home-school conferencing and greater self-efficacy were more likely to be in congruent, positive relationships. Though preliminary, these results suggest that shared perceptions of relationship quality may be important in understanding reports of child behavior and finding ways to support positive student outcomes.

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PARENT-TEACHER relationships have long been considered both a vexing problem and a potential resource for improving students' school success (e.g., Kaplan, 1950). These relationships are unusual in that they can be highly emotionally charged, but are not entered into voluntarily. Both parents and teachers report feeling unprepared for and uncomfortable with their interactions; this discomfort often leads to miscommunication and increased difficulties in the

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relationship (Minke & Anderson, 2003). However, when these relationships are productive, they appear to exert a significant, positive effect on children's academic success (Fan & Chen, 2001).

Relationships versus Involvement

Parent-teacher relationships are distinct from, but related to, the construct of parent involvement in schooling (Kohl, Lengua, & McMahon, 2000; Waanders, Mendez, & Downer, 2007; Wong & Hughes, 2006). There is a large, complex literature investigating the value of parent involvement, with most studies investigating early childhood and elementary school settings. Generally, it appears that involvement is associated with higher academic achievement (Jeynes, 2011). There is also evidence that increases in parent involvement over the elementary school years are associated with improved social skills and decreased behavior problems (El Nokali, Bachman, & Votruba-Drzal, 2010). However, there are also studies that show no, or negative, effects of parent involvement on child outcomes (see El Nokali et al., 2010), possibly as a result of varying definitions and measures of parent involvement.

Parent involvement is understood to be a multidimensional construct that encompasses parenting behaviors that support children's learning, including those that are visible to teachers (e.g., attending conferences, volunteering at school) and those that are not immediately visible (e.g., support of learning at home; Fantuzzo, Tighe, & Childs, 2000). Parent and teacher perceptions of parent involvement often differ (Wong & Hughes, 2006). Not surprisingly, teachers tend to emphasize behaviors they can observe, whereas parents tend to reference home-based supports as well as school-based supports; as a result, parents tend to see themselves as more involved than do teachers (Bakker, Denessen, & Brus-Laeven, 2007). Furthermore, teachers sometimes interpret a lack of visible involvement at school as evidence of parents' lack of support for their children's education, leading to unproductive working relationships (Lawson, 2003). Teachers and parents also differ with respect to initiation of involvement activities. Parents tend to initiate contact when things are going well for the child, whereas teachers initiate involvement when there are problems (Epstein, 1996), setting the stage for challenging interactions (Dishion & Stormshak, 2006).

Pianta and Walsh (1996) suggest that interactions between parents and teachers evolve over time and form stable patterns, expectations, and "a quality separate from the interactions themselves" (p. 66). This may explain the conclusions of Kohl et al. (2000), who reported that the quality of the parent-teacher relationship is more predictive of child outcomes than the amount of contact between parents and teachers. Indeed, research has advanced from a search for specific "parent involvement" activities that will produce better child outcomes to a recognition that often subtle relationship variables between parents and children and between parents and teachers strongly influence both parents' decisions to become involved (Green, Walker, Hoover-Dempsey, & Sandler, 2007) and the outcomes achieved through family-school engagement (Jeynes, 2011). There is emerging evidence that the quality of the parent-teacher relationship influences parents' efforts to engage their children in discussions of academic success, which in turn produces improved academic achievement (Hughes & Kwok, 2007). The quality of the parent-teacher relationship

also appears to be a factor in the success of interventions designed to develop prosocial behaviors among young children with behavior problems (Sheridan et al., 2012).

Quality of Parent-Teacher Relationships

The investigation of relationships between families and schools and related variables as distinct from other forms of involvement activities has become a research priority. We adopt the definition of Clarke, Sheridan, and Woods (2009) when we consider a family-school relationship as "a child-centered connection between individuals in the home and school settings who share responsibility for supporting the growth and development of children" (p. 61). Relationships between families and schools are always present (Pianta & Walsh, 1996); however, their quality varies as a function of several individual and interpersonal dynamics.

Healthy parent-teacher relationships are characterized by shared beliefs in the importance of the relationship, commitment to establishing and maintaining a positive relationship with respect to a child's schooling, and consistency and continuity across systems to promote positive child adaptation (Clarke et al., 2009). Relational trust between families and schools, including respect and personal regard, accountability, consideration, sensitivity and understanding, and equality and reciprocity, are all elements of healthy family-school relationships (Bryk & Schneider, 2002; Clarke et al., 2009; Minke, 2006). Furthermore, these relationships are characterized by mutuality, connectedness, and congruence between families and schools. It is generally accepted that supportive, positive relationships between families and teachers (undergirded by congruence of perceptions among participants) serve as the foundation for intentional, collaborative partnerships (Christenson & Sheridan, 2001; Dinnebeil, Hale, & Rule, 1996, 1999).

Views of the relationship appear to influence teacher beliefs about students. In one study, teacher perceptions of the parent-teacher "alliance" accounted for 6.9% of the variance in their ratings of student academic ability (Hughes, Gleason, & Zhang, 2005). Because teacher expectations for students are known to influence student achievement (e.g., Hinnant, O'Brien, & Ghazarian, 2009; Mistry, White, Benner, & Huynh, 2009), it is important to understand how perceptions of parent-teacher relationships may themselves play a role in teacher perceptions of students. These perceptions may be particularly relevant when the child is experiencing behavioral difficulties, given that parent-teacher interactions are likely to be focused on negative behaviors and there is a greater likelihood of strained relationships (Sheridan et al., 2012).

Role of Congruent Perceptions

Given that parents and teachers differ in their perceptions of involvement behavior (Bakker et al., 2007), it is logical to suspect that they differ in their perceptions of relationship quality as well. However, relationship quality typically is assessed from the viewpoint of one partner or the other; rarely are data from both participants in the parent-teacher dyad used to describe the same relationship. Although individual perceptions are important and likely guide individual parent and teacher behavior, there may be value in understanding whether shared perceptions of the relationship also influence behavior. As noted above, from an ecosystemic perspective, relation-

ships develop over time and have qualities distinct from individual interactions (Pianta & Walsh, 1996); therefore, measuring shared perceptions may provide additional depth of understanding in how these relationships function. One of the few studies to assess similarity in parent and teacher ratings of their relationship showed a correlation of .23 between parent and teacher perceptions (Iruka, Winn, Kingsley, & Orthodoxou, 2011). Although this correlation was statistically significant, it suggests a fair degree of incongruence between parents' and teachers' views of the same relationship. Most researchers are very clear in indicating whose perception of the relationship is being reported; however, investigations that include dyadic data should provide improved understanding of the association between relationship quality and child outcomes. Indeed, if partners do not have shared perceptions, and only one partner's view is represented in a study, it remains unknown whether relationship quality adds to our understanding or if individual perceptions of the other are sufficient in predicting child outcomes. That is, might the effects of a positive parent-teacher relationship be limited to situations in which both partners have a shared view of the relationship? Or do benefits accrue when even one partner views the relationship positively? These questions also have implications for intervention. Unlike static, "social address" variables (e.g., socioeconomic status [SES], ethnicity, family size), relationship quality is a process variable that may be amenable to change (Dornbusch & Wood, 1989). By exploring the consistency or congruence in perceptions between members of the dyad, and understanding the ways in which congruence affects child outcomes, it may be possible to direct interventions more efficaciously.

If congruent perceptions of the parent-teacher relationship are shown to influence child outcomes, it becomes important to understand variables that predict this congruence. There is likely to be a complex interplay of variables involved, including parent and teacher beliefs and behaviors. Hoover-Dempsey and colleagues (e.g., Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey, Walker, & Sandler, 2005) have outlined a model of parent involvement that includes two motivational beliefs contributing to involvement decisions: role construction and self-efficacy. Role construction concerns the extent to which parents believe that involvement in education is appropriate or part of their job as parents; self-efficacy is the degree to which parents believe they are capable of engaging in behaviors that will help their children succeed. Parents who hold positive beliefs pertaining to role construction and self-efficacy are more likely to be motivated to participate in their children's education than parents whose beliefs about their role and efficacy are less positive (for a review, see Hoover-Dempsey et al., 2005). Furthermore, parents holding positive beliefs are likely to have greater opportunities to interact with teachers; thus, these partners may also hold more congruent views of the relationship. Additionally, because teacher perceptions are known to be influenced by the visibility of parents' involvement behaviors (Bakker et al., 2007), the extent to which parents choose to be involved at school, as opposed to home, may exert an important influence on perceptions of the relationship.

In the same way that parents' beliefs about their roles and capabilities influence their involvement choices, teachers' beliefs about parents also influence parent-teacher interactions. For example, teachers who believe that parents are not capable of helping their children learn are less likely to attempt to engage parents (Epstein & Becker, 1982). Similarly, teachers who have had negative experiences can develop

stereotypical beliefs about parents and, subsequently, reduce their efforts to engage them (Souto-Manning & Swick, 2006). Teachers who believe that parents are capable of involvement and see it as important to invite parent participation may issue more invitations to involvement and create greater opportunities for interaction with parents, thereby potentially supporting the emergence of congruent perceptions.

Research Questions

This study addressed two research questions. First, we examined the congruence of perceptions of relationship quality and its relation to student outcomes among a group of students experiencing behavior difficulties. Importantly, we used parent and teacher perceptions within the same dyad (i.e., both individuals' ratings of the same relationship) to investigate what influence, if any, congruence of perception has on ratings of children's achievement and behavior. We anticipated that there would be significant differences in child achievement and reports of child social skills and behavioral problems depending on whether parents and teachers agreed that they experienced either a positive or nonpositive relationship with one another, or disagreed about the quality of their relationship.

Second, we examined variables that predict congruent perceptions of the parent-teacher relationship. We anticipated positive, congruent perceptions when (*a*) parents have positive perceptions of efficacy and role construction and are engaged in involvement behaviors that are visible to teachers, and (*b*) teachers have positive beliefs about parent involvement, see parents as having a high level of efficacy, and report high levels of invitations to parents for involvement.

Method

The data for this study were part of a randomized trial (Sheridan et al., 2012) assessing the efficacy of Conjoint Behavioral Consultation (Sheridan & Kratochwill, 2008), an intervention for children with behavioral concerns. The current sample was drawn from baseline assessments administered prior to intervention, utilizing data from child assessments and parent and teacher questionnaires.

Participants were recruited for the trial using a multigate procedure as described in the Systematic Screening for Behavior Disorders (SSBD; H. M. Walker & Severson, 1990). First, teachers nominated five children with the greatest degree of disruptive behavior. Second, teachers rated the behavior of these children using (1) the SSBD and (2) a scale developed for this research evaluating the severity and frequency of children's externalizing behaviors and the necessity of additional intervention (Sheridan et al., 2012). To be invited to participate in this research, children had to meet one or both of the following conditions: (1) "elevated" or "extremely elevated" scores on the SSBD and/or (2) externalizing behaviors of a moderate to extremely severe level, moderate to extreme frequency, or moderate to significant need for additional services. The parents of children meeting these criteria were contacted regarding participation. Two to three children per classroom participated.

Participants

Children. The sample from which these data were drawn consisted of 206 kindergarten through grade 3 children with an average age of 6.51 years ($SD = 1.12$) from 21 Midwestern elementary schools. The majority of children were male (73.8%) and, as reported by parents, 72.4% White, 8.2% Black, 5.1% Hispanic/Latino, 0.5% American Indian/Alaska Native, and 13.8% other ethnicities. Most children spoke English at home (95.4%), 3.1% spoke Spanish at home, and 1.5% of parents reported other languages. Of participating children, 43.2% were identified as having a disability according to teacher reports of special education services, teacher-reported clinical diagnosis, or a parent-reported clinical diagnosis.

Parents. Parent participants ($N = 206$) were predominantly female (90.2%) and White (85.6%), with 4.6% Black, 3.6% Hispanic/Latino, 1.5% American Indian/Alaska Native, and 4.6% reporting other ethnicities. Parents' mean age was 34.74 years ($SD = 7.79$). Parents reported a range of education levels, with 4.1% earning less than a high school diploma, 17.5% earning a high school diploma, 33% completing some college, 32% receiving a college degree, 5.2% completing some graduate coursework, and 8.2% reported earning an advanced degree.

Teachers. Teachers ($N = 82$) were predominantly female (95.1%) and White (98.8%), with 1.2% Hispanic/Latino. Of teachers, 32.9% reported earning a college degree, 37.8% completing some advanced coursework, and 28% reported earning an advanced degree. One teacher reported completing some college. Teachers reported an average of 9.74 years ($SD = 9.59$) in their current teaching position.

The results of the current analyses are based on 175 cases (of the 206) where parent-teacher relationship data (i.e., completed Parent-Teacher Relationship Scales [PTRS]; see description below) were available for both partners. As shown in Tables 1 and 2, additional item-level missing data resulted in some variation in sample size across analyses. The 31 cases for which PTRS data from both partners were not available were compared with the analysis sample to assess whether any systematic differences existed between them. Only 3 of 19 variables considered in this study indicated a mean difference between the analysis sample and the 31 dyads not included in analyses. Those variables were math calculation ($t_{188} = -2.221$, $p = .03$, M (SD) = 103.93 (14.70) and M (SD) = 97.43 (14.64) for the analysis and omitted cases, respectively), the teacher-rated SSRS score ($t_{200} = -2.295$, $p = .02$, M (SD) = 84.73 (10.61) and M (SD) = 79.59 (12.10) for the analysis and omitted cases, respectively), and teachers' reports of their invitations ($t_{178} = -3.347$, $p = .001$, M (SD) = 2.88 (0.73) and M (SD) = 2.35 (0.77) for the analysis and omitted cases, respectively). No specific reason for missing data was indicated, and there was no apparent pattern in the data collection suggesting systematic missingness. Furthermore, the magnitudes of the significant differences were not considered clinically meaningful. Thus, the data were analyzed under the assumption of missing completely at random, as defined by Rubin (1976).

Study Variables and Measures

Parent-teacher relationship quality; child academic, social, and behavioral functioning; and parent and teacher beliefs and behaviors were assessed to address the

Table 1. Child Variables as a Function of Parent-Teacher Relationship Congruence Group

	Positive Congruent			Incongruent			Nonpositive Congruent		
	M	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Academic (Woodcock-Johnson):									
Reading	104.50	13.99	66	105.28	10.50	36	98.14	20.66	14
Math	106.42	13.95	66	103.08	16.05	36	97.21	13.68	14
Social skills (SSRS):									
Parent report	92.03	17.18	109	97.65	18.95	49	92.47	18.86	17
Teacher report	87.21	10.04	109	81.67***	10.18	49	77.59***	10.42	17
Behavior (BASC):									
Parent report:									
Adaptive skills	42.39	8.63	92	45.44	9.71	45	42.94	9.18	16
Behavioral symptoms	59.85	11.34	92	56.53	10.47	45	60.94	11.38	16
Externalizing problems	62.24	13.29	92	57.89	11.36	45	62.25	12.52	16
Teacher report:									
Adaptive skills	42.50	6.12	92	41.16	7.26	44	38.69	5.64	16
Behavioral symptoms	65.68	10.63	92	69.77***	10.26	44	76.50*	10.91	16
Externalizing problems	65.82	11.24	92	69.43**	10.81	44	73.19*	6.60	16

Note.—Asterisks indicate group mean is significantly different from positive congruence group mean. SSRS is the Social Skills Rating Scale. BASC is the Behavior Assessment System for Children.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

research questions. Descriptive data from scales used to measure these variables are reported in Tables 1 and 2.

Congruence of parent-teacher relationship quality. The central variable of interest in this study was congruence between parent and teacher reports of their relationship quality. Relationship quality was determined through ratings made by parents and teachers on the Parent-Teacher Relationship Scale (Vickers & Minke, 1995). The PTRS has two subscales: Joining and Communication-to-Other. The 19-item Joining subscale assesses the interpersonal connection between parents and teachers (e.g., "We understand each other"). The 5-item Communication-to-Other subscale

Table 2. Parent and Teacher Variables as a Function of Parent-Teacher Relationship Congruence Group

	Positive Congruent			Incongruent			Nonpositive Congruent		
Parent and Teacher Variables	*M*	*SD*	*n*	*M*	*SD*	*N*	*M*	*SD*	*n*
Parent:									
Self-efficacy	4.82	.56	108	4.62	.60	49	4.19	.71	17
Role construction	5.31	.41	108	5.09	.58	49	5.09	.40	17
Participation in problem solving	4.63	.69	80	4.37	.71	34	4.00	1.13	7
Home-school conferencing	2.88	.64	108	2.40	.61	49	2.24	.50	17
School involvement	1.98	.51	87	1.81	.44	43	1.91	.60	15
Home involvement	3.18	.40	108	3.01	.44	49	2.98	.51	17
Teacher:									
Beliefs about parent involvement	5.21	.43	96	5.18	.44	46	5.24	.44	15
Perceptions of parent efficacy	4.40	.60	96	4.37	.70	46	4.35	.54	15
Report of invitations	2.93	.73	94	2.83	.73	46	2.73	.85	15

reflects the quality of communication between parents and teachers (e.g., "I tell this parent/teacher when I am pleased"). Each item was rated on a 5-point Likert scale based on the frequency with which it occurred (1 = almost never; 5 = almost always). Because of the substantial correlation between the two subscales (r's = .51 for both parents and teachers), we used the total score calculated from the 24 items rather than the subscale scores to compute a mean for each participant. Internal consistency reliabilities on the total scores for this sample were high (α's = .93 and .95 for parents and teachers, respectively). The mean item PTRS score for parents was 4.39 (SD = 0.61) and 4.18 (SD = 0.65) for teachers. Data were negatively skewed, with 81.1% of parents and 71.4% of teachers rating relationship quality at 4.00 or above.

To index relationship congruence, a new variable was created from the PTRS mean scores with three exclusive and exhaustive categories: positive congruence, incongruence, and nonpositive congruence. Given the negatively skewed nature of the PTRS data (skewness = −2.09 and −1.33 for parent- and teacher-rated PTRS scores, respectively), we chose a conservative level of quality to define positive congruence (i.e., mean item score of ≥4.00 on the 5-point Likert scale from both participants). Nonpositive congruence was defined as PTRS mean item scores below 4.00 for both partners, and incongruence was defined as PTRS mean item scores that fell in different categories for each partner (i.e., one partner rated the relationship at or above 4.00 and the other rated the relationship below 4.00). We use the term "nonpositive" congruence, rather than negative congruence, to reflect that although scores of less than 4.00 were below average for the sample, they include relationships that were rated as fairly neutral and not just those that would be considered "negative" or problematic. We hypothesized that these nonpositive relationships would differ in important ways from those that both partners rated as highly positive. Based on these criteria, 109 parent-teacher dyads (62.3%) were categorized as positive congruent, 17 (9.7%) were nonpositive congruent, and 49 (28.0%) were incongruent.

Table 3 provides descriptive statistics for the PTRS by parent-teacher relationship congruence group. The observed differences among the three group means lend support to our choice of cutoff criteria. The mean PTRS score was greater than 4.50 for both parents and teachers in the positive congruent group, and less than 3.5 for both parents and teachers in the nonpositive congruent group. The incongruent group had the largest mean difference between dyad members' PTRS scores.

Child functioning. Three aspects of children's functioning served as dependent variables: academic, social, and behavioral functioning (see Table 1). To assess children's academic functioning, select subtests from the Woodcock-Johnson III Tests

Table 3. Parent-Teacher Relationship Scale (PTRS) Descriptive Statistics by Parent-Teacher Relationship Congruence Group

	Positive Congruent				Incongruent				Nonpositive Congruent			
	M	*SD*	Range	*n*	*M*	*SD*	Range	*n*	*M*	*SD*	Range	*n*
PTRS mean:												
Parent	4.66	.29	(4.04, 5.00)	109	4.20	.50	(3.13, 5.00)	49	3.25	.86	(1.00, 3.96)	17
Teacher	4.53	.28	(4.00, 5.00)	109	3.73	.70	(1.69, 5.00)	49	3.28	.51	(1.96, 3.96)	17
Dyad difference score[a]	.36	.22	(.00, .96)	109	.99	.55	(.08, 2.57)	49	.62	.59	(.00, 2.38)	17

[a] The dyad difference score is the absolute difference between dyad members' mean PTRS score.

of Achievement (WJ-III; Woodcock, McGrew, & Mather, 2001) were administered (i.e., Letter-Word Identification, Reading Fluency, Passage Comprehension, Calculation, and Math Fluency; subtest scores constituted the Broad Reading and Math Calculation Skills clusters scores). The WJ-III is a standardized measure ($M = 100$, $SD = 15$) with substantial evidence of internal consistency reliability (α's = .93 and .90 for Broad Reading and Math Calculation Skills, respectively) established in prior research (Woodcock et al., 2001).

To assess children's social functioning, parents and teachers completed the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). The social skills subscale of the SSRS was utilized because of its focus on children's prosocial behaviors such as sharing and exhibiting appropriate responses. Internal consistency (α's range from .65 to .87 and .86 to .94 for parent and teacher reports, respectively) for this standardized measure ($M = 100$, $SD = 15$) has been demonstrated in prior research (Gresham & Elliott, 1990).

Parents and teachers completed the Behavior Assessment System for Children—Second Edition (BASC-2; Reynolds & Kamphaus, 2004) to assess children's behavioral functioning. We used three subscales in the present study. The Adaptive Skills subscale assesses children's positive behaviors such as leadership and adaptability. The Behavioral Symptoms Index reflects problematic behavior. The Externalizing Problems subscale assesses children's disruptive behaviors, including hyperactivity and aggression. Subscales have demonstrated substantial internal consistency reliability evidence (α's range from .90 to .95 and .93 to .97 for parent and teacher reports, respectively) in prior research (Reynolds & Kamphaus, 2004).

Parent beliefs and behaviors. Several dimensions of parents' beliefs and behaviors regarding children's schooling were assessed (see Table 2). Parents reported on their self-efficacy using the Parent Efficacy for Helping Children Succeed in School Scale (Hoover-Dempsey, Bassler, & Brissie, 1992; J. M. Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005). Parents rated their agreement on a 6-point Likert scale (1 = disagree very strongly; 6 = agree very strongly) with 12 items (e.g., "I know how to help my child do well in school") assessing their feelings of capability to help their child learn ($\alpha = .82$ in the present sample). Parents' role construction was assessed using the 10-item Parent Role Construction Scale (Walker et al., 2005). Parents rated on a 6-point Likert scale (1 = disagree very strongly; 6 = agree very strongly) the degree to which they felt it was their responsibility to be actively involved in their children's education (e.g., "I believe it is my responsibility to stay on top of things at school"). Internal consistency reliability in the present sample was $\alpha = .79$.

Four dimensions of parents' behavior were assessed. The first, parents' participation in problem solving, was assessed using a scale developed for this research (Sheridan et al., 2012). Parents rated their agreement on a 6-point Likert scale (1 = disagree very strongly; 6 = agree very strongly) with eight items assessing their actions and strategies around problem solving for their child (e.g., "I have figured out what helps my child and what does not"). Internal consistency reliability in the present sample was $\alpha = .89$. Three additional dimensions of parents' behaviors were assessed using the Family Involvement Questionnaire—Elementary Version (FIQ; Manz, Fantuzzo, & Power, 2004). Parents' home-school conferencing reflects parents' contact with teachers (e.g., "I talk with my child's teacher about schoolwork he or she is expected to practice at home"). School-based involvement reflects parents' involve-

ment taking place at the school (e.g., "I volunteer in my child's classroom"). Home-based involvement captures parents' learning-oriented practices outside of school (e.g., "I review my child's schoolwork"). Parents rated 34 items on a 4-point Likert frequency scale (1 = rarely; 4 = always). Internal consistency reliabilities in this sample were α's = .90, .81, and .85 for home-school conferencing, school-based involvement, and home-based involvement, respectively.

Teacher beliefs and behaviors. Two aspects of teachers' beliefs were assessed (see Table 2). First, their beliefs about parent involvement were measured using the Teacher Beliefs about Parental Involvement Scale (Epstein, Salinas, & Horsey, 1994; Hoover-Dempsey, Walker, Jones, & Reed, 2002). Teachers rated their agreement with eight items (e.g., "Parent involvement can help teachers be more effective with more students") on a 6-point Likert scale (1 = disagree very strongly; 6 = agree very strongly). Internal consistency reliability for the sample was $\alpha = .69$. Second, teachers' perceptions of parent efficacy were assessed using the Teacher Perceptions of Parent Efficacy for Helping Children Succeed in School Scale (Hoover-Dempsey et al., 1992, 2002). This scale assesses teachers' perceptions regarding how efficacious parents feel in helping their children learn. Seven items were administered (e.g., "My students' parents help their child learn"), and teachers rated their agreement on a 6-point Likert scale (1 = disagree very strongly; 6 = agree very strongly). Internal consistency in this sample was $\alpha = .78$. Teachers' behavior with respect to invitations for parent involvement was also assessed. Teachers completed the 16-item Teacher Report of Invitations to Parental Involvement Scale (Epstein, 1986), which assesses teachers' general involvement practices. They rated on a 6-point Likert scale (1 = never; 6 = 1+ time(s) each week) the frequency with which they invite parents to be involved in children's learning (e.g., "Ask a parent to visit my classroom"). Internal consistency reliability for the sample was $\alpha = .86$.

Analysis Overview

All analyses were conducted in M*plus* Version 6.1 (Muthén & Muthén, 1998–2010). The M*plus* TYPE = COMPLEX and CLUSTER options were used along with the M*plus* robust maximum likelihood (MLR) estimator to adjust the standard errors and chi-square test statistics for dependency in the data due to multiple (i.e., 2—3) parents/children nested within teachers. Analyses were guided by two central questions: (1) Does parent-teacher relationship congruence predict child functioning? and (2) Do parent and teacher beliefs and behaviors regarding parental involvement predict relationship congruence?

To address the first question, five path models were evaluated in which PTRS congruence served as the predictor variable. The outcome variables assessed were (1) teacher-rated WJ-III Broad Reading and Math Calculation Skills, (2) parent- and (3) teacher-rated SSRS, and (4) parent- and (5) teacher-rated BASC adaptive skills, behavioral symptoms, and externalizing problems. All models were fully saturated so tests of overall model fit and goodness-of-fit indices are not provided. Instead, the models were evaluated in a similar manner to that of traditional ANOVA (models 2 and 3) and MANOVA (models 1, 4, and 5). A likelihood ratio test statistic (LRT; or, symbolically, $-2\log(\Lambda)$) was used to determine whether the omnibus effect of the categorical predictor, PTRS congruence, on the outcome(s) was significant. Univariate tests were evaluated for all MANOVA models demonstrating a significant om-

nibus effect. The Bonferroni-Holm correction (Holm, 1979) was applied to the univariate tests to prevent inflation of the Type I error rate. For the significant ANOVAs and univariate tests of the MANOVAs, planned comparisons were evaluated for the positive congruent and nonpositive congruent groups, and positive congruent and incongruent groups.

To address the second research question, multinomial logit models (MLM; Greene, 1997), in which relationship congruence was regressed on parent and teacher beliefs and behaviors, were evaluated using MLR with numerical integration (see Table 4). All models were fully saturated so tests of model fit are not provided. LRTs were conducted to determine whether individual predictors accounted for a significant amount of variance in PTRS congruence. Significant omnibus effects were followed up by two evaluations to specifically determine whether the variable predicted (1) positive congruent versus incongruent status and (2) positive congruent versus nonpositive congruent status. Because the positive congruence group was the reference for both comparisons, positive beta coefficients indicate that the probability of being in the positive congruent group (versus the comparison group) decreases as the predictor variable increases, and vice versa.

We first examined the predictor variables for parents (self-efficacy, role construction, participation in problem solving, home-school conferencing, school involvement, and home involvement) and teachers (beliefs about parental involvement, perceptions of parent efficacy, and report of invitations) for missing data. There were a number of cases in which missing data only occurred on parent or teacher predictors. To prevent a substantial reduction in sample size that would result from listwise deletion on exogenous (i.e., predictor) variables, MLMs were evaluated separately for the parent and teacher predictors. Furthermore, considerable listwise deletion ($N = 174$ reduced to $N = 98$) occurred in estimating the parent model as a result of missing data on the parent participation in problem solving and school involvement variables. In the full parent model, neither of these variables uniquely predicted PTRS congruence: $-2\log(\Lambda)$ ($df = 2$) = 0.108, MLR correction factor = 0.873, p = .9476 and -2log(Λ) ($df = 2$) = 1.256, MLR correction factor = 0.963, p = .5335 for

Table 4. Multinomial Logit Model

Variable	Beta Coefficients: Nonpositive vs. Positive	Beta Coefficients: Incongruent vs. Positive	$-2\log(\Lambda)$ [a]
Parent:			
Self-efficacy	−1.55**	−.32	11.15**
Role construction	.03	−.51	1.95
Home-school conferencing	−1.58**	−1.10**	21.00**
Home involvement	.47	.16	.35
Teacher:			
Beliefs about parental involvement	.22	−.19	.27
Perceptions of parent efficacy	−.21	−.04	.20
Report of invitations	−.35	−.21	1.33

Note.—Sample sizes for positive congruent = 108 parents and 94 teachers; incongruent = 49 parents and 46 teachers; nonpositive congruent = 17 parents and 15 teachers.

[a] $-2\log(\Lambda)$ corresponds to a likelihood ratio test statistic.

** $p < .01$.

parent participation in problem solving and school involvement, respectively. Due to their negative impact on sample size and their nonsignificant effect on PTRS congruence, these variables were removed from the parent model to increase power for testing the other parent predictors.

Results

Does Parent-Teacher Relationship Congruence Predict Child Functioning?

Child academic functioning. Contrary to expectations, the path model with multiple dependent outcomes indicated no significant relation between parent-teacher relationship congruence and children's academic performance on the WJ-III Broad Reading nor the WJ-III Math Calculation Skills (see Table 1), $-2\log(\Lambda)$ ($df = 4$) = 5.73, MLR correction factor = 1.17, $p = .22$.

Child social functioning. Path models with a single outcome were evaluated separately for parent and teacher reports of children's social skills on the SSRS. There was no significant relation between parent reports of children's social skills and parent-teacher relationship congruence, $-2\log(\Lambda)$ ($df = 2$) = 3.27, MLR correction factor = 1.06, $p = .19$. However, there was a significant effect for teacher reports of children's social skills, $-2\log(\Lambda)$ ($df = 2$) = 19.61, MLR correction factor = 0.96, $p < .001$. Therefore, the positive congruent relationship group was compared to the incongruent and nonpositive congruent groups. As shown in Table 1, the positive congruent group had significantly higher mean teacher-reported SSRS scores than the nonpositive congruent and incongruent groups (p's $< .001$). That is, teachers were more likely to rate children's social skills higher in the presence of a positive and congruent perception of the parent-teacher relationship.

Child behavioral functioning. To analyze the relation between parent-teacher congruence and child behavioral functioning, three subscales of the BASC as reported by parents and teachers were used: Adaptive Skills, Behavioral Symptoms, and Externalizing Problems. The result of the omnibus test was not significant for parent-reported outcomes, $-2\log(\Lambda)$ ($df = 6$) = 6.75, MLR correction factor = 0.86, $p = .35$. In contrast, the result of the omnibus test was significant for teacher-rated outcomes, $-2\log(\Lambda)$ ($df = 6$) = 15.19, MLR correction factor = 1.05, $p = .02$. The Behavioral Symptoms Index and the Externalizing Problems subscales were significant (Bonferroni-Holm adjusted p's = .01), but the Adaptive Skills subscale was not (Bonferroni-Holm adjusted $p = 0.05$). As shown in Table 1, the nonpositive congruent and incongruent relationship groups had significantly higher means on the teacher-rated Behavioral Symptoms Index than the positive congruent group (p's $<$ .001 and .01, respectively). Teachers in congruent, nonpositive relationships or incongruent relationships gave significantly higher ratings of child behavior problems than teachers in congruent, positive relationships. Likewise, the nonpositive congruent and incongruent groups had significantly higher means on the teacher-reported Externalizing Problems subscale than the positive congruent group (p's = .001 and .048, respectively).

In summary, congruence in perceptions of the parent-teacher relationship did not predict students' academic performance or parent ratings of child social skills and behavior. However, congruence in perceptions did predict teacher ratings of child social skills and behaviors. Teachers rated children's social skills more favorably in

the presence of a shared, positive view of the parent-teacher relationship. When parents and teachers were incongruent in their perception of the relationship, or when they saw the relationship similarly but in a less positive light, teachers rated children's behavioral symptoms and externalizing issues as more problematic.

Do Parent and Teacher Beliefs and Behaviors Predict Relationship Congruence?

The second set of analyses investigated whether parent and teacher beliefs and behaviors predict parent-teacher relationship congruence. Table 4 provides the beta coefficients and LRTs for the individual predictors in the parent and teacher models.

Parent beliefs and behaviors. Consistent with predictions, certain parent motivational beliefs and involvement behaviors were associated with relationship congruence as evidenced by the significant omnibus test, $-2\log(\Lambda)$ ($df = 8$) $= 39.16$, MLR correction factor $= 1.01$, $p < .001$. Significant effects based on the individual LRTs were found for parent self-efficacy and home-school conferencing, but not for parent role construction or home involvement. An examination of the individual beta coefficients showed that parents who reported a higher level of efficacy were more likely to be in positive congruent relationships with teachers than in nonpositive congruent relationships. Parent efficacy did not distinguish among parents in positive congruent relationships versus parents in incongruent relationships. Parents reporting a higher level of home-school conferencing were more likely to be in positive congruent relationships than in nonpositive or incongruent relationships with teachers.

Teacher beliefs and behaviors. Contrary to expectations, none of the teacher-reported variables demonstrated predictive value. Specifically, teacher beliefs about parental involvement and perceptions of parental efficacy, as well as teachers' reports of their invitations to parents, did not predict congruence of perceptions of the relationship, $-2\log(\Lambda)$ ($df = 6$) $= 1.82$, MLR correction factor $= 1.00$, $p = .94$.

Discussion

Evidence continues to emerge supporting the importance of parent engagement and parent-teacher relationships in producing positive child outcomes (Jeynes, 2011). The current study is one of the few that examines the quality of these relationships by taking into account perceptions of both members of the dyad. It contributes to the literature through simultaneous examination of the role of relationship congruence on several important child outcomes, and through initial exploration of variables that predict shared perceptions between parents and teachers regarding the quality of their relationships in the context of teacher-identified child behavior difficulties.

The majority of parent-teacher dyads in this sample agreed that their relationship is a positive one (62.3% positive congruent), even though the child at the center of the relationship was identified by the teacher as having behavior problems significant enough to warrant intervention. In these circumstances, strained relationships between parents and teachers might be anticipated, and there were a number of dyads in the present sample that were in agreement that their relationship was not positive (9.7% nonpositive congruent). It is encouraging that most dyad members in this study rated their relationship similarly (72%), suggesting that the PTRS is capturing qualities of the relationship that are not idiosyncratic to the rater. The presence of

incongruent ratings, however, allowed preliminary examination of whether differing perceptions of the relationship constitute a risk factor for poor child outcomes and for exploration of factors that predict incongruent perceptions.

Relationship Congruence and Child Outcomes

Child academic functioning. In this sample, mean reading and math scores of children whose parents and teachers reported congruent but nonpositive relationships were lower but not significantly different than those who shared a positive view of the relationship. This finding was unexpected given other research showing that students' academic success is enhanced in the presence of positive parent-teacher relationships (Hughes et al., 2005; Hughes & Kwok, 2007). The timing of data collection may have influenced this result. That is, relationship data and academic achievement data were collected at the same time and at the time of referral, whereas Hughes et al. followed students over a period of one year. Greater differences may have emerged in our data if student achievement was followed over time.

Child social and behavioral functioning. Significant differences were observed in teacher ratings of child social skills and behavioral problems based on congruence and quality of parent-teacher relationships. Specifically, teachers' views of children's social skills were more favorable in the presence of a shared, positive view of the parent-teacher relationship than when other relationship qualities were apparent (i.e., when the relationship was nonpositive congruent or incongruent). When parents and teachers viewed their relationship similarly but in a nonpositive light, or when they were incongruent in their perception of the relationship, teachers rated behavioral symptoms and externalizing issues as problematic. Given that the present sample was one for whom behavioral difficulties were reported by teachers to the extent that a referral for consultation support was extended, this finding is particularly salient. In contrast, parents' perceptions of their children's behavior were unrelated to congruence of parent-teacher relationship quality.

Because parents and teachers in this study were rating the same child and the same relationship, this intriguing finding may have implications for the interpretation of behavior rating scales. It is established in the literature that parents and teachers frequently rate behavior differently (Achenbach, McConaughy, & Howell, 1987; Thomas, Forehand, Armistead, Wierson, & Fauber, 1990); these differences are typically attributed to rater and setting effects. That is, teachers often have a broader developmental perspective on age-appropriate behaviors, but their ratings are limited to what they observe at school. Parents, on the other hand, make judgments from the perspective of a longer history with the child and observations across settings, but their perception of normative behavior may be limited. Thus, differences in ratings are not surprising. These findings suggest that other rater effects may be involved for teachers but not parents; that is, teacher ratings also may be influenced by relationship quality.

Our results differed somewhat from those of Iruka et al. (2011), who found that both teacher and parent perceptions of child social competence and aggression were related to perceptions of the strength of the relationship. However, they also indicated that parent and teacher ratings of student behaviors were only moderately correlated, and observed that teachers' reports of relationship quality were linked

more strongly with child outcome ratings than parents' reports of relationship quality. The differences in these findings may relate to differences in student samples.

Our sample consisted of students identified by their teachers as having disruptive behavior difficulties. It is possible that the nature of the behavior problems demonstrated by students in classroom settings (i.e., those of sufficient frequency or severity, warranting referral and resulting in enrollment in the study) influenced teachers' perceptions of parents and, by extension, relationships with parents. The effect of specific student behaviors on teachers' perceptions of their relationship with parents is unknown. Likewise, it is unclear how child behaviors may have influenced parents' perceptions of relationships with teachers. Given that parents did not participate in the initial referral process, different processes may be at play. It should be noted that the relationships among these variables are likely bidirectional, mutually influencing one another over time. The present study was designed to investigate whether relationships exist but did not address causal connections. In addition, we did not assess children's behavioral difficulties independent of parent and teacher perceptions. It is possible that there were real differences in child behavior across the congruence groups in the school setting (but not at home) that influenced these results. The role of student behavioral problems as a predictor or moderator of relationship quality between parents and teachers is worthy of future investigation. Observational or other objective measures of child behavior should be included to further our understanding of how these rater differences occur.

Predicting Shared Perceptions of the Parent-Teacher Relationship

Although ratings of the child were influenced by relationship congruence only for teachers, it was parent rather than teacher variables that predicted relationship congruence perceptions. Specifically, parents who reported higher levels of home-school conferencing and greater self-efficacy were more likely to be in positive, congruent parent-teacher relationships.

The home-school conferencing variable primarily assessed parents' reports of communication between parents and teachers about child progress through notes, phone calls, or meetings. Thus, it appears that communication is an important element in the development of positive, congruent relationships. As expected, home involvement did not have a similar predictive function. These results are consistent with the notion that parent involvement behaviors that are visible to the teacher are likely to be more influential in relationship quality than those activities that occur at home. Although there are few studies that include relationship quality as an outcome variable, a number of studies show a significant relationship between visible involvement behaviors and positive child outcomes. For example, Marcon (1999) found that home-school communication and active types of parent involvement (such as helping with activities within the classroom) were positively associated with children's adaptive behaviors and achieving learning objectives in prekindergarten. Similarly, Fantuzzo, Tighe, and Perry (1999) found that school-based involvement was related to lower levels of disruptive peer play at school and home. It is noteworthy, however, that in the present study the third subscale of the FIQ, school involvement, did not predict relationship congruence as would be expected if "visibility" is the key element. It is possible that communication, rather than simply visible involvement in school-based activities, is central to congruence perceptions. It should be remembered that the specific involvement behaviors assessed in this study

were obtained from parents' self-reports only. Teachers' perceptions of these parent behaviors would clarify the interplay of these variables and should be explored in future research.

Parents who perceived a higher level of self-efficacy for involvement were more likely to be in relationships that both partners experience as positive. Interestingly, efficacy has not always been shown to have a direct relationship on parents' involvement at school (e.g., Walker, Ice, Hoover-Dempsey, & Sandler 2011) and sometimes has been related directly to involvement at home (Anderson & Minke, 2007). It is possible that more efficacious parents engage with their children around academic issues at home, influencing children's engagement in school, which in turn supports a positive, congruent perception of the relationship. It is also possible that efficacious parents are more confident in their interactions with teachers than parents not feeling efficacious, supporting positive, shared perceptions. This is an interesting area for further study, particularly given the nature of the sample here. It is encouraging that parental self-efficacy is associated with positive, congruent relationships even in the presence of child behavior difficulties. Future research might consider whether parental self-efficacy serves a mediating role in the relationship between parent involvement behaviors and relationship congruence.

Although we anticipated that role construction, the belief that parent involvement is part of one's job as a parent, would operate similarly to the efficacy variable, this was not the case. With respect to school- and home-based involvement, this variable has functioned inconsistently in other research, with some finding it to have a strong role in parents' decisions (Sheldon, 2002; Walker et al., 2011) and others finding a more limited influence (Anderson & Minke, 2007). In this sample, role construction was generally fairly high among the three congruence groups, which might have affected the results; it is possible that a relationship would emerge in a more diverse sample.

Contrary to expectations, none of the teacher variables (i.e., beliefs about parent involvement, perceptions of parent efficacy, and perceptions of invitations to parents) predicted congruence within the parent-teacher relationship. Whether teachers' beliefs and behaviors contribute to a shared perception of the parent-teacher relationship remains unknown. Because these data were drawn from an existing data set, there are potentially important variables that were unavailable in this study and should be investigated in future research. For example, teachers' beliefs about their own efficacy for interacting with parents might exert a stronger influence on relationship congruence than their beliefs about parents' efficacy. Teachers' beliefs about parents as the cause of student misbehavior may also be influential (Skiba & Peterson, 2000), particularly in a sample like this one where students were selected due to behavior difficulties. It is also possible that teachers' cognitive events are less influential in relationship congruence than communication that occurs through home-school conferencing. As noted above, perceptions of both parents and teachers for these variables are needed to draw firm conclusions.

Teachers' invitations to involvement have been shown consistently to be important in parent engagement (Anderson & Minke, 2007), and we anticipated that these invitations would serve a similar role in supporting congruent perceptions of the parent-teacher relationship. The lack of predictive power for this variable may have been related to the available measure. That is, we had only teachers' reports of their general invitation practices but not parents' reports of invitations that they received. Because parents' and teachers' perceptions about invitations are themselves often incongruent (Lawson, 2003), it will be important in future research to assess both partners' perceptions.

Limitations

Results should be interpreted as preliminary, keeping in mind the nature of the sample used. Students were nominated for participation on the basis of teachers' rankings of their behavior problems. Therefore, the sample does not represent relationships where the child is judged to be doing well behaviorally. It was somewhat surprising to find a relatively small number of nonpositive and incongruent relationships in a sample where substantial behavior problems are evident and strained relationships are common (Dishion & Stormshak, 2006). In a sample not focused on behavior problems, it is possible that even higher rates of positive congruence might be observed. Importantly, approximately 25% of the eligible students' parents did not participate in the larger study of a problem-solving intervention from which these data were drawn. It is possible, though unknown, that these nonparticipants may have had more problematic relationships with teachers than parents who participated. The sample included a relatively small number of relationships that both partners rated as genuinely negative. Although it is difficult to access information from parents and teachers involved in conflicted relationships, such data are critical to fully understanding how relationship variables influence children's academic and behavioral success.

Our missing data analyses indicated that there might have been differences between the study sample and the larger sample on ratings of child social skills (SSRS); it is unknown what effect these differences may have had on the results. It should also be recalled that the present sample consisted of primarily White, English-speaking families and teachers. Results may not be generalizable to other populations. Because these data were drawn from a larger study not focused specifically on the question of relationship congruence, potentially important variables were not investigated in the present study (e.g., teacher efficacy, parents' perceptions of invitations, teachers' reports of parent involvement) and should be included in future research.

Measures of our predictive variables were self-reports of parents' and teachers' beliefs and actions, and no objective indicators of relationship quality or involvement activities were collected. Given that this study primarily concerns perceptions of the parent-teacher relationship and cognitive beliefs about involvement, self-report was considered appropriate and behaviors such as parents' participation in problem solving, family involvement, and teacher invitations were not directly assessed. Similarly, ratings of parent involvement were recorded by parents only, with no assessment of teachers' views of parents' activities. Future research is needed to further evaluate relationships among variables using objective indicators, and multi-informant perspectives where possible.

Finally, our definition of incongruent perceptions of the parent-teacher relationship, and the method used to classify the three groups, was based on artificially derived cut-scores and not empirical grounds. The degree to which the categories appropriately characterize "positive," "nonpositive," "congruent," and "incongruent" qualities is unknown. Studies establishing empirical support for the categories derived for the current investigation are necessary to ensure precision and increase confidence in our conclusions.

Conclusion

This study represents a preliminary exploration of the construct of congruence in parent-teacher relationships. Similarity in perceptions of the parent-teacher rela-

tionship is a potentially significant factor in children's adjustment at school. Teachers' ratings of children's social and behavioral performance appear to be related to shared perceptions of the parent-teacher relationship. Whether the nature of the relationship influences students' classroom behaviors (e.g., through messages or expectations conveyed to the student) or student behavior influences congruence or quality within the parent-teacher relationship is an area ripe for investigation. Research that considers both partners' views of the relationship simultaneously will be important in understanding these connections and finding avenues to support student achievement through positive family-school collaboration.

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