

5-8-2004

The Perfect Angel Hypothesis: The Effect of Parents' False Perceptions on Children's Adjustment

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**THE PERFECT ANGEL HYPOTHESIS:
THE EFFECT OF PARENTS' FALSE PERCEPTIONS ON CHILDREN'S
ADJUSTMENT**

A Thesis

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Masters of Science
in
Psychology

By

Sonya S. Myers

B.S. University of Southern Mississippi, 2002

August 2004

Acknowledgments

I would first like to thank my major advisor, Dr. Amanda Morris, for her many hours of support, guidance, patience, and support on this study and throughout my graduate career. Without her dedication and commitment to the success of this project, this endeavor would not have been possible. I would also like to thank my committee members, Dr. Persephanie Silverthorn and Dr. Mary Williams-Brewer, for their assistance and encouragement throughout this process. A big “Thank You” to both graduate (Katherine Aucoin, Angela Keyes, Lara Robinson) and undergraduate students working with the Family Development and Education Project for their abundant help with data collection and support throughout the course of this project. Finally, I would like to thank my family, Frank & Lisa Roberts, Auther & Mable Gilmore, friends, and other family members for their unyielding belief in me. Without their everlasting love and constant support, none of this would have been possible.

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Abstract

This study explored the effects of parental false perceptions of their children's temperament on their subsequent school behavior problems. Participants were parents and teachers of 97 kindergarten children in an urban southern community. Both parents and teachers completed questionnaires on children's temperament, while teachers reported on children's school behaviors. Results indicate that both parent and teacher report of child temperament is related to school behavior problems, however, when parental ratings are more favorable than teacher ratings, this favorability is related to more internalizing and externalizing behaviors in school. In addition, parents rated their children higher on negative emotions, while parents and teachers rated similarly on effortful control. Furthermore, parent ratings of children's negative emotions were predictive of behavior problems above and beyond teacher's report. Findings highlight the relation of parental perceptions to children's school behavior problems and the utility of parent-teacher collaboration in improving children's school adjustment.

Introduction

Many teachers and educators have requested a parent conference in order to inform parents of children's troublesome behavior only to have parents react, "You must be mistaken, my child is a perfect angel!" For the teacher, the child's imperfections are quite evident, yet to the parent, the child can do no wrong. This much too common occurrence is likely the result of parents' false perceptions regarding their child's behavior/disposition. Parents see what they want to see, not what actually exists, which may have a negative impact on children's overall adjustment over time.

Research on parenting suggests that a child's environment is shaped by the context of parental beliefs (Sigel, 1995). Indeed, parental beliefs may be even more influential when children enter school, when a new environmental context is introduced, particularly if parent and teacher beliefs about a child differ. During the transition from school to home, for some children conflicts between parents and teachers arise and this is likely due in part to differences in beliefs about children's behavior (McGillicuddy & Sigel, 1994). This occurrence can have both positive and negative effects on the child's academic experience as well as set the tone for parent-teacher relations. A parent should be a child's strongest advocate, but if a parent is blind to his or her child's behavior difficulties, this could lead to problems in school adjustment. In addition, if a child is having trouble in school and the parent denies the problem, future adjustment difficulties are likely, and this can have a negative impact on parent-child relations.

Most studies have examined parental perceptions of children's intellectual ability. In contrast, the current study examines parental false perceptions of children's temperament, and how their perceptions relate to children's internalizing and externalizing behaviors in school. This study examines these relations during kindergarten, as children are transitioning into formal

schooling. Parents beliefs about child *temperament* are important to consider because of the “goodness of fit” between the children’s own style of behaving and teacher expectations. If there is a mismatch between home and school environments and how children’s temperament fits into these contexts, then this inconsistency could lead to negative school experiences. Indeed, some children’s individual temperament characteristics may be less compatible with the school context, having a negative effect on their academic experiences (Keogh, 1986). Additionally, a mismatch between parent and teacher expectations / beliefs about children’s temperament may have a negative impact on children’s adjustment to school, and create parent-teacher conflict. It is important to consider these factors early in children’s schooling because as early as kindergarten, children can form negative attitudes toward school, leading to school detachment and diminished academic success. In contrast, promoting positive school behaviors and attitudes during the early primary grades enhances learning opportunities and contributes favorably to school achievement (Ladd, 1999; Normandeau & Guay, 1998).

Temperament

There are few studies that have attempted to understand the causes and consequences of parents’ false perceptions on children’s adjustment. Beliefs about the temperament of children and prediction of child behaviors are very complex. Temperament is defined as the “constitutionally based individual differences in reactivity and self-regulation, influenced over time by heredity, maturation, and experience” (Rothbart & Ahadi, 1994, p. 55). To understand the interaction between temperament and the environment in the development of behavioral problems, the work of seminal research in this area must be addressed. Thomas, Chess, and Birch (1968) defined temperament as a behavioral style or the “how” of behavior as contrasted with abilities and motivation. Temperament does have a basis in biology, but in many cases it

may be changed by environmental influences (Thomas & Chess, 1977). Temperament patterns contributing to behavior problems require a particular kind of interaction between the child and the environment. One of the first studies to examine temperament was a comparative analysis of children including 85 families with 145 children. This study used measures of temperament including activity level, rhythmicity, approach / withdrawal, adaptability, intensity of reaction, responsiveness, mood, distractibility and persistence. The findings of the longitudinal study indicated that features of temperament play significant roles in the development of behavior problems in childhood (Thomas, Chess, & Birch, 1968). The concept of behavior problems involved, “behaviors and affective states characterized by withdrawal from novel stimuli, irritability, negative mood, intense reactions to stimuli, low adaptability to change, distractibility, irregularities in biological functions, and poor attention and persistence” (Thomas & Chess, 1977 p. 21).

In early studies conducted by Thomas et al. (1968) three child temperament patterns emerged. First, difficult temperament includes negative responses to new situations (withdrawal), slowness adapting to changes in the environment, negative mood, and intense reactions. When a “difficult child” has behavior problems, there are wide areas of malfunction including dysfunctions in peer relationships, school, and problems in reaction to parents. As these children mature, parental attitudes that are unfavorable emerge, which leads to problems in coping for both parent and child. The next temperament pattern, easy temperament, includes positive mood, low intensity of reactions, quick adaptability and positive approaches to new situations. In order to understand a child’s behavior, it is important to understand the parents’ values and beliefs, because the conflict is not just between parent and child directly, but between parent, child, and expectations of the larger environment. Parental demands and expectations

can lead to inappropriate behaviors in easy children. Finally, slow to warm up children are characterized by initial withdrawal from new situations with slow adaptation to that situation, mild mood intensity, and low activity level. The most effective approach to use with slow to warm up children is a combination of patience and willingness to wait. Behavior problems arise when the child is pushed into a situation and the behavior reflects the child's discomfort with the demand. As shown in the previous examples, temperament alone does not predict behavior problems; it is the interaction between the child with certain temperament characteristics and features of the intra-familial and extra-familial environment. The child's temperament and parental expectations of the child's behavior not only influence the parent's behavior with the child, but also how parental attitudes are expressed.

There are varying definitions for the concept of temperament. Rothbart, Ahadi, and Hershey (1994) define temperament as a general concept referring to a broad arrangement of behavior traits, biologically rooted and early emerging to some degree. Temperament traits can be characterized as various forms of reactivity and self-regulation (Rothbart & Bates, 1998). Reactivity refers to arousability and motor responses, while self-regulation refers to attention, approach/withdrawal, behavioral inhibition, and self-soothing, which tempers reactivity (Rothbart, Ahadi, & Hershey, 1994). Self-regulation includes behavioral forms of self-control (inhibition) and attention / effortful control (Derryberry & Rothbart, 1988).

The attention network of the brain (prefrontal cortex) is involved in the effortful control (voluntary and deliberate regulation of attention and behavior) and contributes to the emergence of self-regulation in childhood (Rothbart, Derryberry, & Posner, 1994). Early studies of inhibition processes maintain that childhood effortful control is positively related to the length of attention, and attention / emotional control later in life (Rothbart, 1989). Effortful control is

essential to the socialization of children at an early age in that society requires that children inhibit their impulses and comply with the required standards of conduct (Kochanska et al., 1996; Rothbart, Ahadi, & Evans, 2000). As children enter school, the emerging self-regulation is developed by input from various systems, including cognitive, attention, and parent-child interaction factors, which all contribute to the growth of inhibitory and impulse control for children (Kochanska et al., 1996).

Negative affectivity is another temperament factor comprised of negative emotions including sadness, discomfort, anger, and fear. Behavioral inhibition, a component of fear, is often used to control behavior and is used to modulate control of child actions through disappointment or fearfulness (Kochanska, 1991). Early laboratory research assessing temperament stability from infancy to seven years of age found that children with early tendencies toward anger and irritability tend to have higher levels of anger, frustration, and sadness later in life (Rothbart, Derryberry, & Hershey, 2000). Children with these components of negative emotionality (fear, sadness, anger) have a tendency to show later internalizing and externalizing behaviors as well (Derryberry & Rothbart, 1988).

Temperament and Behavior Problems

Previous research has established that some temperament traits have direct relations with behavior problems, as noted above. The most common childhood behavior problems can be grouped into the categories of externalizing behavior and internalizing behavior. Externalizing behaviors include attention, hyperactivity, impulsivity, and defiant behaviors (Keenan, et al., 1998). Eisenberg and Fabes (1992) found that in regard to prediction of behavior problems, children who are inclined toward intense negative emotion (fear, anger, sadness) and low in their ability to regulate emotions are higher in externalizing behavior problems. Later studies have

also shown that children characterized with externalizing behavior problems are high on anger, frustration, and irritability and would be rated as low in attention and inhibitory control, and high on impulsivity. Children with externalizing problems in general are observed to be sub-regulated in their regulatory efforts as well as involuntary control.

Internalizing behaviors include problems with depressed mood (sadness) and anxiety (fear). Keenan, et al.'s (1998) study assessing the continuity of behavior problems found that a difficult temperament early in life was highly related to sustained internalizing problems in later years. Children who exhibit more internalizing behaviors are low on impulsivity and low on attention regulation; which supports the theory that children that express internalizing behaviors have problems in emotion regulation. Children with internalizing problems, however, have more attentional and inhibitory control than children who express externalizing behaviors (Eisenberg et al., 2001). The distinctiveness of these two types of behavior problems demonstrates the importance of examining each phenomenon separately in order to understand children's behavior and adjustment problems.

The course by which temperament predicts later behavior problems is not conclusive, but the evidence bestows moderate support for both direct and indirect linear effects. In direct linear effects, temperament traits contribute to the development of an adjustment pattern; such as a combination of temperament traits increase the risk for a disorder. Rothbart and Bates (1998) provide examples of direct effects such as high attentional control resulting in good social adjustment, or fearful temperament leading to Generalized Anxiety Disorder. Indirect linear effects occur where there is mediation of temperament by experiences in the environment such as temperament setting the stage for the quality of parenting, which produces the adjustment.

Parental False Perceptions

Research supports links between parenting beliefs and a child's intellectual and personal development (Bacon & Ashmore, 1982; Halle, Costes, and Mahoney, 1997). However, there are few studies examining parental beliefs about children's non-academic behavior. Studies on parental beliefs about children's academic abilities suggest that in general, parents tend to overestimate children's abilities, particularly the abilities of their own children. When parents accurately judge their children's cognitive abilities, they tend to have more competent children (Miller, Manhal, and Mee's, 1991), indicating that accurate perceptions are related to more positive development. Parental beliefs have also been linked to children's own perceptions of their academic ability. For example, Parsons, Adler, and Kaczala's (1982) found that overall parents' believed boys were better students in mathematics compared to girls, and that parents believed that their daughters had to work harder than boys in order to do well. These beliefs influenced children's attitudes about their mathematics abilities more than their prior math performances, suggesting that parental beliefs rather than actual ability affect academic attitudes.

Research on parenting and children's behavior suggests that parental beliefs are important in children's overall development and play an important role in the overall family environment (e.g., Laosa & Sigel, 1982). Many previous studies find that parental perceptions of child temperament affect childrearing practices. Researchers have theorized that these perceptions are constructed from experience and are held as the absolute truth in the eyes of parents (Sigel, 1992). Parental experiences in assessing their child's temperament are crucial in shaping parents perceptions of their child. Parental perceptions offer parents the opportunity to set parenting priorities, and to evaluate parenting success, while maintaining self-efficacy (Goodnow & Collins, 1990). Parenting beliefs (perceptions) influence a child's intellectual and

personal development. Though these perceptions can make existence easier for the parent, they can have differing effects on the child. An abundance of studies have found that in relation to parental influences on children's achievement, parents' positive perceptions have a positive influence on children's academic achievement (Crane, 1996; Frome & Eccles, 1998). In general, these findings offer encouragement that parenting beliefs and behaviors influence children's development, which allows for the prospect that constructive interaction between parents and teachers can promote positive academic experiences for children.

Attribution theory provides a functional perspective for studying parental perceptions of children. The fundamental attribution error is defined as the tendency for observers to underestimate situational influences and overestimate dispositional influences (Myers, 1993). In terms of children, when parental perceptions conflict with observers' perceptions, parents are likely to believe that when the child exhibits behavior problems, the behavior is situationally caused (at school) rather than attributed to the child. This phenomena can be attributed the parent's self-serving bias, where parents will not be objective observers of their children's behavior, but will be positively biased in an attempt to preserve a positive impression of themselves and others whom they value (Dix & Grusec, 1985; Goldberg, 1981; Regan, Strauss, & Fazio, 1974). In contrast, if a child performs favorably in school, parents are likely to attribute the positive behavior to internal characteristics of the child, such as intelligence.

Taylor and Koivumaki's (1979) study of people's perceptions of themselves and others indicated that people were seen as causing their positive behaviors, and situational factors were regarded as causing negative behaviors. These findings suggest that a parent's perception of their children's behavior interact with attitudes about their child. Another more recent study regarding parent attribution of their child's behavior and personality indicate that mothers

perceived desirable child behaviors as dispositional, and undesirable ones as unstable and provoked by the situation. Similar to findings in previous attribution theory about school performance, this study also revealed that parents thought that their own children were more capable and secure than other assessments of their child would indicate. The researchers added that parents' perceptions of their children closely resemble their own self-perceptions, because others view their genetically similar offspring, as extensions of their parents. The parents' feelings of self-importance are therefore enhanced in believing that their children are especially praiseworthy (Gretarsson and Gelfand, 1988). Parents' positive perceptions of their children, which may be viewed as false by situational observers, may contribute to child behavior problems and is a major topic of interest in the present study.

Rater Agreement

Though temperament assessment by means of parent perceptions / reports has generally been accepted to be a valid description of child temperament, psychometric matters and inter-rater agreement are major concerns in terms of measurement (Victor, Halveson, & Wampler, 1988). In the majority of studies assessing child temperament and behavior, parent report has been used. Kagan (1998) alludes to the fact that parent reports may be biased and may mirror parents' characteristics more than characteristics of the child. These parents possibly have a positive bias toward their children and want their children to be shown in a "socially desirable" way (Mangelsdorf, Schoppe, & Buur, 2000). Many researchers have noticed the association between parent ratings of their own personality and their reports of their child's characteristics (Bates, 1987; Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990). The subjectivity intrinsic in parental ratings provides evidence that using solely parent reports of child behavior is not the best method to study child temperament. For this reason, current researchers often use

observer reports in conjunction with parent and teacher reports for a full assessment of child temperament and behaviors.

Setting-specific behaviors produce low levels of agreement between parents and teachers (Achenbach, McConaughy, & Howell, 1987). Children many exhibit different behaviors in different settings when they are observed by different people. Parents do not usually observe their children's classroom behavior and teachers are usually unaware of their students' behavior outside of the classroom (Cole et al, 1998). In early studies of child development, it was common to interview parents or to provide questionnaires to parents in order to gain information on young children. The specific advantage of this process is that parents know their children better than anyone else, even taking into account time and social contexts (Sigel, 1992), they have large samples of behaviors to draw from, and parents measures are of low-cost and easy to dispense.

Upon documentation of low inter-rater agreement, the idea that parent obtained information would provide a valid description of behavior is called into question. Teachers have recently been called upon as informants of child temperament and may disagree with parents because they have a better-standardized basis of behavior (Victor, Halverson, & Wampler, 1988). Teachers and parents may have specific expectations about how they want their students to behave. The degree to which the child fits into each specific context, such as not meeting the demands of the teacher, is communicated to the parent. Cross-rater agreement may also differ depending on item content. Teachers would be more sensitive to behaviors that result in classroom disruption whereas parents may show more sensitivity to symptoms of depression or anxiety (Abikoff et al., 1993).

The most consistent findings on report of child behavior problems when taking parent and teacher ratings into account, indicate that there is greater agreement between mothers and fathers who interact with the child in similar situations than between other raters (Achenbach, McConaughy, & Howell, 1987). The studies that gathered data from both mothers and fathers to assess child behavior generally found moderate agreement between parents' on their ratings of their child's temperament. Studies such as Field and Greenberg (1982) have found that agreement between parents was considerably higher at preschool age than during infancy. Inter-parent agreement, when looking at a variety of studies on child temperament, is moderate and also presents some indication of greater inter-parental agreement as the age of the child increases. Agreement between parents does not automatically assume accurate assessment of child behaviors. An early study assessing the relationship between parental ratings and observer ratings assumed that parental (mothers) reports would reflect their children's behavior, however correlations were very low and typically non-significant. (Seifer, 2002)

Those who interact with children in different situations such as the "parent-child" or "teacher-child" context are less likely to agree on child temperament (Achenbach, McConaughy, & Howell, 1987). Achenbach, McConaughy, and Howell's (1987) meta-analysis of 119 studies on parent and teacher agreement on child emotional and behavioral problems found average correlations at .27. Researchers have hypothesized that teachers, who have also been called upon as informants of child temperament and behaviors, may disagree with parents because they have a better normative base of behavior (Victor, Halverson, & Wampler, 1988).

Teacher reports do have predictive validity. For example, in a study on expectations for later personality developments of young children, teachers observed temperament-related differences in preschool children and were also able to foresee future developmental problems

for these differences (Graziano, Campbell, & Logan, 1998). DeKlyen et al. (1998) identified both strengths and weaknesses of teacher reports. They show that in one aspect, the favoritism toward having the same informant (parents) provides both predictor and outcome data is evaded, and teacher ratings may better foresee long-term difficulties. Low correlations of among parent and teacher ratings of child behaviors reveal the differences in the evaluation of behavior problems by different informants, thus implicating the potential effects of parental perceptions on parent reports. For the aforementioned reasons, this study will examine the contribution of both parental report and teacher report separately to prediction of children's school behavior problems.

The Current Study

Though many studies have examined the influence of parental perceptions on behavior, there is little relevant literature on parental perceptions of child temperament and how these perceptions are related to problem behavior in school. In one of the few studies to examine parent and teacher agreement on temperament and child adjustment, Victor, Halverson and Wampler (1988) discovered that among three studies surfaced a “consistent pattern in which the more parents and teachers agreed on child temperament, the more likely it was that the child was a non-problem, socially adaptable, confident and academically skillful young child.” This study examined preschoolers and calculated an agreement score (a correlation) over several studies. In contrast, the current study specifically examines parental favorability by having parents, who are most commonly used in assessing child temperament, and teachers, provide data on children’s temperament. Teachers also provided reports of each students’ school behaviors.

In order to examine whether parents have false perceptions of their child’s behavior and whether these false perceptions lead to negative behaviors in school, four hypotheses were tested:

1. Parental ratings and teacher ratings of negative emotionality and low effortful control are correlated with more behavior problems in school.
2. Parental ratings of child temperament are more favorable than teacher ratings of temperament.
3. When parental ratings are more favorable, there will be a positive correlation between parental favorability and behavior problems in school.
4. Parent and teacher ratings of child negative emotionality and effortful control will both contribute to the prediction of child problem behavior.

Methods

Participants

Ninety-eight kindergarten children, [58 boys (59.2%) and 40 girls (40.8%)] their parents and their teachers participated in this study with the data collected in two public elementary schools in a large southern city. All principals allowed six kindergarten classrooms to participate. The ethnic makeup of the sample includes 64 (65.3%) Euro-American, 12 (12.2%) African-American, 11 (11.2%) Hispanic/ Latin American, 5 (5.1%) Asian American, and 6 (6.2%) of other nationalities. Socioeconomic data from the families indicate that the median income level is between \$20,000-\$30,000, which signifies that most of the samples come from economically disadvantaged families. Both the school boards and the principals of these two schools consented to allow research investigators to interview the children and give questionnaires to the teachers whom allowed their classes to be used. Recruitment began prior to the beginning of the fall semester, during the mandatory kindergarten testing, which included most of the children of interest in this study.

Procedures

Parents completed a questionnaire regarding their child's temperament and provided demographic information during kindergarten testing early in the fall semester. Those who could not complete them during the time allotted were allowed to take them home and return them to their child's teacher. If not returned, the questionnaires were completed over the telephone. Parents were informed that their consent is completely voluntary and had no bearing on their relationship with their child's school. Parents who agreed signed the "Parent and Child Informed Consent" forms, which also contained consent to obtain information from the child's teacher. Each teacher was given a copy of the parents' consent to obtain information and was given their

own consent form to sign. After giving consent for both their child's and their own participation, the parents completed the questionnaires during this one-hour period. It is estimated that it took 20 minutes to complete the questionnaires.

At the beginning of the fall semester, teachers completed questionnaires on child temperament. Later in the spring semester, teachers completed an additional questionnaire assessing each child's aggressive, anxious-fearful, and hyperactive-distractible behaviors, which took about 45 minutes to complete. Kindergarten teachers were given a palm pilot with teacher software valued at \$250 for their participation.

Measures

Temperament

Child Behavior Questionnaire [CBQ] ("Dispositional Emotional and Behavioral Qualities" – Parent and Teacher Report)

Parents and teachers completed shortened scales of the Child Behavior Questionnaire (CBQ) measuring attention focusing, attention shifting, inhibitory control, anger, and sadness. The Children's Behavior Questionnaire (CBQ) was designed to measure temperamental characteristics of preschool and early school-age children (Rothbart et al., 1997). Internal consistency of this measure is estimated to range from .67 to .94 (Goldsmith and Rothbart, 1991). The shortened subscales (see Fabes, 1994 for subscale reliability) were completed by parents early in the fall school semester, while teacher reports were collected at the end of the fall semester. Participants rated each child on a 7-point Likert scale ranging (1= extremely untrue to 7 = extremely true) to indicate each child's level of effortful control (i.e. inhibitory control, attention shifting, attention focusing) and negative emotionality (i.e. sadness and anger).

Internal consistency of scales from this study ranged from .57 to .73 for parents and .84 to .92 for teachers.

Behavior Problems

Child Behavior Scale – (Teacher Report)

Externalizing and internalizing behavior was assessed from teacher report from the subscales of the Child Behavior Scale (Social Competence; Ladd & Profilet, 1996). The CBS includes scales on, social competence, and taps into aggressive, asocial, anxious-fearful, and hyperactive-distractible behaviors. For the current study, the externalizing (aggressive, hyperactive-distractible) and internalizing scale (anxious-fearful) were used. The CBS measures children's externalizing behavior using questions such as, he/she "Fights", "Bullies", and "Threatens other children." The CBS also measures internalizing behavior/anxiety using questions such as he / she, "Worries", and "Is afraid of new things". Sixty-one questions are rated on a 3-item scale (1= "Seldom Applies" to 3= "Often Applies". Ladd & Profilet reported good construct validity, internal consistency (alphas .77-.96) and stability across semesters. For this study, internal consistency of the scales ranged from .78 to .91.

Results

The analysis plan was as follows:

1. In order to investigate the relations between parent / teacher reports on child temperament (independent variables) and child behavior problems (dependent variables), correlations were performed. Correlations revealed the association between parent / teacher report of child negative temperament (i.e., negative emotions, effortful control) and child behavior problems in school.
2. We investigated relations of parent ratings of child temperament to teacher ratings. Correlations were performed for both parent and teacher ratings of child temperament in order to examine correspondence among raters. Paired samples t-tests were also conducted to compare the means of parent, and teacher. Analyses were used to determine if parent temperament ratings were higher than teacher's temperament ratings.
3. Correlations assessed the relations between higher parent temperament ratings and child behavior problems. In order to obtain a measure of higher parental temperament ratings, a "favorability" score was calculated by subtracting teacher mean scores from parent mean scores for each effortful control variable. In contrast, because lower negative emotionality (anger, sadness) denotes parental favorability, a "favorability" score was calculated for anger and sadness by subtracting parent mean scores from teacher mean scores. Correlations revealed the relation between higher parental ratings and child behavior problems in school.
4. A series of hierarchical regression were performed on aggressive, hyperactive-distractible, and anxious-fearful school behaviors. To test our hypotheses that both parent and teacher reports of temperament are important to consider when examining

children's problem behavior in school, teacher temperament ratings were entered in a first step and parent temperament ratings were entered in a second step. The change in R^2 was examined to determine the unique association of parental ratings of negative emotions and effortful control with school behavior problems. These analyses tested whether both parent and teacher ratings of negative emotionality and effortful control made independent contributions to the explanation of outcomes.

Relations of Temperament to Behavior Problems

Means and standard deviations of all variables are presented in Table 1. Correlations examined relations among constructs. Correlations indicated that for negative emotionality variables, parent rated anger was associated with higher aggression and hyperactive-distractible school behaviors and parent rated sadness was associated with higher aggression, anxiety-fear, and hyperactive-distractible school behaviors. For parent rated effortful control, both inhibitory control and attention shifting were related to less aggression and hyperactive-distractible behaviors at school, while attention focusing was related to less hyperactive-distractible behaviors only (See Table 2).

Table 1. *Means and Standard Deviations of Major Variables*

Variable	Min	Max	Mean	<u>SD</u>
Anger				
Parent	1.11	6.09	4.14	.98
Teacher	1.09	6.64	3.42	1.27
Parental Favorability	-3.73	2.36	-.69	1.36
Sadness				
Parent	1.60	5.80	3.99	.83
Teacher	1.30	6.30	3.61	1.17
Parent Favorability	-3.50	2.40	-.40	1.38
Attention Shifting				
Parent	1.00	7.00	4.45	1.32
Teacher	1.50	7.00	4.63	1.45
Parent Favorability	-3.75	3.00	-.08	1.71
Attention Focusing				
Parent	2.38	7.00	4.75	.84
Teacher	1.78	6.44	4.55	1.13
Parent Favorability	-2.56	3.33	.21	1.25
Inhibitory Control				
Parent	2.44	6.67	4.84	.93
Teacher	1.44	6.89	4.92	1.39
Parent Favorability	-3.00	4.22	-.03	1.35
Behavior Problems				
Aggression	1.00	3.00	1.36	.47
Anxiety/ Fear	1.00	3.00	1.45	.51
Hyperactive / Distract	1.00	3.00	1.67	.66

Table 2. *Correlation Matrix for Major Variables*

Variable	1	2	3	4	5	6	7	8	9	10
1. Parent Anger	1.00									
2. Teacher Anger	.31**	1.00								
3. Parent Sadness	.44***	.11	1.00							
4. Teacher Sadness	.17	.57***	.07	1.00						
5. Parent Attention Shifting	-.46***	-.18	-.38***	.03	1.00					
6. Teacher Attention Shifting	-.31**	-.76***	-.14	-.47***	.25*	1.00				
7. Parent Attention Focusing	-.18	.04	-.11	.12	.39	.23*	1.00			
8. Teacher Attention Focusing	-.26*	-.46***	-.19	-.26*	.12	.65***	.26*	1.00		
9. Parent Inhibitory Control	-.33**	-.08	-.17	.08	.60***	.27*	.52***	.30**	1.00	
10. Teacher Inhibitory Control	-.37***	-.66***	-.14	-.14	.23*	.73***	.22*	.78***	.37**	1.00
11. Aggression	.41***	.68***	.28**	.14	-.29**	-.55***	-.09	-.53***	-.23*	-.77***
12. Anxiety / Fear	.11	.37***	.22*	.71***	.04	-.42***	-.00	-.33**	.06	-.13
13. Hyperactive / Distractible	.34**	.57***	.22*	.22*	-.23*	-.69***	-.24*	.84***	-.38***	-.69***

Note: * $p < .05$, ** $p < .01$, *** $p < .00$

Table 2 cont'd. *Correlation Matrix for Major Variables*

Variable	11	12	13
11. Aggression	1.00		
12. Anxiety / Fear	.08	1.00	
13. Hyperactive / Distractible	.69***	.22*	1.00

Note: * $p < .05$, ** $p < .01$, *** $p < .00$

For teacher ratings on negative emotionality, anger was associated with more aggression, anxiety-fear, and hyperactive-distractible school behaviors and teacher rated sadness was associated with more anxious-fearful and hyperactive-distractible behaviors in school. For teacher rated effortful control, high inhibitory control was related to less aggression and hyperactivity. Both attention shifting and attention focusing were associated with fewer aggressive, anxious-fearful, and hyperactive-distractible school behaviors (See Table 2). Overall, both parent and teacher ratings were correlated with child behavior problems in school.

Relations between Parent Ratings and Teacher Ratings of Child Temperament

Correlations revealed that parent and teacher temperament ratings were moderately correlated, .25 to .37, which is similar to previous studies of inter-rater agreement on child temperament. Paired-samples t-tests revealed that there were significant differences between parent and teacher ratings on child anger and sadness. Overall, parents rated their children higher on negative emotions than did teachers. In terms of effortful control, teacher ratings were slightly higher than parent ratings (except for attention focusing), yet findings were non-significant (See Table 3). These findings indicate that parents and teachers rated children similarly overall with regard to effortful control.

Table 3. *Mean Comparisons*

Variable	Mean	Mean Difference	t	p<
Anger				
Parent	4.14	.69	4.69	.00
Teacher	3.42			
Sadness				
Parent	3.99	.40	2.59	.01
Teacher	3.61			
Attention Shifting				
Parent	4.45	-.08	-.43	.66
Teacher	4.63			
Attention Focusing				
Parent	4.75	.21	1.56	.12
Teacher	4.55			
Inhibitory Control				
Parent	4.84	-.03	-.24	.81
Teacher	4.92			

Relation Between Higher Parent Temperament Ratings and Child Behavior Problems

As previously mentioned, parents rated their children significantly higher on negative emotions than did teachers, which is overall less favorable. On these variables, parental favorability (lower than teachers) on child anger was significantly correlated with more aggressive, anxious-fearful, and hyperactive-distractible behaviors in school. Additionally, high parental favorability on sadness was highly correlated only with more anxious-fearful behaviors in school. In terms of effortful control variables, when parents rated their children higher than teachers on attention focusing, these parental perceptions were correlated with more aggressive, anxious-fearful, and hyperactive-distractible behaviors in school. Furthermore, analyses indicated that parent favorability on child attention shifting is positively correlated with more aggressive, anxious-fearful, and hyperactive-distractible behaviors at school, and parental

favorability on child inhibitory control is highly correlated with more aggressive and hyperactive-distractible behaviors in school (See Table 4). As hypothesized, findings illustrate that when parents rate their children lower on negative emotions and higher on effortful control, relative to teachers, children have more behavior problems in school.

Table 4. *Correlations: Parental Favorability & Behavior Problems*

	Aggression	Anxiety/Fear	Hyperactive/ Distractible
Anger			
Parent Favorability	.36**	.30**	.29**
Sadness			
Parent Favorability	-.02	.46**	.09
Attention Shifting			
Parent Favorability	.26*	.42**	.43**
Attention Focusing			
Parent Favorability	.39**	.32**	.59**
Inhibitory Control			
Parent Favorability	.63**	.21	.64**

Note: ** $p < .01$, * $p < .05$

Association Between Parent Ratings of Temperament and Behavior Problems When Controlling for Teacher Report of Temperament.

Preliminary hierarchical regression analyses indicated that teacher report of child temperament was a significant predictor of children's behavior problems, above and beyond parent report of temperament. Because this study seeks to examine how parental perceptions of temperament are related to behavior problems, hierarchical regressions were run for parent report of child temperament in relation to behavior problems after controlling for teacher report. The resulting changes in R^2 from the hierarchical regressions are presented in Tables 5-6. For child negative emotionality, regressions indicate parent rating of child anger is a significant predictor of children's aggressive, and hyperactive-distractible school behaviors, even after the variance in the association accounted for by teacher report of anger is partialled out ($\beta = .10, p = .00; \beta = .13, p = .00$). Regressions also indicate that parent rating of child sadness is also a significant predictor of children's aggressive, anxious-fearful, and hyperactive-distractible school behaviors when the variance in the association accounted for by teacher report of sadness is partialled out ($\beta = .16, p = .01; \beta = .10, p = .04; \beta = .15, p = .07^+$).

In terms of effortful control, regressions indicate that parent ratings of attention shifting, attention focusing, and inhibitory control are not significant predictors of any aggressive, anxious-fearful, or hyperactive-distractible school behaviors after the variance in the association accounted for by teacher report of effortful control is partialled out. These findings indicate that parental report of child temperament is a unique predictor of children's behavior problems in school only for negative emotions, when controlling for teacher report; however, parent report is not uniquely predictive of children's behavior problems in school beyond teacher report for children's effortful control.

Table 5.
Contributions of Parent Ratings of Anger in Predicting Child School Adjustment

Hierarchical Regression			
	Step 1 Teacher Rated Anger	Step 2 Parent Rated Anger	
	R ² change	R ² change	R ²
Aggression	.46***	.04**	.49***
Hyperactive-Distractible	.31***	.03*	.34***

Note: * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 6.
Contributions of Parent Ratings of Sadness in Predicting Child School Adjustment

Hierarchical Regression			
	Step 1 Teacher Rated Sadness	Step 2 Parent Rated Sadness	
	R ² change	R ² change	R ²
Aggression	.04	.08**	.34**
Anxiety-Fear	.49***	.03**	.72***
Hyperactive-Distractible	.07*	.04 ⁺	.33**

Note: * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Discussion

Researchers and educators have long strived to identify the ways in which parental perceptions contribute to children's problem behavior. The results of the present analyses indicate an interesting pattern of relations among parents and teachers perspectives of child temperament. Consistent with previous research, both parent and teacher perceptions of child temperament are related to child behavior problems in expected directions. However, the results of the present analysis also indicate that when parental perceptions are particularly favorable in comparison to teachers, this is related to more child internalizing and externalizing behaviors in school. In this study, high parental favorability was related to teachers' report of aggressive, hyperactive-distractible, and anxious-fearful behavior in the classroom.

In general, both parents and teachers ratings of child temperament were predictive of internalizing and externalizing behaviors in school. Though this study hypothesized that parents' ratings of child temperament would be more favorable than teacher ratings for all temperament variables, a somewhat different pattern emerged. Parents were less favorable (higher parental ratings) than teachers on their child's negative emotions, while parents rated children similarly to teachers on effortful control, suggesting that children's displays of negative emotions may vary across contexts and children display significantly more negative emotions at home than at school. A plausible explanation for these findings, as previous studies have stated, is that parents are more attuned to behaviors, which are particularly disruptive at home (i.e. anger, sadness), while teachers are more attuned to behaviors, which are particularly salient within the classroom environment (i.e. attention shifting, inhibitory control). The discrepancy in parent and teacher reports of children's negative emotions may also be because parents' reports of their child's negative emotions reflect the level of negative emotionality in the home, which greatly

influences children's displays of negative emotions, whereas teachers' reports reflect the child's levels of these observed negative emotions at school (Briggs-Gowan et al., 1996; Phares et al., 1989). In accordance with our findings, agreement between parents and teachers has been found to be slightly higher for more overt characteristics (e.g., effortful control) than for more internal attributes (Billman & McDevitt, 1980).

Overall, these findings suggest that when parents have false perceptions of their child's temperament, they are less likely to see children's negative school behaviors as a problem. Studies suggest that when parents have false perceptions of their child's temperament and behaviors, they are more likely to see the behavior problems that children exhibit as situationally caused, rather than dispositional in order to preserve the positive impressions of their children (Dix & Grusec, 1985; Goldberg, 1981). When teachers have problems with children, parents and teachers often work together in order to decrease the child's behavior problems in the classroom. Victor, Halveson, & Wampler (1988) found that when parents agree on child temperament and behaviors, it was likely that the child had fewer behavior problems and greater social competence, and academic success. Similarly, we found that when parents and teachers disagree on children's negative reactivity and effortful control, children are more likely to display more internalizing and externalizing behaviors in school. Intervention research aimed at reducing child conduct problems over time also found that when interventions include both teachers and parents, there is more of a decrease in child behavior problems over time, compared to interventions with just parents alone (Webster-Stratton, Reid, & Hammond, 2004). When parents feel that these difficult child behaviors are more teacher-related than child-related, parents are less likely to validate teachers concerns, thus contributing more to the problem rather than the solution.

Given the significant relation between teacher report of child temperament and teacher report of children's school behavior problems, the fact that parental reports on children's negative emotions was predictive of children's behavior problems after controlling for the influence of teacher report was important. Parent report, particularly mother's report, of child temperament is the most used measure of child behavioral adjustment. Many studies have found parents' reports of temperament are highly predictive of child behavior, mainly because parents can observe children's behavior across a wider domain of situations and for longer periods of time than other informants (Mangelsdorf, Schoppe, & Burr, 2000). Among many studies of child temperament, teacher ratings have also been shown to be highly predictive of children's behavior problems, although agreement between parents and observers (mainly teachers) are modest to moderate (Goldsmith, Rieser-Danner, and Briggs, 1991; Graziano, Campbell, & Logan, 1998). In the current study, teacher ratings of effortful control were significantly related to behavior problems beyond parent report of effortful control, suggesting that teachers may be also be accurate raters of children's effortful control abilities. However, findings also illustrate that parental perceptions of negative emotions are significantly predictive of children's behavior problems beyond that of teachers, suggesting that parental report of negative emotionality may be a more accurate tool in assessing child adjustment.

One major limitation of this study is the lack of observer reports in order to examine if observers (i.e. teachers and other observers) are more similar in their ratings of child temperament, thus denoting parental bias in relation to their children. Obtaining observer reports of children's temperament related reactions in naturalistic settings over time (i.e. playground), free from both parent and teacher influences, would allow for more reliable ratings. Moreover,

analyses would be able to examine the accuracy of parent and teacher reports, relative to a more un-biased observer.

In conclusion, the results of this research emphasize the unique perspectives that both teachers and parents have on child temperament and how these perspectives impact children's school behaviors. Although evidence of the accuracy of parent versus teacher perceptions are not provided, this study does provide evidence that children's behaviors are negatively affected when parents' perceptions are more favorable than teachers. Though researchers still debate as to the accuracy of parents versus observers, further research is needed to explore the effect of contextual factors (i.e. family, school) on children's social and emotional adjustment. Findings from this study provide support for the effect of parent perceptions on school adjustment and highlight the need for more interventions targeting the use of both parents and teachers in strengthening the positive trajectories of children's socio-emotional competence.

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Vita

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