

Children's Behavior: Consistency in Perceptions between Mothers, Teachers, Observers,  
and Children across Multiple Contexts

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## Abstract

Studies have shown that children showing signs of behavior problems early in life are at considerable risk for continued behavioral disturbances throughout childhood (Winsler & Wallace, 2002). A significant tool in early identification and prevention is assessment of the child's behavior - often provided by parents, teachers, and observers. Assessments of child behavior benefit highly from multiple informants; however, the degree to which agreement is achieved among informants is important in order for them to be considered a significant tool. Mothers in 113 families completed questionnaires concerning their perceptions of their preschool aged child's behavior, and their 3-5-year-old child was observed while they worked on an activity together with their parents. The child's behavior during the activity was coded by trained observers. Children also reported on their perceptions of their psychological self-concepts. Furthermore, the children's preschool or kindergarten teachers were mailed questionnaires in order to gain an additional perspective on the child's behavior. The questionnaire and observation process was repeated again one year later and data collected from each phase of the study were used in my investigation. Results indicated greater agreement between all informants for more easily observable behaviors like anger and aggression, persistence, and activity level. Greater agreement was also found for boys than for girls, for more overt behaviors as well as internalizing behaviors and characteristics (e.g., timidity, anxiety). Results concerning the role of child age and day care experience in informant agreement were less clear.

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Parents and school professionals are faced with the challenge of effectively assessing and serving children and their needs. Specifically, child behavior is assessed by implementing various methods such as evaluations, interviews, and questionnaires in order to determine what is best for the child. Information gathered from multiple contexts and environments is important in order to provide a more holistic picture of the child. Clearly, given that children often behave differently in different contexts (Mangelsdorf, Schoppe, & Buur, 2000), assessments of child behavior benefit highly from multiple informants. Agreement among multiple informants is measured by consistency, and problems arise in assessing children when reliability is low. High levels of disagreement among informants may affect the degree to which parents and teachers are able to communicate effectively about children's behavior, and to work together to develop plans for modifying children's behavior.

When evaluating the degree of consistency across informants of child behavior whose perceptions are based on interactions with the child in a wide range of contexts, important factors must be considered. Roles of informants vary with respect to interacting with a child; for example, teachers and parents may employ their own distinct ways of interacting with children. Therefore, it is logical to say that as the informants' roles differ in the life of a child, the child behavior that the informant has an opportunity to observe will differ as well. Mood is an important factor to consider in addition to roles and behaviors. Observers, teachers, and parents may all be "correct" in responses regarding a child, but agreement may not be as strong because the mood and energy of

the child differs at different times of day. However, despite very real difficulties in achieving consistency among informants, it is still advantageous to include multiple informants in order to provide the most thorough picture of the child's behavior across multiple contexts (Mangelsdorf et al., 2000).

#### Mother, Teacher, and Observer Agreement

The majority of research on parent-teacher agreement has been conducted on school-age children, leaving a gap in research on informant agreement. Consistency in behavioral reports on preschool aged children is examined much less often, despite the importance of early identification of behavioral disturbances and early intervention (Winsler & Wallace, 2002). The existing research on young children has yielded inconsistent results. Some investigators have found greater parent-teacher agreement for preschoolers and kindergarteners than for older children (Vitaro, Gagnon, & Tremblay, 1991). On the other hand, research has also shown that parents, observers, and teachers have increased agreement as children get older and agreement tends to be slightly higher for more external characteristics (e.g., anger, aggression) rather than internal characteristics (sadness, anxiety; Mangelsdorf et al., 2000).

In a study conducted by Firmin, Proemmel, and Hwang (2005), researchers found statistically significant agreement when comparing overall child behavior ratings between parents and teachers. The parent and teacher informants within the study completed a behavioral assessment (Clinical Assessment of Behavior) consisting of questions pertaining to six domains. These domains included externalizing behaviors, internalizing behaviors, social skills, competence, adaptive behaviors, and critical items. Correlations were calculated and ratings between parents and teachers showed statistically significant

agreement in all domains excluding internalizing behavior. Interestingly enough, this is in accord with other research in that informants tend to agree more about overt actions rather than covert actions. Behaviors such as aggression and delinquency, categorized as externalizing behaviors, have higher levels of agreement because behaviors such as these are more directly observable. Unlike externalizing behaviors, any internalized feeling a child may have, such as depression or anxiety, is less noticeable to outside informants (Mangelsdorf et al., 2000).

In other research, reports of parents and observers in regards to child temperament (an aspect of child behavior) have been found to show little evidence of correlation. In a study by Seifer, Sameroff, Barrett, and Krafchuk (1994), infants were rated by mothers and observers on behavior using a temperament survey. Results showed that reliability between observer ratings and parent ratings was low. Conclusions were drawn by the researchers based on observation reliability that the mothers may in fact be the poor reporters in measuring their infant's temperament, thus causing the low correlations between observers and mothers in this study. The reasoning for this explanation is connected to some of the criticisms of using parental reports. Specifically, researchers have debated the advantages and disadvantages of using parental reports (Mangelsdorf et al., 2000). Disadvantages may be reflected in any bias that may be shown through parent expectations or parent characteristics, rather than the actual child's behavior. However, many researchers are in support of the use of parent reports due to the simple fact that they are the informant who spends the most time with the child. Therefore, parents can report on more behaviors and activities across a wider spectrum of contexts.

Not only is parent, teacher, and observer agreement important for determining results from behavior assessments, but the child's self-concept is just as vital. Ideally, to provide the clearest picture of child behavior and functioning, it might also be useful to gain the child's perspective on his/her behavior and feelings. This type of approach is commonly used with older children and adults, especially for gaining information concerning internalized behaviors (e.g., sadness, fear) that may be less obvious to other informants (Stanger & Lewis, 1993).

#### Previous Research on Children's Self-Concepts

Children's self-concepts are an important component of their social and emotional development (Eder, 1990). However, the majority of self-concept research is based on adolescent or young adult self-perceptions due to the opinion that young children may not have the ability to describe themselves. For example, studies have disputed whether a young child's self-concept is differentiated enough or not, and have debated at what age children obtain a multidimensional view of themselves (Harter & Pike, 1984). However, more recent research indicates that 4.5 to 7.5 year olds do in fact possess a multidimensional self-concept (Measelle, Ablow, Cowan, & Cowan, 1998). Part of the disagreement among researchers is due to obstacles in obtaining accurate assessments of young children's self-concepts. Some of these obstacles have included finding assessments that fit children's short attention spans and limited expressive vocabulary, and finding age-appropriate activities in which these children can give accurate feedback.

In a longitudinal study by Measelle et al. (1998), researchers gathered information from child participants by using self-perceptive scales based on the Berkeley Puppet Interview (BPI). The BPI assesses academic competence, social competence, aggression

hostility, depression-anxiety, achievement motivation, and peer acceptance using forced-choice responses to opposing statements presented by puppets. An advantage to using this assessment is the level of comfort achieved. By allowing children to hear both positive and negative responses and making it known that both are acceptable answers, more reliable data is obtained due to the minimizing of socially desirable responding. Findings in this study suggest that during the span of their lives when children are going from being at home to becoming elementary students, young children have both consistent and coherent conceptions of themselves; this study also suggests that agreement between children and teachers or children and mothers tends to be just as strong as, if not stronger than, the level of agreement between adult informants (Measelle et al. 1998). Similar findings were obtained by a 2005 study conducted by Measelle, John, Ablow, Cowan, and Cowan which focused on child self-reports of the Big Five personality traits using the BPI. These Big Five traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness) were compared for children 5-7 years old to reports of college level students and child behavior ratings by adult informants. Not only did children's personality self-reports demonstrate significant correlations across the same time intervals as those of college students, but substantial convergence was also found between children's self-reports on extraversion, agreeableness, and conscientiousness and ratings by mothers, fathers, and teachers. Thus, childhood self-reports appear to be valid and stable.

Following previous research, Brown, Mangelsdorf, Agathen, and Ho (2008) found results that suggest that mothers and children are generally in agreement when it comes to reports on the child's emotions and personality. Evidence from the Children's

Self-View Questionnaire (CSVQ; similar to the BPI) showed that young children's self-concepts reflected a meaningful structure and provided valuable information about their own personalities. The CSVQ measures three aspects of child self-concept: timidity, negative affect, and agreeableness. Brown et al. found that these three factors, or groupings, were significantly correlated with an interesting number of Big Five personality dimensions. Children who rated themselves high on timidity were reported by mothers as being high on neuroticism and low on extraversion and openness to experience. Children who saw themselves as high on agreeableness were seen as more agreeable by their mothers. Finally, reported negative affect by children was positively related to their mothers' reports on neuroticism and was negatively related to mothers' reports of conscientiousness. In sum, research is giving more credibility to the existence and measurement of young children's self-concepts, therefore providing evidence that children may be valid and reliable reporters about their own psychological characteristics.

#### Effects of Child Characteristics on Informant Agreement

Little research has examined factors that may affect the strength of agreement found between adult informants, and between children and adults concerning children's behavior. However, a series of analyses were completed by Measelle et al. (1998) to examine the possible effects of gender and grade level on children's self-perceptions in each BPI domain. Analyses showed that boys' perceived academic competence remained stable from preschool to 1<sup>st</sup> grade, whereas girls' sense of their academic competence tended to decline across the same span of time. Despite indication of these gender-related patterns, gender effects on agreement were not established. Mangelsdorf et al. (2000) suggest that there are systematic differences in a child's behavior based on context

and interactions with different adults; for example, with mothers and fathers. For instance, boys were found to be more avoidant while girls were more enthusiastic and positive with mothers; on the other hand, boys engaged in more physical warmth toward mothers than girls. In the dimension of compliance, boys were found to show more compliance toward fathers than mothers while girls showed no difference in compliance across either context. This evidence shows that children's behavior toward each individual may affect the degree to which adults' ratings of their behavior are influenced, and that a child's behavior may differ by gender.

Aside from gender, researchers have attempted to uncover whether agreement between parents and children could be related to the developmental processes children undergo throughout childhood. "The period from 5 to 7 years is widely regarded as one of the dramatic periods of human development. Not only do fast-maturing representational abilities underlie children's growing capacities to report reliably and validly on their personality characteristics but ecological transitions also coincide with real behavioral change" (Measelle et al., 2005, p. 103). Ecological transitions, such as the major one from home to school, expand children's experiences. For example, unstructured interactions within the family transform into structured interactions with peers and teachers, and as a result, internal consistency in self-perceptions emerges along with accurate self-representations. Therefore, school or day care experience may be a factor affecting levels of informant agreement.

Coinciding with development, research concerning adult and child agreement has also examined the factor of child age. Winsler and Wallace (2002) looked at internalizing and externalizing behaviors for three and four year olds and how agreement

between adult informants was related to child age. Data revealed interesting correlations in that agreement was higher for three year olds when rated on internalized behaviors, yet agreement for externalizing behaviors was found to be higher for four year olds.

Likewise, Mangelsdorf et al. (2000) concluded that there is evidence of greater agreement between parents and observers as the age of a child increases. When comparing 5 to 7-year-old children's reports on the Big Five personality dimensions to adults' reports, Measelle et al. (2005) found that children's reports were stable at age five, but stabilized even further after age five. Stable reports are important because they may affect agreement between informants. When children are able to gain insight into their self-concepts and give stable reports, then adult informants are able to interpret child behavior in a more accurate manner. This therefore increases the likelihood of informants reaching a higher level of agreement.

### The Present Study

The current study was aimed at measuring agreement between multiple informants across multiple contexts. Specifically, the child participant provided information concerning his/her own behavior and feelings through a self-concept assessment, and mothers, teachers, and observers also provided perspectives on the child's behavior. I examined the degree to which observers, mothers, teachers, and the child agreed on differing aspects of the child's behavior. Such aspects included both more external, observable behaviors (e.g., persistence, aggression) and less easily observable, internal behaviors (e.g., negative affect, anxiety). Following with previous research (Brown et al., 2008; Measelle et al., 1998, 2005; Mangelsdorf et al., 2000; Winsler & Wallace, 2002), I hypothesized that I would find results indicating significant

agreement among young children's reports of their self-concepts and mother, teacher, and observer reports of the child's behavior, and that agreement would be particularly high for more external or observable behaviors. I also examined the extent to which agreement between informants is related to characteristics of the child (e.g., age, gender, day care experience). I predicted that gender would be a factor in agreement between adult informants, in that higher agreement would be found concerning boys' displays of externalizing behaviors, whereas higher agreement would be found for girls' internalizing behaviors. With respect to child age, consistent with previous research (e.g., Measelle et al., 2005), I expected that agreement would be higher among informants as the child aged. Coinciding with age, I hypothesized that the more school or day care experience a child has, the more child and adult informants would agree on reports on child behavior. Because this study had a longitudinal component, I was able to conduct and compare analyses relevant to my questions both within and across time. Overall, I hoped to find results that supported the importance of early assessment of child behavior by multiple informants, including the child's own perception of self.

## Method

### *Participants*

*Phase one.* The present study is based on data collected from a longitudinal study, "The Parents and Preschoolers Study," in which relationships between family members were investigated. Families consisted of a mother, father, and a preschool aged child (3 - 5 years old at Phase 1). Biological relation was not a requirement of the preschooler to his/her parents; however, the mother and father were obligated to be either married or cohabitating and living with the preschooler. Families were recruited by

means of newspaper ads, the dispersing of fliers in churches or preschools and by referrals from participating families.

At Phase 1, 113 families participated. Mothers participating in the study ranged from 22.20 to 56.17 years of age with a mean age of 35.90 years ( $SD = 5.40$  years). Children's ages averaged at 4.10 years old ( $SD = 6.24$  months; 55 girls, 58 boys). Finally, fathers' ages ranged from 25.10 years to 56.71 years with a mean age of 37.60 years ( $SD = 5.80$  years). Within the families in the study, 85% of mothers participating were European American, 9% were African American, 2% were Hispanic, 2% were Asian American, and 2% were of mixed race. Of children who participated, 76% were European American, 12% were of mixed race, 10% were African American, 1% were Hispanic, and 1% were Asian American. Eighty-four percent of fathers who participated were European American, 9% were African American, 4% were Hispanic, 2% were Asian American, and 1% were of mixed race. The annual family income of the participants ranged from less than \$10,000 to over \$100,000 (median annual income was between \$61,000 and \$80,000). Education level of mothers and fathers ranged from some high school to a Ph.D., averaging at a college degree; 83% of mothers and 81% of fathers had received at least a college degree.

*Phase two.* Families who had participated in phase one were contacted a year later and asked to participate for a second time. Upon final data collection, 93 families returned. Demographics somewhat differed in that a smaller percentage of African American mothers, fathers, and children participated and the average level of education increased slightly in the returning sample. Mothers that participated in the second phase of the study were 88% European American, 7% were African American, 1% were

Hispanic, 2% were Asian American, and 2% were of mixed race. Of children who participated, 78% were European American, 13% were of mixed race, 7% were African American, 1% were Hispanic, and 1 % were Asian American. Eighty-six percent of fathers who participated were European American, 6% were African American, 6% were Hispanic, 2% were Asian American, and 1% were of mixed race. The annual family income of the participants ranged from less than \$10,000 to over \$100,000 (median annual income was between \$61,000 and \$80,000). Education level of mothers and fathers ranged from some high school to a Ph.D., averaging at a college degree; 86% of mothers and 80% of fathers had received at least a college degree.

### *Procedure*

Participating parents were mailed a packet of questionnaires and a consent form prior to a scheduled lab visit. Questionnaires contained survey questions assessing a wide range of responses regarding areas such as demographic information and family relationship perceptions. Mailed-home questionnaires required approximately 1.5 hours to complete. Upon completion of the mailed packet, the mother, father, and child visited the lab for a duration of 1.5 hours.

During the visit, the family was asked to complete a set of tasks. While the child performed a forced-choice video questionnaire with a research assistant, the parents were asked to fill out additional questionnaires in a separate room. Once both tasks were concluded, the parents were brought back into the room with the child and asked to participate as a family in a videotaped triadic interaction task.

Lab procedure and questionnaires were identical for Phase 1 and Phase 2, only differing in the activity for the videotaped, triadic interaction task. At Phase 1, families

were given ten minutes to draw a picture of their family together, while at Phase 2 families were allotted five minutes to put together a puzzle. Upon the completion of the study, Phase 1 families received a \$30 gift card to Target or Toys-R-Us and Phase 2 families received \$50 cash as a token of gratitude for participation.

### *Measures*

The following section contains descriptions of measures used for the current study. Measures were identical for both phases of the study. Data analyzed primarily include measures of the child's behavior from multiple perspectives: child, mother, teacher, and observer. Demographic data were also used to identify potential moderators of informant agreement.

#### *Mother's Perspective:*

*Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000)*. Used as a measure of a child's behavioral adjustment, this 100-item questionnaire, appropriate for children aged 1-5 years, requires parents to assess the existence or absence of behavioral problems in their child using a three-point scale (0 = *not true*, 2 = *very true*). Items are summed into two scores that reflect internalizing (36 items) and externalizing (24 items) behavioral problems. Examples that represent internalizing problems are ones such as "moody", "nervous", or "self-conscious". Externalizing behavioral problems are exhibited through examples such as "cannot concentrate", "lacks guilt", and "uncooperative". The reliability and validity of this questionnaire has been well established (see Achenbach & Rescorla, 2000). In the present study, Cronbach's alphas were .91 for externalizing at Phases 1 and 2, and .84 for internalizing at Phase 1 and .80 for internalizing at Phase 2.

*Child's Perspective:*

*Child Self-View Questionnaire (CSVQ; Eder, 1990).* This forced-choice video questionnaire, administered by two puppets, consists of 62-items that evaluate a child's psychological self-concept. The CSVQ (see Appendix A), is considered appropriate for children ranging in age from 3.5 to 7. A human researcher records the child's response to the questions asked by the puppets. The child is given a choice between two contrasting statements and asked to respond to the statement closest to their personal feelings. For example, one puppet states "When new people come to my house, I show them my toys," while the other puppet then states "When new people come to my house, I run to mom and dad." The researcher will then prompt the child to respond by saying, "What about you?" and then the response is recorded. Puppet statements are alternated throughout the video so that negative statements appear first just as frequently as positive statements appear first.

The CSVQ measures child self-concept on three dimensions (Brown et al., 2008): *timidity* (8 items), *agreeableness* (14 items), and *negative affect* (9 items). The timidity factor describes children who tend to avoid taking risks and participating in potentially harmful activities (e.g. "I don't climb up on things that are high"). The second factor, agreeableness, combines levels of extraversion, sociability, and overall good behavior (e.g. "I like meeting new people"). Negative affect, the final factor, characterizes worried, anxious, or stress reactive children (e.g. "When new people come to my house, I run to mom or dad"). Cronbach's alphas for timidity were .44 at Phase 1 and .58 at Phase 2. For agreeableness, Cronbach's alphas were .79 at Phase 1 and .69 at Phase 2. Lastly, Cronbach's alphas for negative affect were .55 at Phase 1 and .44 at Phase 2. These

reliability estimates are slightly lower than those found in previous research (Brown et al., 2008) but are still fairly impressive for self-reports from such young children.

*Observer's Perspective:*

*Child Behavior Coding* (see Appendix B). For Phases 1 and 2, the videoed sessions of the triadic interactions were assessed by two different teams of researchers. These coders were not familiar with the participating families and were unaware of each child's CSVQ responses and mothers' and teachers' questionnaire responses. Each team member was trained to use the "Teaching Tasks: Child Behavior Scales – Egeland and Sroufe Revised" in order to rate the child on observed behavior based on five dimensions: *persistence, positive and negative affect, activity level, and distractibility* (Egeland & Sroufe, 1983). The persistence scale was used to measure the degree to which the child remained task oriented during the session. Positive and negative affect each measured the child's overall feelings demonstrated throughout the session; expressions such as smiling or laughing were considered more positive as opposed to expressions such as frowning or crying that were considered more negative. Activity level measured the child's movement and overall energy level observed. Lastly, distractibility measured the child's aptitude for maintaining attentiveness to the task at hand.

Each of the five scales were scored based on a five-point scale (1 = *very low* to 5 = *very high*). A score for each of the five dimensions was recorded for each of the tasks in Phase 1 and Phase 2. The two researchers on each coding team were randomly assigned separate videos to observe, allowing for an overlap to occur (an average of two videos per week).

Researchers from the coding teams compared overlapping sessions to check for accuracy. In the event that the researchers disagreed by more than two points on a given scale or disagreed by one point on more than three scales, they were required to watch the video again. Reviewed videos were then given new scores based on a collaborative decision. To further ensure accuracy, the reliability of the two teams of coders was calculated. For Phase 1, coders overlapped on 29% of taped episodes. Agreement within one scale point ranged from 94-100% ( $M = 98.4\%$ ). For Phase 2, coders overlapped on 25% of available taped episodes and agreement within one scale point ranged from 91-98% ( $M = 95\%$ ). Gamma coefficients were also used as a measure of inter-rater reliability because they control for chance agreement like kappa, but are more appropriate for use with ordinal data (Hays, 1981; Liebetrau, 1983). Gamma statistics for both Phases 1 and 2 were acceptable in that they ranged from .70 – 1.00 (Phase 1  $M = .80$ , Phase 2  $M = .91$ ).

*Teacher's Perspective:*

*Social Competence and Behavior Evaluation Scale – Short Form (SCBE-30; LaFreniere & Dumas, 1996).* For this 30-item questionnaire, teachers were asked to rate a child's social competence, as well as anxiety and timidity (internalizing behaviors) and anger and aggression (externalizing behaviors) based on a six-point scale (1 = *never*; 6 = *always*). Social competence (10 items) is rated based on behaviors such as "negotiates solutions to conflicts with other children" and "works easily with groups", whereas externalizing (10 items) and internalizing (10 items) behaviors were based on statements such as "gets angry when interrupted" and "worries or avoids new situations", respectively. In both phases, preschool/kindergarten teachers were mailed this

questionnaire (with parents' permission) after the family had completed the visit. In the study, Cronbach's alphas for social competence were .89 at both Phase 1 and Phase 2. For anger and aggression, Cronbach's alphas were .89 at Phase 1 and .88 at Phase 2. Lastly, Cronbach's alphas for anxiety and timidity were .89 at Phase 1 and .87 at Phase 2.

*Moderating Factors:*

*Demographic Questionnaire.* Mothers completed a demographic questionnaire that gathered information on multiple parent and child factors. For this study, I focused on the following child factors: child gender, child age, and day care experience.

Results

First, descriptive statistics (means, standard deviations) were computed for all study variables at Phases 1 and 2 (see Table 1). To address my first research question, mothers', teachers', observers' and children's perceptions of child behavior at Phase 1 were correlated, and the strength of the correlations examined and compared. With respect to my second question, the moderating factors of child gender, age, and day care experience were examined by recalculating correlations separately by groups. For data collected at Phase 2, correlations were computed in the same manner as for Phase 1.

*Overall Agreement: Phase 1 (Table 2)*

*Agreement between mothers and teachers.* First, correlations were computed between mothers' and teachers' perceptions of children's behavior. When mothers perceived children as having more externalizing behavior problems, teachers viewed children as more angry and aggressive,  $r = .34, p < .01$ , as well as less socially competent,  $r = -.30, p < .01$ . Correlation trends were found such that when mothers perceived their children as having high internalizing behavior problems, teachers

perceived children as having high anger and aggression,  $r = .18, p < .10$ , and high anxiety,  $r = .18, p < .10$ .

*Agreement between mothers and children.* Correlations were then computed between mothers' perceptions of children's behavior and the children's own perceptions of themselves. No significant correlations were found.

*Agreement between mothers and observers.* Next, correlations between mothers' and observers' perceptions of children's behavior were computed. When children were perceived by their mothers as exhibiting more externalizing behavior problems, observers perceived children as low in persistence, high in activity level, and high in distractibility,  $r = -.24, p < .05$ ,  $r = .26, p < .01$ , and  $r = .27, p < .01$ , respectively.

*Agreement between children and observers.* Children's perceptions of self were then correlated with the observers' perceptions of children's behavior. Results showed that when children perceived themselves as higher in negative affect, observers perceived high levels of activity level,  $r = .31, p < .01$ . Also, when children rated themselves high on agreeableness, observers perceived the child as more persistent,  $r = .24, p < .05$ , and less active,  $r = -.27, p < .01$ . When children perceived themselves as low in agreeableness, there was a trend such that observers rated children's behavior as high in negative affect,  $r = -.17, p < .10$ . Also when children perceived themselves as high in negative affect, there was a trend such that observers rated children's behavior as high in distractibility,  $r = .17, p < .10$ .

*Agreement between children and teachers.* Correlations were then computed between children's perceptions of themselves and the teachers' perceptions of children's behavior, yet no significant correlations were found.

*Agreement between teachers and observers.* Lastly, correlations were computed between teachers' and observers' perceptions of children's behavior. When teachers perceived children as more angry and aggressive, the observers perceived children's behavior as less persistent,  $r = -.30, p < .01$ , higher in activity level,  $r = .35, p < .01$ , and higher in distractibility,  $r = .30, p < .01$ . When teachers perceived children's behavior as more socially competent, observers perceived children as more persistent,  $r = .24, p < .05$  and lower in distractibility,  $r = -.22, p < .05$ . Finally, when teachers rated children's behavior as more anxious and timid, observers perceived the children as lower in positive affect,  $r = -.21, p < .05$ . A trend was also present such that when teachers rated children low in social competence, observers rated children as high in activity level,  $r = -.18, p < .10$ .

*Summary.* No significant or trend-level correlations were found when correlations were computed between children and mothers or children and teachers. However, observers were found to have significant correlations with all three other informants. Agreement between observers and mothers was greater for externalizing behaviors than for internalizing behaviors. Similarly, agreement between observers and children and observers and teachers also was higher for easily observable behaviors like persistence and activity level. From the perspectives of children and teachers, the aspects of behavior that generated the greatest agreement with observers were agreeableness and negative affect (children) and anger and aggression and social competence (teachers).

*Agreement Among Informants by Child Gender: Phase 1 (Table 3)*

Correlations were computed between teachers, observers, mothers, and children separately by child gender. There were a total of 58 boys compared with 55 girls.

*Agreement between mothers and teachers by child gender.* Correlations regarding agreement between mothers and teachers were then computed separately by child gender. No significant correlations were found for girls; however, for boys, when mothers perceived their child as exhibiting high externalizing behavior problems, teachers perceived the child as being high in anger and aggression,  $r = .39, p < .01$ , and also low in social competence,  $r = -.39, p < .01$ . There was also a trend in that when mothers rated boys as having high internalizing behavior problems, teachers rated children as high in anger and aggression,  $r = .29, p < .10$ .

*Agreement between mothers and children by child gender.* Agreement between mothers and children was then examined separately by gender. For girls there was only a trend such that when mothers perceived their daughters as having low externalizing behavior problems, daughters rated themselves as having high negative affect,  $r = -.25, p < .10$ . There were no significant correlations for boys.

*Agreement between mothers and observers by child gender.* Correlations between mothers' and observers' perceptions of children's behavior were computed separately by gender, but no significant correlations were found for girls. Yet, correlations for boys indicated that when mothers perceived their sons as displaying high externalizing behavior, observers rated the same children as low in persistence,  $r = -.29, p < .05$ , high in activity level,  $r = .35, p < .01$ , and high in distractibility,  $r = .35, p < .01$ . Lastly, there was a trend found such that when mothers rated their male children as demonstrating high levels of internalizing behavior, observers rated these boys as high in distractibility,  $r = .26, p < .10$ .

*Agreement between children and observers by child gender.* Significant correlations were found for both girls and boys when agreement between children and observers was examined. In regards to girls, when observers perceived children as low in negative affect, children rated themselves as high in agreeableness,  $r = -.30, p < .05$ . Also, when observers viewed girls as high in activity level, girls rated themselves as high in negative affect,  $r = .35, p < .05$ . For boys, when observers saw them as low in persistence, boys perceived themselves as high in negative affect,  $r = -.29, p < .05$ , and a trend was found that indicated that when observers saw boys as high on persistence, boys perceived themselves as high on agreeableness,  $r = .27, p < .10$ . When observers saw boys as low in activity level, boys viewed themselves as high in agreeableness,  $r = -.31, p < .05$ . Another trend for boys appeared such that when observers rated them as high in activity level, boys perceived themselves as exhibiting more negative affect,  $r = .27, p < .10$ .

*Agreement between children and teachers by child gender.* Correlations between teachers and children were then computed, yet no significant results were found for either boys or girls.

*Agreement between teachers and observers by child gender.* Lastly, correlations between teachers and observers were computed and results were found for both girls and boys. One trend was present for girls in that when teachers perceived children's behavior as low in anxiety, observers rated the child as high in positive affect,  $r = -.27, p < .10$ . For boys, significant correlations indicated that when teachers perceived boys as low in social competence, observers saw boys as high in distractibility,  $r = -.38, p < .05$ . Also, when teachers rated boys as low in anger and aggression, observers perceived them as

high in persistence,  $r = -.45, p < .01$ , and when teachers perceived boys as high in anger and aggression, observers saw them as high in activity level,  $r = .47, p < .01$ , and high in distractibility,  $r = .53, p < .01$ . In addition, trends were found such that when teachers rated boys as high in social competence, observers rated boys as high in persistence,  $r = .28, p < .10$ , and when teachers rated boys as low in social competence, observers rated boys as high in activity level,  $r = -.28, p < .10$ .

*Summary.* More significant or trend-level correlations were found regarding boys than girls when looking at agreement between all informants. For girls, aside from trends, only two significant correlations were found which were between observers and children. For boys, significant or trend-level correlations were found in all comparisons except for those between mothers and children and children and teachers. Adults (mothers and observers, mothers and teachers) were again found to have higher agreement concerning externalizing behaviors, especially for boys. Agreement was shown again to be higher for ratings of anger and aggression and social competence (teachers) with ratings of persistence, activity level, and distractibility (observer). Lastly, agreement between children and the other informants continued to be stronger in the areas of children's self-perceived agreeableness and negative affect.

*Agreement Among Informants by Child Age: Phase 1 (Table 4)*

Correlations were computed to determine whether the amount of agreement between mothers, teachers, children, and observers on children's behavior differed by the child's age. With the median age being 4.07, younger children were defined as being 4.07 years old and under whereas older children were defined as being 4.10 years old and

over. There were a total of 57 children grouped into the “younger” category, whereas there were a total of 56 children grouped into the “older” category.

*Agreement between mothers and teachers by child age.* Significant correlations were found for both younger and older groups when mothers' and teachers' agreement was examined. For the younger group, when mothers rated their child as higher in externalizing behaviors, teachers rated the child as showing more anger and aggression,  $r = .30, p < .05$ , and as showing less social competence,  $r = -.37, p < .05$ . For the older group, similar correlations were found. When mothers rated their child as displaying higher externalizing behaviors, teachers rated the child's anger and aggression as higher,  $r = .44, p < .01$ , and a trend indicated that teachers also rated the child's social competence as lower,  $r = -.26, p < .10$ .

*Agreement between mothers and children by child age.* No significant correlations were found for the younger group when agreement was compared between mothers and children. Yet, for the older group, a trend indicated that when mothers rated children as lower in externalizing behavior problems, children rated themselves as higher in negative affect,  $r = -.26, p < .10$ .

*Agreement between mothers and observers by child age.* For the younger group, when mothers perceived their children as exhibiting higher externalizing behaviors, observers saw the children as rating higher in activity level,  $r = .32, p < .05$ , and somewhat lower on persistence,  $r = -.23, p < .10$ . When mothers of older children viewed their child as higher in externalizing behaviors, observers rated the child as less persistent,  $r = -.27, p < .05$ , and more distractible,  $r = .34, p < .05$ .

*Agreement between children and observers by child age.* When agreement between children and observers was examined by child age, significant correlations and trends were found for both younger and older groups. When observers rated younger children as higher in activity level, the children perceived themselves as higher in negative affect,  $r = .40, p < .01$ . Also, a trend indicated that when observers viewed younger children as higher in distractibility, children saw themselves as higher in negative affect,  $r = .24, p < .10$ . For the older group, when children rated themselves as higher in agreeableness, observers saw the child as more persistent,  $r = .30, p < .05$ , lower in activity level,  $r = -.34, p < .05$ , and, as a trend, less distractible,  $r = -.24, p < .10$ .

*Agreement between children and teachers by child age.* When comparing younger and older groups for agreement between children and teachers, no significant correlations were found for either group.

*Agreement between teachers and observers by child age.* For the younger group, significant correlations were found such that when teachers rated children as higher in anger and aggression, observers viewed children as lower in persistence,  $r = -.37, p < .05$ , higher in activity level,  $r = .43, p < .01$ , and higher in distractibility,  $r = .40, p < .01$ . A trend for the younger group indicated that when teachers perceived children as lower in social competence, observers perceived children as higher in activity level,  $r = -.26, p < .10$ . However, for the older group only one trend was found which suggested that when teachers observed children as being lower in social competence, observers rated these children as higher in distractibility,  $r = -.26, p < .10$ .

*Summary.* When comparing informant agreement based on child age, results showed that a few more significant or trend-level correlations were found for the younger

children, although some of the patterns of correlations were stronger for the older children. No significant correlations were found for either age group when agreement was compared between mothers and children and teachers and children. However, agreement between teachers and observers produced three significant correlations when looking at younger children, such that when teachers rated children as higher in anger and aggression, observers rated these same children as lower in persistence, higher in activity level, and higher in distractibility.

*Agreement Among Informants by Child Day Care Experience: Phase 1 (Table 5)*

Final comparisons on informant agreement were then completed based on amount of child day care experience. Two groups were created determined by the amount of hours a child spent in day care. Given that the median was 16 hours per week, children spending a total of 10 hours or less in child day care were grouped together, and children spending 16 or more hours in child day care were grouped together. The total number of children in the “less time” group was 55, whereas the total number of children in the “more time” group was 58.

*Agreement between mothers and teachers by child day care experience.*

Correlations between mothers and teachers were computed and significant relations were found for both children who experienced less time in care and more time in care. For those with less time in care, when mothers rated their children as exhibiting lower externalizing behavior problems, teachers saw those children as higher in social competence,  $r = -.42, p < .01$ . However, for children with more time in care, when mothers viewed their children as being higher in externalizing behavior problems,

teachers rated children as higher in anger and aggression,  $r = .35, p < .05$ , and, a trend showed, lower in social competence,  $r = -.24, p < .10$ .

*Agreement between mothers and children by child day care experience.* No significant correlations were found when comparisons were conducted regarding agreement between mothers and children.

*Agreement between mothers and observers by child day care experience.* Children who spent a lower amount of time in child day care had results such that when mothers perceived their children as higher in externalizing behaviors, observers rated children higher in activity level,  $r = .34, p < .05$ , and a trend showed that observers also rated children as lower in persistence,  $r = -.25, p < .10$ . For children who spent more time in child day care, a trend resulted which showed that when mothers saw children as high in externalizing behaviors, observers saw the children as high in distractibility,  $r = .26, p < .10$ .

*Agreement between children and observers by child day care experience.* Only one trend made itself apparent when looking at comparisons between children and observers for children with less time in child care. When observers rated children as lower in activity level, the children rated themselves as higher in agreeableness,  $r = -.27, p < .10$ . Yet, more correlations were found for the group of children who spent more time in child care. When observers perceived children as high in persistence and high in activity level, children saw themselves as higher in agreeableness,  $r = .33, p < .05$ , and higher in negative affect,  $r = .36, p < .01$ , respectively. Also, a trend indicated that when observers viewed children as lower in distractibility, children saw themselves as higher in agreeableness,  $r = -.26, p < .10$ .

*Agreement between children and teachers by child day care experience.* Unlike comparisons between children and observers, when looking at comparisons between children and teachers more significant correlations arose when examining the group of children who spent lower amounts of time in care. When children perceived themselves as higher in timidity, teachers rated children as lower in anger and aggression,  $r = -.40, p < .05$ , and higher in social competence,  $r = .46, p < .01$ . Trends also showed that when teachers rated children as high in social competence, children viewed themselves as high in agreeableness,  $r = .28, p < .10$ , and high in negative affect,  $r = .30, p < .10$ . When examining the group of children who spent more time in care, correlations showed that when children saw themselves as lower in timidity, teachers rated them as high in social competence,  $r = -.31, p < .05$ .

*Agreement between teachers and observers by child day care experience.* Comparisons were at last run between teachers and observers and correlations favored children with more experience in care. For children who spent a lower amount of time in child day care the only correlation that was found indicated that when teachers perceived a child as lower in anxiety, observers saw the child as higher in positive affect,  $r = -.38, p < .05$ . However, many correlations made themselves apparent when focusing on the group with more time in care. When teachers rated children as higher in anger and aggression, observers rated children as lower in persistence,  $r = -.35, p < .01$ , higher in activity level,  $r = .33, p < .05$ , and higher in distractibility,  $r = .33, p < .05$ . Also, trends were visible such that when teachers rated children as high in social competence, observers saw children as higher in persistence,  $r = .25, p < .10$ , and lower in distractibility,  $r = -.27, p < .10$ .

*Summary.* Significant and trend-level correlations were found for both groups of children with less or more time in child day care. For the group of children with more time in care, teachers and observers had the greatest agreement, whereas the group with less time in care had the greatest agreement for children and teachers. Although results for mothers showed hardly any differences in significant correlations in these analyses, teachers played a significant role in agreement when comparing groups with low vs. high day care experience. Externalizing behaviors presented by mothers and more easily observable characteristics in general, such as children's agreeableness, children's negative affect, teachers' ratings of anger and aggression, teachers' ratings of social competence, and observers' ratings of persistence, activity level, and distractibility played a role in increasing the amount of agreement between informants. Unlike other correlations reported thus far, correlations between teachers and children by child care experience highlighted the importance of children's self-perceived timidity as well. In particular, higher timidity was associated with greater teacher-reported social competence for children with less day care experience, but with lower social competence for children with more day care experience.

*Overall Agreement: Phase 2 (Table 6)*

*Agreement between mothers and teachers.* Between mothers and teachers, correlations were computed and it was found that when teachers rated children as high in anger and aggression, mothers rated children higher in externalizing and internalizing behaviors,  $r = .39, p < .01$  and  $r = .29, p < .05$ , respectively.

*Agreement between mothers and children.* Correlations were then computed between mothers' perceptions of children's behavior and the children's own perceptions of themselves. No significant correlations were found.

*Agreement between mothers and observers.* Trend-level correlations showed that when mothers viewed their children as high in externalizing behaviors, observers rated the children as lower in positive affect,  $r = -.18, p < .10$ , higher in activity level,  $r = .18, p < .10$ , and higher in distractibility,  $r = .18, p < .10$ . No significant correlations were found.

*Agreement between children and observers.* Significant correlations between children and observers were found such that when children rated themselves as high in agreeableness, observers viewed the children as high in persistence,  $r = .33, p < .01$ , and low in negative affect,  $r = -.27, p < .05$ . Also, when children perceived themselves as high in negative affect, observers saw the children as high in negative affect as well,  $r = .30, p < .01$ . A trend was also found that indicated that when children viewed themselves as low in negative affect, observers viewed them as high in persistence,  $r = -.18, p < .10$ .

*Agreement between children and teachers.* Correlations were then computed for children's perceptions of self and teachers' perceptions of children's behavior. Significant correlations show that when children rated themselves higher in agreeableness, teachers rate these same children as higher in social competence,  $r = .32, p < .01$ , and lower in anxiety,  $r = -.30, p < .01$ .

*Agreement between teachers and observers.* When correlations were computed between teachers' and observers' perceptions of child behavior, no significant correlations were found.

*Summary.* In comparison with Phase 1, there were fewer significant correlations between teachers and observers; instead, significant correlations were obtained between teachers and children. For instance, when teachers rated children as lower in anxiety, children rated themselves as being higher in agreeableness. In accord with Phase 1, significant correlations between mothers and children were still not found at Phase 2. Several notable correlations were found when looking at children's perception of self and both observers' and teachers' ratings of child behavior. High social competence (teachers) was associated with high agreeableness (children), suggesting that teachers' perception of social competence is for a child to exhibit positive, compliant behaviors. There was also a significant correlation regarding negative affect between children and observers in that when children rated themselves as high in negative affect, observers rated children high in negative affect as well.

*Agreement Among Informants by Child Gender: Phase 2 (Table 7)*

Correlations were then computed between teachers, observers, mothers, and children separately by child gender. There were a total of 49 boys compared with 44 girls.

*Agreement between mothers and teachers by child gender.* Correlations between mothers and teachers, for girls, were not significant. However, for boys, when teachers rated children higher in anger and aggression, mothers reported higher externalizing,  $r = .56, p < .01$ , and internalizing behaviors,  $r = .51, p < .01$ . Also, when teachers rated boys higher in anxiety, mothers rated these same children as exhibiting higher internalizing behaviors,  $r = .33, p < .05$ .

*Agreement between mothers and children by child gender.* When correlations were computed in regards to agreement between mothers and children based on child gender, girls and boys each demonstrated one significant correlation. For girls, when mothers rated their daughters as high in externalizing behaviors, the girls rated themselves as high in negative affect,  $r = .30, p < .05$ . For boys, when mothers rated their sons as being high in internalizing behaviors, boys rated themselves as higher in timidity,  $r = .35, p < .05$ .

*Agreement between mothers and observers by child gender.* Correlations between mothers and observers in regards to child gender yielded no relations for boys. However, for girls, when mothers viewed their daughters as more externalizing in their behaviors, observers rated them as less persistent,  $r = -.45, p < .01$ , lower in positive affect,  $r = -.31, p < .05$ , higher in activity level,  $r = .33, p < .05$ , and higher in distractibility,  $r = .34, p < .05$ .

*Agreement between children and observers by child gender.* Relations between children and observers were examined and although no significant correlations were revealed for girls, correlations for boys were present. When boys rated themselves as higher in negative affect, observers also saw them as high in negative affect,  $r = .43, p < .01$ . Also, when boys also saw themselves as higher in agreeableness, observers perceived them as higher in persistence,  $r = .42, p < .01$ , and lower in negative affect,  $r = -.35, p < .05$ .

*Agreement between children and teachers by child gender.* When correlations were computed between teachers and children, significant correlations were found such that when boys rated themselves as higher in agreeableness, teachers rated boys as lower

in anxiety,  $r = -.50, p < .01$  and higher in social competence,  $r = .37, p < .05$ . One trend was also found for girls such that when teachers rated children as lower in anger and aggression, girls saw themselves as higher in agreeableness,  $r = -.28, p < .10$ .

*Agreement between teachers and observers by child gender.* When looking at agreement between observers' and teachers' perceptions of boys' behavior, no significant correlations were found. However, for girls, a trend was found such that when teachers reported children as exhibiting less anger and aggression, girls were viewed by observers as higher in persistence,  $r = -.32, p < .10$ .

*Summary.* The only informant agreement found for girls was between mothers and observers. Significant correlations for boys occurred more frequently, especially in relation to internalizing behaviors. High internalizing behaviors (mothers) were correlated with high anxiety (teachers) and high timidity (children). Moreover, correlations indicated that when boys view themselves as high in negative affect, observers do as well. Finally, when boys saw themselves as high in agreeableness, teachers saw them as high in social competence and low in anxiety.

*Agreement Among Informants by Child Age: Phase 2 (Table 8)*

*Agreement between mothers and teachers by child age.* Significant correlations were found for the older children such that when mothers viewed their children as higher in exhibiting externalizing behaviors, teachers rated these same children as higher in anger and aggression,  $r = .52, p < .01$ , and lower in social competence,  $r = -.36, p < .05$ . Also, when mothers rated older children as higher in internalizing behaviors, teachers rated them as higher in anxiety,  $r = .42, p < .01$ . Trends were also found for the older children such that when teachers reported children as higher in anger and aggression,

mothers rated children as higher in internalizing behaviors,  $r = .29, p < .10$ . No significant correlations were found for the younger children, yet a few trends were found such that when mothers rated their children as higher in externalizing behaviors, teachers saw children as higher in anger and aggression,  $r = .31, p < .10$ , and lower in anxiety,  $r = -.28, p < .10$ . Lastly, another trend for the younger children found that when teachers rated children as high in anger and aggression, mothers rated these children as higher in internalizing behaviors,  $r = .30, p < .10$ .

*Agreement between mothers and children by child age.* No significant correlations were found when examining agreement between mothers and children. However, a trend was found such that when mothers rated children in the younger category as higher in externalizing behaviors, younger children rated themselves higher in negative affect,  $r = .25, p < .10$ .

*Agreement between mothers and observers by child age.* When viewing agreement between mothers and observers in the category with younger children, significant and trend-level correlations were found. When mothers rated children in the younger group as high in externalizing behaviors, observers viewed these children as lower in persistence,  $r = -.31, p < .05$ , higher in activity level,  $r = .42, p < .01$ , and higher in distractibility,  $r = .27, p < .10$  (trend). No significant correlations were found for children in the older group.

*Agreement between children and observers by child age.* When correlations were computed between children and observers both significant and trend-level correlations were found. When observers viewed the older children as high in negative affect, the same children perceived themselves as low in agreeableness,  $r = -.37, p < .05$ , and high in

negative affect,  $r = .32, p < .05$ . Another significant correlation was also found for the older group such that when observers saw these children as high in persistence, these children rated themselves as high in agreeableness,  $r = .60, p < .01$ . Also, when observers rated children in the younger group as higher in negative affect, these children also rated themselves as high in negative affect,  $r = .29, p < .10$  (trend). For the younger category, trends were found such that when observers perceived children as higher in activity level, these children rated themselves as lower in agreeableness,  $r = -.28, p < .10$ , and higher in negative affect,  $r = .29, p < .10$ .

*Agreement between children and teachers by child age.* For the younger children, significant correlations showed that when children viewed themselves as higher in agreeableness, teachers rated these children as higher in social competence,  $r = .50, p < .01$ , and lower in anxiety,  $r = -.47, p < .01$ . For the older children, correlations found that when teachers rated children as high in anxiety, children saw themselves as higher in negative affect,  $r = .35, p < .05$ , and higher in timidity,  $r = .30, p < .10$  (trend).

*Agreement between teachers and observers by child age.* Correlations were then computed to look at agreement between teachers' and observers' perceptions of child behavior. For the older children, one significant correlation indicated that when teachers saw children as lower in anxiety, observers reported higher persistence in children,  $r = -.34, p < .05$ . No significant correlations were found for the younger children when looking at agreement between teachers and observers.

*Summary.* For the younger group, high child agreeableness was significantly correlated with high social competence and low anxiety (teachers). Also, for the younger children, mother and observer agreement was stronger than for the older group of

children. However, for the older group, mother and teacher agreement was greater than for younger children for both externalizing and internalizing behaviors. Also, child and observer agreement was a bit stronger for the older group than for the younger.

Agreement on internalizing behaviors was also shown in the older group between high teacher rated anxiety and high child rated negative affect and timidity.

#### *Agreement Among Informants by Child Day Care Experience: Phase 2*

Due to the fact that the majority of children at Phase 2 were in kindergarten, and thus had entered formal schooling, I did not examine day care experience as a moderator at Phase 2.

### Discussion

The central aim of this study was to determine if significant agreement could be found among young children's reports of their self-concepts and mother, teacher, and observer reports of the child's behavior. A second aim was to examine characteristics of the child (e.g., age, gender, day care experience) and determine how much of an impact child characteristics had on informant agreement.

Consistent with other sources (i.e., Mangelsdorf et al., 2000), results from Phase 1 and Phase 2 showed that it is likely to be beneficial for researchers to gain knowledge regarding children by referencing multiple informants. Overall, results for Phase 1 showed consistency in agreement between observers when correlated with other informants. In other words, no informant, other than observers, had correlations with every other informant (e.g., children, mother, and teacher). The greatest degree of agreement with observers was with respect to agreeableness and negative affect (children), anger and aggression and social competence (teachers), and externalizing

behaviors (mothers). In comparison with Phase 1, at Phase 2 more agreement was found between teachers and children, whereas less agreement was noted between teachers and observers. Specifically, high social competence (teachers) was associated with high agreeableness (children), suggesting that teachers' perception of social competence is for a child to exhibit affirmative, compliant behaviors. Also, at Phase 2 there was a significant correlation between children and observers based on negative affect. When children rated themselves as high in negative affect, observers rated these same children as high in negative affect as well. Notably, throughout both phases, mothers and children never showed significant agreement. This was somewhat of a surprise given that significant agreement was found between mothers and children in previous research (e.g., Brown et al., 2008; Measelle et al., 1998, 2005). Perhaps this demonstration of poor agreement between mothers and children can relate back to the disadvantages of parental reports discussed by Mangelsdorf et al (2000), who stated that disadvantages may be reflected in possible bias due to the influence of parent expectations or parent characteristics on parents' reports of children's behavior.

Overall, consistent with my hypotheses, informant agreement was higher for more externalizing behaviors such as anger and aggression, activity level, persistence, and distractibility; these behaviors are often easily observable to any informant regardless of the intimate knowledge of the behavior or feelings of a child. Internalizing behaviors were agreed upon less often particularly with observer informants, yet more often with teachers and mothers, perhaps due to the personal connections mothers and teachers have with children. Observers, having not met the child prior to the investigation, cannot be as knowledgeable as to the timidity and anxiety of a child as a teacher or a mother. Similar

findings, in regards to more agreement for overt behaviors, were reported in a study conducted by Firmin et al. (2005). In this study, parent and teacher agreement was correlated and ratings between parents and teachers showed statistically significant agreement in all domains excluding internalizing behavior. However, unlike Firmin et al., in my study significant agreement was also found to occur between mothers, teachers, and children in regards to more covert actions, especially for boys. For instance, high internalizing behaviors (mothers) were associated with high anxiety (teachers) and high timidity (children).

As expected, characteristics of the children appeared to affect the degree of informant agreement. Specifically, greater agreement was found regarding boys than girls in both phases of the study. As predicted, higher agreement was found for boys across all informants. This was not only as expected for more overt, external actions, but also for more internal characteristics. For example, at Phase 2 when mothers rated boys as higher in internalizing behaviors, teachers rated these same boys as being high in anxiety. In contrast to my hypothesis, agreement for girls was found to occur more often when agreement was based on externalizing behaviors instead of the predicted internalizing behaviors. For girls, agreement occurred mainly between mothers and observers and children and observers, perhaps giving meaning behind the findings of higher agreement with overt actions instead of covert actions. As mentioned before, observers seem to play a valuable role in agreement with respect to overt behaviors, which is consistent with what Mangelsdorf et al. (2000) found.

Counter to my hypothesis, when comparisons were done based on child age, results showed that there did not seem to be a noticeable difference in the amount of

informant agreement between the younger and the older groups of child participants. In Phase 1, a few more significant correlations were revealed for the younger aged group, especially between teachers and observers, an exception being that correlations between mothers and observers were stronger for the older group. However, in Phase 2, slightly more significant correlations were apparent for the older aged group, an exception being that correlations between mothers and observers were stronger for younger children. However, it is interesting to note that it was not until Phase 2 that overall correlations (not based on child characteristics) were found between children and teachers, possibly attributing something to the age of the child.

The role of day care experience was only examined at Phase 1 of the study due to the fact that the majority of the children participating were attending kindergarten at Phase 2 of the study. When reviewing results based on more time in day care there was greater agreement between observers and children as well as greater agreement between teachers and observers; however, with less time in care there was greater agreement between teachers and children. This may be demonstrating a possible link with higher agreement between informants and observers as the time in day care increases; however, it is unclear what the nature of this link is. It does not seem to be directly due to the age of the child because greater agreement between teachers and children was found with less time in care in Phase 1, whereas teachers and children agreed significantly (overall) for the first time at Phase 2. Interestingly, at Phase 1 it was also found that higher timidity was associated with greater teacher-reported social competence for children with less day care experience. However, higher timidity was associated with lower social competence when children had more day care experience. It can be reasoned that when teachers do

not spend as much time with a child complex relationships and behavior patterns cannot be thoroughly formed and behaviors such as timidity may be noted as being compliant, and not causing trouble. Thus these children are judged to be socially competent.

However, as a teacher spends more time with a child and can build a more complex relationship and more clearly observe the child's behavior patterns, the teacher may notice that not only is the child timid (and perhaps compliant), but the teacher is also with the child enough to know that he/she may be having problems with social competence because the child's timidity is affecting his/her interactions with other children.

This study did have limitations that should be considered in future research. First, the reliability of the children's reports of self-concept was somewhat lower than in most research that has used children as informants. Cronbach's alphas for agreeableness were at a respectable level, yet those for negative affect and timidity were lower than those found in previous research (Brown et al., 2008). However, these modest reliabilities are still notable for self-reports from such young children. Second, father perspectives were excluded from the study in order to reduce the number of variables examined in the study. The lack of inclusion of fathers leaves a gap in information regarding the role of fathers in informant agreement. Finally, the sample of participants in this study was quite homogeneous, and therefore the results may not apply to informant agreement in a more racially/ethnically and socioeconomically diverse sample.

On the other hand, the strengths of this study are notable and may mitigate some of the limitations just presented. First, the characteristics of a child have been shown to play a significant role in the amount of agreement among informants. Unlike many other studies, this investigation examined the role of child characteristics such as age, gender,

and day care experience in informant agreement and found a clear pattern with respect to effects of child gender. Yet, there are certainly more child characteristics that should be examined. Specifically, it would be interesting to study how the temperament or the race/ethnicity of the child affects multiple informant agreement. In addition, as mentioned above, the reliability of the children's responses for negative affect and timidity was lower than in previous research. Nonetheless, this study adds to the growing amount of research on children's perspectives. In order for this area of research to gain more ground, studies such as this need to contribute to our understanding of both the strengths and weaknesses of the child's perspective; after all, the child should be involved in his/her own assessment. In particular, the reliability of children's agreeableness is high enough for this dimension to be used in further research on child perspectives. Finally, given the results from this study, there is enough evidence presented to make the argument that assessments are likely to be more valuable when information is gathered from multiple informants because it creates a more holistic picture of child behavior, which differs across diverse situations and contexts (Mangelsdorf et al., 2000).

In conclusion, by obtaining information from multiple informants researchers and practitioners can gain more insight into child behavior, specifically by being able to look at a child through the eyes of family members, acquaintances, and strangers. Mothers and teachers can provide a priceless glimpse into the internalizing behavior of a child, whereas observers may have an important role with respect to agreement concerning more overt behaviors, thereby providing a common objective link among informants. Children also play an important role within informant agreement as well. Lastly, child characteristics, particularly gender, have also been shown to contribute pieces to this

complex child behavior puzzle. With the ever growing need for new methods of evaluations and assessments to determine what is best for a child, it is valuable for researchers to know the value of multiple perspectives for painting the clearest picture of the multifaceted nature of a child's behavior.

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Table 1: Means and Standard Deviations of Variables

	Phase 1			Phase 2		
	Mean	Standard Deviation	Range	Mean	Standard Deviation	Range
<b>Mother's CBCL</b>						
Externalizing Behavior	.48	.32	.00-1.46	.41	.29	.00-1.46
Internalizing Behavior	.24	.18	.00-.75	.22	.15	.00-.83
<b>Teacher's SCBE</b>						
Anger	1.74	.70	1.00-4.40	1.49	.56	1.00-3.70
Social Competence	4.07	.84	2.30-6.00	4.36	.80	1.90-6.00
Anxiety	1.71	.68	1.00-4.60	1.78	.70	1.00-4.80
<b>Child's CSVQ</b>						
Timidity	.63	.21	.13-1.00	.59	.24	.00-1.00
Agreeableness	.72	.22	.14-1.00	.79	.18	.29-1.00
Negative Affect	.27	.20	.00-.89	.23	.17	.00-.78
<b>Observer's Ratings</b>						
Persistence	4.13	1.10	1.00-5.00	4.61	.95	1.00-5.00
Positive Affect	3.04	.90	1.00-5.00	1.98	.93	1.00-5.00
Negative Affect	2.40	1.01	1.00-5.00	1.45	.80	1.00-4.00
Activity Level	2.60	1.11	1.00-5.00	1.30	.70	1.00-4.00
Distractibility	2.05	1.11	1.00-5.00	1.40	.86	1.00-5.00

Table 2: Overall Agreement between Mother, Teacher, Child, and Observer at Phase 1

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	<b>.34**</b>	<b>-.30**</b>	.10	-.07	-.11	-.04	<b>-.24*</b>	-.02	.00	<b>.26**</b>	<b>.27**</b>
2. Int. Behavior	-	-	<b>.18+</b>	-.07	<b>.18+</b>	.01	.06	.03	-.07	-.03	.00	.02	.11
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	.02	-.06	.11	<b>-.30**</b>	-.02	-.00	<b>.35**</b>	<b>.30**</b>
4. Social C.	-	-	-	-	-	-.01	.09	.10	<b>.24*</b>	.04	-.02	<b>-.18+</b>	<b>-.22*</b>
5. Anxiety	-	-	-	-	-	-.07	.11	.10	-.03	<b>-.21*</b>	.07	-.12	-.03
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.10	-.01	.11	.02	-.05
7. Agree.	-	-	-	-	-	-	-	-	<b>.24*</b>	.05	<b>-.17+</b>	<b>-.27**</b>	-.15
8. Neg. Aff.	-	-	-	-	-	-	-	-	-.13	.01	.07	<b>.31**</b>	<b>.17+</b>
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

+p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 3: Agreement between Mother, Teacher, Child, and Observer at Phase 1 by Child Gender

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	.18(.39**)	-.08(-.39**)	.19(.08)	-.21(-.13)	-.06(-.11)	<b>-.25+</b> (.11)	-.10(-.29*)	-.14(-.10)	-.04(.05)	.06(.35**)	.08(.35**)
2. Int. Behavior	-	-	.02(.29+)	.06(-.18)	.19(.18)	.07(-.01)	.15(-.00)	-.17(.21)	.03(-.11)	.06(-.10)	-.04(.05)	-.10(.06)	-.13(.26+)
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	-.00(.07)	-.13(.03)	.03(.16)	<b>-.06(-.45**)</b>	-.19(.13)	.01(-.02)	.15(.47**)	-.08(.53**)
4. Social C.	-	-	-	-	-	.00(-.10)	.11(-.00)	.16(.07)	.13(.28+)	.07(-.01)	.05(-.09)	-.00(-.28+)	.02(-.38*)
5. Anxiety	-	-	-	-	-	.05(-.25)	.09(.09)	.11(.12)	.03(-.09)	<b>-.27+</b> (-.15)	.03(.14)	-.20(-.00)	-.13(.09)
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.01(.15)	.01(-.05)	.12(.08)	-.10(.19)	-.08(.02)
7. Agree.	-	-	-	-	-	-	-	-	.20(.27+)	.12(-.03)	<b>-.30*</b> (-.03)	-.21(-.31*)	-.13(-.15)
8. Neg. Aff.	-	-	-	-	-	-	-	-	.05(-.29*)	.05(-.02)	.12(.01)	<b>.35*</b> (.27+)	.10(.21)
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

Correlation: girl(boy) +p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 4: Agreement between Mother, Teacher, Child, and Observer at Phase 1 by Child Age

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	<b>.30*(.44**)</b>	<b>-.37*(-.26+)</b>	-.07(.23)	-.12(-.02)	-.12(-.09)	.10(-.26+)	<b>-.23+(-.27*)</b>	-.01(-.04)	-.05(.07)	<b>.32*(.22)</b>	<b>.22(.34*)</b>
2. Int. Behavior	-	-	.15(.27)	-.16(-.03)	-.01(.27)	-.08(.09)	.15(-.09)	.20(-.15)	-.11(-.07)	.01(-.07)	-.09(.11)	.11(-.04)	.12(.13)
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	.12(-.21)	-.06(.09)	.23(-.16)	<b>-.37*(-.14)</b>	-.08(.07)	-.01(-.07)	<b>.43**(.20)</b>	<b>.40**(.13)</b>
4. Social C.	-	-	-	-	-	-.21(.15)	.14(-.00)	-.04(.23)	.25(.22)	.02(.06)	.03(-.03)	<b>-.26+(-.12)</b>	<b>-.15(-.26+)</b>
5. Anxiety	-	-	-	-	-	.22(-.23)	-.01(.12)	.24(.01)	.05(-.18)	-.19(-.24)	.24(.02)	-.15(-.02)	-.06(.05)
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.10(.16)	-.05(.02)	.01(.16)	-.13(.10)	-.10(-.02)
7. Agree.	-	-	-	-	-	-	-	-	<b>.09(.30*)</b>	.16(-.06)	-.10(-.17)	<b>-.11(-.34*)</b>	<b>-.02(-.24+)</b>
8. Neg. Aff.	-	-	-	-	-	-	-	-	-.19(-.03)	.01(.01)	.00(.12)	<b>.40**(.18)</b>	<b>.24+ (.04)</b>
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

Correlation: younger(older) +p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 5: Agreement between Mother, Teacher, Child, and Observer at Phase 1 by Child Day Care Experience

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	.21(.35*)	<b>-.42**(-.24+)</b>	.03(.20)	-.12(.01)	-.19(.03)	-.04(-.13)	<b>-.25+(-.19)</b>	-.10(.03)	.02(-.06)	<b>.34*(.14)</b>	.21( <b>.26+</b> )
2. Int. Behavior	-	-	.04(.19)	.14(-.23)	.17(.23)	.12(-.07)	.19(-.03)	.08(-.09)	.08(-.20)	-.03(-.00)	.02(-.01)	-.08(.08)	-.02(.21)
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	<b>-.40*(.14)</b>	-.10(.02)	-.11(.08)	<b>-.19(-.35**)</b>	-.03(-.01)	-.04(-.00)	<b>.09(.33*)</b>	<b>.09(.33*)</b>
4. Social C.	-	-	-	-	-	<b>.46**(-.31*)</b>	<b>.28+(-.06)</b>	<b>.30+(-.01)</b>	<b>.21(.25+)</b>	-.01(.08)	.07(-.09)	-.17(-.18)	-.13( <b>-.27+</b> )
5. Anxiety	-	-	-	-	-	-.16(.00)	.16(.04)	.08(.18)	-.08(-.01)	<b>-.38*(-.06)</b>	.18(-.00)	-.18(-.02)	-.05(.03)
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.18(.01)	.09(-.11)	.11(.12)	.10(-.06)	-.09(.01)
7. Agree.	-	-	-	-	-	-	-	-	<b>.12(.33*)</b>	.03(.09)	-.24(-.11)	<b>-.27+(-.21)</b>	<b>.02(-.26+)</b>
8. Neg. Aff.	-	-	-	-	-	-	-	-	-.11(-.15)	-.22(.16)	.03(.10)	<b>.14(.36**)</b>	.21(.10)
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

Correlation: less time(more time) +p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 6: Overall Agreement between Mother, Teacher, Child, and Observer at Phase 2

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	<b>.39**</b>	-.11	-.14	-.03	.01	.15	-.16	<b>-.18+</b>	.08	<b>.18+</b>	<b>.18+</b>
2. Int. Behavior	-	-	<b>.29*</b>	-.17	.17	.16	-.09	.05	.01	-.03	-.01	.04	-.02
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	-.07	-.16	.10	-.10	.02	.03	.12	.07
4. Social C.	-	-	-	-	-	.03	<b>.32**</b>	-.09	.03	.01	.04	-.08	-.13
5. Anxiety	-	-	-	-	-	.13	<b>-.30**</b>	.08	.06	.01	.03	-.07	-.09
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.06	.03	-.12	-.07	-.15
7. Agree.	-	-	-	-	-	-	-	-	<b>.33**</b>	.11	<b>-.27*</b>	-.08	-.17
8. Neg. Aff.	-	-	-	-	-	-	-	-	<b>-.18+</b>	.00	<b>.30**</b>	.08	.06
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

+p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 7: Agreement between Mother, Teacher, Child, and Observer at Phase 2 by Child Gender

	Mother's CBCL			Teacher's SCBE			Child's CSVQ			Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>Mother's CBCL</b>													
1. Ext. Behavior	-	-	.19(.56**)	-.09(-.06)	-.08(-.19)	-.16(.11)	-.04(.12)	<b>.30*</b> (.03)	<b>-.45**</b> (.12)	<b>-.31*</b> (-.03)	.24(-.08)	<b>.33*</b> (.07)	<b>.34*</b> (.01)
2. Int. Behavior	-	-	<b>-.01</b> (.51**)	-.13(-.14)	<b>-.03</b> (.33*)	<b>-.01</b> (.35*)	.06(-.13)	.01(.06)	-.05(.08)	-.12(.08)	-.00(-.03)	-.00(.02)	.04(-.08)
<b>Teacher's SCBE</b>													
3. Anger	-	-	-	-	-	.00(-.16)	<b>-.28+</b> (-.07)	.13(.07)	<b>-.32+</b> (.13)	.04(.05)	.12(-.07)	.22(.04)	.19(-.06)
4. Social C.	-	-	-	-	-	-.16(.25)	<b>.20</b> (.37*)	.02(-.16)	.10(-.07)	.07(-.10)	-.00(.09)	-.10(-.02)	-.21(-.03)
5. Anxiety	-	-	-	-	-	.11(.14)	<b>.01</b> (-.50**)	.21(.00)	.20(-.05)	.08(-.06)	.04(.01)	-.03(-.09)	-.20(-.03)
<b>Child's CSVQ</b>													
6. Timidity	-	-	-	-	-	-	-	-	.15(-.02)	.07(-.0)	-.25(-.01)	-.19(-.01)	-.16(-.15)
7. Agree.	-	-	-	-	-	-	-	-	<b>.16</b> (.42**)	.07(.09)	-.11(-.35*)	.02(-.05)	-.06(-.24)
8. Neg. Aff.	-	-	-	-	-	-	-	-	-.10(-.24)	-.16(.12)	<b>.10</b> (.43**)	.03(.09)	-.03(.13)
<b>Observer's Ratings</b>													
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-

Correlation: girl(boy) +p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

Table 8: Agreement between Mother, Teacher, Child, and Observer at Phase 2 by Child Age

	Mother's CBCL				Teacher's SCBE				Child's CSVQ				Observer's Ratings			
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.			
<b>Mother's CBCL</b>																
1. Ext. Behavior	-	-	<b>.31+(.52**)</b>	.06(-.36*)	<b>-.28+(.13)</b>	-.03(-.04)	.06(-.06)	<b>.25+(.02)</b>	<b>-.31*(.13)</b>	-.17(-.21)	.14(.02)	<b>.42**(-.07)</b>	<b>.27+(-.04)</b>			
2. Int. Behavior	-	-	<b>.30+(.29+)</b>	-.19(-.16)	-.03( <b>.42**</b> )	.21(.12)	-.14(-.03)	.11(-.01)	.00(-.01)	.03(-.08)	-.16(.11)	.10(.01)	.02(-.04)			
<b>Teacher's SCBE</b>																
3. Anger	-	-	-	-	-	-.15(.01)	-.21(.00)	.16(.01)	-.14(.04)	.12(-.04)	.05(.01)	.25(.03)	.06(.05)			
4. Social C.	-	-	-	-	-	.04(.04)	<b>.50**(.03)</b>	-.09(-.09)	.01(.01)	-.20(.17)	.13(-.07)	-.11(-.06)	-.12(-.12)			
5. Anxiety	-	-	-	-	-	<b>.01(.30+)</b>	<b>-.47**(.03)</b>	-.11( <b>.35*</b> )	<b>.20(-.34*)</b>	.01(.00)	-.02(.10)	-.19(.07)	-.14(.08)			
<b>Child's CSVQ</b>																
6. Timidity	-	-	-	-	-	-	-	-	.21(-.14)	.06(.02)	-.15(-.09)	-.16(.01)	-.25(-.06)			
7. Agree.	-	-	-	-	-	-	-	-	<b>.17(-.60**)</b>	.12(.09)	<b>-.20(-.37*)</b>	<b>-.28+(.14)</b>	-.16(-.08)			
8. Neg. Aff.	-	-	-	-	-	-	-	-	-.17(-.22)	.25(-.16)	<b>.29+(.32*)</b>	<b>.29+(-.08)</b>	.08(.01)			
<b>Observer's Ratings</b>																
9. Persistence	-	-	-	-	-	-	-	-	-	-	-	-	-			
10. Pos. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-			
11. Neg. Aff.	-	-	-	-	-	-	-	-	-	-	-	-	-			
12. Activity Level	-	-	-	-	-	-	-	-	-	-	-	-	-			
13. Distract.	-	-	-	-	-	-	-	-	-	-	-	-	-			

Correlation: younger(older) +p < .10 \*p < .05 \*\*p < .01

Notes: Ext. Behavior = Externalizing Behavior; Int. Behavior = Internalizing Behavior; Social C. = Social Competence; Agree. = Agreeableness; Neg. Aff. = Negative Affect; Pos. Aff. = Positive Affect; Distract. = Distractibility.

*Appendix A*  
CSVQ

1. A: I mostly do things that are hard.  
 B: I mostly do things that are easy.
2. A: When I get angry, I feel like being quiet.  
 B: When I'm angry, I feel like hitting someone.
3. A: I don't ever feel that people want bad things to happen to me.  
 B: I sometimes feel that people want bad things to happen to me.  
 RE: switched order  
 SHORT PAUSE
4. B: I don't climb up on things that are high.  
 A: I climb really high things.  
 RE: switched order
5. A: I like meeting new people.  
 B: I don't like meeting new people.
6. A: I like to play by myself.  
 B: I like to play with my friends.
7. A: I like to do what my friends tell me to do.  
 B: I like to tell my friends what to do.  
 SHORT PAUSE
8. A: I get scared a lot.  
 B: I get scared a little.  
 LONG PAUSE
9. B: I sometimes do things that I'm not supposed to do.  
 A: I never do things that I'm not supposed to do.  
 RE: switched order  
 SHORT PAUSE
10. A: I am usually happy.  
 B: I am not usually very happy.  
 SHORT PAUSE
11. (MUST BE READ)  
 A: I don't care about doing a really good job on everything.  
 B: I care about doing a really good job on everything.
12. B: Sometimes it's fun to scare people.  
 A: It's not fun to scare people.

13. B: I know that people care what happens to me.  
A: I sometimes think that no one cares what happens to me.  
RE: switched order  
SHORT PAUSE
14. A: I think it would be really fun to go down a slide head-first.  
B: I don't think it would be fun at all to go down a slide head-first.  
SHORT PAUSE
15. B: I don't get upset around strangers.  
A: I get upset around strangers.  
RE: switched order  
LONG PAUSE
16. A: I have a best friend.  
B: I don't have a best friend.  
VERY LONG PAUSE
17. B: I pick the game to play.  
A: Other people pick the game to play.  
LONG PAUSE
18. B: I get mad a little.  
A: I get mad a lot.
19. A: I usually do what Mommy or the teacher says.  
B: Sometimes I don't do what Mommy or the teacher says.  
SHORT PAUSE
20. A: When I'm happy, I feel OK.  
B: When I'm happy, I feel good all over.
21. B: I don't like it when other kids do things better than me.  
A: I don't usually care when other kids do better than me.  
RE: switched order
22. B: I don't ever try to push in front of people in line.  
A: I sometimes try to push in front of people in line.  
RE: switched order

23. A: When my friends come over to my house they play with my **toys** and not  
with me.  
B: When my friends visit they come to play with **me** and not my toys.  
RE: switched order
24. A: I don't think that it would be fun at all to hang upside-down on a jungle-  
gym.  
B: I think that it would be really fun to hang upside-down on a jungle-gym.  
RE: switched order
25. A: When new people come to my house I show them my toys.  
B: When new people come to my house, I run to mom and dad.  
SHORT PAUSE
26. B: It's more fun to do things with other people than by myself.  
A: It's more fun to do things by myself than with other people.  
RE: switched order  
LONG PAUSE
27. B: I don't like to have people look at me.  
A: I like to have people look at me.  
RE: switched order  
LONG PAUSE
28. A: Some days everything makes me grouchy.  
B: I hardly ever get grouchy.  
VERY LONG PAUSE
29. A: Sometimes I get in trouble for being bad.  
B: I never get in trouble for being bad.
30. B: I really like myself.  
A: Sometimes, I just don't like myself.
31. B: I like to do work that's not very hard.  
A: I like hard work.  
RE: switched order  
VERY LONG PAUSE
32. A: Sometimes I like to tease people by saying mean things to them.  
B: I don't like to tease people.

33. A: Nobody wants to be around me.  
 B: People want to be around me.  
 RE: switched order
34. B: When I hear lightening and thunder, I go look at it out the window.  
 A: When I hear lightening and thunder, I would never run to look out the window.
35. B: I don't share toys with kids I don't know.  
 A: I share toys with kids I don't know.  
 RE: switched order  
 SHORT PAUSE
36. B: I am happiest when I'm around other people.  
 A: I am happiest when I'm by myself.  
 RE: switched order
37. A: I am the leader in "follow the leader."  
 B: Other people are the leader in "follow the leader."
38. A: If something scary happens at night, I still fall asleep.  
 B: When I am scared, I have trouble falling asleep.
45. B: I would play with a group of kids I didn't know.  
 A: I would never play with a group of kids I didn't know.  
 SHORT PAUSE
39. B: Sometimes I do naughty things.  
 A: I never do naughty things.
40. B: I always feel great when I wake up in the morning.  
 A: I usually don't feel that "great" when I wake up in the morning.  
 SHORT PAUSE
41. A: I usually keep working on a puzzle, even if I am very tired.  
 B: I usually stop working on a puzzle if I am very tired.  
 SHORT PAUSE
42. A: I don't like to watch other people fight.  
 B: I like to watch people fight.  
 RE: switched order  
 SHORT PAUSE

43. B: People always say mean things to me.  
A: People don't usually say mean things to me.  
SHORT PAUSE
44. B: When I am scared, I run away.  
A: When I am scared, I stand up to what scares me.
46. A: When I am sad, I go play in my room by myself.  
B: When I am sad, I go find someone to play with.  
LONG PAUSE
47. A: I don't like to show things at "show and tell" at school.  
B: I like to show things in "show and tell" at school.  
RE: switched order
48. B: A lot of things make me upset.  
A: It is hard for me to get upset.  
LONG PAUSE
49. B: I am a good girl/boy.  
A: I am not a good girl/boy.
50. A: I laugh a lot.  
B: I don't laugh a lot.  
LONG PAUSE
51. A: I try hard in school.  
B: I don't try hard in school.
52. A: People like me.  
B: People don't like me.  
LONG PAUSE
53. B: I like to look at scary things on TV.  
A: When I see something scary on TV, I cover my face.  
LONG PAUSE
54. A: I would play with a new kid in my school.  
B: I would not play with a new kid in my school.  
SHORT PAUSE
55. A: I like to boss people around.  
B: I don't like to boss people around.

56. A: I am grumpy a little of the time.  
B: I am grumpy a lot of the time.
57. B: I hardly ever get sad.  
A: I get sad a lot.  
RE: switched order
58. B: Easy puzzles are fun.  
A: Hard puzzles are fun.  
SHORT PAUSE
59. A: It's not fun to ride in a fast car.  
B: It's fun to ride in a fast car.  
RE: switched order  
SHORT PAUSE
61. A: I don't cry when I get upset.  
B: I cry when I get upset.  
RE: switched order
62. B: I feel good inside.  
A: I don't feel that good inside.
60. B: It really bothers me when strangers look at me.  
A: It doesn't bother me when strangers look at me.

*Appendix B***Teaching Tasks: Child Behavior Scales - Egeland & Sroufe Revised**

**Child Persistence:** This is a measure of the extent to which the child actually was task oriented in the session. At the low extreme, the child shows no effort on any tasks, refuses to become involved in the tasks and either flees or spends his/her time in off-task activities, or is involved only to the extent that parent enforces his/her attention to her directions and responds to her questions about the task. At the high end, the child is actively engaged in the task and attempts solutions either directly on his/her own or through parent's mediating suggestions (regardless of how good the child or parent's skills on the task really are). The child may be sober or playful, compliant or not to the parent's directions as long as he/she shows motivation toward solving the task. Although the child's degree of task motivation may depend greatly on the parent's efforts to keep the child on task, the observer should consider this rating to reflect the child's problem-solving regardless of the degree to which parent was instrumental on creating persistence.

1. Very low: Child actively tries to avoid the task. S/he seems to want no part in this task and spends as little time as s/he can get away with doing the task at all.
2. Low: Child is engaged somewhat in the task but efforts are mixed and s/he has no long periods of concentrated problem-solving. The child might respond to task-related questions but doesn't invest any effort in this or any of his/her own energies to it.
3. Moderate: Child sustains some long periods of task oriented efforts, but clearly loses interest when task reaches some difficulty level. His/her persistence eventually wanes, however, on portions of the task and s/he begins to treat them in a task-avoidant fashion with superficial answers that show lack of concentration or disinterest.
4. High: Child persists across most of the session in trying to solve the problems. S/he loses interest or concentration only sporadically within an overall pattern of effort on the task (2 instances of stopped task behavior)
5. Very high: Child is persistent virtually throughout the session. S/he displays very little if any diversionary tactics requiring special effort by the parent to engage him/her at the tasks. S/he works at each task with an apparent goal of getting correct solutions for each part of the tasks until the puzzle is finished.

Note: A child who is on task much of the time because of constant efforts by the parent to return the child to the tasks should not get a score of 5, even though the child worked at all the tasks.

**Compliance:** Child complies with parent's task directions: This scale measures the degree to which the child shows willingness to listen to parent's suggestions in the setting

and to comply with parent's requests in a reasonable manner. At the high end, a child matches his/her behavior to the parental directions in a detailed fashion. (e.g., if parent asks the child to try and use a certain piece, the child uses that piece). The child also is attentive to parent and may focus his/her activity around parent's directions to the extent that she/he provides direction. At the low end of the scale, the child actively refuses to comply with parental directions throughout most of the session. The child may do so by overt denial of parent's demands and pulling away from the parent or leaving the table, rejecting parent's physical efforts to help solve the task, and acting contrary to parent's suggestions. At intermediate scale points, the child show a mixture of compliant and rejecting response to parent's plans, acts as though incognizant of parent's suggestions either because the child is involved in his/her own schedule of activity or the parent gives few directions with which to comply.

1. Very Low: Child rejects virtually all directions of parent during the session. Early in session and continuing throughout, the child refuses to obey parent. Commands and suggestions may be followed at initial steps but are regularly sequenced with refusals to comply. In effect, the child does nothing demanded of him/her.
2. Low: Child shows strong tendency toward noncompliance but it is mixed with a few efforts to follow suggestions and directions given by parent. There are major, but isolated, episodes of noncompliance during the session, or tendencies toward noncompliance throughout, that make the interaction difficult and strained. Noncompliance is more sporadic and probably patterned to frustrating and difficult moments of the session compared to the above level.
3. Moderate: The child seems not to be strongly invested in noncompliance and basically complies eventually to most directives. There seems to be some purposeful noncompliance, however, that produces momentary difficulties between parent and child. The child basically seems compliant toward parent's demands and willing to work in collaboration with him/her, but the child's own schedule of activities sometimes leads to noncompliance.
4. High: Child complies with virtually all major directions of parent, e.g., staying on task or returning to task efforts at parent's direction, accepting parent's ideas on how to do the task. Child may not comply with lesser details with regularity; however, e.g., parent's suggestions about placing a particular piece sometimes would go unheeded. Child does not seem invested in rejecting parent's directions, and episodes of noncompliance are brief and followed by behavior indicating acceptance of parent's leadership. Child may be briefly noncompliant when frustrated or bored, but recovers quickly.
5. Very High: Child actively orients toward parent's directions in the session and complies to all major task instructions plus most details about specific behaviors on the tasks, e.g., using the particular piece parent suggests, giving answers to parent's questions about the form and color or pieces on the puzzle task. Thus,

the child molds his/her behavior into a collaborative effort with parent on the tasks, heeding suggestions with a compliance that suggests a basic trust in parent's advice and direction and acceptance of parent's authority as a guide in this situation. The child may disagree with some ideas and argue for other approaches to problem details, but these behaviors reflect autonomy within a compliant orientation rather than intentional noncompliance.

**Positive Affect:** This rating scale addresses the child's expressions of global positive affect. These feelings are expressed by a display of smiling, laughing, verbalizations (e.g., positive tone of voice, squeals of delight), or delight in response to the task. Such expressions occur outside of (or in addition to) affection displayed specifically toward the parent.

1. Very Low: No expressions of positive affect displayed. Child expresses neutral or negative affect and makes no attempt to share positive feelings, whether in response to his/her own actions or the parent's actions. Child does not smile or laugh. (Nothing at all)
2. Low: Child may be generally neutral but expresses positive feelings only once or twice during the session
3. Moderate: Child is generally contented and expresses positive emotions (more than 1 or 2 times)
4. High: Child expresses positive affect although not to the degree that a child with a 5 rating does. The child smiles and is generally in an upbeat and happy mood. S/he is enjoying the interaction (half time- more happy than neutral)
5. Very High: Child's expression of some form of positive affect (smiles, squeals, laughter) is present throughout almost all of the session. Clearly, child is thoroughly enjoying the interaction.

**Negative Affect:** This rating scale addresses the child's expression of global negative affect. Negativity can arise from a number of factors, including irritability, a bad day, a cold, or fatigue as well as emotional hostility and anger. Negativity may be expressed by fussing, pouting, crying, yelling, throwing toys, banging toys, pushing toys away, turning away, shrieking, whining, refusals, etc. Such expressions occur outside of (or in addition to) negativity displayed specifically toward the parent.

1. Very Low: No expressions of negative affect. Child expresses neutral or positive affect throughout the session. (nothing negative)
2. Low: Negative feelings are expressed once or twice during the session (negative anything at least once)

3. Moderate: Child expresses negative emotions on several occasions or during one significant period, but these are rather isolated episodes separated by periods in which the child displays more positive affect (more than 1 or 2 times).
4. High: Child expresses some form of negative affect approximately half of the time.
5. Very High: Child frequently expresses some form of negative affect (e.g., frowning, use of negative gestures, active crying, hitting, kicking, or temper tantrum) throughout the session. The degree of anger here seems so strong that the child cannot disguise it in subtle ways for very long.

Note: Make sure negative statement is actually said in a negative feeling. Child expresses negative affect not related to task. Be careful when judging sad facial expressions- make sadness and boredom be accompanied by speech reason qualifying the emotion.

**Activity Level**: This is a measure of the child's overall activity level during the session. At the high end, the child displays a tendency to run around the room, jump around, bounce on furniture, etc. The child has difficulty remaining seated, and often fidgets and manipulates toys in a rough manner (e.g., throwing them around, banging on them, etc.). At the low end, the child does not display an unusual amount of activity, given their age and the task requirements. The child does not have difficulty remaining seated for the duration of the task.

1. Very Low: Child does not display excessive activity, outside of what would be expected given his/her age. Child sits quietly for almost all of the session, and instances of higher activity are very short in duration and mild in nature (e.g., fidgeting slightly, getting up and sitting right back down).
2. Low: Child sits or stands quietly for most of the session, but may display a few instances of higher activity level (e.g., fidgeting, getting up and walking around the room briefly). These instances are short in duration and moderate in nature (e.g., no wild horseplay is displayed).
3. Moderate: Child displays evidence of moderate activity level throughout the session, or one brief instance of higher activity level. Moderate activity level may include fidgeting or playing a little rough with toys, while higher activity level includes jumping or bouncing around the room (moderate bouncing and fidgeting in place).
4. High: Child has several periods of excessive activity, including jumping around, running around the room, not remaining seated, etc. These activities are mixed, however, with periods of low activity during which the child is sitting down and attending to task (any periods of staying still).

5. Very High: Child displays excessive activity throughout most of the session, with very few or no periods of quiet, task-focused behavior (constantly in motion-unusual)

Note: Don't include standing up if it's to see something better, do look at fidgeting, look at *how* they walk around the room

**Distractibility**: This scale reflects the degree to which the child maintains attention to the task. At the low end, the child remains focused on the task and is actively engaged in the task throughout the session. At the high end, the child's attention frequently and easily shifts away from the task, and the child is minimally engaged in the task.

1. Very Low: Child remains focused on the task at hand (i.e. pays attention to his/her parent's actions and/or verbalizations, or explores puzzle) and resists external distraction (e.g., sibling interference, other activities going on in room), Child remains engaged in interaction throughout the task. Still is ok to look around once or twice, as long as it is not prolonged.
2. Low: Child may be momentarily distracted by external distraction, but returns quickly to the task at hand with little or no encouragement or prodding needed from parent. Child is engaged in interaction for extended periods of time (working with materials, but can get caught up in own agenda)
3. Moderate: Child may be momentarily distracted by external distraction and needs parental intervention to return to the task. Child does appear engaged in interaction for some periods of time (contributing to task most of time- but sometimes doing other things)
4. High: Child's attention shifts away from the task, or from one stimulus to another, and it is difficult to engage the child in an extended interaction. Any prolonged engagement relies heavily on the parent's ability to keep the child's attention. Child may try to distract from the task by making unrelated verbalizations (e.g., asking non-relevant questions, talking excessively).
5. Very High: Child's attention shifts at the slightest external stimulation, or for no apparent reason and it is almost impossible to keep him/her engaged for more than short periods of time. Child frequently tries to distract attention from the task by making unrelated verbalizations.