

SELF-PERCEIVED COMPETENCE AMONG PRESCHOOL CHILDREN IN RELATION TO TEACHER-PERCEIVED COMPETENCE

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The aims of this study were to examine the utility of the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSC; Harter & Pike, 1984) with preschoolers and to explore correspondence between children's and teacher's perceptions of child competence. Children's self-perceptions of competence were not internally consistent within the physical, maternal acceptance, or cognitive domains. Children's ratings of their competence were significantly higher than teacher ratings only for the domain of physical competence. Contrary to expectations, teachers' perceptions of children's peer

acceptance and cognitive competence were significantly higher than children's self-perceptions. Associations between children's self-perceptions and teacher ratings were nonexistent. Overall, findings suggest that the PSPCSC may not be an appropriate measure of self-perceived competence in preschool children. It may be that teacher and child reports of perceived competence tap different constructs. Additional instrument development work is needed in this area in order to more reliably measure preschool children's self-perceived competence.

A critical element in the development of children's motivation is perceived self-competence, which has been described as the degree to which an individual views him- or herself as capable in different domains (Harter, 1981). In Harter's (1981) model of effectance motivation, perceived self-competence, self-esteem, and perceptions of control contribute to an individual's desire to explore and master the environment. Support for this model has been found through research that implicates a clear link between self-perceived competence and motivational orientation (Gottfried, 1985, 1990; Harter & Connell, 1984). Interest in self-perceptions of competence has been further stimulated by the important implications it has for children's adjustment. Research suggests that academic performance, persistence, self-esteem, self-regulated learning, social acceptance, and delinquency are predicted by children's views of their own competence (Cole, Chan, & Lytton, 1989; Ford, 1995; Heckhausen & Dweck, 1998; Schunk & Zimmerman, 1994). In order to facilitate positive

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adjustment in children, it is important to understand the process by which self-perceived competence develops.

Harter (1981) proposed that self-perceived competence emerges through children's early social experiences in that the reinforcements and negative feedback children receive from parents, peers, and teachers are internalized to form their perceptions of competency and motivational orientation. That is, support from parents, peers, and teachers enhances children's feelings of self-worth and facilitates their motivation to master future skills (Harter, 1990, 1999). This internalization marks an important developmental achievement and is of particular concern because perceived self-competence and intrinsic motivation seem to lack stability between early and middle childhood (Benenson & Dweck, 1986; Carlton & Winsler, 1998). In general, studies have shown that children's perceptions of competence are usually quite high during early childhood, and tend to steadily decrease from kindergarten through about fourth grade (Benenson & Dweck, 1986; Butler, 1990; Eccles, Wigfield, Harold, & Blumenfeld, 1993).

Various, sometimes contradictory, theories have been proposed to account for these changes. It may be that such high perceptions of competence reflect the generally optimistic standards and expectations for young children held by teachers and parents (Harter, 1999), indicating the internalization of external ideals. Developmental researchers note that young children are often unable to differentiate between their real and ideal selves (Harter, 1999). Thus, young children's inflated self-perceived competency may be due to the tendency in children to report an internalized ideal for competency, rather than the actual state of their own competency (Harter, 1999; Harter & Pike, 1984; Stipek, 1981). This theory may be refuted, however, by findings that indicate discrepancies between children's perceptions of competence, teachers' perceptions of competence, and objective measures of competence. When compared to teacher perceptions of children's abilities and competencies, kindergarteners are not accurate reporters of their own competency (Gullo & Ambrose, 1987; Stipek, 1981). In fact, children's perceptions do not appear to reflect teachers' perceptions until around third grade (Nicholls, 1978, 1979; Stipek, 1981). Teacher ratings of children's abilities and competencies, however, appear to accurately predict even young children's actual competence (Gullo & Ambrose, 1987; Hoge & Butcher, 1984). These findings may indicate that children before third grade are unable to self-report accurately on competency; this may be indicative of a lack of internalization.

The need for effective assessment tools for identifying early motivational problems in children, combined with the inaccuracy of children's self-reports, underlines the importance of adult informant instruments. Parent report and teacher report on children's adjustment are the most commonly used methods for assessment during early childhood (Achenbach & Edelbrock, 1984; Kohn & Rosman, 1972). Despite the frequent use of parents or teachers as a sole source of information on children's adjustment, there has been some debate on the utility of multiple informants. Clinicians and mental health professionals, for example, tend to value multiple reports from parents, teachers, and the

children themselves in the assessment of child psychopathology (Bird, Gould, & Staghezza, 1992). Many researchers, however, have sought to identify a single source (i.e., parent, teacher, peer, self) as having the greatest degree of utility in assessing children's adjustment (Ledingham, Younger, Schwartzman, & Bergeron, 1982; Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). The majority of these studies have examined cross-informant correspondence on measures of children's behavior problems, finding substantial differences and low rates of agreement among parent, teacher, peer, and self-reports of children's adjustment (Ledingham et al., 1982; Loeber et al., 1991; Vitaro, Gagnon, & Tremblay, 1991; Winsler & Wallace, 2002). These differences are not necessarily due, however, to one informant being better equipped to report on children's behavior than another. Instead, it may be that reports from children, parents, and teachers make unique contributions to the understanding of children's adjustment (Achenbach, McConaughy, & Howell, 1987). In fact, evidence suggests that different informants do provide unique information toward the understanding of children's behavior and in making predictions about children's future functioning (Achenbach et al., 1987; Verhulst & van der Ende, 1991).

Research on the utility of multiple informants for assessing children's perceived competence is limited. The few studies that have examined cross-informant correspondence in relation to children's competence have yielded conflicting results, some finding positive correlations between children's and teachers' reports (Harter & Pike, 1984) and others finding distinct differences between child and teacher perceptions of competence (Gullo & Ambrose, 1987; Stipek, 1981). However, the majority of these studies examined these issues among kindergarten and school-aged children only (e.g., Gullo & Ambrose, 1987; Stipek, 1981), or they combined reports of preschoolers' competence with reports on older children for the purposes of reporting (e.g., Harter & Pike, 1984). Thus, little is known about the correspondence between preschool children's self-perceived competence and the perceptions of teachers.

In an effort to facilitate the assessment of children's perceived competence across multiple informants, Harter and Pike (1984) developed a scale for children between ages 4 and 7 years. Their scale, the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSC), measures children's perceptions of cognitive competence, physical competence, social competence, and maternal acceptance. Although Harter and Pike concluded from their assessment that the PSPCSC is a reliable and valid measure for children between 4 and 7 years old, acceptable reliabilities were reached only when subscales were combined, and preschoolers were combined with kindergartners, first, and second graders when comparisons were made with teacher ratings of competence. Although this scale has since been widely used, many are concerned with the scale's reliability and validity with preschool and kindergarten populations, because their ability to evaluate their own abilities and competencies appears poor until a later age (Fantuzzo, McDermott, Manz, Hampton, & Burdick, 1996; Gullo & Ambrose, 1987). Unfortunately, only a few studies have examined the utility of the PSPCSC with very young children. For

example, Gullo and Ambrose (1987) examined the utility of the PSPCSC with kindergarteners and found that kindergarteners' ratings of their own competence were inconsistent with both teacher ratings and objective measures of competence. In a study with low-income urban children enrolled in Head Start programs, Fantuzzo and colleagues (1996) tested children's comprehension of the tasks involved in the PSPCSC and found that the PSPCSC is not a developmentally appropriate tool for use with preschoolers. This study did not, however, conduct reliability analyses of the PSPCSC for this age group, nor were comparisons to teacher ratings made. Furthermore, these findings may be relevant only for groups of economically at-risk preschoolers, such as those enrolled in Head Start programs. Thus, the utility and appropriateness of the PSPCSC with normally developing preschoolers is still unclear.

The purpose of the current study was to examine the utility of the PSPCSC in a sample of normally developing preschool children and the correspondence between teacher and child reports on children's competence. The following research questions were addressed:

1. What is the internal consistency reliability of both children's and teachers' reports of children's competence as measured with the PSPCSC for preschool children?
2. Are children's self-perceptions of competence greater than teachers' reports of child competence?
3. How does perceived competence vary with age and gender?
4. To what degree is preschool children's self-perceived competence related to teachers' perception of child competence?
5. Are associations between children's and teachers' reports of child competence moderated by age or gender?

METHOD

Participants

Participants for this study were recruited from a university-affiliated laboratory preschool in the southeastern United States. A total of 32 preschoolers (*M* age of 49 months, 53% male) from two classrooms participated in the study. A reasonable range of socioeconomic status was represented in the sample (Hollingshead range = 25 to 66). Sixty-nine percent of the child participants were Caucasian, 10% were African American, and 19% were Asian American. The two (female) lead teachers from the two preschool classrooms also participated.

Procedure

A separate room of the university-affiliated laboratory preschool was used for administration of the measures used in this study. Using the PSPCSC (Harter & Pike, 1984), children were asked to report on their own perceptions of their competencies. The PSPCSC was administered to each child individually. At roughly the same time, the lead teacher for each child participant independently completed the teacher-report version of the PSPCSC.

Measures

Four subscales comprise the child-report version of the PSPCSC (Harter & Pike, 1984): cognitive competence, physical competence, peer acceptance, and maternal acceptance. Each subscale contains six items, which are presented to the child in the form of a picture depicting two children engaged in an activity. Two sets of the pictures are available with the PSPCSC. The two sets are gender specific (one for boys and one for girls), but the activities children are pictured in are identical for both sets of pictures.

For each item, the experimenter read a brief statement to the child about the picture. For example, on the cognitive competence subscale, the child was shown a picture of two children working on puzzles and was told that one child is good at puzzles and the other is not. The child was then asked to report which child in the pictures he or she is more like. After the child responded, the experimenter asked the child to indicate the degree to which he or she is like the child in the picture ("a lot," represented by a big circle, or "a little," represented by a small circle). Responses were then scored on a four-point scale, ranging from 4, *most competent* (i.e., child responded that he or she is a lot like the child good at puzzles), to 1, *least competent* (i.e., child responded that he or she is a lot like the child not good at puzzles).

The subscale for cognitive competence also includes items that assess a child's competency with colors, counting, and the alphabet. The subscale on physical competence includes pictures of children engaged in age-appropriate physical activities, such as swinging, climbing, and tying shoes. Peer acceptance is assessed with pictures of a child with other children, while the experimenter points out that the child in the picture, for example, "has friends to play with." Items on the maternal acceptance subscale include pictures of a mom and child reading, playing, talking, and smiling.

The teacher-report version of the PSPCSC includes three of the four subscales on the child-report version: cognitive competence, physical competence, and peer acceptance. Each subscale contains six items, analogous to the six items on the child-report version. For each item, the teacher rated a written description of the item on a four-point scale, ranging from 4, *really true*, to 1, *not very true*.

For both the child- and teacher-report versions of the PSPCSC, the mean of the six items on each subscale was computed. The resulting score represents the average level of perceived competence within that domain. An average of all the subscales was also computed to represent a measure of global perceived competence across all domains.

The authors of the PSPCSC indicate some evidence of reliability and validity for the measure. Although reliability estimates are available for preschoolers, the examination of the scale's validity is available only for groups including older children. Preschool children's ratings on the subscales of the PSPCSC were found to range between low and acceptable internal consistency (with alphas ranging from .66 to .85; Harter & Pike, 1984). Internal consistency for the total scale (all subscales combined) was reported to be .89 with acceptable

subscale inter-correlations (ranging from .43 to .64). Thus, Harter and Pike (1984) concluded that the PSPCSC is reliably tapping preschooler's self-perceived competence. Harter and Pike also examined the validity of this measure, which was assessed in several ways: first, by the ability of first and second graders to provide reasons for how they know they are competent within various domains (e.g., "I get the hardest words right," "I was first place in running in the gym"); second, through the correspondence between children's self-competency ratings and children's characteristics (e.g., being held back in school, attending a new school, premature birth); and third, through the correlations on cognitive and physical competence scores across children's and teacher report (although moderate to weak, ranging from .30 for physical competence to .37 for cognitive competence). The construct validity of the PSPCSC was further examined by Fantuzzo and colleagues (1996) with a sample of Head Start preschoolers. Findings indicated no clear underlying constructs in the PSPCSC reflecting the subscales proposed by Harter and Pike, nor did any other known psychological constructs appear to be represented. Other researchers have also failed to obtain acceptable validity, because kindergarteners' ratings of self-perceived competence failed to correlate with either teacher ratings or objective measures of competence, and in some cases significant negative correlations were found (Gullo & Ambrose, 1987).

RESULTS

Cronbach alphas were examined to assess the internal consistency reliability of the PSPCSC for both child and teacher report. As seen in Table 1, although teacher ratings of child competence were internally consistent at both the global and individual domain levels (alphas = .84 to .96), children's self-perceptions of competence with the cognitive, physical, and maternal acceptance domains were not internally consistent across items within the subscales (alphas = .48, .38, .67, respectively). Children's overall scores were internally consistent (alpha = .83), as were their perceptions of peer competence (alpha = .78).

Table 1
Cronbach Alpha Reliability Coefficients for the PSPCSC for both Teacher and Child Ratings of Perceived Competence

Domain	Children's Self-Perceptions	Teachers' Perceptions of Child Competence
Cognitive Competence	.48	.95
Peer Acceptance	.78	.96
Physical Competence	.38	.84
Maternal Acceptance	.67	—
Global Competence	.83	.91

Table 2 lists the means (and standard deviations) for both child and teacher ratings of competence. A repeated measures multivariate analysis of variance

(RM MANOVA) was conducted to test the hypothesis that children's self-ratings of competence were greater than teacher ratings of child competence, with rater (child, teacher) as the repeated measure and the three subscales as the multiple measures. This revealed a significant multivariate effect of rater, $F(3, 23) = 6.89, p < .01$. Follow-up univariate F tests further indicated that children's ratings of their competence were significantly higher than teacher ratings only within the domain of physical competence, $F(1, 25) = 4.72, p < .05$. Contrary to expectations, teachers' perceptions of children's cognitive competence were significantly higher than children's self-perceptions, $F(1, 25) = 6.40, p < .05$, as were teachers' perceptions of peer acceptance, $F(1, 25) = 4.61, p < .05$. A paired samples t test was also conducted to examine differences between children's and teachers' global ratings of competency (total across all subscales). Results indicated that teacher and child ratings of global competence on the PSPCSC did not differ in their means, nor was there a ceiling effect.

Table 2
Means (and Standard Deviations) for the PSPCSC for Both Teacher and Child Ratings

Domain	Children's Self-Perceptions	Teachers' Perception of Child Competence
Cognitive Competence*	3.38 (.40)	3.67 (.45)
Boys	3.42 (.41)	3.25 (1.06)
Girls	3.33 (.41)	3.67 (.31)
Peer Acceptance*	3.00 (.66)	3.35 (.69)
Boys	3.00 (.30)	3.06 (1.00)
Girls	3.03 (.47)	3.25 (.73)
Physical Competence*	3.19 (.41)	2.90 (.54)
Boys	3.08 (.43)	2.50 (.52)**
Girls	3.31 (.37)	3.03 (.57)**
Maternal Acceptance	3.01 (.56)	—
Boys	3.10 (.64)	
Girls	2.91 (.47)	
Global Competence	3.14 (.40)	3.27 (.35)
Boys	3.14 (.46)	2.90 (.69)
Girls	3.14 (.33)	3.30 (.39)

* $p < .05$. ** $p < .01$.

To examine the magnitude of these rater differences, absolute difference scores were computed between children's self-perceived competence and teacher's perceptions of children's competence (Walker & Bracken, 1996). These scores, which represent actual differences between child and teacher ratings for individual cases regardless of the direction of the difference, ranged from 0 to 2.17. Overall, the majority (61.6%) of child and teacher scores differed by .50 or less (see Table 3). Approximately 15.3% of child and teacher ratings of children's competence, however, differed by more than .75 points. Absolute difference scores across raters were also examined separately by gender, but no particular pattern of greater or lesser differences by gender was observed.

Table 3
Absolute Difference Scores between Children's and Teachers' Ratings of Child Competence on the PSPCSC and the Percentage of the Sample Exhibiting Each Level of Difference

Difference Scores	Percent Occurrence			
	Cognitive Competence	Peer Acceptance	Physical Competence	Global Competence
0.0 to 0.24	19.2	19.2	38.5	30.8
0.25 to 0.49	30.8	26.9	11.5	30.8
0.50 to 0.74	19.2	19.2	27.0	23.1
0.75 to 0.99	19.2	15.5	3.8	11.5
1.00 and above	11.6	19.2	19.2	3.8

Also of interest was whether or not perceived competence varied by the gender of the child. Two multivariate analyses of variance (MANOVA) were conducted to test for gender differences, first in teachers' and then in children's perceptions of child competence. Results yielded a marginally significant multivariate F for gender differences in teacher ratings, $F(3, 27) = 2.38, p = .09$. Follow-up univariate analyses indicated that teachers rated girls as being more physically competent than boys, $F(1, 29) = 7.41, p < .01$ (see Table 2). No other gender differences were found in teachers' perceptions of children's cognitive or peer competence, or in any of the domains of children's self-perceived competence.

Pearson correlation coefficients were also computed between child age and both child and teacher ratings of perceived competence (see Table 4). Teacher ratings of children's competence in the cognitive domain and their overall competence scores were both significantly positively correlated with age of child, but age was not associated with any of the children's self-perceptions of competence.

Table 4
Correlations between Age and Teacher and Child Ratings of Perceived Competence

Domain	Children's Self-Perceptions	Teachers' Perceptions of Child Competence
Cognitive Competence	-.18	.37*
Peer Acceptance	.00	.29
Physical Competence	-.07	.29
Maternal Acceptance	-.29	-
Global Competence	-.16	.40*

* $p < .05$.

Pearson's correlation coefficients were also computed to examine the relationship between children's and teachers' perceived competence, overall for all children and separately by gender and age group (3-year-olds and 4-year-olds). Table 5 shows that there were no significant associations between child and teacher perceptions of child competence (r s from $-.06$ to $.26$, ns), and that correspondence between teacher and child reports was no different for the 3-year-olds compared to the 4-year-olds, or for boys compared to girls. An inter-

esting and potentially concerning trend was observed in that the girls who felt they were physically competent were not the ones rated by their teachers as being physically competent ($r = -.52, p = .07$).

Table 5
Correlations between Child and Teacher Report of Child Competence, Both Overall and Separately by Gender and Age of the Child.

Domain	Overall	Boys	Girls	3 Years	4 Years
Cognitive Competence	.10	.16	-.02	-.11	.20
Peer Acceptance	.26	.19	.40	.19	.28
Physical Competence	-.06	-.05	-.52	-.07	-.06
Global Competence	-.02	-.10	.10	-.27	.21

* $p = .07$.

DISCUSSION

The PSPCSC is a widely used measure of children's self-perceived competence in the examination of young children's intrinsic motivation, academic success, socialization, and overall psychological functioning (Gullo & Ambrose, 1987; Harter, 1999; Jongmans, Demetre, Dubowitz, & Henderson, 1996; Spitzer, Cupp, & Parke, 1995). The purpose of the current study was to determine the utility of the PSPCSC with a normal sample of preschool children by examining its internal consistency reliability and by making comparisons between children's and teacher's perceptions of competence. Overall, the findings of this study suggest that the PSPCSC may not be a developmentally appropriate measure for preschoolers, validating the concerns of other researchers about the reliability and validity of the PSPCSC with at-risk preschoolers and older children (Fantuzzo et al., 1996; Gullo & Ambrose, 1987). This study, therefore, confirms the findings of earlier studies with older children that children before third grade may not be accurate reporters of their own abilities and competencies (Nicholls, 1978, 1979; Stipek, 1981), extending these findings to apply to preschoolers. More specifically, the current study replicates the findings of Gullo and Ambrose (1987) with kindergarteners, indicating that the PSPCSC appears to be an inappropriate tool for assessing the self-perceived competence of preschoolers as well.

Although teacher ratings of preschoolers' competence were internally consistent, the internal consistency reliabilities of the PSPCSC for several of the child-report subscales were unacceptable. This refutes the conclusions of Harter and Pike (1984), which were based on analyses combining the subscales of the PSPCSC. Thus, when ratings of the individual subscales are examined separately, preschoolers are not able to consistently report on their own level of competence, nor do their ratings reflect teacher ratings. Based on previous research indicating that the teacher version is a valid measure of perceived competence through similarities between teacher ratings and objective meas-

ures of competence (Gullo & Ambrose, 1987; Hoge & Butcher, 1984), we may assume that teachers are accurate reporters of children's competence using the PSPCSC. Therefore, the low reliability of child report and the lack of associations between child and teacher reports of competence suggest that (a) preschool children are not accurate reporters of the competence in different domains, and/or (b) teacher and child reports of child competence tap different constructs.

These assumptions are supported by other findings from this investigation. For example, age of the child was positively associated with teachers' but not children's perceptions of competence. These findings may suggest that, although positive developmental changes are actually occurring in children's competencies between the ages of 3 and 4 (based on teachers' perceptions), preschoolers have not acquired the cognitive ability to detect these changes in themselves. Alternatively, children may be reporting on something other than self-perceived competence that does not change between the ages of 3 and 4. For example, the PSPCSC may tap children's perceptions of their ideal levels of competence, rather than their actual competence (Harter, 1999; Harter & Pike, 1984; Stipek, 1981). These findings may be viewed as further evidence that preschoolers have difficulty reporting their self-perceptions of competence using the pictorial scale.

A finding from this study of particular interest is that preschool children's ratings of their own self-perceived competence do not appear to be systematically inflated relative to preschool teacher ratings. In fact, the finding that children's perceived cognitive competence and peer acceptance were significantly lower than teacher perceptions contradicts previous findings where preschoolers' ratings were combined with ratings from children in kindergarten, first, and second grade (Harter & Pike, 1984). This may offer evidence refuting the assumption that young children's exaggerated perceptions of competence reflect optimistic standards by parents and teachers or children's idealized view of competence (Harter, 1999; Harter & Pike, 1984; Stipek, 1981).

Although the present study was clearly limited by its small sample size, suggesting that the findings should be interpreted with caution and that replication with larger samples is certainly needed, these findings taken together suggest that while the PSPCSC may be an appropriate measure of child competence for teachers and older children, it does not appear to be a reliable or valid measure for use with preschoolers. Thus, researchers and practitioners should be cautious when drawing conclusions about young children's welfare and adjustment based on research using the PSPCSC. These findings do not suggest, however, that preschoolers' perceptions of competence are not important. They may still be related in important ways to other aspects of psychological functioning for the young child. Future research might explore whether the PSPCSC is tapping another construct of interest in young children. Additional instrument development work is clearly needed in this area in order to more reliably measure preschool children's self-perceived competence.

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