RUNNING HEAD: SOCIAL BEHAVIOR

Psychometric Analyses of the Positive Behavior Scale in the New Hope Project and the Panel Study of Income Dynamics

Sylvia R. Epps

Seoung Eun Park

Aletha C. Huston

Marika Ripke

The University of Texas at Austin

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Abstract

. In this chapter, we define positive social behavior as social competence with peers and adults, compliance to rules and adult direction, and autonomy or self-reliance. We argue that positive social behaviors represent important skills for dealing with both peers and adults. Positive social behavior is not simply the absence of problem behavior

We begin with a detailed analysis of the psychometric properties of the Positive Behavior Scale using data from two studies. First, we draw on an evaluation of the New Hope Project, in which children in low-income families were evaluated on two occasions separated by three years. Second, we report analyses from a nationally representative sample of children studied in the Child Development Supplement of the Panel Study of Income Dynamics (PSID). Both samples include children from African American, Hispanic, and European American ethnic groups.

We report internal consistency, correlations among subscales, correlations among raters, and stability over time. We also examine construct validity by considering the correlations with related measures. Finally, we report average scores in the two samples by child gender, child age, ethnic group, parent education, and family income.

On the whole, the scale is highly internally consistent. The correlations among the subscales suggest considerable overlap in the characteristics measured, but there is some evidence that the subscales represent distinct aspects of social behavior. Parent and teacher reports also indicate stability over a three-year time period. There are, however, weak correlations between parents' and teachers' ratings at each time point.

There is modest evidence for construct validity. On average, girls were rated higher than boys on the positive behavior scales, particularly on compliance to adults. There were minimal differences among age groups. In most comparisons, Hispanic children were rated highest and White Non-Hispanic children

were rated lowest, with African American children falling somewhere in between. There were inconsistent differences associated with parent education and income.

Overall, the Positive Behavior Scale is a reliable measure of children's social competence, compliance, and autonomy in home and school settings. The evidence from this scale and other similar measures strongly suggests that social behavior and skills are specific to particular environments and settings, but are moderately stable over time within settings. The fact that social behavior is context-specific suggests that information should be collected from multiple settings and reporters in order to gain a full understanding of the child's social competence.

Introduction

In this chapter, we define positive social behavior as social competence with peers and adults, compliance to rules and adult direction, and autonomy or self-reliance. Social competence or social skills include: getting along with peers; being well-liked; being generous and thoughtful; and being perceptive about others' feelings and perspectives. Compliance is not merely obedience, but conforming to expectations without constant supervision. High autonomy entails self-reliance, doing things on one's own, and not relying on others for unnecessary help. These positive behaviors are more than the absence of problems; they represent important skills for dealing with both peers and adults.

Historically, policy research on children and youth has emphasized negative behavior; this tendency reflects and also may contribute to the negative images of youth. Few studies have given equal weight youths' positive behavior. It is important to understand both positive and negative behavior so that adults (parents, teachers, etc.) can make efforts not only to correct problems, but also to foster social skills and other kinds of positive behavior.

One requirement for understanding positive social behavior is the availability of reliable and valid assessment tools. In this paper, we examine the psychometric properties of the Positive Behavior Scale, which was originally developed for a study of young children from low-income families whose mothers were participating in an intervention called New Chance (Quint, Bos, and Polit, 1997). The scale was subsequently used in several evaluations of welfare and employment programs for children across a wide age range and in national surveys. We draw on data from two studies. The first is the New Hope Project, in which children in low-income families were evaluated on two occasions separated by three years. The second is a nationally

representative sample of children studied in the Child Development Supplement of the Panel Study of Income Dynamics (PSID-CDS).

Historical Importance

Positive child social behavior has often been assumed to be the opposite of problem behavior, an assumption that we challenge in this paper. Positive or prosocial behaviors can include social skills for relating to peers and adults, empathic and helpful actions, responsibility, autonomy, and self-control. One definition includes voluntary actions that are intended to help or benefit another individual or group (Eisenberg & Mussen, 1989; Eisenberg & Fabes, 1997). Problem behavior, by contrast, is generally defined as behavior that deviates from social norms or indicates distress and unhappiness. The most common measures of problem behaviors suggest two extremes: externalizing and internalizing problems. Externalizing problems involve low levels of behavior control—aggression, defiance, anger, and socially disapproved actions. Internalizing problems are indicated by social withdrawal, sadness, and signs of anxiety (e.g., see Child Behavior Checklist) (Achenbach, Edelbrock, & Howell, 1987). Clearly, positive and problem behaviors are not the opposite ends of one dimension and many have argued that they should be measured separately to reflect their conceptual independence (Aber & Jones, 1997).

Eisenberg & Mussen (1989) suggest that there has been a lag in research on positive social behavior for several reasons. First, society has only recently recognized the importance of prosocial behavior and its role in enhancing humanity. The increase in interest led to studies designed to understand how prosocial behaviors develop and the role societal institutions, (i.e., the education system, religious organizations, and families) play in fostering these behaviors early in life. Another reason for the lack of research is the absence of a widely accepted method of assessing prosocial behavior (Eisenberg & Mussen, 1989). Until about 30 years ago, there

was little interest in studying prosocial behavior, and both definition and measurement issues are complex.

Assessment tools for prosocial behavior have normally fallen into one of five categories: naturalistic observations, situational tests, ratings, sociometric questionnaires, and self report questionnaires (Eisenberg & Mussen, 1989). Researchers often develop their own assessment tool to fit their needs because there is no standard measure of prosocial behavior. Standardized scales for positive behavior have been slow to emerge for two major reasons: a lack of a consensus on what defines positive development and a growing gap between developmental theories and methods (Aber & Jones, 1997).

Rating scales and questionnaires are the most economical methods of measuring social behavior. The Positive Behavior Scale was developed originally because no available scale was well-suited for use with young children in low-income families. There are three subscales: social competence, compliance, and autonomy.

Two other scales are fairly widely used. The Social Skills Rating System, created by Elliot and Gresham (1987) defines social skills as the interaction between individuals and the environment, and the tools used to initiate and maintain vital interpersonal relations. They specify three components of social skills: 1) peer acceptance (is the child accepted by peers), 2) behavior (behaviors exhibited in specific settings and situations in which punishment is dependent on one's behavior), and 3) social validity (behaviors that predict a child's position on important social outcomes) (Elliot & Gresham, 1987). Including both prosocial and negative behavior provides an understanding of the reasoning behind selecting specific behaviors for their measure. This conceptualization serves as an appropriate guideline for developing assessments because it specifies the features of behavior necessary to label it prosocial.

The Social Skills Rating System (SSRS), is a rating scale used by parents, teachers, and children to rate social behavior on a 3-point scale (often true, sometimes true, never true) (Gresham & Elliot, 1987). It has items representing both positive and problem behaviors. A significant feature of this scale is the parent's or teacher's report of how important each behavior is for the child's success in a variety of settings.

A second commonly used rating scale for social behavior is the Child Behavior Checklist (Achenbach et.al., 1987). It contains a brief scale titled Social Competence, but the overall measure contains much more detail about problem behaviors than about positive behaviors.

A related measure of problem behavior is the Behavior Problem Index (BPI), a 26-item scale designed for children ages 4 years and older (Quint, Bos, and Polit, 1997). It was developed for the 1981 Child Health Supplement to the National Health Interview Survey (Peterson & Zill, 1986), and was also used in the New Chance study and the National Longitudinal Survey of Youth. It is widely used for several reasons including its ability to measure a broad developmental range and its simplicity in reading and understanding.

The overall purpose of this paper is to provide detail information about the Positive Behavior Scale measure as an indicator of children's well-being. We examine data collected from two studies in which the Positive Behavior Scale was administered. First, we report internal consistency, correlations among subscales, correlations among raters, and stability over time. Second, we examine construct validity by considering the correlations with problem behaviors, achievement, peer relationships, and perceived competence. Finally, we report scores by child gender, child age, ethnic group, parent education, and family income.

Methods

The New Hope Sample

The New Hope project is a longitudinal study of a work-based poverty intervention program for families with low incomes in Milwaukee, Wisconsin. Adults (parents) were randomly assigned in a lottery-like process to either a program group (with access to New Hope services) or a control group (with no access to New Hope services, but able to seek other services). To date, data have been collected two years (Time 1) and five years (Time 2) since the initial treatment phase began, and an 8-year follow up is in the beginning phase of development.

The sample used in this report consists of families who had at least one child between the ages of 3 and 12 at the two-year anniversary of sample enrollment and between ages 6 and 15 at the five-year anniversary. Up to two children were selected from these families. Of the 745 eligible parents, 580 (78%) responded at two years and 547 (73%) responded at five years. The Positive Behavior Scale was completed by parents during an individual interview and by teachers as part of a mailed questionnaire.

All interviews were conducted in person unless the family had moved too far from Milwaukee; phone interviews were conducted for people living more than two or three hours from the city. Children who were 6 years old or older were also interviewed.

Characteristics of the sample at the time of recruitment are shown in Table 1. When they entered the New Hope study, the average age of the parents was 29. About 55 percent of the sample were African American, 29 percent were Hispanic, 13 percent were White, and 3 percent were of other racial/ethnic backgrounds. The majority of the parents (primarily mothers) had never been married, and 11 percent were currently married and living with their spouse. At

Time 1 (two years after enrollment), the average family income was $14,000; at Time 2 (five years after recruitment), it was $22,000.

[Table1 about here]

The Panel Study of Income Dynamics (PSID)

The Child Development Supplement (CDS) of the Panel Study of Income Dynamics (PSID) was collected by the Institute for Social Research at the University of Michigan in 1997 (Hofferth, 1998). The PSID, a longitudinal study focusing primarily on the transfer of capital within families and conducted since 1967, was extended in 1997 to obtain measures for children ages 12 years and under. The measures assessed each family's home environment, economic status, and a myriad of parenting attitudes and practices, as well as information on children's cognitive ability, academic achievement and socio-emotional well-being. For a more complete discussion of the PSID and the CDS samples see Hofferth and Sandberg (2001).

The data for the 1997 Child Development Supplement are from three different samples: 1) the original nationally representative sample of U.S. households from the PSID; 2) an oversample of low income, mostly African-American families from the Survey of Economic Opportunity, and 3) a refresher sample of immigrant families. In this paper, all analyses were conducted using weighted data (with weights recalibrated for our subsample) and are therefore representative of the U.S. population. Of all families in the PSID with children under twelve, 2,380 agreed to participate, yielding a total CDS sample of 3,562 children. Up to two children in each family from age 1 to 12 could be included.

The unweighted and weighted estimates of household characteristics are shown in Table 2. Fifty-one percent are girls and 49 percent are boys. The average age of the head of the family

was 36.3 years old. About 46 percent of the sample is White, 41 percent are African American, 7 percent are Hispanic, 2 percent are Asian and 4 percent are Native American or other. The average number of years of school the head of the family completed was 12.61 years. The average family income was about $44,063. The majority of the sample lived in married two-parent families (60 percent), with a smaller percentage living in single-parent families (33 percent) (i.e. never married, separated, divorced, or widowed).

There are important differences between the New Hope and PSID samples. The New Hope sample is drawn from one community and consists primarily of single-parent families with low incomes. Most of the families are ethnic minorities. The PSID is a nationally representative sample with a predominance of whites and a wider income range, ranging from almost nothing to over $1 million.

[Table2]

Measure of Positive Social Behavior

The Positive Behavior Scale was developed for the New Chance study to assess positive behaviors in a population of educationally and economically disadvantaged children and youth (Quint, et. al., 1997). Items were adapted from the Block and Block California Child Q Set (CCQS), and other items were newly developed (Quint, Bos, and Polit, 1997). The scale, which includes 25 items, is divided into three subscales: (a) social competence and sensitivity (e.g., gets along well with other children, shows concern for other people's feelings); (b) compliance and self-control (e.g., thinks before he/she acts, usually does what I till him/her); and (c) autonomy (e.g., tries to do things for him/herself, is self-reliant). The scale is also intended to measure other constructs including obedience, persistence, and self-esteem. Parents and teachers use a

five-point scale, ranging from "never" to "all of the time" to describe the frequency with which the child manifests each behavior. The items in the parent and teacher versions are slightly different, reflecting the different contexts in which the child is observed. The complete list of items in both versions appears in Appendix 1.

In the PSID-CDS, parents completed a shortened version of the Positive Behavior Scale with only 10 items which focused on social competence and compliance. The primary caregiver responded on a five-point scale ranging from "not at all like my child" to "totally like my child". The items in the abbreviated version are designated in Appendix 1.

Other Measures

Other measures administered to parents and children were examined in this report to provide information about the construct validity and correlates of the PBS.

Problem behavior. In both the New Hope and PSID samples, we examined the relationship between positive behavior and problem behavior using parent and teacher reports. The Problem Behavior Scale from the Social Skills Rating System was administered to both parents and teachers in the New Hope study (Gresham & Elliot, 1990). Parents received two subscales: *externalizing* problems and *internalizing* problems. Teachers completed the externalizing, internalizing, and hyperactivity scales.

Achievement. Parents and teachers reported children's school achievement. Parents' report was based on their knowledge of recent report cards, as well as an evaluation of their child's performance in reading, mathematics, and written work. Teachers completed the Academic Subscale of the Social Skills Rating System (New Hope only) (Gresham & Elliot, 1990). They responded to 10 items on a scale of 1 'lowest 10% of class' to 5 'highest 10% of class' assessing children's performance in comparison to others in the same classroom on

reading skill, math skill, intellectual functioning, motivation, oral communication, classroom behavior, and parental encouragement.

Friendship quality. In the New Hope study, children responded to the Loneliness and Social Dissatisfaction Questionnaire (or friendship scale), which measures the child's perceptions of peer relations and friendships (Cassidy & Asher, 1992). The items include: "do you feel alone?", "do the kids at school like you?", and "is it easy for you to make new friends?" All items were coded so that higher scores indicate more satisfaction with friendships.

Relationship with parents. Children reported their perceptions of their relationship with their parents in the New Hope sample. This measure was adapted from the Child Evaluation of Relationship with Mother/Caregiver measure, which was developed as part of a study of low-income African-American families (McLoyd, Jayaratne, Ceballo, & Borquez, 1994). Children aged 6-12 indicated on a 5-point scale (1 = not at all true, 5 = very true) how true 19 statements were about the parent, their relations with the parent, and interactions with the parent (e.g., "Your parent spends a lot of time talking with you").

Academic competence. Children rated their perceived academic competence in New Hope. These items were adapted from the Self and Task Perception Questionnaire and contained questions assessing children's self-concept of ability, expectations for success, extrinsic and intrinsic utility value, and attainment value regarding Math and English/Reading (e.g., how good at English are you; how useful is what you learn in math) (Eccles, 1983). In the PSID, teachers rated children's competence in academic, physical (athletic), and social skills.

Results

To examine the psychometric properties of the Positive Behavior Scale, we report internal consistency, correlations among subscales, correlations among raters, and stability over time. We also examine the construct validity by considering the correlations with related measures and average scores in both samples by child gender, child age, ethnic group, parent education, and family income.

Reliability

Internal consistency. The internal consistencies of the total score and of the three subscales were tested using Cronbach Alpha (shown in Table 3). A higher level on the alpha indicates that the items on the subscales fit together well in a given administration. Internal consistencies greater than .70 are considered to be adequate. In the New Hope sample, which received all 25 items, the alphas for total positive behavior were all above .90. The internal consistency of the subscales was also high, ranging from .71 to .92. The alpha for the 10-item positive behavior scale in the PSID was .79. (see Table 3)

[Table 3]

Correlations among subscales. The correlations among subscales are shown in Tables 4 (the two-year follow-up) and 5 (the five-year follow-up) for the New Hope sample. In general, there were high inter-correlations among the three subscales, ranging from .38 to .96. These analyses could not be completed for the PSID because only 10 items were included.

[Table 4] [Table 5]

Correlations among raters. Parent and teacher reports of child social behavior were minimally related. The correlations between their ratings of total positive behavior were .19 (Time 1) and .24 (Time 2). The correlations for the subscales ranged from .01 to .25 (Time 1)

and .08 to .25 (Time 2) (see Tables 4 & 5). These weak correlations between parent and teacher report are consistent with other findings on child social behavior.

Stability over time. Parent and teacher reports of child social behavior indicated moderate stability over time. They are shown in Table 6. For parents, the relation between total scores at Time 1 and Time 2 was .51—indicating moderate stability over a 3-year period. The correlation between teacher ratings of total positive behavior at the two time periods was .42, a fairly high correlation considering the fact that different teachers made the two sets of ratings, and many children had moved from elementary to middle or junior high school. The stability of the subscales was somewhat lower, but most of the correlations were positive and statistically significant.

[Table6]

Validity

Construct validity: The New Hope Project. There were generally moderate to high correlations between the Positive Behavior Scale and the Problem Behavior Scale at Times 1 & 2. The correlations were higher for teacher ratings than for parent ratings. The correlation between total positive and problem scores for teachers was -.80 and -.81 at the two time periods. Correlations among subscales of the two measures were also generally high. For parent ratings, the correlations of total positive and problem behavior were -.50 and -.48 for the two time periods, and the correlations among subscales were lower as well.

Parent reports of positive behavior were modestly related to school achievement as reported by parents (r = .30), but bore little relation to teacher-reported school achievement (r = .11). Teacher reports of positive behavior were highly related to teacher reported achievement (r = .70) and modestly related to parent-reported achievement (r = .37). This pattern suggests that

children's academic achievement had a larger effect on teachers' perceptions of their positive behavior than it did on parents' reports, perhaps accounting in part for the differences between parent and teacher ratings of positive and problem behavior.

There were weak relationships of positive behavior (as rated by parents and teachers) to children's perceived positive relationships with their parents and their satisfaction with friendships, primarily at Time 2. Children with higher scores on positive behavior perceived their relations with their parents as more positive and were more satisfied with their friendships. There were few significant relations of positive behavior to children's perceived academic competence.

The Panel Study of Income Dynamics. Correlations of the Positive Behavior Scale with other child measures in the PSID are shown in Table 7. There were significant relationships between positive and problem behaviors. Positive behavior (as rated by parent) was associated with low problem behavior, especially low levels of externalizing behavior, according to parent ratings (-.59). Positive behavior rated by parents was also modestly associated with low teacher ratings of problem behavior (-.23). The correlations with the problem behavior subscales ranged from -.19 to -.61. These results were consistent with the levels of association in New Hope. There were significant relationships between the primary caregiver report of positive behavior and teacher reports of competence in academic, physical, and social skills. The correlation coefficients ranged from .17 to .23, all significant at the .001 level (see Table 7).

[Table 7]

Differences among groups

We used one-way analysis of variances (ANOVA) to assess gender, ethnic, income, and education differences. In addition, a two-way analysis was conducted to determine gender and age differences.

Gender. In general, girls scored higher than boys on positive behavior in both studies. The means and standard deviations for New Hope are shown in Table 8. The difference in total positive behavior was significant in New Hope parent ratings at Time 2, New Hope teacher ratings at both times, and in the PSID parent ratings. The largest differences between boys and girls appeared on the compliance subscales; girls were rated considerably more compliant than boys were.

[Table 8]

Gender and age. For the New Hope sample, three age groups were formed at Time 1: 3-5, 6-8, and 9-12. The means and standard deviations are shown in Table 9. For parent reports, the patterns of age differences were different for boys and girls[1]. Parents rated older girls slightly higher than younger girls, but rated older boys lower than younger boys. Teachers rated older children lower than they did younger children on social competence[2] and total positive behavior.[3] At each age level, they rated girls higher than boys on social competence[4], compliance[5], and total positive behavior[6].

[Table 9]

[1] There was a significant interaction of age x gender on compliance $F(2, 241) = 3.34$, $p<.05$.
[2] $F(2, 241)=3.04$, $p<.05$.
[3] $F(2, 242)=4.03$, $p<.05$.
[4] $F(1, 241)=8.65$, $p<.01$
[5] $F(1, 241)=16.54$, $p<.001$
[6] $F(1, 242)=10.98$, $p<.001$

At Time 2, the New Hope age groups were 6-8, 9-12, and 13-16. The means are shown in Table 10. Parents rated girls higher than boys on compliance[7] and total positive behavior,[8] and their ratings did not differ significantly for children of different ages. For teacher reports, there were main effects of gender on social competence[9], compliance[10], autonomy[11], and total positive behavior[12]. For the oldest group, who were adolescents, teachers' ratings of girls were lower and more similar to those for boys.[13] Overall, teachers rated younger children more favorably than older children on social competence[14] and total positive behavior.[15]

[Table 10]

In the PSID sample; children were grouped in ages 0-2, 3-5, 6-8, and 9-12. The weighted means and standard deviations are presented in Table 11. Parents rated girls higher than boys, but this difference was minimal for 3-5 year-olds. There were no overall differences among age groups. Older boys' scores were equal to or slightly lower than those of younger boys, but older girls had somewhat higher scores than younger girls did.

[Table 11]

Ethnicity. In both samples, Hispanic children were rated more positively than were children in other ethnic groups (see Table 12). At both Times 1 and 2, parents and teachers in the New Hope sample rated Hispanics the highest and Whites the lowest on positive behavior. Hispanics were significantly higher than Whites, while Whites were significantly higher than

[7] $F(1, 476)=5.20$, $p<.05$
[8] $F(1, 504)=4.71$, $p<.05$
[9] $F(1, 476)=8.61$, $p<.01$
[10] $F(1, 476)=15.03$, $p<.001$
[11] $F(1, 476)=6.30$, $p<.05$
[12] $F(1, 504)=11.73$, $p<.001$
[13] The interaction of age x gender on compliance was $F(2, 476)=3.51$, $p<.05$.
[14] $F(2, 476)=5.04$, $p<.01$.
[15] $F(2, 504)=5.02$, $p<.01$

African-Americans and Hispanics. There were significant differences between each group on all subscales except autonomy for parent reports at Time 1 & 2 and teacher reports at Time 1.

In the PSID sample, Hispanic children displayed more positive behaviors than the other three groups. The weighted means and standard deviations are given in Table 12.

[Table 12]

Parent Education. We created two education categories in the New Hope data: less than a high school diploma and a high school diploma or more, to determine if children's behavior differed by the level of the education of their parent. Table 13 displays the means and standard deviations of each group at Time 1 and 2. There were no significant differences associated with parent education except for teacher ratings at Time 2. Teachers rated children of more educated parents higher on all three subscales than they did children of less educated parents.

Because the range of education in the PSID sample was larger than that in New Hope, we created four categories describing the education of the head of the household: less than high school, high school, college, and above college. The weighted means and standard deviations are presented in Table 14. There was a significant association between education and positive behavior. Children who lived with a household head with less than a high school diploma were rated as higher on positive behaviors than were children in the high school or the college groups. Children who lived with a household head in the above college group did not differ significantly from any other groups.

[Table 13] [Table 14]

Family income. Families with incomes less than $15,000 were compared to those with incomes higher than $15,000 in the New Hope sample. Table 15 shows the means and standard deviations for each group. There were no significant differences associated with family income at Time 1, but at Time 2, children in families with incomes greater than $15,000 were rated higher by parents and teachers.

For the PSID sample, four income groups were created using the income-to-needs ratio[16] (Group1: income-to- needs ratio < 1.0; Group 2: 1.0 <= income-to- needs ratio < 2.0; Group 3: 2.0 <= income to needs ratio <= 3.0; Group 4: 3.0 < income-to-needs ratio). Each group's weighted means and standard deviations are presented in Table16. There was a significant relation between income and positive behavior; children in the lowest income group were rated higher than those in other groups.

[Table 15][Table 16]

Summary and Discussion

The purpose of this paper is to describe the reliability and validity of the Positive Behavior Scale using two distinct samples. On the whole, the scale is highly reliable. Both the total score and the three subscales have high internal consistency. Parent and teacher reports also indicate moderate stability within contexts over a three-year time period. This stability is particularly striking because the teachers performing the ratings were different, and they were often in different schools. It appears that children's behavior at home and at school remains reasonably consistent over time.

[16] Income to needs is annual family income divided by the federal poverty threshold for that family size and composition.

By contrast, social behavior appears to be context-specific, a finding that is consistent with other literature. There were weak correlations between parents' and teachers' ratings of children's positive behavior at each time period. Some of the discrepancy may be due to different biases by raters, but some of it probably reflects real differences in behavior as observed by parents and teachers. Children behave differently in different settings. Different settings contain different behavioral requirements, and children adapt their behavior to the environment. For example, at school they may act to gain acceptance from their teachers or peers, whereas as at home they may act to gain acceptance from their parents and have their needs met.

Teachers may rate children's positive behavior on the basis of its frequency and their inferences about its possible motives (Eisenberg, et. al, 2001). Teachers compare children to their classmates, but parents have fewer points of comparison, particularly with children of the same age. Teachers see children in one setting, unlike parents who see their children in a variety of settings and with a variety of different people.

Parents and teachers may have different expectations and values for children's behavior. For example, parents may focus their expectations on their children getting along with their siblings, being considerate of others, and being happy, all of which are captured by items on the social competence subscale. Teachers may be concerned with their students sticking with their activities until they are finished, waiting their turn, and being prepared for classroom work, all of which are items on the compliance subscale. Teachers' positive behavior ratings were highly correlated with children's achievement and classroom behavior, suggesting that these valued components of school behavior affected their views of children's social qualities. There is also

the possibility of a halo effect, given that the teacher ratings of achievement and social behavior are highly correlated.

One question concerns the utility of the subscales. The subscales have relatively high correlations with one another, suggesting that the total score is most useful for many purposes. In fact, it was apparently assumed in the PSID that a subset of the items was sufficient to represent the construct. For some purposes, however, differentiating compliance from autonomy, for example, may yield useful information.

We tested construct validity by examining the relation of positive behavior scores to other characteristics of children as reported by parents, teachers, and children. There was modest evidence for construct validity. Children who were rated high on positive behavior were rated low in problem behavior, particularly externalizing behavior. These associations occurred primarily within raters. That is, parents who rated children high on positive behavior also rated them low on problem behavior. Similarly, teachers' positive behavior ratings were associated with low ratings on behavior problems, but the relations across raters were low. There was evidence, however, that the two measures offered different information; the correlations were not so high that it is reasonable to assume that positive and problem behaviors are mirror images of one another.

Children with positive social behavior skills, particularly compliance, might be expected to perform well in school. In fact, teachers' reports of positive behavior were associated with their perceptions of children's achievement, and parents' reports were less strongly associated with achievement. In the PSID sample, children rated high in positive behavior by their primary caregiver were also rated high in academic competence, physical competence, and social competence by teachers.

Children with good positive behavior skills might also be expected to have more successful relationships with parents and peers, and to feel more competent academically. There was little support for this prediction. Children with higher scores on positive behavior (from either parents or teachers) were slightly more likely to report having satisfactory friendships and to report positive relationships with their parents. They did not generally feel more academically competent. These findings suggest that children's own perceptions of their social and academic competence are not highly related to those of either their parents or their teachers. Overall, there was mixed evidence for the construct validity of the measure.

We examined differences among groups based on gender, age, ethnic group, parent education, and family income. On average, girls were rated higher on positive behavior than boys. These gender differences likely reflect societal expectations and are consistent with observational findings. For example, several studies have reported that girls are more likely than boys to comfort, share, and be helpful to others (Feshbach, 1978; Lennon & Eisenberg, 1987; Moore & Eisenberg, 1984; Mussen & Eisenberg, 1977). Gender differences were largest on the compliance subscale and smallest on autonomy, a pattern that is consistent with sex-typed social norms and earlier findings. In an early review of sex differences, Maccoby and Jacklin (1974) concluded that the only consistent observed behavioral difference between boys and girls was on compliance to adults.

Age differences were not clear. There were minimal differences between age groups for parent report and several for teacher report; the patterns were inconsistent in the two samples. Older children were rated less positively than younger ones in New Hope, but more positively in PSID. Whatever the reasons, the absence of large age differences suggests that the measure is useful across a wide age range.

Three ethnic groups were represented in both studies, and consistent patterns of differences associated with ethnic group appeared. In most comparisons, Hispanic children were rated highest and White Non-Hispanic children were rated lowest, with African American children falling somewhere in between. These patterns occurred more consistently in parent than in teacher ratings. Although the differences could reflect ethnic differences in standards held by parents or in the tendency to describe one's child in a positive light, their consistency suggests that they are also a valid reflection of group differences. However, there is concern about whether the these items measuring "good" social behavior are culturally biased or if what we are finding reflect true differences between racial and ethnic groups.

Many members of low-income minority communities are concerned about ethnic stereotyping in school, so it is interesting to note that teachers did not manifest negative stereotypes of African American or Hispanic children in comparison to White children. One reason may be familiarity with minority children. The New Hope children attended schools that, in many instances, served large numbers of ethnic minority children. Teachers may have been familiar with the behavior styles of these ethnic groups and may have adapted their expectations accordingly. For example, compliance or autonomy may be manifested somewhat different for a child from a Hispanic family than for a child from a White family. It is important to note that the ethnic group differences in rating patterns were stable over time.

There were inconsistent differences associated with parent education and income. In New Hope, children from both education groups were rated almost identically by parents both times and by teachers at Time 1. Teachers at Time 2 rated children from higher education families more positively than those from lower education families. A similar pattern occurred for the comparison of lower and higher income families. By contrast, in the PSID, children in

families with less than a high school education and those in families living below poverty were rated the highest on positive behaviors by their parents.

The discrepancy could be a result of the differing characteristics of the samples. The New Hope sample lived in one community and had an income constraint; the PSID sample is nationally representative and includes the entire parent education and income ranges of the United States. Most of the differences based on income and education in New Hope appeared in the teacher ratings, and there are no comparable data in PSID. There was some tendency for teachers to perceive children from relatively more advantaged homes more positively than those from homes with very low parent education and income. The differences in the PSID are relatively small. Parents with low levels of education and income may perceive their children more positively, or those with higher levels may be more willing to acknowledge their children's faults. It is also possible that children from low-income families exhibit slightly more positive behaviors at home than do children from families with higher income.

In summary, the Positive Behavior Scale is a reliable measure of children's social competence, compliance, and autonomy in home and school settings, at least as they are perceived by important adults in their lives. Individual differences are stable over a long period of time. There is some evidence for validity. The evidence from this scale and other similar measures indicate that social behavior and skills are specific to particular environments and settings, suggesting that information should be collected from multiple settings and reporters, including the child, in order to gain a full understanding of the child's social competence. It might also be possible to improve the usefulness of the scale by adapting it to fit the home and school contexts, yet measure the same constructs. The subscales are highly related, but they represent conceptually distinct constructs that may be useful in some instances.

The patterns of group differences suggest that the scale provides comparable measures across a range of ages, socioeconomic levels, and ethnic groups. Gender differences are possible evidence of validity, given the large literature showing gender differences in observed social behavior. The scale has not been extensively used for samples over the age of 12, and more data are needed to extend the scale appropriately for adolescents. More information on its predictive validity for children's social adjustment in school and other settings is also needed.

In conclusion, we recommend that this scale be used to assess positive behavior. It appears worthwhile to include the entire scale with its three subscales whenever possible, but the reduced length 10-item version used in the PSID is reliable and may be adequate for some purposes. Data from two samples, one predominantly from low-income families and one a nationally representative sample, provide consistent evidence that this measure assesses positive behavior, not simply the absence of problem behavior, and is appropriate for parents, teachers, all ethnic backgrounds, and all ages up to about age 12.

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Appendix 1

<Positive Behavior Scale, Parent Version >

1. Social Competence subscales (11 itmes)
   The target child:
   a. Is cheerful, happy*
   b. Is warm, loving*
   c. Is curious and exploring, likes new experiences*
   d. Gets along well with other kids*
   e. Can get over being upset quickly*
   f. Is admired and well liked by other kids*
   g. Shows concern for other people's feelings
   h. Is easily calmed when (he/she) gets angry
   i. Is helpful and cooperative
   j. Is considerate and thoughtful of other kids
   k. Tends to give, lend, and share

2. Autonomy subscales (5 items)

The target child:

   l. Does things for (him/her)self, is self-reliant*
   m. Can easily find something to do on (his/her) own
   n. Shows pride when (he/she) does something well or learns something new
   o. Sticks up for (him/her) self, is self-assertive
   p. Is independent, does things (him/her)self

3. Compliance subscales (9 items)

The target child:

   q. Waits his or her turn during activities*
   r. Thinks before he or she acts, is not impulsive*
   s. Usually does what I tell (him/her) to do*
   t. Is able to concentrate or focus on an activity
   u. Is obedient, follows rules
   v. Is calm, easy-going
   w. Sticks with an activity until it is finished
   x. Is eager to please
   y. Is patient when (he/she) wants something

<Positive Behavior Scale, Teacher Version>

1. Social Competence Subscale (11 items)

This student:

a. Is cheerful, happy
b. Is curious and exploring, likes new experiences
c. Does neat, careful work
d. Gets along well with other students
e. Can get over being upset quickly
f. Is admired and well-liked by other students
g. Shows concern for other people's feelings
h. Is easily comforted when he/she gets angry
i. Is helpful and cooperative
j. Is considerate and thoughtful of other students
k. Tends to give, lend, and share

2. Autonomy Subscale (5 items)

This student:

l. Tries to do things for him/herself, is self-reliant
m. Tends to be a leader among students his/her own age
n. Shows pride when he/she does something well and learns something new
o. Sticks up for him/herself, is self-assertive
p. Tries to be independent, to do things for him/herself

3. Compliance Subscale (9 items)

This student:

q. Waits his/her turn in games and other activities
r. Thinks before he/she acts, is not impulsive
s. Usually does what I tell him/her to do
t. Is able to concentrate or focus on an activity
u. Is obedient, follows rules
v. Is calm, easy-going
w. Sticks with an activity until it is finished
x. Is eager to please
y. Is well-prepared for classroom work or tests

Note. Asterisks ("*") indicate items used in the PSID-CDS.