

ABSTRACT

Title of Document: ASSESSMENT OF SOCIAL COMPETENCE
AND PROBLEM BEHAVIOR: THE
PSYCHOMETRIC PROPERTIES OF A
SOCIAL COMPETENCY RATING FORM

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and Personnel Services

Intervention programs commonly target the development of social competencies and the prevention of problem behaviors among children. Practical assessment measures are necessary for evaluating these interventions. Examination of popularly used instruments reveals the need for a brief rating scale that measures both social competencies and problem behaviors. The Social Competency Rating Form (Gottfredson et al., 2002) is a brief 29-item scale designed to be user-friendly and closely aligned with the objectives of cognitive-behavioral social skills training programs for adolescents. It also serves as a research tool in studying social competence and problem behaviors, especially in the context of evaluating intervention programs. This study shows an adaptation of the SCRF to be a reliable and valid measure for use with elementary school children.

ASSESSMENT OF SOCIAL COMPETENCE AND PROBLEM BEHAVIOR: THE
PSYCHOMETRIC PROPERTIES OF A SOCIAL COMPETENCY RATING FORM

By

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Chapter 1: Introduction

Social skills are specific behaviors that an individual exhibits in order to competently carry out a social task, and social competence is a summative judgment of one's ability to use these skills when contextually appropriate (Gresham, 1986). Social competencies have been suggested as protective factors for resilient youth (Consortium on the School-based Promotion of Social Competence, 1994). The promotion of social competencies may be useful in the prevention of childhood psychosocial problems such as delinquency and drug use (Chung & Elias, 1996), the promotion of academic adjustment (Gresham & Elliott, 1990), and in the treatment of behavioral and emotional problems such as oppositional defiant disorder, conduct disorder, depression, and anxiety (Vera & Gaubatz, 2002). A prosocial style of interacting with others is an important precursor of peer acceptance and children's social adjustment (Webster-Stratton & Lindsay, 1999), while peer rejection in elementary school has been identified as a risk factor for adolescent drug abuse and other antisocial behaviors (Consortium on the School-based Promotion of Social Competence, 1994).

Moreover, displaying problem behaviors impedes the development of socially skilled behaviors (Gresham & Elliott, 1990). Cognitive-problem-solving tests and observations of peer play interactions for 4 to 7 year old children with conduct problems showed that these children have fewer positive problem-solving strategies and positive social skills, more negative conflict management strategies, and delayed development of skills in playing with peers than do children without conduct problems. Children with conduct problems may benefit from training aimed at the

development of positive prosocial skills, such as problem-solving skills, anger management, and play interaction skills, as well as empathy training (Webster-Stratton & Lindsay, 1999). Interventions are not only intended for at-risk youth. By developing prosocial skills, all individuals may become more capable and competent, their psychological well-being may improve, and they may thus become better able to withstand or cope with potential risk factors for maladjustment (Durlak & Wells, 1997).

Social Competency Intervention Programs

Schools are a central setting in which actions can be taken to promote students' competence and prevent the development of problem behaviors. Schools also offer a pipeline through which most parents and guardians can be accessed. Among the most widely used and recommended types of interventions are those focusing on teaching children social competencies such as problem-solving, decision making, social approach and engagement, and communication skills. Meta-analyses of skills-based interventions have consistently shown moderate effect sizes on reducing behavior problems and improving social competencies (Consortium on the School-based Promotion of Social Competence, 1994). For example, a meta-analysis by Durlak and Wells (1997) showed that behavioral and cognitive-behavioral prevention interventions reduce problem behaviors and increase competencies.

Intervention programs that focus exclusively on strengthening protective factors might not be as effective in promoting positive youth development and reducing problem behaviors as those programs focusing on both risk reduction and the development of protective factors (Catalano, Hawkins, Berglund, Pollard, &

Arthur, 2002). Universal prevention programs often seek to simultaneously reduce risk and increase protection by emphasizing the reduction of problem behaviors as well as enhancing social and emotional competencies. These primary interventions adopt a universal strategy for the selection of the target population, in which all children in a school receive the intervention (Durlak & Wells, 1997).

Assessment of Social Competence

Practical and psychometrically sound assessment measures are necessary for the evaluation of intervention programs. Behavior rating scales are one of the most widely used methods of assessing the behavior of young children. There are many advantages for their use: (1) behavior rating scales require less time and training to complete than direct behavioral observation; (2) behavior rating scales can provide data on behaviors that occur infrequently, and which may be missed in a limited number of direct observation sessions; (3) behavior rating scales provide data that are more quantitative, objective, and reliable than information obtained through unstructured interviews or projective techniques; (4) behavior rating scales can be used to assess individuals who are unable to provide information about themselves (e.g., young children); (5) behavior rating scales make use of observations made over a period of time in an individual's natural environment (e.g., school or home); (6) behavior rating scales can be completed by raters who are familiar with the person's behavior (e.g., parents or teachers) (Merrell, 2001); (7) and behavior rating scales may have normative data against which the child's behavior can be compared (Barkley, 1988). In short, rating scales provide an overview of the individual's

behavior in a short amount of time, at a moderate cost, and with technical precision and practical utility (Merrell, 2001).

Despite these advantages, there are also disadvantages to using behavior rating scales. Behavior rating scales lack specificity, summarizing observations of the relative frequency of specific behaviors, not exact counts. Therefore they may usefully be supplemented by more direct methods. Furthermore, ratings of social behaviors are subjective and are affected by a rater's standards for behavior (Gresham & Elliott, 1990). Raters may differently decide on whether a particular behavior qualifies for inclusion in the item being rated or perceive differently how much of a particular behavior constitutes "almost never" or "often" (Barkley, 1988).

Student characteristics influence social behavior. For example, sex is consistently associated with differences in social behavior (Gresham & Elliott, 1990). Females are rated on average as having greater levels of social competence and lower levels of problem behaviors than males (Gresham & Elliott, 1990; Merrell, 1993). Social skills rating scales completed by parents and teachers have found little indication of a strong or consistent developmental change in scores with age (Gresham & Elliott, 1990).

Naturally, an individual's social behaviors may change depending on the situation. Therefore, gathering data from multiple raters in different settings may paint a more comprehensive picture of a child, as well as be important for assessing the effectiveness of interventions across settings (Gresham & Elliott, 1990). Reports obtained from different raters correlate modestly, as each informant may have differing experiences with the various behaviors displayed by a particular child (Renk

& Phares, 2004), different raters may interpret the same behaviors differently, or a variety of influences may contribute systematic and random variance to the ratings of different raters.

Inter-rater reliability, the degree of agreement between two different raters, of the social competence displayed by children and adolescents is low to moderate. When examining rating scale measures of social competence, a meta-analysis consisting of 14 studies and 2476 participants revealed an average correlation for parent-teacher pairs to be 0.36, with no significant difference in parent-teacher ratings of social competence across age groups (Renk & Phares, 2004). The relatively low agreement suggests that obtaining ratings from multiple sources (e.g., parents and teachers) provides more dependable information about social competence than using only a single rater.

Recognition of the importance of assessing social skills has given rise to a number of rating scales specifically focused on children's and adolescents' social behaviors. Social skills rating scales have been developed for use by parents, teachers, and other adults familiar with the individual being rated. These measures range in composition from inventories with two or more scales assessing different areas of a construct, to single scales measuring narrowly defined constructs. The following three rating instruments are popular, norm-referenced devices that focus on child and/or adolescent social skills in the schools. These particular rating scales were chosen because the scales' intended use and the behaviors measured are most closely aligned with those of the Social Competency Rating Form. Information about these scales is summarized in Appendix A.

1. Social Skills Behavior Scales (SSBS-2) and Home and Community Social Behavior Scales (HCSBS). The Social Skills Behavior Scales (Merrell, 2002) were intended to be used as a screening tool for identifying students who are at risk for developing behavior problems, as part of an assessment battery for determining program eligibility, for designing, monitoring, and evaluating intervention programs, and as a research instrument in studying social competence and problem behavior patterns of school-age children. The SSBS-2 is a 64-item inventory completed by teachers and designed to measure social competence and antisocial behavior. Each item of the SSBS is rated on a 5-point Likert-type scale (1- Never to 5- Frequently). The Social Competence scale consists of 32 items describing positive social skills distributed across three subscales: Peer Relations, Self-Management/Compliance, and Academic Behavior. The Antisocial Behavior Scale has 32 items describing problem behaviors distributed across three subscales: Hostile/Irritable, Antisocial/Aggressive, and Defiant/Disruptive. Ratings take approximately eight to ten minutes to complete.

The first edition of the SSBS was normed on a sample of 1855 teacher ratings of students in grades K-12. In the development of the SSBS-2, additional raters were obtained and combined with 1700 of those from the previous sample, resulting in a norming sample of 2280 cases. Of the students in the final norming sample, 76% were identified as Caucasian, 11% as African American, 9.9% as Hispanic, 1.1% as Asian/Pacific Islander, 0.6% as American Indian, Eskimo, or Aleut, and 1.4% as multiracial or other. The norming sample included cases from the four major geographical regions of the United States. This represented a mix of urban, suburban, rural, and small town areas, with an overrepresentation of cases from the West region,

accounting for 50% of the cases, and the remaining 50% from the other three regions. Students who received special education services were overrepresented, comprising 22.3% of the norming sample.

The SSBS-2 has internal consistency reliabilities coefficients of .98 on the two major scales, and ranges from .94 to .96 on the six subscales in the norming sample. These reliabilities may be inflated due to the wide response scale (1 to 5) and by the overrepresentation of special education students in the sample. In order to examine the degree of independence of the scales of the SSBS-2, data reported in the manual were used to estimate the correlation between hypothetical true scores corrected for attenuation due to unreliability (calculated using $r_{xy,corrected} = r_{xy} / (r_{xx} * r_{yy})^{1/2}$). The estimated true score correlation of the Social Competence Total scale and the Antisocial Behavior Total scale is -.69. Estimated true score intercorrelations among subscales in the SSBS-2 range from -.49 (Peer Relations and Hostile/Irritable and Peer Relations and Antisocial/Aggressive) to .93 (Hostile/Irritable and Antisocial/Aggressive). Test-retest reliabilities over a three-week period range from .76 to .82 for the Social Competence Scale and .60 to .73 for the Antisocial Behavior Scale. Interrater reliabilities were obtained from ratings of 40 learning disabled elementary school students made by classroom teachers and aides working in the same classrooms. Interrater reliabilities ranged from .72 to .83 on the Social Competence scales scores, and from .53 to .71 on the Antisocial Behavior scale scores (Merrell, 1993). These interrater reliabilities reflect agreement between two individuals working in a similar capacity and in the same setting, and do not capture reliability across settings or across raters in a non-educational role.

Uncorrected item-subscale and item-total correlations for the six subscales are generally in the .70s and .80s for all items. While adequate, the authors do not show the factor loadings for those same items with the other scales. It is unknown if the items have equally high loadings on the other scales. Also, there is no evidence of incremental validity describing how adding scales improves the measurement of an ultimate criterion.

Home and Community Social Behavior Scales (*HCSBS*) (Merrell & Caldarella, 2002) is a companion rating scale to the SSBS-2. It is a behavior rating scale completed by parents and other caregivers, and designed for use in evaluating social competence and antisocial behavior of children ages 5-18. The HCSBS and SSBS-2 are conceptually similar, contain the same numbers of items, and include similar content and rating formats. The HCSBS consists of 64 items in two major scales: Social Competence and Antisocial Behavior. The Social Competence scale consists of 32 items describing positive social skills distributed across two subscales: Peer Relations and Self-Management/Compliance. The Antisocial Behavior Scale has 32 items describing problem behaviors distributed across two subscales: Defiant/Disruptive and Antisocial/Aggressive. The HCSBS items were derived from the SSBS-2, but with some rewording to reflect home and community contexts rather than educational contexts.

Data collection for norming resulted in 2000 useable HCSBS forms from 13 communities in 9 U.S. states. The final norming sample consisted of 1562 cases. The sample overrepresents children in the West and North Central regions, and to a lesser extent, the South region. Only 5% of the sample is from the Northeast region.

Of the students in the final norming sample, 71% were identified as Caucasian, 14% as African American, 11% as Hispanic, 2% as Asian/Pacific Islander, 0.4% as American Indian, Eskimo, or Aleut, and 2% as multiracial or other. There is a slight underrepresentation of Asian/Pacific Islander and Native American students. About 12% of the norming sample consisted of children in special education, which is comparable to the rate in the U.S. population. Social Competence and Antisocial Behaviors scores did not meaningfully vary with age (ES 0.18). In the norming sample, girls were found to have an overall better level of social-behavioral adjustment than boys.

The HCSBS has internal consistency reliability coefficients of .97 on the Social Competence scale and .96 on the Antisocial Behavior scale, and .94 on the four subscales. The estimated true score correlation of the Social Competence Total scale and the Antisocial Behavior Total scale is -.80. Estimated true score intercorrelations among subscales for the range from -.69 (Peer Relations and Antisocial/Aggressive) to 1.02 (Antisocial/Aggressive and Antisocial Behavior Total). These high intercorrelations imply that different named scales are not measuring different student characteristics. Test-retest scores were obtained after two weeks from a total of 137 raters in the rural community of Cedar City, Utah. Retest reliability coefficients were .84 for the Social Competence scale and .91 Antisocial Behavior scale, and ranged from .84 to .91 for the four subscales. Interrater reliabilities obtained from two parents for 83 children are .86 on the Social Competence scale and .71 on the Antisocial Behavior scale, and ranged from .64 to .86 on the four subscales.

Item-subscale and item-total correlations for the four subscales are in the .60s and .70s for all items. However, the authors do not show the factor loadings for those same items with the other scales. It is unknown if the items have equally high loadings on the other scales. Also, there is no evidence of incremental validity describing how adding scales improves the prediction of any ultimate criterion.

2. *Social Skills Rating System (SSRS)*. The Social Skills Rating System (Gresham & Elliott, 1990) is a broad, multirater assessment of students' social behaviors intended to be used for screening, classification, and intervention planning. The SSRS consists of three separate rating forms for teachers, parents, and students (grades 3 to 12) and has three levels: Preschool, Elementary, and Secondary. The SSRS uses the teacher, parent, and student rating forms to sample three domains: social skills, problem behaviors, and academic competence. In the Elementary version there are a total of 57 items for the teacher form, 55 items for the parent form, and 34 items for the student form. Each item on the SSRS is rated on a 3-point scale (0-Never, 1- Sometimes, 2- Very Often) based on a rater's perceived frequency of a certain behavior. Approximate administration time is 20 minutes, plus an additional five minutes for the counselor or psychologist to score each questionnaire booklet. In addition, all SSRS forms (except the Student Elementary Form) use a 3-point Importance rating scale for the Social Skills Scale. The Importance rating is not used to calculate rating scores, but rather is used to identify target behaviors for planning interventions. Teacher ratings of academic competence compare a particular student to his or her classmates by placing the student within one of five percentage clusters.

The SSRS assesses the following social skills domains: Cooperation, Assertion, Responsibility (Parent Form only), Empathy (Student Form only), and Self-Control. It also assesses three problem behavior domains: Externalizing Problems, Internalizing Problems, and Hyperactivity Problems (Parent and Teacher Forms). The Academic Competence Scale is composed of 9 items reflecting academic performance.

The SSRS was normed in 1988 on a national sample of 4170 children, in grades 3 to 12, using their self-ratings as well as the ratings of children made by 1027 parents and 259 teachers. Of these ratings, at the elementary level, 352 ratings were obtained from a teacher, a parent, and a student rating the student's social skills. Children below grade 3 did not complete self-ratings, and 328 ratings were obtained from both teachers and parents for students below grade three. The characteristics of the sample of students who were rated by multiple raters are not described. For this rating obtained in the 1988 sample, internal consistency estimates for the Total Social Skills Scale for the teacher forms at the Elementary level are .94, with subscale coefficient alphas ranging from .86 to .92. Coefficient alphas for the Total Problem Behavior Scale for teacher forms at the Elementary level are .88, with subscale alphas ranging from .78 to .88.

The estimated true score correlation of the Total Social Skills Scale and the Total Problem Behavior Scale for teacher forms is -.83. Estimates of true score intercorrelations among subscales on the teacher form were very high for Cooperation and Self-Control subscales (.70) and Externalizing and Hyperactivity subscales (.80).

There is little evidence to suggest that these differently named scales are indeed measuring different student characteristics.

Coefficient alpha for the Academic Competence Scale was .95. The internal consistency estimate for the Total Social Skills Scale for the parent forms at the Elementary level is .87, with subscale coefficient alphas ranging from .65 to .80. Coefficient alpha for the Total Problem Behavior Scale for parent forms at the Elementary level is .87, with subscale alphas ranging from .71 to .77. The estimated true score correlation of the Total Social Skills Scale and the Total Problem Behavior Scale for parent forms is -.57. Estimated true score correlations among subscales for the parent forms range from .44 (Cooperation and Assertion) to .83 (Externalizing Problems and Hyperactivity Problems).

Four-week test-retest reliabilities were obtained for parent and teacher ratings. For the teacher forms, four-week test-retest reliability for the Total Social Skills Scale was .85 ($N = 288$) and .84 for the Total Problem Behaviors Scale ($N = 285$). For the parent forms, four-week test-retest reliabilities were .87 for the Total Social Skills Scale ($N = 45$) and .65 for the Total Problem Behaviors Scale ($N = 45$). The parent test-retest reliability estimates are based on a small sample, and how parents were selected to be part of this sample is not indicated.

For those scales that are common across rating forms, convergent validity coefficients are reported in the manual. Correlations among same-named scales across parent and teacher raters are modest, ranging from .26 to .36 (median $r = .30$). Correlations among same-named scales across teacher and student ratings range from .10 to .39 (median $r = .20$). The least agreement among same-named scales was

between parent and student ratings; correlations ranged from .03 to .12 (median $r = .10$). Caution should be used when making direct comparisons in social skills ratings across informants because fewer than 40% of the items are shared across the three forms of the system. Evidence of discriminant validity is lacking, as correlations between Social Skills total score and subscales and Problem Behaviors total score and subscales are not provided.

Several criterion validity studies are listed for the parent and teacher forms. Correlations between the SSRS Parent Form and the CBCL Parent Form ($N \approx 45$) showed a $-.37$ correlation between the SSRS Total Social Skills Scale and the CBCL Total Behavior Problems Scale, $.70$ correlation between the SSRS Total Problem Behaviors Scale and the CBCL Total Behavior Problems Scale, $.58$ correlation between the SSRS Total Social Skills scale and the CBCL Social Competence Scale, and $-.52$ correlation between the SSRS Total Behavior Problems Scale and the CBCL Total Social Competence Scale. Correlations between the SSRS Teacher Form and Child Behavior Checklist (CBCL) ($N \approx 98$) are $-.64$ for the SSRS Total Social Skills Scale and the CBCL Total Behavior Problems Scale, and $.81$ for the SSRS Total Problem Behaviors Scale and the CBCL Total Behavior Problems Scale. Additional criterion validity coefficients were provided for the SSRS Teacher Form, comparing teacher ratings to the Social Behavior Assessment (SBA) and Harter Teacher Rating Scale (TRS), obtaining Total Scale correlations of about $.60$.

3. The Walker-McConnell Scales of Social Competence and School

Adjustment. The Walker-McConnell Scales of Social Competence and School Adjustment (Walker & McConnell, 1995a) were designed to be used in the screening

and identification of social skills deficits among students, and as a tool to investigate the effects of social skills interventions. The rating scales are completed by teachers or other school professionals. There are two versions available: an elementary version for children in grades K-6 (Walker & McConnell, 1995a) and an adolescent version for students in grades 7 through 12 (Walker & McConnell, 1995b). The Elementary version consists of 43 positively worded items intended to measure adaptive behavior and interpersonal social competence across three subscales: Teacher-Preferred Social Behavior (16 items), Peer-Preferred Social Behavior (17 items), and School Adjustment (10 items). Each item of the scales is rated on a 5-point Likert scale reflecting the relative frequency of the behavior (1- Never occurs to 5- Frequently occurs). The questionnaire requires five to ten minutes to complete per student.

The elementary version was normed during a two-year period from 1985 to 1987 on a sample of 1812 students representing the four geographic regions of the United States, involving 15 states. For the total sample, 49% were female and 51% were male, with 80% white, 11% black, 1% Hispanic, and 7% classified as “other.” Forty-five percent of the school districts were urban, 29% were suburban, and 26% were rural.

Internal consistency reliability was .97 for the Total scale, .96 for Teacher-preferred Social Behavior, .95 for Peer-preferred Social Behavior, and .96 for School Adjustment. Test-retest reliabilities for the total scale score and subscale scores range from .67 to .92 for teacher ratings obtained over a 2 to 4 week interval. Interrater correlations among teachers and their aides and for regular and special education

teachers range from .11 on the Teacher-preferred Social Behavior Scale to .74 on the Peer-preferred Social Behavior Scale (median $r = .52$); however, the samples were small and consisted of children who were severely behaviorally disordered and/or receiving special education services (Walker & McConnell, 1995a).

The authors present a number of validity studies showing that the scales differentiate behavior-disordered, at-risk, antisocial, and rejected children from normal groups. Criterion-related validity evidence shows that the scales significantly correlate with a variety of criterion measures, including sociometric status, academic achievement, other social skills rating scales, and arrest rates in antisocial at-risk groups. Advantages of this inventory include the broad range of ages for which it may be used and its extensive research base. Disadvantages include that it does not include a problem behavior scale, and it has a mono-method bias, relying exclusively on teacher ratings (Gresham, 2001).

Limitations of Existing Social Competency Rating Scales

Schools should be using interventions of known effectiveness or the value of which is under investigation. For this reason, it is important to investigate the effectiveness of social competency intervention programs. To do this we must have instruments that provide appropriate measurements for this sort of investigation. The social skills rating scales described earlier are limited in this capacity. First, the measures are quite lengthy, ranging from 40 items (SSRS Preschool teacher form) to 65 items (SSBS-2 scale). When evaluating school interventions, it is often important to have a rating scale that is feasible to use in large-scale research. In such research, a teacher may have to complete a rating scale on every child in his or her class (20 to

30 students). Spending 15 to 20 minutes (or even 5 minutes) per student in completing rating forms is too burdensome and may foster noncompliance. Therefore, the traditional full-length rating scale measures may be too long and time-consuming for the frequent and repeated use characteristic of measures used in program evaluations. Furthermore, the items included in existing scales are typically not designed to correspond to the social skills targeted by the cognitive-behavioral interventions implemented in the schools.

Second, many of the rating forms available make use only of teacher ratings. This limits the scope of children's behavior to only one setting, the classroom. Equally important, it may limit assessment to only a single rater. This is undesirable because the interrater reliability of child rating scales is usually low. Since social behaviors may vary across situations and because rater may be an important source of error, using multiple raters would paint a more complete picture of the child. Furthermore, many prevention programs intend for the generalization of the targeted social behaviors outside of the classroom (Committee for Children, 2002). This component cannot be evaluated if only data from a single rater are obtained. Pooling the ratings of parent and teachers may produce better measurement of intended constructs.

Third, preventive interventions often aim at both reducing problem behaviors and increasing competencies. Few rating scales currently provide an integrated assessment of both positive social skills and problem behaviors. And, if they do, it is at the cost of a lengthy instrument. Therefore, there is a need for a brief rating scale that measures social skills and problem behavior from multiple raters that can be used

in the repeated assessment and monitoring of student progress over years of implementation of prevention programs.

History of the Social Competency Rating Form (SCRF)

The Social Competency Rating Form (SCRF; Gottfredson, Jones, & Gore, 2002) was created to fill this gap in an evaluation of a school-based social competency intervention for adolescents. It was first used in a 2002 program evaluation of the Social Problem Solving intervention (Weissberg et al, 1990) in an inner-city middle school. Originally the Walker-McConnell rating scales were being used to measure student behavior. Teachers complained that the scale was difficult to complete, and interrater correlations and correlations with other variables suggested that some teachers may have been unable to describe students well using the instrument or may have been uncooperative. As a result, the SCRF was developed to obtain the second round of teacher ratings at the end of the school year. The goal in developing the new scale was to create a form that was shorter, clearer, and more closely aligned with the cognitive-behavioral objectives of the social skills intervention than was the Walker-McConnell. Teacher comments indicated that they found the SCRF easier to complete. Internal consistency (alpha) for the form was .95 overall, with .95 for both boys and girls. Interrater correlations were .64 for the pooled ratings, with .69 for pooled ratings for boys and .57 for girls (Gottfredson et al, 2002).

Purpose of current study

The purpose of this study is to investigate the reliability and validity of a modified version of the SCRF. As part of the larger program evaluation from which

this current study's data were obtained, the SCRF was slightly modified for a younger population and to better reflect the goals of the particular cognitive-behavioral social skills program, Second Step: A Violence Prevention Curriculum (Committee for Children, 2002), being assessed. Second Step is a universal curricular classroom intervention designed to develop social-emotional skills. The curriculum is organized into three sections: empathy and perspective taking, problem solving and impulse control, and anger management.

Statement of Research Aims

1. Explore the factor structure of the SCRF.
2. Assess the reliability of the SCRF. The scale's internal consistency (alpha) will be assessed. Cross-informant correlations between parent and teacher correlations will also be calculated, as will Fall-Spring longitudinal correlations.
3. Assess the construct validity of the SCRF. This will be addressed by examining the scale's convergent validity.
4. Extend the research on this scale to (a) a large sample of Maryland elementary school students, and (b) to both parent and teacher ratings, as past research has only used teacher ratings of student behavior in an inner-city middle school.

Chapter 2: Methods

This study utilized data collected as part of a larger project evaluating a social competency program in Maryland public elementary schools. Parents and teachers of consented students in all 12 schools completed the SCRF.

Participants

Affirmative written parental consent for participation was sought from all 1st, 2nd, 4th, and 5th grade students from 12 suburban and rural Maryland, public elementary schools (except a small number of students in self-contained special education classrooms). Data obtained from third grade students was used as part of the larger multi-site project and is not included in these analyses. Of the approximately 3700 students enrolled in the twelve schools, affirmative consent was obtained from 2553 students, for a consent rate of 69%. Consent rates varied by school and were lowest in the school with the lowest socioeconomic average and highest mobility (59%). In all, 2139 useable rating forms were completed and returned by parents' or guardians (88% of the consented students, 58% of all enrolled students), and 2291 completed and useable rating forms were returned by classroom teachers (94% of consented students, 62% of all enrolled students) in the fall semester of 2004. Of those surveys completed, 52% were ratings of male students and 48% were ratings of female students. An approximately equal distribution of surveys was returned across grade levels. In spring 2005, 2096 useable rating forms were completed and returned by parents' or guardians (82% of consented students, 56% of all enrolled students), 2486 completed and useable rating forms were returned by classroom teachers (98% of consented students, 67% of all enrolled students). Of

those forms completed, about 50% were ratings of male students and 50% were ratings of female students. In both the fall and spring, approximately 88% of completed surveys were ratings of White/Non-Hispanic students, 6% of African American, 3% of Asian/Pacific Islander, 2% of Hispanic, and .5% of American Indian/Alaskan Native students. Refer to Appendix B for overall consent rates and return rates.

Measures

Social Competency Rating Form. The revised scale consists of 29 items, with 12 negatively worded items and 17 positively worded items. Sample items include: *Hits, kicks at, or jumps on other children; If provoked by peers, shows self-control; Solves problems with peers through compromise or discussion; and Expresses concern for others.* All items are answered on a 4-point Likert-type scale, with a 1 indicating “Almost Never”, 2 indicating “Sometimes”, 3 indicating “Often”, and 4 indicating “Very Often.” The SCRF is intended to be used as a research tool in studying social competence and problem behaviors, especially in the specific context of evaluating intervention programs. In response to rater feedback, the response scale was changed slightly; “Almost Never” was changed to “Never/Almost Never.” The revised SCRF was distributed during the Spring 2005 data collection. See Appendix C for a copy of the revised SCRF. Rating forms are scored by taking the average rating of the total number of items completed.

Student Self-Reports. Fourth and fifth grade students ($N \sim 1150$) completed the student self-report survey, an 86-item questionnaire. The questionnaire consists of 11 a priori scales adapted from prior research designed to assess students’ school

attachment and safety, positive social skills, and problem behavior. Table 1 provides more detailed information about each of the scales (Harak, 2006).

School records. The county school system provided school records data on student attendance, disciplinary referrals and suspensions, and standardized achievement test scores.

1. Student attendance was calculated by dividing the number of days the student attended school by the number of days the student was enrolled in the school.
2. Disciplinary referrals and suspensions are the number of disciplinary referrals and suspensions the student received during the school year. Each variable was dichotomized, thereby indicating whether or not the student received a discipline referral or suspension.
3. Standardized student achievement test scores on the math and reading sections of the Maryland State Assessment (MSA) taken during the fourth and fifth grades.

Procedures

Rating forms and student surveys were distributed by researchers to school counselors who coordinated data collection activities in their schools. Teachers completed their ratings, and sent home parental rating forms with students. Approximately three weeks after the initial data collection, counselors redistributed surveys to parents and teachers who had not yet returned surveys. School counselors and classroom teachers also reminded students to return the surveys completed by

their parents or guardians. In order to safeguard the confidentiality of individual-level information during data collection, self-adhesive removable labels with student names were placed on surveys. After parents and teachers filled out the survey, they removed the name label, and a unique, confidential code number was left on the form. Surveys were quickly removed from the school and never became part of any school record. Student self-report questionnaires were administered by classroom teachers during a regular class period following instructions provided by the investigators.

Table 1

Student Social Competency Self-Report Subscales

Scale Name	Adapted from	No. of items	Example Question	Reliability/ Six-Month Longitudinal Correlations
Engagement in Learning	Furrer and Skinner (2003)	9	In class, I work as hard as I can.	$\alpha = 0.75$; $r = 0.47$
Sense of School as a Community	Roberts, Horn, and Battistich (1995)	6	Students at this school are willing to go out of their way to help someone.	$\alpha = 0.82$; $r = 0.54$
Feelings of Safety at School	Created by IES	5	Students feel safe at this school	$\alpha = 0.76$; $r = 0.45$
Empathy	Funk et al. (2003)	10	It's easy for me to tell when another kid is upset	$\alpha = 0.79$; $r = 0.51$
Self-restraint	Constructed by U of MD team	7	When I have a problem I think about different things I could do	$\alpha = 0.84$; $r = 0.50$
Hostile Attribution Bias	Constructed by U of MD team	6	When others tell me what to do they are usually trying to help	$\alpha = 0.73$; $r = 0.39$
Altruism	Solomon et al. (2000)	8	At school or someplace else, I got help for someone who was hurt	$\alpha = 0.86$; $r = 0.47$
Victimization	Orpinas and Kelder (1995)	6	A kid from school pushed, shoved, or hit me" and "Other kids left me out on purpose	$\alpha = 0.87$; $r = 0.52$
Acceptability of Aggression	Huesmann and Guerra (1997)	8	It is wrong to make fun of other people	$\alpha = 0.88$; $r = 0.30$
Rebellious behavior	Loeber and Dishion (1983)	6	I broke or ruined something on purpose that belonged to the school	$\alpha = 0.83$; $r = 0.27$
Aggression	Orpinas and Frankowski (2001)	6	I teased a kid at school	$\alpha = 0.88$; $r = 0.40$

Note. From "First-year self-report outcomes of a character education experiment with elementary students" by E. T. Harak, 2006, Unpublished master's thesis, University of Maryland, College Park. Adapted with permission.

Chapter 3: Results

Descriptive Statistics

Normative information for the SCRF was prepared using descriptive statistics for social competency scores as rated by parents and teachers, reported separately by sex, grade, and ethnicity. Tables 2 and 3 display the raw score means, standard deviations, and *Ns* for the teacher and parent ratings, respectively. Scores are reported separately for males and females, and for both sexes combined. Females are consistently rated as more socially competent by teachers and parents than their same-grade male peers. There is no consistent developmental trend. Appendixes D and E display means and standard deviations for different ethnic groups, reported separately for males and females, and for both sexes combined.

Factor Analysis

An exploratory factor analysis using principal axis factoring was conducted to describe the internal structure of the SCRF. Factor matrices were rotated orthogonally using the varimax method. The scree plot of eigenvalues was examined and the solution that offered the most parsimonious account of the factors was selected (DeVillis, 2003). Analyses show that for both the parent and teacher reports scoring a single global index best reflects the data.

For the teacher reports, initial unrotated eigenvalues show that the first factor accounts for approximately 43% of the total variance. Factors two through four explain considerably less variance, but have eigenvalues over one. Subsequent factors had eigenvalues below one. After rotation, the four factors do not explain more variance than in the unrotated solution. The four factor rotated solution

explains a total of 56% of the variance, whereas a single unrotated factor explains 43% of the variance. A visual analysis of the scree plot showed that the scree begins at about Factor 3. Therefore, a second principal axis analysis was run constraining the number of factors to two. A total of approximately 50% of the variance was

Table 2

Raw Score Means and Standard Deviations for Teacher Reports of Social Competency

Grade	Males			Females			Both Sexes		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Fall 2004									
1	2.00	.48	302	2.25	.41	255	2.11	.47	557
2	2.01	.52	271	2.29	.47	271	2.15	.52	542
4	2.04	.51	319	2.32	.46	304	2.18	.51	603
5	2.06	.54	301	2.28	.49	297	2.17	.53	598
All Grades	2.03	.51	1193	2.29	.46	1127	2.15	.51	2300
Spring 2005									
1	2.01	.50	321	2.67	.44	280	2.13	.49	601
2	2.07	.56	289	2.35	.51	284	2.21	.55	573
4	2.05	.58	342	2.32	.49	325	2.18	.55	667
5	2.07	.57	321	2.31	.49	320	2.19	.55	641
All Grades	2.05	.55	1273	2.31	.48	1209	2.18	.54	2482

Note. Raw score means range from 0 to 3 with 3 indicating the highest social competence.

accounted for by the two factor solution; however, an examination of the items showed that one factor was composed of all negatively worded items and the other factor was composed of all positively worded items. It was concluded that the two

factors were methodological artifacts rather than two separate constructs. Table 4 displays the eigenvalues and percentage of variance explained for the initial model, the four factor rotated model, and the two factor rotated model.

For the parent reports, a single factor solution was deemed most appropriate. Again the addition of multiple factors did not explain considerably more of the variance, and an examination of the items composing the factors revealed a

Table 3

Raw Score Means and Standard Deviations for Parent Reports of Social Competency

Grade	Males			Females			Both Sexes		
	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>
Fall 2004									
1	1.99	.41	273	2.15	.32	229	2.06	.38	498
2	2.04	.38	256	2.18	.34	252	2.11	.37	505
4	2.07	.40	308	2.19	.37	294	2.13	.39	594
5	2.09	.40	267	2.25	.41	280	2.17	.41	545
All Grades	2.05	.40	1104	2.19	.37	1055	2.12	.39	2142
Spring 2005									
1	1.96	.40	263	2.13	.35	238	2.04	.39	501
2	2.04	.38	242	2.19	.36	254	2.11	.38	496
4	2.02	.41	298	2.20	.39	289	2.11	.40	587
5	2.10	.39	249	2.26	.40	254	2.18	.40	503
All Grades	2.03	.40	1052	2.19	.38	1035	2.11	.40	2087

Note. Raw score means range from 0 to 3 with 3 indicating the highest social competence.

Table 4

Eigenvalues for Teacher Ratings of Student Social Competency, Fall 2004

Factor	Initial Unrotated Solution			Rotation Sums of Squared Loadings, 4 Factors			Rotation of Sums of Squared Loadings, 2 Factors		
	Total	% of common variance	Cumulative %	Total	% of common variance	Cumulative %	Total	% of common variance	Cumulative %
1	12.47	42.98	42.99	4.95	17.05	17.05	8.29	28.59	28.59
2	3.05	10.52	53.50	4.62	15.95	32.98	6.23	21.46	50.06
3	1.39	4.78	62.06	4.12	14.21	47.21	--	--	--
4	1.09	3.77	65.13	2.58	8.91	56.12	--	--	--

methodological phenomenon rather than separate constructs. Table 5 displays the eigenvalues for the initial model, the five factor rotated model (factors with eigenvalues over one), and the two factor rotated model. In light of the results of the factor analysis, all subsequent analyses are conducted for a single summary score reflecting global ratings of student social competence.

Table 5

Eigenvalues for Parent Ratings of Student Social Competency, Fall 2004

Factor	Initial Unrotated Solution			Rotation Sums of Squared Loadings, 4 Factors			Rotation of Sums of Squared Loadings, 2 Factors		
	Total	% of common variance	Cumulative %	Total	% of common variance	Cumulative %	Total	% of common variance	Cumulative %
1	8.38	28.89	28.89	3.66	12.61	12.61	5.34	18.41	18.41
2	2.37	8.16	37.05	2.12	7.31	19.92	4.07	14.04	32.45
3	1.45	4.99	42.03	2.09	7.19	27.11	--	--	--
4	1.12	3.85	45.88	1.98	6.83	33.94	--	--	--
5	1.06	3.66	49.54	1.55	5.34	39.28	--	--	--

Exploration using three subscales was also conducted and considered. The three subscales constructed were Social Skills, Problem Behavior, and Impulsiveness. The Impulsiveness scale contains only three items. Five items did not fit into any scale. The subscales are reasonably independent, as shown by the moderate correlations among subscales and the higher longitudinal correlations with their own scale. The three scales were originally expected to correspond to the Second Step curriculum because several SCRF items were constructed a priori to tap into the curriculum's three units (Empathy, Problem-Solving/Impulse Control, and Anger Management). The three subscales of Social Skills, Problem Behavior, and Impulsiveness do not directly correspond to these original constructs. However, the first factor, Social Skills, is most related to the Second Step curriculum and may be a more sensitive measure of the intervention effects than is the global measure. The subscales show high alpha reliabilities for teacher ratings, but alpha reliabilities for parent ratings of Problem Behavior and Impulsiveness are moderate. See Appendix F for more details. While further modification and testing of the SCRF could favor a strong three-factor scale, it is still premature to work with three separate factors. Potential modifications would include adding items to the Impulsiveness scale and examining or altering the five questions that did not belong to any scale. Without modifications, I prefer a single global index.

Reliability

Internal consistency reliability is concerned with the strength of the correlations between items in the same scale. Internal consistency reliability was calculated using Cronbach's coefficient alpha, which partitions the total variance

among a set of items into shared variance due to true score and unshared variance due to error. High coefficient alphas suggest that the items are all measuring the same latent variable (DeVillis, 2003). Table 6 displays the alpha reliabilities, concurrent correlations, and six-month longitudinal correlations for the teacher and parent ratings. See Appendixes G and H for alpha reliabilities separated by sex and ethnicity. Teacher and parent ratings show high internal consistency in both the fall and spring. Longitudinal correlations show that ratings made by the same individual are fairly stable across time (i.e., from fall to spring). Cross-informant correlations show that teacher and parent ratings of the same child correlate moderately. The degree of agreement does not weaken over time.

Validity

Convergent validity is demonstrated when there is agreement between two attempts to measure the same trait through different measures. Maximally different methods are recommended so that common variance specific to a trait can be distinguished from variance due to shared methods (Campbell & Fiske, 1959). Convergent validity was assessed using correlations of teacher and parent ratings with student self-reports and school records data. The pattern of correlations provides information about the convergent validity. Higher ratings on the SCRF are expected to converge with higher student self-reports of engagement in learning, sense of school as a community, feelings of safety at school, empathy, self-restraint, and altruism and lower student self-reports of hostile attribution bias, aggression, frequency of rebellious behavior, victimization, and acceptability of aggression.

Table 6

Concurrent and Six-Month Longitudinal Correlations Among Teacher and Parent Reports of Social Competency- Girls and Boys Combined

Rater and Occasion	N	Teacher		Parent	
		Fall	Spring	Fall	Spring
Teacher					
Fall	2214	.95	.73	.35	.35
Spring	2385	--	.95	.33	.37
Parent					
Fall	1993	--	--	.91	.69
Spring	1931	--	--	--	.91

Note. Alpha reliabilities are shown in bold face on the diagonal. The column headed *N* shows the number of ratings on which the alpha reliability is estimated. Only cases with no missing item responses enter the alpha calculation.

Higher ratings on the on the SCRF are expected to converge with lower rates of discipline referrals, lower rates of suspensions, higher rates of school attendance, and higher scores on a standardized achievement test.

Student self-reports. Correlations between parent and teacher ratings and the 11 scales of the student self-reports of social competency were calculated. The correlations were all in the expected direction (with the exception of parent ratings and student reports of altruism) and were generally low to moderate. The highest correlations were with the Aggression and Frequency of Rebellious Behavior scales; the lowest correlations were with the Altruism and Acceptability of Aggression scales. Students reporting more aggression are rated by teachers and parents as less socially competent. Correlations with each of the 11 scales are presented in Table 7.

Discipline referrals and suspensions. Bar charts were created to visually display the relationship between ratings made using the SCRF and the number of discipline referrals and suspensions received. SCRF scores were divided into quintiles, with the fifth quintile representing the students rated as most socially competent and the first quintile representing the students rated as the least socially competent. The discipline referral variable was dichotomized to indicate whether or not the student received a discipline referral. Figure 1 shows that students rated as less socially competent receive more discipline referrals. This is especially true for students in the lowest quintile. Figure 2 shows a similar, more marked trend, for whether or not the student received a suspension. See Appendixes G and H for the full collection of figures.

Attendance. Bar charts were created to display the relationship between social competency ratings and student attendance. Figure 3 demonstrates that students in the lowest quintile are absent slightly more frequently than students with higher social competency ratings; however, the trend is slight and exists only for students in the lowest quintile. There is no pattern of attendance for students in the other four quintiles. See Appendix I for additional bar charts. Attendance may not be a good indicator of social competence for elementary school students because young children may not be in control of whether or not they attend school.

Achievement. Students in grades 4 and 5 take standardized tests in reading and mathematics. These tests serve as an indicator of student achievement. Table 8 shows moderate ($\sim .2 - .4$) correlations between SCRF scores and standardized test

scores. Students with higher standardized test scores are rated as more socially competent by teachers and parents.

Table 7

Correlations Among Teacher and Parent Reports of Social Competency and Student Self-Reports

Student Survey Scales, Fall 2004	Teacher		Parent	
	Fall 2004	Spring 2005	Fall 2004	Spring 2005
Engagement in Learning	.22	.23	.21	.20
Sense of School as a Community	.14	.13	.10	.13
Feelings of Safety at School	.17	.17	.15	.15
Empathy	.11	.13	.16	.17
Self-Restraint	.16	.17	.17	.21
Hostile Attribution Bias	.23	.20	.14	.17
Altruism	.05	.02	-.04	-.03
Aggression	.31	.33	.26	.27
Frequency of Rebellious Behavior	.28	.35	.15	.26
Victimization	.23	.21	.12	.15
Acceptability of Aggression	.07	.09	.03	.08

Note. Teacher and Parent Reports of Social Competency have been reflected, transformed using a natural logarithm, and standardized using a z-score. Engagement in Learning, Sense of School as a Community, Feelings of Safety at School, Empathy, and Self-Restraint were reflected and transformed using a natural logarithm, and standardized using a z-score. Aggression, Rebellious Behavior, Victimization, and Acceptability of Aggression were normalized using a natural logarithm and standardized using a z-score. Hostile Attribution Bias and Altruism were standardized use a z-score.

Figure 1

Teacher Ratings of Social Competency (Fall) and Student Referrals

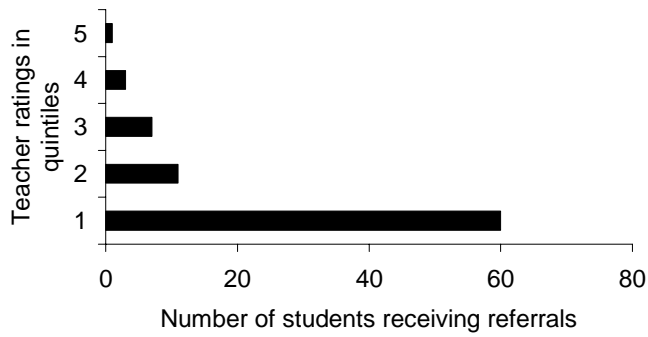


Figure 2

Teacher Social Competency Ratings (Fall) and Student Suspensions

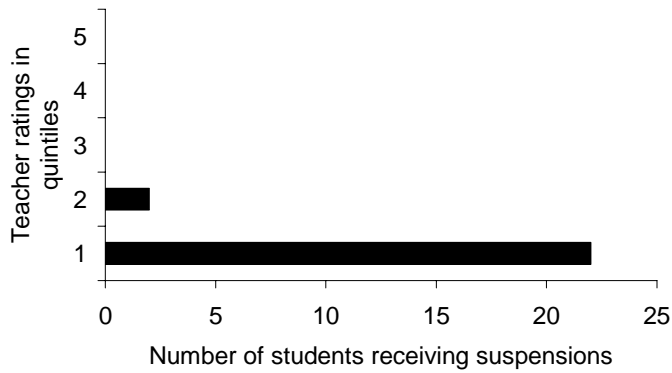
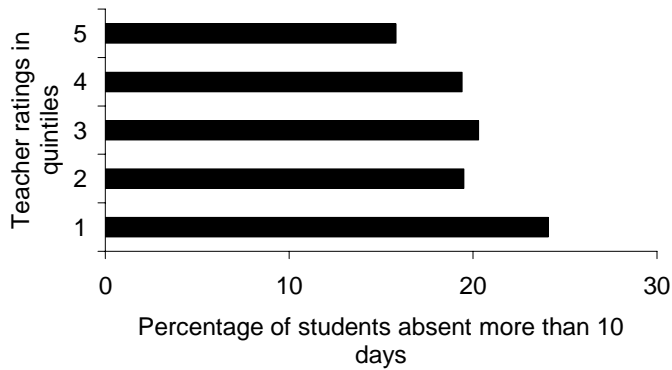


Figure 3

Teacher Social Competency Ratings (Fall) and Student Attendance



Chapter 4: Discussion and Conclusions

The Social Competency Rating Form is a brief rating scale that measures both social skills and problem behaviors, and can be used to gather data from multiple raters. Preliminary analyses support the SCRF as a useful and psychometrically sound measure of social competency in elementary school students, particularly for use in the evaluation of interventions.

Internal consistency reliability, cross-informant correlations, and longitudinal correlations are similar to those found in previous research on social competency ratings by parents and teachers. Ratings made by the same individual are stable over a six-month period. Moderate correlations between parent and teacher ratings demonstrate considerable method variance and provide support for the need to obtain information from multiple raters.

Parent and teacher ratings using the SCRF show the expected relationship with real-world criteria of discipline referrals, suspensions, and standardized test scores. Higher social competency ratings are associated with fewer problem behaviors in school and higher achievement. No relationship was found between social competency ratings and student attendance. It is possible that attendance is not a meaningful criterion for elementary school students because student attendance may be more in the control of the parent than the student. SCRF ratings correlated in the expected direction with student-self reports, except for correlations of parent ratings and the student self-report Altruism scale.

Table 8

Correlations Among Teacher and Parent Reports of Social Competency and Maryland State Assessment scores

Maryland State Assessment, z score	Teacher		Parent	
	Fall	Spring	Fall	Spring
Grade 4				
Reading	0.37	0.33	0.25	0.22
Math	0.38	0.37	0.23	0.24
Combined	0.42	0.38	0.27	0.26
<i>N</i>	586	660	576	582
Grade 5				
Reading	0.24	0.21	0.20	0.24
Math	0.28	0.21	0.20	0.26
Combined	0.29	0.23	0.22	0.28
<i>N</i>	580	638	534	502

Note. Teacher and Parent Reports of Social Competency have been reflected, transformed using a natural logarithm, and standardized using a z-score. SCRF scores were then multiplied by -1 to aid in interpretation of correlations. Positive correlations among survey scores and standardized test scores indicate a positive correlation among prior achievement and Teacher and Parent reports of social competency.

Factor analysis showed that a single latent variable underlies the SCRF, although, with refinement, a three-factor scale is possible. Other social competency rating scales report multiple factors that are highly correlated and questionably reflect unique constructs. Rather than extracting multiple factors, using a global index score for the SCRF was deemed most psychometrically defensible.

A virtue of this study is that it involves a large sample for which data are available from a variety of sources. The rich school record data provide real world

criteria to which the parent and teacher ratings of social competency can be compared. Parents, teachers, and students all serve as different sources of data.

There are several suggestions for future research. First, further examination of the validity of the SCRF should compare SCRF scores with scores on other social competency rating scales. Second, the sample used in this study is strictly representative only of the 12 schools from which the sample is derived, and it contains relatively few members of ethnic minority groups. Furthermore, of the students enrolled and eligible to participate in the study, affirmative consent was obtained for only 69% of students. The characteristics of the students not participating are currently unexplored, and it is not known at this point if they differ in important ways from those students whose parents agreed to their participation. To gain information on a broader population, future research should ideally be applied to other geographic areas and a more ethnically diverse sample. In addition, the SCRF was not used to rate the behavior of students in self-contained special education classrooms, probably resulting in restriction in the range of social competence in the sample. Future research may wish to sample students from the self-contained special education population. Finally, although the SCRF was constructed with the aim of devising a more user-friendly instrument than existing rating scales, teacher and parent acceptability is not explicitly measured in this research and would be a valuable addition.

Appendices

Appendix A

Table A1. *Social Competency Rating Scales, General Information*

Measure	Scales and Subscales	Informants	No. of Items	Completion Time	Scale
SSBS-2	1. Social Competence (Peer Relations, Self-Management/Compliance, Academic Behavior) 2. Antisocial Behavior (Hostile/Irritable, Antisocial/Aggressive, Defiant/Disruptive)	Teachers	64	8 to 10 minutes	Likert type 1 - 5
HCSBS	1. Social Competence (Peer Relations, Self-Management/Compliance) 2. Antisocial Behavior (Defiant/Disruptive, Antisocial/Aggressive)	Parents and Caregivers	64	8 to 10 minutes	Likert type 1 - 5
SSRS	<i>Parent:</i> 1. Social Skills (Cooperation, Assertion, Responsibility, Self-Control), 2. Problem Behaviors (Externalizing, Internalizing, Hyperactivity) <i>Teacher:</i> 1. Social Skills (Cooperation, Assertion, Self-Control), 2. Problem Behaviors (Externalizing, Internalizing, Hyperactivity) <i>Student:</i> Social Skills (Cooperation, Assertion, Empathy, Self-Control)	Teachers, Parents, Students (grades 3 to 12)	<i>Teacher:</i> 57 <i>Parent:</i> 55 <i>Student:</i> 34	20 minutes to administer, 5 minutes to score	Likert type 0 - 2
Walker-McConnell	1. Teacher Preferred Social Behavior, 2. Peer-Preferred Social Behavior, 3. School Adjustment	Teachers and other school professionals	43	5 to 10 minutes	Likert type 1 - 5

Note. SSBS-2 = Social Skills Behavior Scales, HCSBS = Home and Community Social Behavior Scales, SSRS = Social Skills Rating System, Walker McConnell = The Walker-McConnell Scales of Social Competence and School Adjustment- Elementary version.

Table A2. *Social Competency Rating Scales, Norming Samples*

Measure	Size of Sample	Ethnic Representation	Regional Representation
SSBS-2	2280	76% White, 11% African American, 10% Hispanic, 1% Asian, 0.6% American Indian, 1.4% Multiracial	50% West, 50% other 3 regions
HCSBS	1562	71% White, 14% African American, 11% Hispanic, 2% Asian, 0.4% American Indian, 2% Multiracial	9 states, over represents West, N. Central, and South, 5 % from NE
SSRS	1027 parents, 259 teachers	73% White, 20% African American, 4% Hispanic, 4% Other	12% NE, 36% N. Central, 36% South, 17% West
Walker-McConnell	1812	80% White, 11% African American, 1% Hispanic, 7% Other	4 regions, 15 states

Note. SSBS-2 = Social Skills Behavior Scales, HCSBS = Home and Community Social Behavior Scales, SSRS = Social Skills Rating System, Walker McConnell = The Walker-McConnell Scales of Social Competence and School Adjustment-Elementary version.

Table A3. *Social Competency Rating Scales, Reliability*

Measure	Coefficient Alpha	Test-Retest	Interrater
SSBS-2	Social Competence Total = .98 Antisocial Behavior Total = .98	1 week Social Competence Total = Not reported Peer Relations = .94, Self-Management/Compliance = .86, Academic Behavior = .93 Antisocial Behavior Total = Not reported, Hostile/Irritable = .94, Antisocial/Aggressive = .94, Defiant/Disruptive = .94	Teachers and teacher aides, learning disabled sample ($N = 40$) Social Competence Total = .86, Antisocial Behavior Total = .53
HCSBS	Social Competence Total = .97 Antisocial Behavior Total = .96	2 weeks ($N = 137$) Social Competence Total = .84, Antisocial Behavior Total = .91	Two parents rating ($N = 83$) Social Competence Total = .86, Antisocial Behavior Total = .71
SSRS	<i>Parent:</i> Social Skills = .87, Problem Behavior = .87 <i>Teacher:</i> Social Skills = .94, Problem Behavior = .88	4 week <i>Parent:</i> ($N = 45$) Social Skills = .87, Problem Behavior = .65 <i>Teacher:</i> ($N = 288$) Social Skills = .85, Problem Behavior = .84	Not reported
Walker-McConnell	Total scale = .97, Teacher Preferred Social Behavior = .96, Peer-Preferred Social Behavior = .95, School Adjustment = .96	Several small N studies spanning different time periods, range .61 to .97	Classroom and special education teacher and their aides Multiple studies, range from .11 to .83 across studies

Note. SSBS-2 = Social Skills Behavior Scales, HCSBS = Home and Community Social Behavior Scales, SSRS = Social Skills Rating System, Walker McConnell = The Walker-McConnell Scales of Social Competence and School Adjustment-Elementary version.

Appendix B

Table B1. *Consent Rates and Return Rates for Teacher and Parent Ratings of Student Social Competency*

					<u>Percentage of</u>	
		Enrolled	Consented	Completed	Enrolled	Consented
Fall 2004						
	Teacher	3705	2428	2291	62	94
	Parent	3705	2437	2139	58	88
Spring 2005						
	Teacher	3710	2529	2486	67	98
	Parent	3710	2545	2096	56	82

Appendix C

Social Competency Rating Form Completed by Parents and Teachers

Affix Removable Label Here

SOCIAL COMPETENCY RATING FORM

⇒ Use pencil. Erase completely to change answers.

Instructions: Please describe the child whose name is printed on the label above by telling how much each statement describes his or her usual behavior in the past month. Please fill in marks like this: ● Not like this: ○ ⊗ ⊘ Please remove the label with the child's name before returning this form. Responses are confidential.

	Never/ Almost Never	Some- times	Often	Very Often
Acts without thinking	○	①	②	③
Acts in ways that annoy or bother others	○	①	②	③
Articulates different ways to solve a problem	○	①	②	③
Asks adult for help or advice about ways to resolve difficult situations	○	①	②	③
Expresses concern for others	○	①	②	③
Gossips or spreads rumors	○	①	②	③
Helps others	○	①	②	③
Hits, kicks at, or jumps on siblings or other children	○	①	②	③
If provoked by peers, shows self-control	○	①	②	③
If upset, responds with verbal aggression (swearing, calling names)	○	①	②	③
If angered, expresses anger <u>without</u> being aggressive or destructive	○	①	②	③
Is impulsive in interacting with peers	○	①	②	③
Is able to see things from other children's perspectives	○	①	②	③
Is teased, hit, or bullied by other kids	○	①	②	③
Lets others know how he/she feels about situations	○	①	②	③
Removes him or herself from potential problem situations	○	①	②	③
Resists peer pressure when appropriate	○	①	②	③
Responds with physical aggression to problems with peers	○	①	②	③
Shows defiance in interactions with parents or other adults	○	①	②	③
Shows respect for others	○	①	②	③
Solves problems with peers through compromise or discussion	○	①	②	③
Takes time to calm down when dealing with problem situations	○	①	②	③
Takes other people's feelings into account before acting	○	①	②	③
Takes or steals things that belong to others	○	①	②	③
Takes responsibility for own actions (for example, apologizes)	○	①	②	③
Teases, insults, provokes, or threatens others	○	①	②	③
Tells lies or cheats	○	①	②	③
Tries a new approach to a problem when first approach is not working	○	①	②	③
Understands the likely consequences of his or her own actions	○	①	②	③

Appendix D

Table D1. *Raw Score Means and Standard Deviations for Teacher Reports of Student Social Competency, Ethnic Groups*

Sex	Student's Ethnicity	Fall 2004			Spring 2005		
		Mean	<i>N</i>	Std. Deviation	Mean	<i>N</i>	Std. Deviation
Female	American Indian/ Alaskan Native	2.47	7	.29	2.53	7	.36
	Asian/ Pacific Islander	2.56	25	.44	2.52	27	.44
	African American	2.03	80	.52	2.02	86	.57
	White/Non- Hispanic	2.30	981	.45	2.33	1020	.47
	Hispanic	2.12	14	.35	2.28	13	.38
	Total	2.29	1107	.46	2.31	1153	.49
Male	American Indian/ Alaskan Native	1.49	3	.37	1.59	2	.20
	Asian/ Pacific Islander	2.17	32	.42	2.21	34	.49
	African American	1.69	86	.56	1.66	84	.60
	White/Non- Hispanic	2.05	1035	.51	2.10	1062	.54
	Hispanic	1.94	23	.36	1.92	23	.51
	Total	2.03	1179	.51	2.06	1205	.55
Combined	American Indian/ Alaskan Native	2.18	10	.56	2.32	9	.52
	Asian/ Pacific Islander	2.34	57	.47	2.35	61	.49
	African American	1.85	166	.57	1.84	170	.61
	White/Non- Hispanic	2.18	2016	.50	2.21	2082	.52
	Hispanic	2.00	37	.36	2.05	36	.49
	Total	2.15	2286	.51	2.18	2358	.53

Note. Scores range from 0 to 3, with 3 indicating high social competence.

Appendix E

Table E1. *Raw Score Means and Standard Deviations for Parent Reports of Student Social Competency, Ethnic Groups*

Sex	Student's Ethnicity	Fall 2004			Spring 2005		
		Mean	<i>N</i>	Std. Deviation	Mean	<i>N</i>	Std. Deviation
Female	American Indian/ Alaskan Native	2.28	7	.43	2.32	6	.28
	Asian/ Pacific Islander	2.10	23	.42	2.14	24	.43
	African American	2.08	70	.42	2.05	62	.45
	White/Non- Hispanic	2.21	932	.36	2.21	882	.37
	Hispanic	2.15	12	.32	2.32	9	.16
	Total	2.20	1044	.37	2.20	983	.38
Male	American Indian/ Alaskan Native	1.08	4	.73	2.21	1	.
	Asian/ Pacific Islander	1.93	30	.32	2.06	23	.31
	African American	2.07	65	.38	1.95	58	.43
	White/Non- Hispanic	2.05	973	.40	2.04	897	.40
	Hispanic	2.05	22	.37	2.17	18	.45
	Total	2.05	1094	.40	2.04	997	.40
Combined	American Indian/ Alaskan Native	1.84	11	.80	2.31	7	.26
	Asian/ Pacific Islander	2.01	53	.37	2.10	47	.38
	African American	2.08	135	.40	2.00	120	.44
	White/Non- Hispanic	2.13	1905	.39	2.12	1779	.39
	Hispanic	2.08	34	.35	2.22	27	.38
	Total	2.12	2138	.39	2.12	1980	.40

Note. Scores range from 0 to 3, with 3 indicating high social competence.

Appendix F

Table F1. *Social Competency Rating Scale, Three Subscales*

Scale Name	No. of Items	Sample Item	Coefficient Alpha	
Social Skills	13	Expresses concern for others	Teacher	.94
			Parent	.88
Problem Behavior	8	Teases, insults, provokes, or threatens others	Teacher	.86
			Parent	.78
Impulsiveness	3	Acts without thinking	Teacher	.89
			Parent	.64

Table F2. *Longitudinal Correlations using Three Factor Solution, Teacher Ratings of Student Social Competency*

Factor	Spring 2005		
	Social Cognitive Skills	Problem Behavior	Impulsiveness
Fall 2004			
Social Cognitive Skills	.70	-.39	-.52
<i>N</i>	2220	2219	2216
Problem Behavior	-.40	.54	.48
<i>N</i>	2235	2234	2231
Impulsiveness	-.50	.47	.73
<i>N</i>	2226	2225	2222

Table F3. *Longitudinal Correlations using Three Factor Solution, Parent Ratings of Student Social Competency*

Factor	Spring 2005		
	Social Cognitive Skills	Problem Behavior	Impulsiveness
Fall 2004			
Social Cognitive Skills	.67	-.30	-.34
<i>N</i>	1832	1832	1800
Problem Behavior	-.30	.51	.39
<i>N</i>	1829	1830	1796
Impulsiveness	-.36	.39	.61
<i>N</i>	1796	1796	1766

Appendix G

Table G1. *Concurrent and Six-Month Longitudinal Correlations Among Teacher and Parent Reports of Social Competency*

Rater and Occasion	N	Teacher		Parent	
		Fall	Spring	Fall	Spring
Boys					
Teacher					
Fall	1139	.95	.75	.34	.32
Spring	1234	--	.96	.32	.38
Parent					
Fall	1013	--	--	.92	.72
Spring	975	--	--		.91
Girls					
Teacher					
Fall	1075	.94	.67	.30	.31
Spring	1151	--	.95	.26	.29
Parent					
Fall	980	--	--	.89	.61
Spring	956	--	--	--	.90

Note. Alpha reliabilities are shown in bold face on the diagonal. The column headed *N* shows the number of ratings on which the alpha reliability is estimated. Only cases with no missing item responses enter the alpha calculation.

Appendix H

Table H1. *Concurrent and Six-Month Longitudinal Correlations Among Teacher and Parent Reports of Social Competency- Boys and Girls Combined*

Rater and Occasion	N	Teacher		Parent	
		Fall	Spring	Fall	Spring
White/Non-Hispanic					
Teacher					
Fall	1942	.95	.72	.36	.35
Spring	1997	--	.95	.34	.36
Parent					
Fall	1780	--	--	.91	.68
Spring	1656	--	--		.91
African American					
Teacher					
Fall	157	.96	.74	.22	.42
Spring	164	--	.96	.21	.38
Parent					
Fall	122	--	--	.91	.65
Spring	106	--	--		.91
Asian/Pacific-Islander					
Teacher					
Fall	56	.95	.82	.32	.03
Spring	60	--	.95	.32	-.06
Parent					
Fall	49	--	--	.86	.71
Spring	43	--	--		.88

Note. Alpha reliabilities are shown in bold face on the diagonal. The column headed *N* shows the number of ratings on which the alpha reliability is estimated. Only cases with no missing item responses enter the alpha calculation.

Appendix I

Figure I1

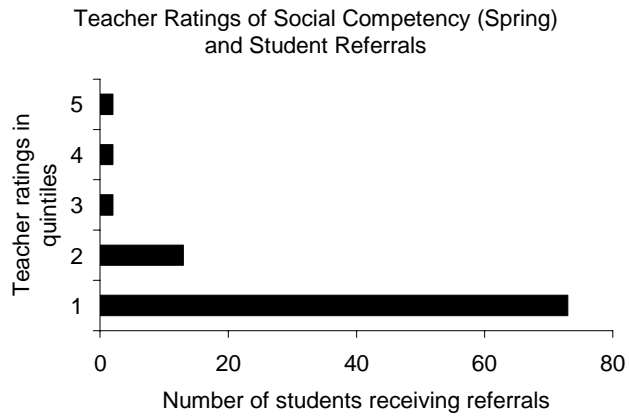


Figure I2

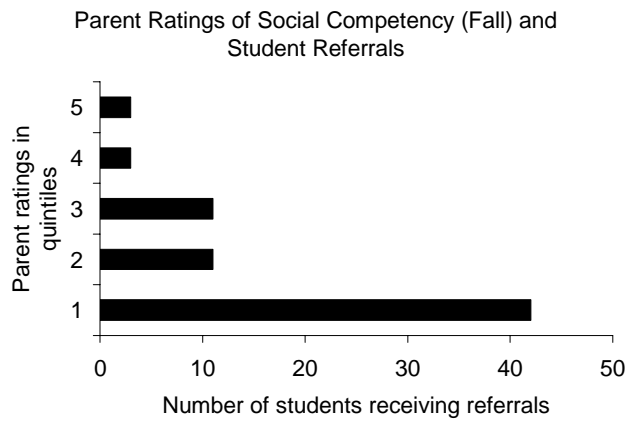
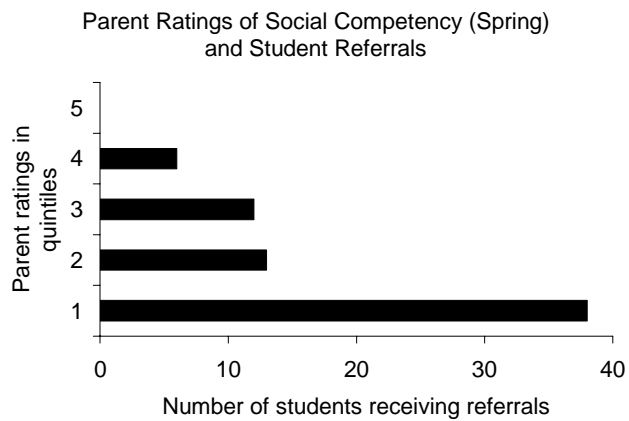


Figure I3



Appendix J

Figure J1

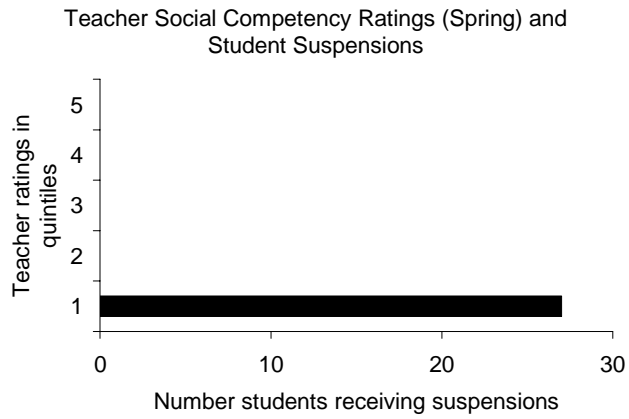


Figure J2

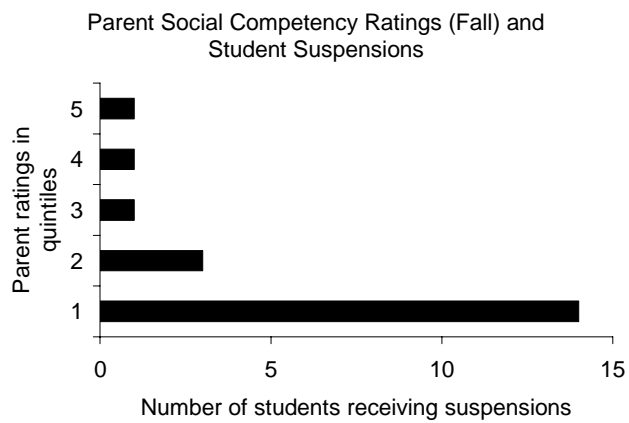
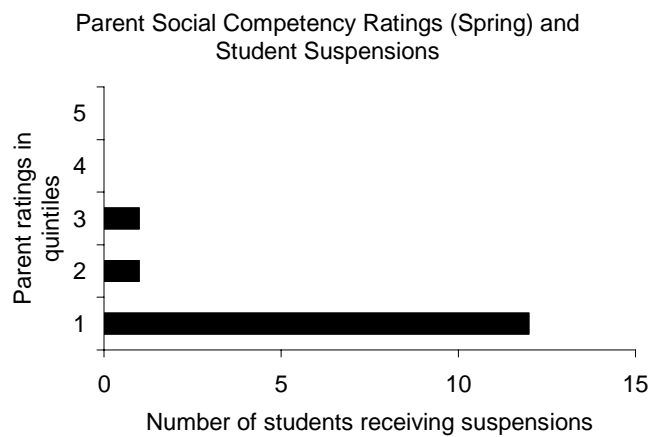


Figure J3



Appendix K

Figure K1

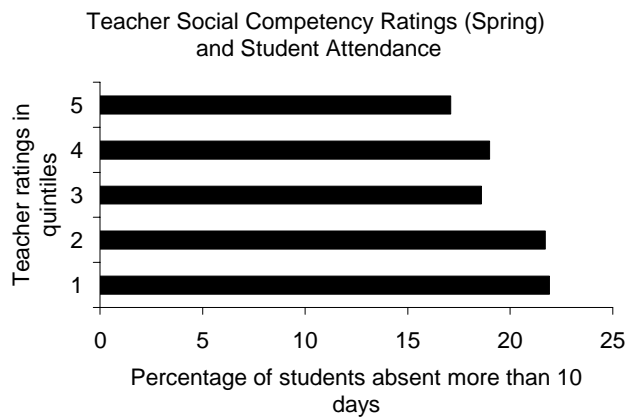


Figure K2

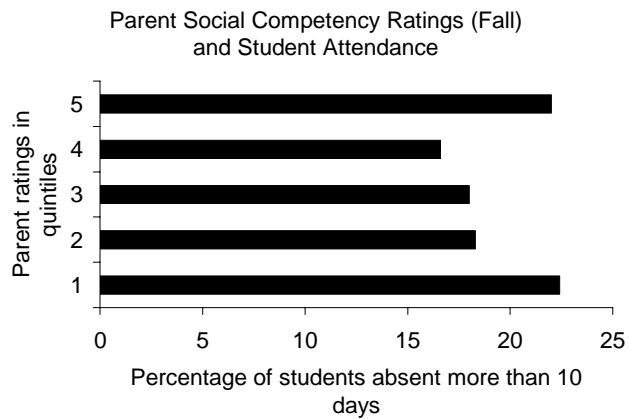
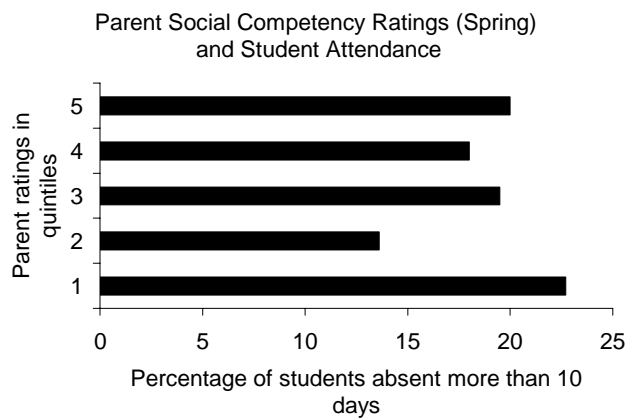


Figure K3



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