Social Skills of Children With Specific Language Impairment

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Language skills are important in establishing and maintaining successful social relationships (e.g., Asher & Renshaw, 1981; Dodge, Pettit, McClaskey, & Brown, 1986; Gottman, 1983). Normally developing children employ their language skills to share information, express feelings, direct behavior, and negotiate misunderstandings as they interact with others. It is also well documented that children with a range of disabilities involving language deficits experience significant social difficulties (e.g., Antia & Kreimeyer, 1992; Aram, Ekelman, & Nation, 1984; Bryan, 1986; Guralnick, 1992).

ABSTRACT: The social skills of 19 elementary school children with specific language impairment (SLI) and 19 chronological age-matched peers were examined. Children in both groups were selected from those children between the ages of 8 and 12 years. Each child with SLI was individually matched to a classmate of the same age. First, the Social Skills Rating System–Teacher Form (Gresham & Elliott, 1990) was administered to provide a general measure of social skill. Following this measure, the quantity of peer relationships was assessed in both groups using an informal picture task. This measure provided an indication of the peers with whom each child interacted while taking part in a variety of activities. The quality of peer relationships was then assessed using the Williams and Asher Loneliness Questionnaire (Williams & Asher, 1992). It was found that children with SLI differed from their peers on all three measures. These results suggested that the children with SLI had poorer social skills and fewer peer relationships, and were less satisfied with the peer relationships in which they participated when compared with their age-matched classmates.

KEY WORDS: language impairment, social competence, social skills, socioemotional problems

For these children, limited language skills and social problems are often associated. It might be expected, then, that children with specific language impairment (SLI) would be at particular risk for social problems. To determine if this is the case, speech-language pathologists have begun to explore the relationship between SLI and social functioning (Brinton & Fujiki, 1993; Craig, 1993; Fujiki & Brinton, 1994; Gallagher, 1991; Goldstein & Gallagher, 1992; Rice, 1993a, 1993b; Windsor, 1995).

LITERATURE REVIEW

A number of investigations have suggested that SLI does, indeed, have an impact on a child’s social world. Results of a series of recent studies have indicated that children with impaired language skills interact differently than their normally developing peers in a classroom context, are less preferred playmates than their normally developing peers, and experience difficulty with basic social tasks. The following is a brief overview of the work that has led to these conclusions.

The classroom is a primary social context for many children. In a series of studies performed at the Language Acquisition Preschool (LAP) of the University of Kansas, Rice and her colleagues (Gertner, Rice, & Hadley, 1994; Hadley & Rice, 1991; Rice, Sell, & Hadley, 1991) have examined the interactional patterns of children with various levels of language ability. These studies suggest that children with problematic speech and language skills interact differently than their peers with normally developing skills.

For example, Rice, Sell, and Hadley (1991) studied four groups of subjects, including (a) children with language impairment (LI), (b) children with speech impairment (SI), (c) children learning English as a second language (ESL), and (d) children with normally developing language skills.
Observations made during play time revealed that even at the preschool level, children appeared to be aware of the communication abilities of other children, and this knowledge influenced their selection of conversational partners.

For example, children with normally developing skills preferred talking with other children with normally developing skills. Children in both groups with communication handicaps preferred talking to adults over peers. The children in the ESL group were the least likely to initiate interaction and the least preferred addressees of children in each of the other groups.

In a follow-up study, Hadley and Rice (1991) examined conversational exchanges between children in the LAP to determine if conversational responsiveness might play an influential role in the observed patterns of social interaction. Children with LI, SI, marginal language skills, and typical language skills were studied. It was found that the children in the LI/SI group frequently ignored the initiations of their peers, and that these children were frequently ignored by their peers.

Gertner, Rice, and Hadley (1994) used a peer nomination task to determine if poor communication skills were associated with peer popularity in the LAP. Each child was presented with pictures of the other children in his or her classroom and asked to select a peer to play with in the context of dramatic play (a classroom activity in which children were free to select others with whom to play and talk). This procedure was repeated in order to produce three different positive nominations from each child.

Children were also asked to select a peer with whom they did not like to play, again producing three nominations. Based on the resulting nominations, children were placed in cells of liked, disliked, low impact (neither liked or disliked), or mixed profile (liked by some and disliked by others). Normally developing children dominated the liked cell, and children in the SI/LI group and the ESL group tended to fall into the low impact or disliked cells.

Children with SLI also have difficulty performing basic social tasks. Craig and Washington (1993) examined the ability of 7-year-old children with SLI to access an ongoing interaction. The performance of these children was compared to peers with normally developing language skills matched for both language age (LA) and chronological age (CA). It was found that all the children in the LA and CA groups accessed the interaction, and most did so quickly. However, three of the children with SLI did not access the interaction at all during a 20-minute observation period. The remaining two subjects with SLI used nonverbal strategies to gain access.

Taken as a whole, these studies suggest that children with SLI are likely to have difficulty interacting with peers, and that these difficulties may have social consequences. If further research demonstrates that these findings can be generalized to the population of children with SLI as a whole, speech-language pathologists will need to seriously consider the implications of language impairment beyond the traditional arena of academic achievement.

The purpose of the current investigation was to further explore the social skills of elementary school children with SLI by first examining their general level of social behavior and then considering the quantity and quality of their social relationships. To provide a general estimate of social skill, the Social Skills Rating System–Teacher Form (SSRS–T; Gresham & Elliott, 1990) was administered to the teachers of children with SLI between the ages of 8 and 12 years of age and their CA-matched peers. The quantity of peer relationships was assessed using an informal picture task. This measure provided an indication of the peers with whom each child interacted while taking part in a variety of activities. The quality of peer relationships was assessed using the Williams and Asher Loneliness Questionnaire (Williams & Asher, 1992). The following research questions were addressed:

- Do children with SLI differ from their CA-matched peers on a general measure of social skill?
- Do children with SLI differ from their CA-matched peers in the number of peers with whom they interact?
- Do children with SLI differ from their CA-matched peers in their satisfaction with the social relationships in which they participate?

**METHOD**

**Subjects**

Children were sampled from several elementary schools in a large western school district. District speech-language pathologists were asked to refer children with SLI who met predetermined criteria. From these referrals, 19 subjects were selected. Criteria used to identify subjects and matching procedures are described as follows.

**Subjects with SLI:** Subjects with SLI met the following criteria:

- CA between 8 and 12 years. The resulting mean age of these subjects was 122.84 months (SD = 15.37 months);
- nonverbal or performance IQ score of 80 or above on a formal measure of intelligence. This score was taken from the Wechsler Intelligence Scale for Children–Revised (WISC–R; Wechsler, 1974) for 13 subjects, the Wechsler Intelligence Scale for Children–III (Wechsler, 1991) for 3 subjects, the Test of Nonverbal Intelligence (TONI; Brown, Sherbenou, & Johnsen, 1990) for 2 subjects, and the Matrix Analogies Test (MAT; Naglieri, 1985) for 1 subject. The resulting mean performance/nonverbal IQ was 94 (ranging from 80–115);
- unremarkable audiological status as indicated by a pure-tone hearing screening administered by a school district speech-language pathologist;
- diagnosis of SLI based on a formal measure of language production and/or comprehension. For 10 subjects, a receptive and/or productive score of 85 or lower on the Clinical Evaluation of Language Fundamentals–R (Semel, Wiig, & Secord, 1987) was used as a basis for diagnosis. For 6 subjects, a receptive and/or
or productive score of 85 or lower on the Test of Language Development–2, Primary (Newcomer & Hammill, 1988) was used for diagnosis. For 2 subjects, diagnosis was based on a total language score below 35 on the Language Processing Test (M = 50, SD = 10) (Richard & Hanner, 1985). For 1 subject, the diagnosis was based on performance more than 1 SD below the mean on two subtests of the Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy, & Kirk, 1968), one subtest of the Clinical Evaluation of Language Fundamentals–R, and the Peabody Picture Vocabulary Test–Revised (Dunn & Dunn, 1981); 

- mainstream classroom placement;
- enrollment in the speech-language pathology caseload for language intervention on a pullout or consultation basis; and
- no formal diagnosis of emotional or behavioral disorder.

**Subjects with normally developing language skills.** Children with SLI were individually matched with peers of the same CA (within 6 months) with normally developing language skills. Once a child with SLI was identified, classroom teachers were asked to generate a list of all children in the same classroom as the child with SLI meeting the following criteria:

- expected academic performance based on classroom teacher report and school records;
- no enrollment in special services for academic, behavioral, emotional, or communication difficulties;
- unremarkable audiological status as indicated by a pure-tone hearing screening administered by a school district speech-language pathologist;
- CA within 6 months of age of the target child with SLI. The resulting mean age of these subjects was 122.21 months (SD = 14.83 months); and
- same gender as the target child with SLI. This resulted in 9 male and 10 female subjects.

Each match was then randomly selected from the resulting list. The only exception to this involved one child with SLI who had been retained a year in school, thus making it necessary to select an age match from the next grade level.

**Assessment Instruments**

The following assessment measures were used.

**SSRS–T (Gresham & Elliott, 1990).** The SSRS–T is a norm-referenced behavior rating scale completed by a child’s teacher to assess that child’s performance in the domains of social skills, problem behaviors, and academic competence. There are also versions of the SSRS designed for administration to the student and to a parent.

Only data from the teacher form were used in the current analysis (see Todd, 1994, for a comparison of the teacher form with a modified version of the student form). Additionally, only the domains of social skills and problem behaviors were included in the analysis. This was done because it is generally accepted that children with SLI have academic problems. Comparisons with children selected on the basis of expected academic performance would most likely be unproductive.

The SSRS–T is typically administered by having each teacher read and complete the questionnaire. However, for this study, the format was modified and each teacher was interviewed to increase the consistency of time spent on task. Items were reworded into question form (e.g., “Makes friends easily” was revised to “Does [child’s name] make friends easily?”). Teachers were asked to judge the frequency of the behavior mentioned using a 3-point scale (based on whether the behavior occurred “never,” “sometimes,” or “very often”).

In the domain of social skills, the SSRS–T included three subscales focusing on cooperation, assertion, and self-control. The cooperation subscale included items focusing on cooperation with others and following directions (e.g., “Does [child’s name] finish assignments?”). The assertion subscale focused on initiating behaviors with others (e.g., “Does [child’s name] make friends easily?”). The self-control subscale focused on social skills displayed in confrontational and potentially confrontational circumstances (e.g., “Does [child’s name] control his/her temper in conflict situations with peers?”).

The problem behavior domain of the SSRS–T included three subscales: externalizing problems, internalizing problems, and hyperactivity. The externalizing problems subscale focused on problematic behaviors directed toward other individuals (e.g., “Does [child’s name] fight with others?”). The internalizing problems subscale included problematic behaviors that are directed inward (e.g., “Does [child’s name] act sad or depressed?”). The hyperactivity subscale included items centering on impulsive and hyperactive behaviors (“Does [child’s name] fidget or move excessively?”).

**Informal picture task.** In order to estimate the number of peer contacts of each child, subjects were shown a series of 10 pictures depicting common activities (e.g., children playing on a swing set, children eating lunch). The subjects were then asked if they ever took part in the activity pictured, and with whom they performed the activity.

In pilot work, a set of pictures was administered to 20 children. These subjects were then asked whether they took part in the pictured activity and with whom they took part. Pictures that did not elicit the names of others, or that tended to elicit only family members, were eliminated. A final set of 10 pictures was used in the study. The questions used in the task are included in the Appendix.

**The Williams and Asher (1992) Loneliness Questionnaire.** This questionnaire was a modified version of a questionnaire developed by Asher, Hymel, and Renshaw (1984), and consisted of 14 questions focusing on the child’s feelings of loneliness and social satisfaction (e.g., “Do you feel alone at school?” and “Are there kids at school who care about you?”). In order to help the child feel more relaxed about answering the questions involved, the remaining six questions focused on various activities in which the child might take part (e.g., Do you like to draw and paint?).

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Although informal in nature, the internal consistency, test–retest reliability, and split-half reliability of the original scale had been evaluated and found to be high (Asher, Hymel, & Renshaw; 1984; Luftig, 1988).

In order to tailor the scale more specifically to the limitations of persons with disabilities, Williams and Asher (1992) made the following modifications: (a) the scoring system was simplified (the original questionaire used a 5-point response system, the modified version used a 3-point system in which the child responds using always, sometimes, or never) and (b) items were phrased in question form. Researchers using the questionnaire with adults and children with mental retardation have had good success using these modifications (Chadsey-Rusch, DeStefano, O’Reilly, Gonzalez, & Collet-Klingenberg, 1992; Williams & Asher, 1992). Pilot administration suggested that the questionnaire was well within the linguistic abilities of the 8- to 12 year-old subjects with SLI.

Administration

In order to ensure that the assessment instruments were administered properly, the following procedures were used. After familiarization and practice with materials, the investigator (the third author) administered the entire assessment battery to two children with normally developing language skills and two children with SLI. The battery was also administered to one elementary school teacher (administered for two different children). The administrations to child subjects were videotape recorded. The teacher administration was audiotape recorded. These recordings were then reviewed by all the authors and feedback was provided. Following review, 20 additional administrations were performed to ensure consistency. Following completion of training, the investigator initiated data collection.

Data Collection Procedures

The same investigator administered all the assessment instruments to subjects in both groups and their classroom teachers. During the teacher interview, the SSRS–T was administered for both the child with SLI and the normally developing match.1 In administering the teacher scale, 10 of the teachers were interviewed before interviewing the children, and 9 pairs of children were interviewed before interviewing teachers. Additionally, the order in which the children were rated by individual teachers was alternated in order to control for rater bias.

Interviews with children were conducted in a quiet room in the child’s school and included the Williams and Asher Loneliness Questionnaire and the informal picture task. The following instructions were used:

I would like to ask you to do some work with me. I am going to ask you some questions. Some of these questions will be about how you feel, and others will be about things you do. You can ask any questions you want, and you can quit any time. Do you want to work with me?

Once the child agreed to take part, specific directions for each task were administered. To control for sequencing effects, the order of task administration was systematically varied between matched pairs. The child with SLI was interviewed first in 10 of the dyads and the child with normally developing skills was interviewed first in the other nine dyads.

Scoring

Raw scores from the SSRS–T were computed using directions provided in the test manual. The social skills domain was scored for each subject using a 3-point scale (very often = 2, sometimes = 1, never = 0). Scores for the problem behavior domain were also calculated for each subject using a 3-point scale (never = 0, sometimes = 1, very often = 2). For both domains, the raw score for each item was summed to create an overall score. Note that a higher score on the social skills domain indicated greater social skill, whereas a higher score on the problem behavior domain indicated a higher number of problem behaviors.

Raw scores from the informal picture task were calculated for each subject by scoring 2 points for an item in which the subject reported participation with two or more peers, 1 point for one friend, and 0 points for reporting self, family members, or no peers. Credit was given if the same peer was mentioned for multiple activities. Thus, the child could, in theory, name the same two peers for each activity and receive the maximum number of points. Raw scores from each activity were summed to create a total score for each child.

The Williams and Asher Loneliness Questionnaire was scored using the authors’ guidelines. Scores were determined from the 14 target questions (yes = 1, sometimes = 2, no = 3), with five loneliness items scored in reverse order (yes = 3, sometimes = 2, no = 1). A score of 3 was always indicative of greater loneliness/dissatisfaction. The raw score from each item was summed to create a total loneliness score for each child.

RESULTS

General Estimate of Social Skill Level

Scores from the SSRS–T are presented in Table 1. The α level for the following comparisons was set at .025. Analysis using the t-test for correlated means indicated that the normally developing subjects produced a significantly higher score, indicative of greater social skill, on the social skills domain than children in the group with SLI (t = 5.53, p < .0001). Analysis of the behavior domain indicated that the group with normally developing skills produced a significantly lower score, indicative of fewer behavior problems, than the group with SLI (t = -3.236, p = .0046). Because the SSRS–T was used to provide a general

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1 This procedure was used for all subjects except one child with SLI who had been held back a year in school. As noted previously, this necessitated selecting a CA-match from the next grade level. These subjects were each rated by their core classroom teachers.
Table 1. Scores on the Social Skills Rating System–Teacher version by children with SLI and children with normally developing skills.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social skills domaina</td>
<td></td>
<td></td>
</tr>
<tr>
<td>children with SLI</td>
<td>30.68</td>
<td>10.02</td>
</tr>
<tr>
<td>children with normally developing skills</td>
<td>46.16</td>
<td>6.29</td>
</tr>
<tr>
<td>Behavioral domainb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>children with SLI</td>
<td>13.75</td>
<td>6.41</td>
</tr>
<tr>
<td>children with normally developing skills</td>
<td>7.79</td>
<td>4.66</td>
</tr>
</tbody>
</table>

a higher score indicates greater social skill; b higher score indicates more problem behaviors.

estimation of ability, more detailed analyses on subscales were not performed. It was of interest to note, however, that on the social skills domain, the groups differed on all three subscales, with the scores for cooperation and assertion being most influential. In the behavioral domain, differences stemmed largely from performance on the hyperactivity and internalizing problems subscales.

Number of Peer Contacts

On the informal picture task, children with SLI reported a mean of 9.68 social contacts (SD = 4.31) across the 10 activities pictured. Children with normally developing skills reported a mean of 12.95 (SD = 4.30) peer contacts. The α level for this comparison was set at .05 and these data were analyzed using the t-test for independent means. These means were significantly different (t = 2.33, p = .023), with children with SLI having significantly fewer peer contacts.

Estimate of Satisfaction With Social Relationships

The Williams and Asher (1992) Loneliness Questionnaire was used to obtain an estimate of subjects’ satisfaction with their peer relationships. Children with SLI produced a mean score of 21.63 (SD = 6.14) on this measure. Children with normally developing skills produced a mean score of 17.79 (SD = 3.08). The α level for this comparison was set at .05. These scores were analyzed using the t-test for independent means and found to be significantly different (t = -2.438, p = .0198), with children with SLI being significantly less satisfied with their peer relationships.

DISCUSSION

The first question addressed in this study asked whether the subjects with SLI differed from their CA-matched classmates in social skill. To the degree that the SSRS–T was effective in measuring social skill, this was certainly the case. The SSRS–T indicated that the subjects with SLI were less socially skilled than their typical peers and demonstrated a higher number of problem behaviors.

This result reflects the fact that classroom teachers rated students with SLI less favorably than their typical peers in social and behavioral domains despite the fact that these subjects had not been identified as having emotional or behavioral problems. However, some caution is warranted in considering these ratings. Because persons with disabilities are generally at risk to be devalued by society (Wolfensberger, 1985), it is possible that teachers might rate the children with SLI lower than their normally developing peers simply because the teachers perceived these children to have disabilities. Although the consistency of the SSRS–T results with other measures used in the study would suggest that this was not the case, it is a consideration.

Assuming that the results of the SSRS–T accurately reflected the subjects’ actual performance, the fact that teachers rated subjects with SLI lower in the social skills domain of the SSRS–T suggests that the poor performance in accessing an ongoing interaction observed by Craig and Washington (1993) may extend to other social behaviors. This SSRS–T includes items tapping a variety of skills such as introducing oneself, joining activities, initiating interactions, making friends, accepting peers’ ideas, and compromising in conflicts. These kinds of skills deserve additional clinical and research attention. Further investigation is needed to identify which skills are particularly fragile for children with SLI and which skills, if addressed clinically, might contribute most positively to a child’s social world.

As indicated previously, differences in the way teachers rated children with SLI and their typical peers were also evident in the behavioral domain measured by the SSRS–T. This finding dovetails with previous reports indicating that language problems and behavioral difficulties often coexist in children (Baker & Cantwell, 1982, 1987a, 1987b; Baltaxe & Simmons, 1988a, 1988b; Camarata, Hughes, & Ruhl, 1988; Miniutti, 1991; etc.). The current findings, combined with those of previous investigations, underscore the need to coordinate services designed to facilitate communication skills and manage challenging behaviors.

The second question addressed by this study asked whether subjects with SLI differed from the typical subjects in the number of peers with whom they interacted. The results of the informal picture task designed for this study suggested that this was the case. Subjects with SLI reported that they interacted with fewer peers in social activities such as board games, eating lunch, and sports. This suggests that the subjects with SLI had fewer contacts with peers on common social activities.

Again, this finding supports existing data. Considering the work of Rice et al. (1991), Hadley and Rice (1991), and Gertner et al. (1994), it might be expected that children with SLI would have fewer social contacts with peers. As Rice (1993a, 1993b) has suggested, children with SLI are more likely to experience a high rate of rejection and have fewer positive peer contacts because they lack the language skills necessary to interact effectively with their peers. Not only is this likely to influence social development, but it reduces the opportunities in which these children might learn more effective interactional skills.
The final question asked whether children with SLI differed from their typical peers in their satisfaction with their social relationships. Although there is a fair amount of evidence suggesting that children with SLI are perceived as less capable socially than their peers, there is relatively little information regarding the way in which these children perceive themselves.

The results of the Williams and Asher Loneliness Questionnaire indicated that the subjects with SLI were less satisfied with their social interactions than were their CA-matched peers. This finding implies that the subjects with SLI felt that the relationships they had with their peers did not meet their needs for peer companionship. It should be noted that it is difficult to determine whether these differences reflect actual differences in experience or differing expectations of the children. This is a question that merits further study.

It is possible that the responses of the children with SLI on the picture task and the Williams and Asher Loneliness Questionnaire were influenced by their difficulty with language. On any measure that uses verbal language, it is conceivable that children with language deficits may have difficulty understanding both instructions and the response items. However, the questions on the Williams and Asher measure were designed specifically for individuals with limited language abilities, and the directions and questions employed on the picture task were simple and repetitive. Both measures seemed well within the language capabilities of the 8- to 12-year-old subjects with SLI.

It might be argued that if the measures were too difficult linguistically, one would expect a more variable pattern of response than was observed. Additionally, there are data suggesting that positive self reports are more suspect than negative self reports on certain social domains (Kagan, Hans, Markowitz, Lopez, & Sigal, 1982). Given these factors, it seems unlikely that the linguistic requirements of the measures administered to the subjects were primarily responsible for the differences observed.

In summary, findings of previous studies and the results of the current study combine to provide a rather concerning picture of the general social and behavioral adjustment of children with SLI. A relationship between language, behavior, and social difficulties seems evident. Important questions remain to be answered. For example, is this relationship causal or associative? If it is causal, in which direction does causality run? How can language, behavior, and social difficulties be addressed most successfully in intervention? Further research and clinical attention must be directed toward these questions.

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APPENDIX. PICTURE TASK QUESTIONS

1. Do you ever play at someone's house?
   Who do you play with?
2. Do you ever draw or color?
   Who do you draw or color with?
3. Do you ever play outside at recess?
   Who do you play with at recess?
4. Do you ever ride bikes?
   Who do you ride bikes with?
5. Do you ever play games?
   Who do you play games with?
6. Do you ever watch t.v.?
   Who do you watch t.v. with?
7. Do you ever play with toys?
   Who do you play toys with?
8. Do you ever have a sleep over?
   Who do you sleep over with?
9. Do you ever talk on the phone?
   Who do you talk on the phone with?
10. Do you ever eat lunch at school?
    Who do you eat lunch with?
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