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The Influence of Language Production, Comprehension, and Pragmatic Judgment
on Prosocial Behavior in Children with Language Impairment

Nicole Yvette Weber

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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ABSTRACT

The Influence of Language Production, Comprehension, and Pragmatic Judgment on Prosocial Behavior in Children with Language Impairment

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Department of Communication Disorders

Master of Science

The purpose of this study was to examine the relationship between language skills and prosocial behavior in 37 children with language impairment (LI) and 37 typically developing peers matched for age (ranging from 6;11 to 11;1 years). The influence of gender on this relationship was also considered. Three different subtests of the *Comprehensive Assessment of Spoken Language* (Carrow-Woolfolk, 1999) were used to evaluate language ability in the areas of language comprehension, language production and pragmatic judgment skills. The *Teacher Behavior Rating Scale* (C. H. Hart & Robinson, 1996) was used to evaluate prosocial behavior. The current study replicated previous research by documenting that children with LI demonstrate significantly poorer prosocial behavior skills than do typically developing peers. Children with LI also performed significantly more poorly on the three language subtests of paragraph comprehension, syntactic construction, and pragmatic judgment skills compared to typical peers. No significant gender differences were noted on any of the comparisons. Multiple regression analyses were used to evaluate the relationship between the three language subtests and prosocial behavior in the group with LI compared to the typical group. Results for both groups indicated that paragraph comprehension, syntactic construction, and pragmatic judgment skills were not significant predictors of prosocial behavior when used in combination or independently. Results suggest that language alone cannot predict prosocial behavior in children with LI or typically developing children.

Keywords: sociability, prosocial behavior, language impairment

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Introduction

Children are considered to have a language impairment (LI¹) when they demonstrate impaired linguistic abilities in the face of unremarkable cognitive, physical, and sensory development (Leonard, 1998). Studies have shown, however, that despite this general definition, children with LI have problems in other aspects of development besides language. Of particular interest for present purposes are difficulties in social competence. Research has documented that children with LI have more social difficulties than their typically developing peers (Brinton & Fujiki, 1999; Cheek & Buss, 1981; Conti-Ramsden & Botting, 2004; Craig, 1993; Fujiki, Brinton, & Todd, 1996; Fujiki, Brinton, Hart, & Fitzgerald, 1999; Fujiki, Brinton, Morgan, & Hart, 1999; Gertner, Rice, & Hadley, 1994; McCabe & Meller, 2004; Redmond & Rice, 1998; Rice, Sell, & Hadley, 1991). The problems that these children encounter include difficulty accessing ongoing peer interaction (Brinton, Fujiki, Spencer, & Robinson, 1997; Craig & Washington, 1993; Liiva & Cleave, 2005), participating in cooperative groups (Brinton, Fujiki, & Higbee, 1998; Brinton, Fujiki, Montague, & Hanton, 2000), and sustaining peer interactions (Fujiki et al., 1999; Fujiki, Brinton, Isaacson, & Summers, 2001; Fujiki, Spackman, Brinton, & Hall, 2004; Hadley & Rice, 1991; K. I. Hart, Fujiki, Brinton, & Hart, 2004). Additionally, research has shown that children with LI experience a variety of problematic social outcomes with respect to peer acceptance and friendship quality (Conti-Ramsden & Botting, 2004; Craig & Washington, 1993; Durkin & Conti-Ramsden, 2007; Fujiki et al., 1999; Gertner et al., 1994). According to Gertner et al. (1994), children with LI may be rejected by peers as early as preschool.

¹ In this thesis the terms *language impairment* (LI) and *specific language impairment* (SLI) are used synonymously. In cases where authors have used the term SLI, their label has been retained. In all other cases the term LI has been used.

The purpose of the current study is to extend work examining the social competence of children with LI by considering the relationship between impaired language skills and sociability. Sociability is a general umbrella term for positive behaviors such as playing cooperatively, being socially assertive, participating in social conversation, responding to ongoing activities of others, comforting others, and controlling one's emotions (C. H. Hart, Robinson, McNeilly-Choque, Nelson, & Olsen, 1995). Two primary subtypes of sociability that are often discussed in the literature are impulse control/likability and prosocial behavior (C. H. Hart, Olsen, Robinson, & Mandleco, 1997). Impulse control/likability, which will hereafter be referred to as likability, is characterized by conforming and friendly behaviors such as emotional impulse control and cooperative play (C. H. Hart, McGee, & Hernandez, 1993). Prosocial behavior is characterized by behaviors such as helping and sharing with others during social interactions (Radke-Yarrow, Zahn-Waxler, & Chapman, 1983). The current investigation focuses on the prosocial behavior subtype.

Several studies have documented that children with LI have problems with prosocial behavior (Brinton et al., 2000; K. I. Hart et al., 2004). For example, Fujiki, Brinton, Morgan et al. (1999) used a teacher rating scale to demonstrate that children with LI exhibited significantly lower levels of prosocial behavior than their typical peers. K. I. Hart et al. (2004) found that children with more severe LI demonstrated lower levels of proficiency with prosocial behaviors compared to their typical peers and to their peers with less severe LI.

Even though difficulties with social interaction have been documented in children with LI, researchers still do not completely understand the relationship between LI and prosocial behavior. If prosocial skills are linked directly to poor language, then one might assume that treatment of the primary language deficit would improve prosocial behavior. It may also be the

case that improvements in specific aspects of language would have a greater impact on prosocial behavior than others. Some social behaviors, such as reticent withdrawal, have not been found to be related to language behaviors in children with LI. On the other hand, sociability, in general, has been linked to language ability (K. I. Hart et al., 2004). To determine the most effective type of intervention for children with LI, it is necessary to develop a better understanding of the relationship between specific language skills and sociability subtypes. The current study was conducted to investigate further the relationship between language ability and prosocial behavior in children with LI and typical age-matched peers. Research questions included the following:

1. Are there significant differences in the relationship between language performance and prosocial behavior in children with LI and typically developing children?
2. How much of the variance in prosocial scores is explained by a measure of language comprehension in children with LI and their typically developing peers?
3. How much of the variance in prosocial scores is explained by a measure of language production in children with LI and their typically developing peers?
4. How much of the variance in prosocial scores is explained by a measure of pragmatic judgment skills in children with LI and their typically developing peers?

Review of Literature

First, specific areas of social interaction with which children with LI often have difficulty are discussed. These areas include entering ongoing activity, participating in cooperative groups, and sustaining peer interactions. Next, the review focuses on possible negative social outcomes experienced by children with LI. The development of sociable behavior in typical children is reviewed, followed by the study of sociability in children with LI. Finally, the relationship between LI and social behavior is considered.

Social Difficulties Experienced by Children with LI

Children with LI are at higher risk for social difficulties than are age-matched peers with typically developing language (Brinton & Fujiki, 1999; Craig, 1993; McCabe & Meller, 2004; Rice et al., 1991). Several researchers have shown that children with LI experience difficulties during social interactions. These difficulties are significant because poor childhood social interactions are related to various negative social outcomes later in life, including juvenile delinquency, increased school dropout rates, and academic problems that persist through adulthood (Rubin, Bukowski, & Parker, 1998). There is a range of social challenges that children with LI encounter on a daily basis. These include entering ongoing activity, participating in cooperative groups, and sustaining peer interactions.

Entering ongoing activity. Children with LI have greater difficulty accessing ongoing peer interactions than do children with typical language. Craig and Washington (1993) observed five children with SLI who were matched for chronological age (CA) with four typically developing peers and language age (LA) with four typically developing peers. All thirteen participants were between 7 and 8 years of age. Craig and Washington reported that all of the children in the CA and LA groups quickly entered into ongoing activities with ease, while three of the five children with SLI never accessed an activity during the 20-minute observation.

The two children with SLI who were successful at accessing the ongoing activities did so through the use of nonverbal communication. Notably, the children with SLI who were able to access peer activities had relatively good language comprehension.

Similar results were found with older children by Brinton, Fujiki, Spencer, and Robinson (1997). These authors compared the performance of six children with SLI to six CA peers and six LA peers. All participants were between 8 and 12 years of age. All of the children in the CA and LA groups were able to access the interaction successfully. Two of the six children with SLI never entered the ongoing peer activities, and the remaining four took varying amounts of time to do so. The triadic interactions of the children with LI who were successful at accessing the interaction were examined to evaluate the extent to which individual children participated in the interaction. The children with SLI who were successful at accessing the interaction spoke significantly less, collaborated significantly less (verbally and nonverbally), and were addressed by others significantly less than the children in the CA and LA groups during the 20-minute post-access interaction.

Liiva and Cleave (2005) found similar results when observing 10 children with SLI and 13 typically developing peers between 6 and 8 years of age. Four of the children with SLI were unsuccessful at accessing the interaction during the 10-minute play period. The children with SLI who accessed the interaction successfully were addressed significantly less by play partners, participated less in group play, and were more engaged in individual play and onlooking behavior. Post-interaction analysis revealed that the most important factor at predicting how successful the children with SLI were at accessing the interaction was expressive language level. Children who had more advanced expressive language skills took less time to access the interaction.

Participating in cooperative groups. Brinton, Fujiki, and Higbee (1998) observed the participation of children with LI in a cooperative group task with peers. Six children with SLI ages 8 to 12 years each participated in triadic interactions with two children of the same age and gender. Typically developing children of the same LA and CA also participated in triadic interactions (e.g., children in each CA triad had a similar chronological age, children in each LA triad had a similar language age). Each triad worked together to build a periscope, and verbal and nonverbal communication was analyzed. All members of the CA and LA groups were collaborative, working and consistently talking together during the task. Four of the six children with SLI were limited in their cooperative work and their verbal and nonverbal contributions were minimal.

Brinton, Fujiki, Montague, and Hanton (2000) also studied cooperative groups, examining six children with LI who participated in four different work groups. In each work group, the child with LI interacted with two typically developing peers. The groups were structured such that each child with LI could play a meaningful role in completing the tasks. The social profile of each child with LI was obtained using the *Teacher Behavior Rating Scale* (TBRS; C. H. Hart & Robinson, 1996). The interactions were analyzed and compared to the social profile of each child with LI. Social profile (the child's strengths and limitations on various types of behavior, including sociable behaviors) was found to be a better indicator of each child's ability to work in a cooperative group than the severity of LI. It was also observed that the overall severity of LI was not directly associated with social profile.

Sustaining peer interactions. Fujiki, Brinton, Isaacson, and Summers (2001) observed the behaviors of eight children ages 6 to 10 years with LI and eight CA peers on the playground. Each child was video recorded for a total of 45 minutes during morning and lunch recess. The

samples were coded into five-second intervals. Each interval was placed into one of six categories, including: peer interaction, adult interaction, withdrawal, aggression, victimization, or other. Results demonstrated that children with LI had significantly less peer interaction than CA peers and were more withdrawn than their typically developing peers.

These results were consistent with those found by Rice, Sell, and Hadley (1991) who observed preschool children during play center time. The participants consisted of nine typically developing children, six children with SLI, three children with SI (speech impairment), and eight ESL children (children learning English as a second language). Each child was observed for a total of 60 minutes. The study demonstrated that children with SLI were more likely to initiate conversations with adults than peers, and that during all conversations (with adults or peers) the children with SLI had shorter responses and more nonverbal responses than the other three groups. A study conducted in the same setting by Hadley and Rice (1991) found that children with SLI were more likely to have their conversational initiations ignored by peers. At the same time, they were also more likely to ignore initiation attempts by both peers and adults. The authors suggested that having a limited number of social interactions would also limit the opportunities for children with SLI to learn good communication skills from their peers.

Negative Social Outcomes

Peer acceptance and friendship. The difficulty experienced by children with LI during various social tasks often result in poor social interactions and a variety of negative social outcomes. Gertner et al. (1994) examined the relationship between children's language ability and their level of peer acceptance at preschool. Participants were placed in three groups: children with typically developing language, children with speech and/or LI, and children learning English as their second language. The children were observed during two sociometric tasks and then further divided into four categories: liked, disliked, low impact, and mixed. The majority of

children in the liked category were from the typically developing language group. The children with LI fell predominately into the disliked or low impact categories. The authors found that the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981), which measures receptive single-word vocabulary, was the best predictor of peer popularity in preschoolers. The authors concluded that language deficits were associated with lower levels of peer acceptance in preschool. The authors also speculated that children with LI avoid social interactions involving language because they are cognizant of their linguistic difficulties.

Conti-Ramsden, Crutchley, and Botting (1997) examined 242 children with SLI at seven years of age. Since then, many of these children were re-examined at age 11 and as adolescents to study the long-term social outcomes of children with SLI. In 2004, Conti-Ramsden and Botting analyzed the social difficulties faced by 200 of these children at age 11. They found that the most common social difficulties faced by these children were internalized behaviors such as poor social initiation and lack of friendship. Using some of the same participants, Conti-Ramsden and Durkin (2008) conducted another follow-up study which revealed that adolescents with SLI were also less independent than their typical peers, and that their lack of independence was associated with poor language skills early in life. These studies support other work which has found that children with LI spend less time interacting with peers, have fewer friendships, and are less popular than typical peers (Fujiki et al., 1996; Redmond & Rice, 1998).

Durkin and Conti-Ramsden (2007) examined friendship quality in 16-year-old adolescents. Participants consisted of 120 adolescents with SLI who had participated in previous studies and 118 typically developing peers. Although language difficulties were related to poorer quality friendships, 54% of participants with SLI reported having good friendships (compared to 92% for typically developing adolescents). The authors concluded that difficulty with language

use puts individuals with LI at greater risk for poor friendship quality because the nature of friends' interactions relies heavily on linguistic reciprocity.

Withdrawal. Researchers have found that teachers rate children with LI as being significantly more withdrawn than typical peers. Reticent withdrawal is demonstrated by children who want to interact with others but are fearful of doing so. Reticent children may spend a great amount of time watching other children play without joining the play. They may also engage in activities alone (Fujiki et al., 2001). Fujiki, Brinton, Morgan, and Hart (1999) asked classroom teachers to complete the TBRBS for children with LI and typically developing peers. Children ranged in age from 5 to 8 and 10 to 13 years. Teachers rated children with LI as displaying significantly higher levels of reticence than their typical peers. Fujiki, Spackman, Brinton, and Hall (2004) also found that teachers rated children with SLI as having significantly higher levels of reticence than typical peers. Teachers suggested that children with SLI seemed fearful and were reserved when approaching other children and often stared at other children without participating in any activity of their own. In addition, teachers who participated in this study also rated children with typically developing language skills as demonstrating little or no reticent behavior.

K. I. Hart et al. (2004) also examined withdrawal and found that teachers rated children with LI as exhibiting higher levels of reticence and solitary-passive withdrawal than typically developing children. Solitary-passive withdrawal describes the behaviors of children who appear to enjoy solitude and demonstrate constructive activity by themselves (e.g., reading a book or building a block creation alone; Coplan & Rubin, 1998; Rubin, 1982). Teachers have also rated boys with LI as displaying higher levels of solitary-active withdrawal than both girls with LI and typically developing children of both genders (Fujiki et al., 1999). Solitary-active withdrawal is

demonstrated when children are withdrawn because they are being actively excluded by others (Harrist, Waia, Bates, Dodge, & Pettit, 1997).

Sociability

As indicated by the previous section, children with LI experience a range of social problems. The following section focuses specifically on sociable behavior. First, sociability is defined and the literature on typical development reviewed. Sociable behavior in children with LI is then considered.

Cheek and Buss (1981) define sociability as the tendency to affiliate with other people and to prefer the company of others to solitude. Sociable interactions are marked by friendliness and pleasant social interaction. Sociability is required to develop and maintain good relationships. In turn, good relationships are necessary for social and academic growth in children. Typically developing children, as well as adults, agree that prosocial behaviors such as helping, sharing, praising, and encouraging are expected and necessary in relationships (Berndt, 2002). Successful peer relationships in turn contribute to the development of communication skills and sociable behaviors in children (Guralnick & Rice, 2000). Children who are not able to develop good peer relationships are at a higher risk for juvenile delinquency, poor academic achievement, and higher dropout rates from school later in life (Parker & Asher, 1987; Rubin et al., 1998).

Sociability and communication are closely related because many social behaviors require the use of language. Language is used to share information, express feelings and opinions, negotiate and solve problems, and direct behavior. Because of the close interaction between language and sociability, it is likely that language has an effect on the establishment and maintenance of successful social relationships (Fujiki et al., 1996). However, the specific details of this interaction remain unknown and require further investigation.

Sociability in typically developing children. A variety of positive social behaviors have been observed in typically developing children, including offering help, comforting, sharing, and cooperating with peers. As noted, these behaviors are often grouped under the category of sociability. The two primary subtypes of sociability examined in children are likability and prosocial behavior (C. H. Hart et al., 1997). Likability describes a child's ability to receive criticism well, control anger and emotional impulses, cooperate in rough and tumble play, and display leadership skills (C. H. Hart et al., 1993). It also describes how much peers like to be with the child and how well they accept the child into ongoing activities (Fujiki et al., 1999). Prosocial behavior includes helping, comforting, encouraging, empathizing, cooperating, and sharing with others during social interaction (Radke-Yarrow et al., 1983). This term has also been used to describe friendly, helpful, kind, cooperative, and considerate behavior towards others (Chen et al., 2002). The remainder of this review focuses on the prosocial subtype.

Research has shown that typically developing children exhibit prosocial behaviors as early as infancy (Ladd, 2005). Newborns will cry in response to other children's crying, which is considered by researchers to be a rudimentary form of empathy (Dondi, Simion, & Caltran, 1999; Martin & Clark, 1982). Around nine months of age, infants start to reference the emotions of other individuals and use them to guide their own behaviors in social interactions (Saarni, Campos, Camras, & Witherington, 2006). By 12 months of age, typically developing children share objects with parents, siblings, and peers on a regular basis (Hay, Caplan, Castle, & Stimson, 1991).

During the second year of life, typically developing children begin to comfort peers and adults who appear upset. By this time, children begin to acquire a sense of person permanence, personal identity, and perceptual role-taking abilities (Hay, 1979). This is also the age when

forms of cooperation begin to emerge, such as attempting to help with household responsibilities (Rheingold, 1982). Around two to three years of age, typically developing children also increase their capacity to regulate their own behavior during social interactions (Kopp, 1982).

Greener and Crick (1999) examined the prosocial behaviors of 861 children with typically developing language ranging from grade three to grade six. During these middle childhood years, prosocial behaviors such as sharing and caring were mostly demonstrated towards peers of the opposite gender. Prosocial behaviors that were made to initiate or maintain relationships (e.g., group inclusion) were mostly demonstrated towards same gender peers. A meta-analysis reported by Eisenberg and Fabes (1998) found that overall prosocial behavior of typically developing children tends to increase in each age period (infancy, preschool, childhood, adolescence) though the type of behaviors exhibited often vary with age. Prosocial behavior towards others increases rapidly throughout early childhood and grade school years and starts to plateau during adolescence (Hay, Castle, & Davies, 2000).

Sociability in children with LI. Research has shown that teachers rate children with LI significantly lower than typical peers in the areas of likability and prosocial behavior (Fujiki et al., 1999; K. I. Hart et al., 2004). Fujiki, Brinton, Morgan et al. (1999) compared teacher ratings of children with LI to typically developing classmates (matched for gender and age within six months) to determine if they differed in their sociable behavior in the school setting. Participants consisted of two age groups and were between 5 to 8 years or 10 to 13 years of age. Teachers completed the TBRS for all 82 children, with each teacher filling out questionnaires for a child with LI and their typical match. Each participant received a mean score for each subtype of sociability (likability, prosocial). Children with LI were found to demonstrate significantly lower teacher ratings than their typical matches in both likability and prosocial behavior.

A follow-up study by K. I. Hart et al. (2004) examined 82 children (41 with LI and 41 typically developing peers). Teachers completed the TBRS, rating children with LI as exhibiting significantly lower scores in both the likability and prosocial subtypes, thus replicating previous findings. In a subsequent analysis, children with LI were separated into subgroups of more severe or less severe LI, and these subgroups were compared to each other. The authors found that children with less severe receptive LI demonstrated more frequent sociable behaviors than children with more severe receptive LI. Therefore, it appeared that the children's level of receptive language was influencing their level of sociability (both likability and prosocial). However, children who had more severe expressive LI also demonstrated lower levels of proficiency with prosocial behavior, but not likability, than their peers with less severe expressive LI.

More recently, Goldie (2008) used structural equation modeling to examine the relationship between language (as measured by the overall core composite language score of the CASL) and prosocial behavior (as measured by the TBRS). Unexpectedly, a negative relationship was found between language and prosocial behavior: as standardized language scores increased, prosocial behavior ratings decreased. The author suggested that perhaps there is a certain threshold of language ability that is required for prosocial skills to be present, and that once this threshold is met, the child's prosocial skills might not be closely linked to language ability.

While some research has found an association between language and sociable behaviors, other research has not. Goldie (2008) found an association between language and prosocial behavior, but one that conflicts with previous research. These varying results demonstrate that

the relationship between language and sociability is complex and suggests that some areas of sociability may be related to language and some may not.

The Relationship Between Language and Social Behavior

As is clear from the previous section, children with LI have problems with sociable behavior. It is reasonable to suggest that there is a relationship between impaired language skills and poor sociable skills. For example, considering social behavior in general, Redmond and Rice (1998) proposed the Social Adaptation Model as a possible explanation of how SLI may influence an individual's social competence. These researchers proposed that children with SLI experience social difficulties as a result of behavioral adaptations they make to compensate for their limited language ability. In the Social Adaptation Model, compensatory behaviors are thought to be the result of the child's psychosocial processing of three components: (a) the communicative demands of the environment, (b) a child's verbal limitations, and (c) the biases and behaviors of people within the child's environment. Redmond and Rice conducted a study with 17 children with SLI and 20 typical age-matched peers. Parent and teacher ratings of socioemotional behaviors were obtained for each of the 37 participants at age 6 and again at age 7. Teachers, but not parents, reported the children with SLI as having significantly more problems in the areas of social behavior and internalizing behavior compared to typically developing peers. These findings are consistent with the predictions that the socioemotional problems of children with SLI are contextually dependent, which supports the Social Adaptation Model. In essence, this model states that children with SLI are aware of their linguistic limitations and therefore adjust their social behaviors in order to cope with the demands of different situations they encounter.

Paul (2000) proposed an alternative to the Social Adaptation Model, suggesting that perhaps social problems (e.g., withdrawal) are inherent in some children and may cause

interference with the child's language learning, thus leading to LI. Bishop (2000) proposed yet another possibility, suggesting that a more pervasive problem may exist which impairs both language and social functioning. However, explaining the relationship between language and social competence using directly causal interactions is somewhat difficult. In addition, there is research to contradict each of the previously mentioned hypotheses. For example, the degree of social problems that children experience is not always related to the severity of their LI (K. I. Hart et al., 2004). Children with LI are not always more withdrawn than typical peers (Fujiki et al., 1999; K. I. Hart et al., 2004), therefore inherent social deficits cannot be the primary cause of their impaired language skills, as Paul (2000) proposed. Current research has also not yet identified any pervasive cause (suggested by Bishop, 2000) that would explain both language and social difficulties in children (Brinton & Fujiki, 2005).

Brinton and Fujiki (2005) suggested a multi-factorial model, using the metaphor of an omelet to illustrate the relationship between language and social behavior. Just as the eggs and cheese in an omelet are interconnected, so are language and social functioning. An omelet would not be complete without other ingredients, and likewise it is important to consider that other factors are involved in the relationship between language and social behavior. These additional factors vary between individuals, and it is critical to consider that all these factors must work together and cannot be separated from each other. It may not be possible or even necessary to identify a causal relationship between LI and social behaviors in children, but it is important to understand that language skills and social behaviors are connected in social contexts.

A somewhat similar framework was presented by Adams (2005), who suggested that the ability to communicate in social interactions is based on children's development in social cognition, social interaction, pragmatics (verbal and nonverbal), and language processing

(receptive and expressive). This framework is based on the idea that the essential nature of social interaction, starting with an infant's ability to recognize other people as social beings, is a natural part of the communication process. The next factor in the development of social communication is pragmatics. Through social interactions, typically developing children learn the verbal and nonverbal rules of socially appropriate interactions. They learn subtle social rules such as the difference in formality between interaction on the playground with peers and interaction with adults. The ability to process receptive and expressive language is another factor in this framework. Typically developing children learn word meaning, phonological forms, and how to decode and encode formal grammatical structures during social interactions with others. Adams suggests that it is at this point that children with SLI experience difficulty compared to typically developing children, because language and social behaviors cannot be separated when considering social interactions.

The relationship between language ability and prosocial behavior has important implications for the social adjustment of children with LI. The current study further examines this relationship by examining the influence of three specific aspects of language (as measured by individual subtests on the CASL) on children's sociable ratings. Specifically, the analysis examines language comprehension, production, and pragmatics, and their relationship to prosocial behavior.

Method

The data used in this study were taken from an ongoing research project conducted by Martin Fujiki and Bonnie Brinton. The following section describes the participants, assessment instruments, data collection procedure, and statistical methods used for analysis in this study.

Participants

Seventy-four children participated in this study. Thirty-seven children with LI were matched for gender and age within six months (with the exception of three matches who were 7, 8 and 11 months apart) with 37 peers who demonstrated typically developing language. All participants spoke English as a first language and passed a pure tone audiometric screening at 15 dB HL or better at 500, 1000, 2000, and 4000 Hz in both ears. Each child was administered the Universal Nonverbal Intelligence Test (UNIT) to determine IQ and the Comprehensive Assessment of Spoken Language (CASL) to determine language ability and ensure proper group placement. The mean percentage of families below the poverty level was 3.58% ($SD = 3.45$; U.S. Census Bureau, 2008) for the block group area encompassing the elementary schools involved in this study. This research project was approved by the Brigham Young University Institutional Review Board, and written permission was obtained from participating children, their parents/guardians, and their teachers before data collection began.

Participants with typically developing language. The thirty-seven children with typically developing language who participated in this study ranged in age from 7;1 to 11;1. Thirty-three of these participants were Caucasian and four were Hispanic of Mexican descent. The children with typical language were selected from the same mainstream classrooms as the children with LI. Potential participants were identified and permission to participate was requested of the children's guardians. Each typically developing child demonstrated academic performance at grade level based on teacher reports and school records, and none was enrolled in any special

services for academic or communication problems. Participants all scored 85 or above on a standardized nonverbal test of intelligence and within one standard deviation of the mean on a standardized language test.

Participants with LI. Speech-language pathologists in three local school districts were asked to refer children who had been previously diagnosed with LI. The 37 children with LI who participated in this study ranged in age from 6;11 to 10;11. Thirty-four of these participants were Caucasian, one was Hispanic of Mexican descent, and two were of an undetermined racial background. All participants identified with LI had previously scored at least two standard deviations below the mean on a standardized language test which qualified them to receive speech-language pathology services at school. Children with LI were not receiving any treatment for intellectual ability or socioemotional problems.

Children with LI received a score at least one standard deviation below the mean on the CASL in order to provide a standard measure of language ability across all participants for the present study. Each child had an IQ score of 75 or above on the UNIT in order to rule out the diagnosis of an intellectual disability. Children with LI with an IQ between 75 and 85 have traditionally been excluded from research studies. Recent investigation has shown that children with IQs in this range do not qualitatively differ from those with an IQ above 85 (see Fey, Long & Cleave, 1994; Haskin, 2009, for reviews). Thus children with LI who scored in this wider IQ range have been included in the present sample. The inclusion of children with LI with an IQ between 75 and 85 resulted in a difference of mean IQ scores between the group of children with LI and the group of typically developing children. To adjust for this difference, IQ was co-varied in all group comparisons during analysis.

Teachers. A total of 37 teachers (with 37 different classrooms) were asked to complete the TBRS for two children in their classroom: one with LI and one with typically developing language. The data from the TBRS provided information about various social behaviors exhibited by each student. For the purposes of this project, only the information regarding prosocial behavior from the TBRS was used (see below for a more detailed description of the TBRS).

Assessment Instruments

Language assessment. The CASL (Carrow-Woolfolk, 1999) was administered to all participants. The CASL is a standardized test designed to provide an assessment of oral language abilities in individuals ranging in age from 3 through 21 years. The test is designed to provide an evaluation of the child's oral language processing systems, the ability to use language during high-level cognitive tasks, the knowledge and use of words and grammar, and the knowledge and use of language in communicative contexts (Carrow-Woolfolk, 1999). CASL overall core composite standard scores ($M = 100$, $SD = 15$) were used to provide a consistent measure of language ability across all participants.

The CASL is comprised of 15 subtests. A predefined set of subtests is administered to a child depending on the child's chronological age. These subtest scores are then combined to create an overall core composite standard score. The prescribed set of subtests for children ages 6 to 11 years were administered to the children in the present study. These subtests included antonyms, nonliteral language, paragraph comprehension (comprehension), syntactic construction (production), and pragmatic judgment (pragmatics). Only the latter three subtests (comprehension, production, and pragmatics) were analyzed in the present study, as these areas are considered to be the most closely related to prosocial behavior. The paragraph comprehension subtest examined comprehension of syntactic structures, the syntactic

construction subtest examined expressive syntax usage in phrases and sentences, and the pragmatic judgment subtest examined the knowledge and use of appropriate social language.

Intelligence assessment. The UNIT (Bracken & McCallum, 2003) is a nonverbal intelligence test designed to measure general intelligence in individuals ages 5:0 to 17:11 years. The administration of the test is completed with minimal verbal language on the part of the examiner or student. This test is a viable measure for children with LI because it eliminates the linguistic demands present on most intelligence tests. The UNIT examines intelligence nonverbally through the use of eight familiar gestures (pointing, nodding, shrugging shoulders, etc.). The student is trained on task procedures by observing the administrator. Children are given practice items before beginning test items. The set of subtests for children ages 6 to 11 were used, which included symbolic memory, cube design, analogic reasoning, and spatial memory.

Behavioral assessment. The TBRS is an unpublished informal measure designed to assess subtypes of anxious, aggressive, withdrawn, and sociable behaviors. It consists of two separate questionnaires containing a total of 161 items (see Appendix A). Teachers rated each item using a three-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*), comparing the child's present behaviors to typical age level expectations. The TBRS contains items regarding specific subtypes of behavior. For example, a child's withdrawn behavior is separated into subtypes of solitary-active withdrawal, solitary passive withdrawal, and reticence. Sociable behavior is divided into likability and prosocial subtypes. The current study focused on prosocial behavior, and TBRS items used for this analysis contained behaviors such as offering to share materials with a peer, comforting a crying peer, and showing sympathy towards a peer who made a mistake.

Sociable behaviors of children with LI have previously been compared to behaviors of typically developing peers using the TBRS (Brinton et al., 2000; Fujiki et al., 1999; K. I. Hart et al., 2004). Although the TBRS has not been published, its psychometric properties have been studied extensively (Fujiki et al., 1999; K. I. Hart et al. 2004). In summary, teachers completed questionnaires on 382 elementary school-age children (aged 6;4 to 12;6, $M = 8;10$, $SD = 1;6$). Several items were discarded due to (a) relatively little variance, (b) substantial cross-loadings ($>.40$), or (c) low item-total correlations for factors derived in preliminary analyses. After this evaluation, a total of 13 items were chosen to reflect subtypes of sociability. After being assessed for test-retest reliability, the TBRS demonstrated Pearson correlations of .74 for likability and .71 for prosocial behavior between the first and second administrations (Fujiki et al., 1999). A factor analysis was performed by K. I. Hart et al. (2004) which supported the grouping of items within the subtypes of sociability used in the present study (for a more detailed description of the psychometric viability of the TBRS, please see K. I. Hart et al., 2004). The TBRS is considered to be a viable way to measure prosocial behavior in children (Fujiki et al, 1999; K. I. Hart et al., 2004).

For the present study, the items focusing on prosocial behaviors were scattered throughout the TBRS and teachers were not aware of which items were being used by the researchers. Teachers' ratings of the items were combined to give each participant a composite score for overall prosocial behavior.

Procedures

The CASL and UNIT were administered to the participants by graduate students in speech-language pathology. These students were trained to administer both tests by experienced clinical supervisors. The students were observed giving practice administrations before actual data collection to ensure that the tests were administered properly. All assessments used in the

present study were performed in the school setting. Tests were administered in a room where background noise and external distractions were minimal, and all testing was completed following the administration and scoring guidelines provided in the test manuals.

Each classroom teacher completed the TBRS for one child with LI and for one typically developing matched peer. The TBRS took approximately 15 to 20 minutes to complete for each participant. Although teachers were cognizant that some of the children were receiving language intervention, they were not aware of the purpose of the TBRS. The teachers were asked to return the forms within two weeks of receiving them and were compensated with a small monetary gift for completing the questionnaires.

Results

To determine if the group with LI displayed lower levels of prosocial behavior than their typically developing peers, comparisons were made on the three language subtests and prosocial behavior, using group and gender as independent variables. This analysis was completed to determine if current results replicated previous findings (Brinton et al., 2000; Fujiki et al., 1999; K. I. Hart et al., 2004).

A multiple regression analysis was used to determine how much variance in prosocial scores was explained by comprehension (as measured by the paragraph comprehension subtest on the CASL), production (as measured by the syntactic construction subtest), and pragmatic skills (as measured by the pragmatic judgment subtest). Similar analyses were performed for both the group with LI and the group of children with typically developing language.

Language Group Differences

To examine for differences in language ability and ratings of prosocial behavior between groups, a two way analysis of covariance (language group x gender) was used to compare CASL subtest scores and TBRS scores. The mean CASL subtest scores and the mean prosocial behavior scores as measured by the TBRS are presented in Table 1. As expected, there was a significant difference on the CASL subtests between the children with LI and children with typically developing language [paragraph comprehension $F(1, 70) = 14.59, p = .000$; syntactic construction $F(1, 70) = 38.39, p < .000$; pragmatic judgment $F(1, 70) = 49.11, p < .000$]. The groups also demonstrated a significant difference on prosocial behavior scores on the TBRS, $F(1, 70) = 6.84, p = .01$, with typically developing children demonstrating much higher levels of prosocial behavior than children with LI. As can be seen from Table 1, all children with LI received mean scores that were notably more than one standard deviation below the mean on the syntactic construction and pragmatic judgment subtests. Interestingly, both males and females

with LI produced scores within one standard deviation of the mean on the paragraph comprehension subtest. None of the gender comparisons were significant. Additionally, none of the interactions between language group and gender were significant.

The Relationship Between Language and Prosocial Behavior

A multiple regression analysis was used to determine the degree to which prosocial behavior (dependent variable) of the participants in each language group could be explained by paragraph comprehension, syntactic construction, and pragmatic judgment scores (independent variables).

Children with LI. The three language measures as a whole did not significantly predict prosocial behavior ratings, $F(4, 32) = 0.22, p = .925$, explaining 2.7% of the variance in prosocial behavior. In addition, none of the language measures independently reached significance in the children with LI.

Children with typically developing language. As was the case with the children with LI, the combined language measures did not significantly predict prosocial behavior ratings in typical children, $F(4, 32) = 1.10, p = .375$, explaining 12% of the variance in prosocial behavior. None of the language measures independently reached significance in typical children.

Table 1

CASL Subtest Scores and Teacher Behavior Ratings of Prosocial Behavior for Groups with Language Impairment (LI) and Typically Developing Language

Participant Group	Paragraph Comprehension	Syntactic Construction	Pragmatic Judgment	Prosocial Behavior
LI				
Male				
<i>M</i>	91.95	77.91	73.14	1.01
<i>SD</i>	10.58	9.88	11.51	0.64
Range	74 - 115	59 - 102	47 - 90	0 - 2
Female				
<i>M</i>	89.60	76.60	72.53	1.24
<i>SD</i>	10.35	10.07	7.51	0.52
Range	66 - 102	66 - 99	60 - 91	0.2 - 2
Combined				
<i>M</i>	91.00	77.38	72.89	1.10
<i>SD</i>	10.41	9.84	9.96	0.60
Range	66 - 115	59 - 102	47 - 91	0 - 2
Typical				
Male				
<i>M</i>	103.18	102.55	94.55	1.47
<i>SD</i>	11.68	14.10	14.47	0.48
Range	84 - 125	71 - 125	67 - 127	0.6 - 2
Female				
<i>M</i>	108.93	99.87	100.07	1.73
<i>SD</i>	12.74	14.66	13.10	0.39
Range	90 - 134	84 - 133	82 - 122	1 - 2
Combined				
<i>M</i>	105.51	101.46	96.78	1.58
<i>SD</i>	12.28	14.14	14.01	0.46
Range	84 - 134	71 - 133	67 - 127	0.6 - 2

Note: Higher paragraph comprehension, syntactic construction, and pragmatic judgment scores indicate better performance as measured by the CASL language subtests. Higher prosocial behavior ratings indicate greater sociability as measured by the TBRS.

Discussion

The purpose of this study was to investigate further the relationship between language ability and prosocial behavior. Analyses were conducted to determine if children with LI displayed fewer prosocial behaviors than peers with typical language and to determine if prosocial behavior was associated with specific areas of language. It was suggested that certain language skills might influence the use of prosocial behavior more than others. Specific subtests of the CASL were used to examine the extent to which language comprehension, language production and pragmatic judgment explained prosocial behavior in children.

Summary of Results

The group of children with LI performed significantly more poorly than typically developing children on paragraph comprehension ($p = .000$), syntactic construction ($p = .000$), and pragmatic judgment ($p = .000$). These results demonstrate that children with LI have a significantly harder time in these three areas of language than children with typically developing language. In addition, children with LI were also rated by teachers as demonstrating significantly fewer prosocial behaviors than typically developing children ($p = .01$). The significant differences in language performance between the group of children with LI and typically developing children were expected and reaffirmed proper group placement of the participants. The significant difference in prosocial behavior was also expected, replicating previous work with children with LI.

Multiple regression analyses were used to examine the relationship between the paragraph comprehension, syntactic construction, and pragmatic judgment CASL subtest scores and prosocial behavior scores. Language performance accounted for 2.7% of the variance in prosocial behavior in children with LI compared to 12% in typically developing children. The three language subtests were not significantly linked to the prosocial behaviors of children with

LI or typical children. Therefore, how well the children performed on the three language subtests did not significantly predict teachers' prosocial ratings for either group of children.

Evaluation of the Relationship Between Language and Prosocial Behavior

Although children with LI displayed significantly lower levels of prosocial behavior than typical children, their lower performance was not linked to poorer language performance on the CASL subtests. These findings contradicted expectations regarding the relationships between the three language behaviors and prosocial behavior. With respect to language comprehension, several researchers have previously found results indicating a positive relationship between language comprehension and prosocial behavior. For example, Craig and Washington (1993) found that the children with SLI who were able to access ongoing peer activities were also the children with relatively strong language comprehension skills. K. I. Hart et al. (2004) found that the children with SLI who had less severe receptive language problems received higher prosocial ratings from teachers than children with more severe receptive problems. Additionally, Redmond and Rice (1998) have suggested that difficulty with language comprehension may play an important role in the social difficulties of children with SLI.

Current findings also contradicted expectations regarding the relationship between language production and prosocial behavior. Logically, it could be expected that these behaviors would be related because prosocial behavior often involves effective expressive language production. For example, many prosocial behaviors may be carried using language production (e.g., the prosocial subscale of the TBRS has items such as, "comforting a child who is crying or upset"). The idea that there is a relationship between language production and prosocial behavior has also been supported experimentally. For example, K. I. Hart et al. (2004) found that children with more severe expressive LI were rated by teachers as producing fewer prosocial behaviors than children with less severe expressive LI. These results support the idea that there is a

relationship between language production and prosocial behavior. Additionally, Redmond and Rice (1998) have suggested that children with poor language production skills do not participate in social interactions as frequently as children with typically developing language.

A significant relationship between pragmatic judgment and prosocial behavior was also predicted but not observed. As with language production, it might be expected that children who are more pragmatically skilled would also receive higher prosocial ratings. These children would seem to have an advantage over children with poorer pragmatic skills at accomplishing behaviors such as providing comfort, offering help, and demonstrating empathy for someone who has made a mistake. Further, previous work with typically developing children has demonstrated that there is a connection between pragmatic and social behaviors (e.g., Becker, Place, Tenzer, & Frueh, 1991; Black & Hazen, 1990; Place & Becker, 1991). In these studies, children who were more pragmatically skilled were consistently viewed more positively socially than the children with poorer pragmatic skills.

The results of the current study indicated that there is not a significant relationship between language comprehension, language production, or pragmatic judgment, and prosocial behavior. Although these results were unexpected, it is of note that these findings were not without precedent. A number of other studies have failed to find a link between language and social behavior. For example, Conti-Ramsden and Botting (2004) found that overall language scores and individual language domain scores were not significantly related to any social behaviors in the children with SLI that were studied.

There are a number of potential explanations for the current results. The following discussion will focus on two of the most viable. First, the observed results may have been overly impacted by the instruments used to measure language and prosocial behavior. Both of these

behaviors are multifaceted and can be difficult to measure accurately. Further, even accurate measurements may vary, depending on what aspect of the behavior is examined by a particular instrument or how the behavior is quantified. To some extent, the variable results from previous studies are likely a reflection of these types of differences. For example, the current study used the same test instruments (CASL and TBRIS) as K. I. Hart et al. (2004) but different results were found. As noted previously, language subtests of the CASL were used in the current study as opposed to using the overall core composite score used by K. I. Hart et al. It should also be noted that different inferential methods were used in each study. K. I. Hart et al. (2004) separated children with LI of relatively high and low language ability into groups using a median split. The authors then tested for differences in prosocial abilities between these two groups using an analysis of variance. The current study employed a regression analysis to look for a relationship between language and prosocial behaviors. These differences are likely to have accounted for some of the variability in outcomes between the studies.

Despite the fact that different instruments and methods most likely account for some of the differences observed in the literature, this argument does not explain all of the contrary observed outcomes. It might be hypothesized that if a strong relationship did exist, it might still be identified when studied using different instruments and inferential methods. Thus, it is likely that some of the variability in outcomes can be attributed to other sources. One likely source is the individual variability of participants, which is discussed below.

As noted by Brinton and Fujiki (2005), it is important to consider that a variety of factors are involved in the relationship between language and prosocial behavior. These factors may vary across individuals who are grouped together for study under labels such as LI. The complexity of these interactions may make it difficult to identify a single causal relationship

between language and prosocial behavior. By way of illustration, consider the social communication framework suggested by Adams (2005). According to this framework, one of the primary factors involved in social communication is the ability to process both receptive and expressive language. Despite the importance of language processing, other factors such as social cognition, pragmatic knowledge, and social interactional skills also play an important role in social communication. In addition to the child's abilities, it is also possible that external factors, such as parenting skills may influence the child's social competence (e.g., Hart, Newell, & Olson, 2003). Thus, it is possible that a child with a severe language problem might have a highly supportive family. This child might also receive social instruction and support from parents and other family members. Further, this child may have relatively intact social cognitive skills. These skills would make it possible to take advantage of the social instruction received. Another child with a less severe linguistic deficit might have less supportive parents, as well as poorer social cognitive skills. In comparing the two children, the first child might exhibit better prosocial skills than the second, despite having a more severe language problem. Taken as a whole, there may be too much individual variability to find a strong predictive relationship between language and prosocial behavior in children with LI. Considering previous work (e.g., Conti-Ramsden & Botting, 2004; Goldie, 2008; K. I. Hart et al., 2004) and the results of the current study, it can be assumed that the relationship between language and prosocial behavior in children with LI is highly complex.

Clinical Implications

Redmond and Rice (1998) suggested that poor language skills are the primary cause of social problems in children with LI. If this were the case, it could be assumed that directly treating and improving language performance would improve social behavior. It is certainly reasonable to expect that language deficits will limit a child in social interactions, but the current

findings suggest that language ability only accounted for a small portion of the variance in prosocial behavior scores for both children with LI and typically developing children. These findings would suggest that clinicians cannot solely address language problems and expect social behavior problems to be remediated.

When considering therapeutic interventions for children with LI, it is important for clinicians to consider the intricate relationship between language skills and social interaction. A multi-factorial framework similar to the one suggested by Adams (2005) would be beneficial, focusing on the remediation of language deficits while also addressing social skills. Intervention should be as engaging and naturalistic as possible in order to provide the children with real-life opportunities to apply new skills (Fujiki et al., 1999). Since language and social functioning are interconnected, treatment contexts should include naturalistic situations which rely heavily on both language use and social interaction.

Limitations and Recommendations for Future Research

Although the CASL is often used to provide a standardized measure of language ability in children, it does present some limitations. In this study, three CASL subtests were used as measures of language comprehension, language production, and pragmatic judgment. The data from these measurements did not predict prosocial behavior. As noted, it may be the case that using an instrument other than the CASL to measure language ability might produce a different outcome. For example, a language sample might have captured productive language behaviors that were not addressed by the CASL subtest, giving a more holistic view of language production. Data obtained in this way might have also been more predictive of prosocial behavior. This limitation may have been particularly influential in measuring pragmatic skills. The pragmatic judgment subtest of the CASL contains items such as: (a) tell me what you ask

when you want to go out and play, (b) tell me how Jason could ask his brother to help him, and (c) tell me what you should say to your friend who just lost their soccer game. These questions are heavily dependent on both receptive and expressive language and require a verbal answer. They also require a high level of metapragmatic ability (e.g., the participants were required to speculate as to what they would do in particular situations). It is plausible that a more naturalistic measure (e.g., conversational analysis) would have produced more representative outcomes and differing results.

It is recognized that the language subtests of the CASL provide a relatively limited view of the domains they are used to measure. At the same time, this measure was also a reasonable choice to use in the current study. The CASL subtests have undergone rigorous examination and both their validity and reliability have been positively assessed. Additionally, the CASL is also norm-referenced, and therefore provides a standard by which to assess raw scores. Despite these advantages, future researchers may wish to consider other options, or a combination of options, to measure language skills.

Using the TBRS as a measure of prosocial behavior also had limitations. Merrell (2003) summarized advantages and disadvantages of using rating scales. The author describe some advantages, such as being low in cost to administer and requiring less training on the part of the administrator than direct observational measures. In addition, low-frequency behaviors may be documented which otherwise may not have been observed during direct observational sessions. Rating scales also provide more objective data than is usually provided during informal interviews with the subject. Rating scales use the ratings of familiar individuals who can observe the subjects in a naturalistic context over an extended period of time. Teacher observations are advantageous because the classroom setting provides a large number of children to interact with

in various contexts and settings. In addition, teachers are often aware of developmentally appropriate behaviors of their students and can provide objective observations of expected behaviors for that age group.

The numerous advantages to using rating scales are accompanied by some disadvantages as well (Merrill, 2003). Behavior rating scales assess perceptions of problems and do not provide observational data. Rating scales can also result in halo effects of overly negative or positive perceptions. Some teachers may be overly critical in rating children while others are not critical enough. Possible teacher bias could confound results, due to a child's gender, academic performance, socioeconomic status, or perceived classroom behavior from the past. Future research may find clearer results combining rating scales with direct observational methods of important contexts to obtain a more accurate understanding of a child's prosocial behavior.

Conclusion

Children with LI demonstrated significantly poorer prosocial behavior compared to typical children, replicating previous studies. The CASL subtests of paragraph comprehension, syntactic construction, and pragmatic judgment were not statistically significant predictors of prosocial behavior for children with LI, children with typically developing language, or either gender. These findings suggest that factors other than language ability must contribute to the difficulty with prosocial behavior experienced by children with LI. The interaction between language performance and prosocial behavior must be investigated further to gain a clearer understanding of the relationship between these variables. This understanding will provide the basis for effectively addressing the social needs of children with LI.

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Appendix A

Teacher Behavior Rating Scale
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Social Skills Teacher Behavior Rating Scale, Part A

Directions

This questionnaire is designed to measure how often a child exhibits different types of social behaviors. Understanding the development of social skills is important for promoting the educational and psychological well-being of students. Therefore, your careful response to each item is requested.

Reflecting on your experience with children in this age group, read each item in this questionnaire and think about the child's present behavior relative to other you know or have known. Decide how often the child does the things described. If you are not sure about a particular, use your best judgment based on your knowledge of the child's personality.

If the child never does this behavior, fill in the line with a 0 in it.

If the child sometimes does this behavior, fill in the line with a 1 in it.

If the child very often does this behavior, fill in the line with a 2 in it.

HOW OFTEN?

0=Never, 1=Sometimes, 2=Very Often

- _____ 1. Other children like to be with this child.
- _____ 2. Offers to help other children who are having difficulty with a task in the classroom.
- _____ 3. Is slow to anger.
- _____ 4. Invites other to join in activities.
- _____ 5. Peers enjoy talking with him/her.
- _____ 6. Leads out in peer group activities.
- _____ 7. Offers to share materials (e.g. pencils, erasers) when used in a task.
- _____ 8. Controls temper in conflict situations with adults.
- _____ 9. Helps other children who are feeling sick.
- _____ 10. Has many friends.
- _____ 11. Is cooperative during rough and tumble play with peers.
- _____ 12. Children laugh together when engaged in rough and tumble play with him/her.
- _____ 13. Shows sympathy to someone who has made a mistake.
- _____ 14. Peers accept this child easily into ongoing peer group activities.
- _____ 15. Receive criticism well.
- _____ 16. Introduces himself or herself to new people without being told.
- _____ 17. Acknowledges compliments or praises from peers.
- _____ 18. Laughs and smiles easily.
- _____ 19. Peers enjoy rough housing with him/her.
- _____ 20. Controls temper in conflict situations with peers.
- _____ 21. Comforts a child who is crying or upset.

- _____ 22. Gets along even when rough housing with peers.
- _____ 23. Fights back when provoked by peers who are trying to be mean.
- _____ 24. Cries when picked on by peers.
- _____ 25. Reacts angrily when confronted aggressively by peer who is trying to be mean.
- _____ 26. Avoids children who tend to bully him/her.
- _____ 27. Is pushed around by other children.
- _____ 28. Ignores a child who is trying to be mean to him/her.
- _____ 29. Cowers or slinks away when confronted by a bully.
- _____ 30. Misinterprets the friendly intent of others' behavior and becomes defensive.
- _____ 31. Says assertively, but without hostility, something like "that's mine" or "give it back" in a firm voice when another child takes something of his/her.
- _____ 32. Pushes or hits others when perceived he/she is wrong.
- _____ 33. Tells child who tries to be mean to "stop it right now" or something to that effect.
- _____ 34. Is made fun of by mean kids.
- _____ 35. Behaves aggressively even when other children are making friendly overtures toward him/her.
- _____ 36. Cries when intimidated by a mean child.
- _____ 37. Pushes or hits when he/she wants to get something back another child has taken from him/her.
- _____ 38. Withdraws when provoked by peers.
- _____ 39. Is picked on by mean kids.
- _____ 40. Stands up assertively but not aggressively to bullies.
- _____ 41. Lashes out at peer even when peer has not intended to hurt him/her in any way.
- _____ 42. Tells child who tries to intimidate him/her that he/she "doesn't like it" or something to that effect.
- _____ 43. Inconsiderate of others.
- _____ 44. Does things to get the teacher's attention.
- _____ 45. Cries or screams when mad.
- _____ 46. Tells lies.
- _____ 47. Butts into games or activities.
- _____ 48. Has sudden mood changes.
- _____ 49. Disturbs ongoing activities.
- _____ 50. Dawdles when required to do something.
- _____ 51. Becomes aggressive when rough housing with peers.
- _____ 52. Tattles on other children to the teacher.
- _____ 53. Gets angry easily.
- _____ 54. Is obnoxious when rough housing with peers.
- _____ 55. Won't do chores/assignments (cleanup) unless threatened in some way.
- _____ 56. Has temper tantrums.
- _____ 57. Resists going along with ideas of other children.
- _____ 58. Excessive praise or reward is required to get child to do chores/assignment (cleanup).
- _____ 59. Is not sorry after misbehaves.
- _____ 60. Demands teacher's attention.
- _____ 61. Stamps feet when angry.
- _____ 62. Does not wait for opportune moments to enter ongoing peer group activities.

- _____ 63. Is overly boisterous in rough and tumble play.
- _____ 64. Interrupts conversations of others.
- _____ 65. Is louder than peers when engaged in rough and tumble play.
- _____ 66. Is secretive.
- _____ 67. Draws attention to self in disruptive ways when trying to enter ongoing play activities with peers.
- _____ 68. Blames others.
- _____ 69. Follows your instructions.
- _____ 70. Starts conversations rather than waiting on other to talk first.
- _____ 71. Is self-confident in social situations.
- _____ 72. Joins group activities without being told to.
- _____ 73. Makes friends easily.
- _____ 74. Finishes class assignments within time limits.
- _____ 75. Produces correct schoolwork.
- _____ 76. Puts work material or school property away.
- _____ 77. Attends to your instructions.
- _____ 78. Initiates conversations with peers.
- _____ 79. Accepts peers' ideas for group activities.
- _____ 80. Cooperates with peers without prompting.
- _____ 81. Compromises in conflict situations by changing own ideas to reach agreement.

Social Skills Teacher Behavior Rating Scale, Part B

Directions

This questionnaire is designed to measure how often a child exhibits different types of social behaviors. Understanding the development of social skills is important for promoting the educational and psychological well-being of students. Therefore, your careful response to each item is requested.

Reflecting on your experience with children in this age group, read each item in this questionnaire and think about the child's present behavior relative to other you know or have known. Decide how often the child does the things described. If you are not sure about a particular, use your best judgment based on your knowledge of the child's personality.

If the child never does this behavior, fill in the line with a 0 in it.

If the child sometimes does this behavior, fill in the line with a 1 in it.

If the child very often does this behavior, fill in the line with a 2 in it.

HOW OFTEN?

0=Never, 1=Sometimes, 2=Very Often

- _____ 1. Bullies others just to be mean.
- _____ 2. Tries to embarrass peers by making fun of them in front of other children.
- _____ 3. Gives mean looks or frowns when upset at peers.
- _____ 4. Ruins other children's things (artwork, block structures) when upset.
- _____ 5. Laughs at other children in derogatory ways.
- _____ 6. Threatens to push a peer off a toy (e.g. tricycle, play house) or ruin what peer is working on unless he/she shares.
- _____ 7. Hits or kicks others for the sake of doing it.
- _____ 8. Tells a peer that he/she won't play with them if he/she doesn't do what is asked.
- _____ 9. Walks away or turns his/her back when he/she is made at another peer.
- _____ 10. Threatens or intimidates other children just to be mean.
- _____ 11. Tries to exclude other children who want to play.
- _____ 12. Says, "I won't be your friend" to peers "If you don't do things my way."
- _____ 13. Throws things at other children when he/she doesn't get his/her own way.
- _____ 14. Tells other children that they can't play with the group unless they do what the group wants them to do.
- _____ 15. Does not listen to other children when he/she is made (may cover ears).
- _____ 16. Makes fun of peer's possessions (e.g. clothes, art project).
- _____ 17. Picks on other children just to be mean.
- _____ 18. Tells other children not to play with or be a peer's friend.
- _____ 19. Hits, kicks, or pushes to get something he/she wants.
- _____ 20. Pouts or sulks when made at another child.
- _____ 21. Tells other children not to play with someone.
- _____ 22. Squirmy, fidgety child.
- _____ 23. Acts sad or depressed.
- _____ 24. Has poor concentration or short attention span.
- _____ 25. Acts tearful.

- _____26. Rather than asking for something he/she wants, does not ask and appears to wait for it to happen.
- _____27. Talks very quietly.
- _____28. Tends to be fearful or afraid of new things or new situations.
- _____29. Is over-sensitive emotionally.
- _____30. Inattentive.
- _____31. Appears miserable, unhappy, tearful, or distressed.
- _____32. Cries easily.
- _____33. Can't sit still.
- _____34. Rather than asking for something that he/she wants, chooses to do something else.
- _____35. Shows anxiety about being with a group of children.
- _____36. Has stutter or stammer.
- _____37. Has other speech difficulty.
- _____38. Gets mixed up when talking.
- _____39. Restless. Runs about or jumps up & down. Doesn't keep still.
- _____40. Animates toys (e.g. pretends as inanimate object – doll or stick – is alive) by self, away from peers.
- _____41. Reads books alone, away from others.
- _____42. Feelings get hurt easily.
- _____43. Can't get other to play with him/her.
- _____44. Manipulates body parts (e.g. twists/wrings hands, hair mouth, ears).
- _____45. Shies away when approached by other children.
- _____46. Does constructive activities (e.g. build with blocks, legos) or does puzzles alone, away from others.
- _____47. Is off task and preoccupied.
- _____48. Other children tell him/her that he/she cannot play with them.
- _____49. Talks aloud or sings dramatically around peers when they are doing similar things but does not interact with them while doing so.
- _____50. Other children exclude him/her.
- _____51. Is very shy.
- _____52. Has twitches, mannerisms, or tics of the face and body.
- _____53. Pretends to be something (e.g. fireman, doctor, airplane) in vicinity of peers doing similar things but does not interact with them while doing so.
- _____54. Animates toys (e.g. pretends as inanimate object such as a doll or stick is alive) in vicinity of peers doing similar things but does not interact with them while doing so.
- _____55. Builds things by self rather than with other children.
- _____56. Pouts or sulks.
- _____57. Likes to play alone.
- _____58. Cries over seemingly little things.
- _____59. Says nobody likes him or her.
- _____60. Appears to be doing nothing.
- _____61. Does pretend/dramatic play with peers, but does not interact with them while doing so.
- _____62. Is reserved around other children.
- _____63. Is told to go away by other children.

- _____ 64. Is unoccupied even when there is plenty to do.
- _____ 65. Bites nails or fingers.
- _____ 66. Plays with toys by self rather than with other children.
- _____ 67. Is fearful in approaching other children.
- _____ 68. Twists/manipulates clothing.
- _____ 69. Stares at other children without interacting with them.
- _____ 70. Appears lonely.
- _____ 71. Is easily distracted.
- _____ 72. Is easily embarrassed.
- _____ 73. Doesn't listen to what others say.
- _____ 74. Argues with others.
- _____ 75. Talks back to adults when corrected.
- _____ 76. Acts impulsively.
- _____ 77. Is aggressive toward people or objects.
- _____ 78. Disobeys rules or requests.
- _____ 79. Fights with others.
- _____ 80. Has low self-esteem.