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The Efficacy of a Literature-Based Social Communication Intervention on
Teacher Report of Withdrawal for Children with Language Impairment

Cammy G. Peterson

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 Efficacy of a Literature-Based Social Communication Intervention on Teacher Report of Withdrawal for Children with Language Impairment

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Master of Science

Research shows that children with language impairment (LI) often have deficits in social communication. The purpose of this study was to examine the effectiveness of a social communication intervention targeting emotion understanding on teacher perceptions of withdrawal in six elementary-aged boys with LI. The intervention incorporated four elements into treatment sessions: a) Story sharing of children's literature that was rich in emotional content and prosocial behaviors; b) Story enactment of the same children's literature; c) identification and discussion of pictures of facial expressions; and d) journaling to help internalize and reflect on emotions and social behaviors targeted. Two withdrawal subscales of the Teacher Behavior Rating Scale (TBRS), reticence and solitary-passive behavior, were used as variables with which to measure teacher perception. Pre and postintervention measures of teacher ratings were taken and compared for each participant. Results indicated that four of the six participants improved in ratings of withdrawn behaviors following treatment. Two of the boys improved 2 *SD* for ratings of reticence. Two additional participants did not show improvement, but remained stable in their pre and posttreatment scores for both reticence and solitary-passive withdrawal. These results indicate a generally favorable outcome of the social communication intervention with regard to social withdrawal in children with LI.

Keywords: language impairment, social communication, emotion understanding, withdrawal, intervention, school-age children

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DESCRIPTION OF THESIS CONTENT

This thesis, *The Efficacy of a Literature-Based Social Communication Intervention on Teacher Report of Withdrawal for Children with Language Impairment*, is part of a larger research project, and all or part of the data from this thesis may be published as part of articles listing the thesis author as a co-author. Appendix A includes an annotated bibliography, and Appendix B contains the results of the Clinical Evaluation of Language Fundamentals-5 (CELF-5) administered to the participants.

Introduction

Language impairment (LI)¹ is defined as “persistent difficulties in the acquisition and use of language across modalities...due to deficits in comprehension or production,” including language delays, reduced vocabulary, limited sentence structure, and impairments in discourse (American Psychiatric Association, 2013, p. 42). In addition to these structural difficulties, there is substantial evidence that children with LI also experience problems with social interaction, often manifested as social withdrawal (Fujiki, Brinton, Isaacson, & Summers, 2001; Fujiki, Brinton, Morgan, & Hart, 1999; Fujiki, Spackman, Brinton, & Hall, 2004; St Clair, Pickles, Durkin, & Conti-Ramsden, 2011; Wadman, Durkin, & Conti-Ramsden, 2008). The purpose of the current study was to determine the effectiveness of a social communication intervention for children with LI to change teacher’s perceptions of two subtypes of withdrawn behavior in the school setting: reticence and solitary-passive withdrawal.

Social Withdrawal in Children with LI

Numerous studies have found that children with LI are more withdrawn than their typically developing peers (e.g., Brinton & Fujiki, 2005; Fujiki et al., 1999; Fujiki et al., 2004; Horowitz, Westlund, & Ljungberg, 2007; Wadman, Durkin, & Conti-Ramsden, 2008). Withdrawn behavior has historically been referred to by numerous names, often used interchangeably: shyness, social reticence, passivity, inhibition, rejection, solitude, and isolation (Rubin, Coplan, & Bowker, 2009). According to Rubin and Coplan (2004), the term *social withdrawal* is an “umbrella term” that includes social behaviors stemming from varying motivations. There are two subtypes of withdrawal frequently observed in children with LI: (a)

¹ In this thesis, the terms language impairment (LI) and specific language impairment (SLI) will be used as synonyms referring to children who have language problems in the face of relatively typical skills in other areas of development.

reticent behavior, motivated by a fear of interacting with others, and (b) solitary-passive withdrawal, motivated by a preference for solitude. A third type of social withdrawal, solitary-active withdrawal, is less commonly observed in children with LI (Fujiki et al., 1999; Fujiki et al., 2004; Hart et al., 2004).

The first subtype of social withdrawal, reticence, is characterized by behaviors such as staring at other children without interacting, being fearful of approaching other children, and being unoccupied even when there is plenty to do (Hart & Robinson, 1996). This subtype of social withdrawal may also be referred to as shyness. According to Coplan and Weeks (2010), children who demonstrate shyness may desire to socially engage with others, but are fearful of doing so because of anxiety over being judged by others. Rubin et al. (2009) noted that shy-withdrawn children “rarely initiate contact with peers, take longer than typical children to initiate conversation, and speak less frequently than their nonwithdrawn counterparts” (p. 10). Hart, Fujiki, Brinton, & Hart (2004) suggested that reticence and solitary-passive withdrawal behaviors may be linked in that they are both characterized by fear of rejection in social interactions. According to Rubin et al. (2009), reticent behavior is strongly correlated with peer rejection in childhood.

Children who demonstrate the second subtype of withdrawal, solitary-passive withdrawal, may engage in quiet exploration or constructive activities while playing alone (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). For example, a child may be in the corner of his classroom quietly working on a puzzle while other children are playing a game together nearby. Rubin and Coplan (2004) used the term *unsociability* to describe this subtype of withdrawal. Children who demonstrate unsociability may not desire social interaction, but they also do not avoid it. According to Rubin and Asendorpf (1993), a child typified as being unsociable may be

satisfied to play alone, but would also be able to engage in social interactions with others during a joint activity. Rubin (1982), reported that solitary passive withdrawal behaviors are positively reinforced in early childhood by parents and teachers, but by the middle childhood years, peers view these behaviors negatively. Additionally, some researchers assert that solitary-passive withdrawal merges with reticent behavior as children get older, leading to negative social outcomes (Asendorpf, 1993). Other work has documented that unsociability can have negative social consequences as early as the preschool years (Nelson et al., 2009). In contrast with these findings, researchers have also reported that this subtype of social withdrawal does not have negative consequences (Coplan et al., 2013; Coplan & Weeks, 2010). Work with children with LI is also equivocal, with some studies observing high levels of unsociability (Hart et al., 2004) and other studies finding levels no greater than those observed in typical children (Fujiki et al., 1999).

A third type of withdrawal, solitary-active withdrawal, is characterized by repeated sensorimotor actions with or without objects and/or solitary dramatic play produced while in a social group (Coplan et al., 1994). A child displaying this type of behavior may engage in play a short distance from their peers without any direct interaction with the other children. For example, the child may pretend to be a puppy in the vicinity of other children playing pet shop, but will not actually engage in any social interactions or join in group play. Children engaging in solitary-active withdrawal may also present with repetitive motor movements such as rocking or pacing, unusual hand movements, or other repetitive mannerisms (Coplan et al., 1994). Solitary-active social behaviors are highly correlated with peer rejection in childhood (Rubin, 1982). This type of withdrawal is less common than solitary-passive or reticent behaviors in children with LI (Fujiki et al., 1999; Fujiki et al., 2004; Hart et al., 2004).

The current study examined the two types of withdrawal that are observed most frequently in children with LI: reticence (indicative of shyness) and solitary-passive withdrawal (indicative of unsociability). According to Fujiki et al. (2004), impaired language abilities play a role in social withdrawal observed in children with LI, but there are other factors that may contribute to social communication deficits, including emotional competence. One major aspect of emotional competence that is likely to impact the social interactions of children with LI is *emotion understanding*. Emotion understanding refers to the ability to interpret one's own emotions as well as the emotions of others. As such, this term encompasses skills such as interpreting others' emotions by their words, prosody, facial expressions, and gestures. It is hypothesized that improving emotion understanding in children with LI should also result in improved social interactions. In the present study, the amount of time spent in social withdrawal is used as an indication of improved social interaction. The impact of emotion understanding on social communication is discussed below.

Emotion Understanding and Children with LI

Emotion understanding involves the ability to experience, regulate, express, and understand emotion in oneself and in others, and is an important predictor of social competence (Brinton, Spackman, Fujiki, & Ricks, 2007). There is a wealth of evidence indicating that children with LI have difficulty with various aspects of emotion understanding (e.g., Andres-Roqueta, Adrian, Clemente, & Villanueva, 2016; Ford & Milosky, 2003; Spackman, Fujiki, & Brinton, 2006; Spackman, Fujiki, Brinton, Nelson, & Allen, 2005; Westby & Blalock, 2005). According to Westby and Blalock, children with LI are less reflective of their own emotions and exhibit greater difficulty inferring emotional reactions than their typically developing peers. Ford and Milosky (2003) examined the ability of kindergarten children with LI and their typically

developing peers to infer the emotional reactions of individuals in stories. Children were presented with verbal and visual social scenarios and asked to identify and label the emotion of the story characters. The children with LI were less proficient at making an accurate social inference regarding a character's feelings. Additionally, when inferencing errors were made, children in the group with LI occasionally made valence errors (e.g., substituting happy for mad). Making inappropriate inferences in social situations can have negative effects on a child's ability to make friends or engage in social interactions. It may also lead to inappropriate behaviors if a social situation is misinterpreted (Westby & Blalock, 2005).

Spackman et al. (2006) investigated the ability of elementary-aged children with LI to infer emotions based on specific social scenarios. Forty-three children with LI and 43 typical-age and gender-matched children were presented with short verbal and visual scenarios in which the main character of the story was expected to feel anger, fear, happiness, or sadness. Participants were asked to identify the emotion the character experienced, and why the character would feel that way. Both groups of children were able to identify happiness accurately, followed by sadness, fear, and anger. Spackman and colleagues (2006) found that typically developing children were significantly more accurate in their identification of emotion than children with LI, and that children with LI were less sophisticated in their descriptions of emotion than typical children.

One of the most basic aspects of emotional competence is the ability to recognize and understand facial expressions of emotion. Spackman et al. (2005) examined this ability in 43 typical children and 43 children with SLI. Participants were shown photographs of people displaying the emotions of happiness, sadness, anger, fear, surprise, and disgust. Both groups were able to identify the facial expressions of happiness, anger, sadness, and fear equally well.

However, typically developing children performed significantly better at identifying surprise and disgust. Children with LI misidentified surprise as fear and disgust as anger more often than did typically developing children. These researchers suggested that children with LI recognize expressions of emotion differently than typically developing children, which could negatively affect social interactions and emotion understanding. In addition, Spackman and colleagues concluded that “language and emotion understanding cannot be viewed as independent of one another. Language contributes to emotion understanding, and emotion understanding contributes to the social use of language” (p. 142).

Children with LI have also been shown to have difficulty interpreting emotion conveyed by prosody. Fujiki, Spackman, Brinton, and Illig (2008) investigated the ability of 19 children with LI and 19 typical age-matched peers to understand emotion conveyed by prosody in a narrative passage. Both groups listened to a short narrative passage read by actors that expressed the emotions of happiness, anger, sadness, or fear and were then asked to identify the emotion the speaker conveyed. Children with LI were not as adept at recognizing prosodic cues signaling certain emotions as were their typical peers. Although children with LI were able to recognize the prosodic cues of happiness as well as the control group, they were more prone to confuse negative emotions such as fear and sadness.

A more sophisticated social skill involving emotion understanding is the ability to dissemble (hide) emotion for social benefit. This requires the child to comprehend that the emotion they are feeling inside should not be displayed in order to behave in a socially appropriate manner. Brinton et al. (2007) investigated the ability of children with SLI and their typical peers to decide when an emotion should be hidden for social reasons. Nineteen children with SLI and 19 children with typical language skills participated in the research. Both groups

were presented with 10 hypothetical social situations in which a character experienced one of five emotions (happiness, sadness, fear, anger, and disgust) that should be dissembled for an appropriate social interaction. For example, in one scenario, the main character “Chris” eats at his favorite uncle’s house and is served a piece of cake that tastes disgusting. After presenting each scenario, the children were asked four questions about the scenario, including a comprehension question (“How did the cake taste?”); an emotion question (“How does Chris feel?”); a dissemblance question (“What should Chris say?”); and a display rule question (“What would Chris’s parents want him/her to do?”). For all scenarios, both groups of children answered the comprehension questions appropriately, however, typically developing children produced significantly more responses indicating that Chris should dissemble emotion than did the children with specific language impairment (SLI). Researchers concluded that children with SLI did not understand the impact of displaying emotion on relationships in the same way their typical peers did.

Brinton, Fujiki, Hurst, Jones, and Spackman (2015) replicated the Brinton et al. (2007) study by examining the ability of children with LI and their age and gender- matched typical peers to dissemble emotional reactions in both hypothetical scenarios and more naturalistic contexts. Twenty-two children with a diagnosis of LI and 22 children with typical language development participated in the study. Methods were based on those used by Brinton et al. In addition, children were presented with four naturalistic scenarios that might require dissemblance. Three of the four scenarios were considered to be of low cost to the child, meaning that dissembling emotions would not affect them personally but may hurt the examiner’s feelings. The fourth scenario was considered high cost, in that dissemblance resulted in the loss of a desired prize. Children with typically developing language skills were more able

to dissemble emotions in hypothetical situations. Additionally, in the high-cost naturalistic scenario, typically developing children were more likely to conceal their disappointment than children with LI. Children with LI displayed negative emotion rather than dissembling their emotional reaction more often than their typical peers. The children in the two groups did not differ in the low-cost scenarios.

Given that children with LI have been shown to have deficits in emotion understanding in addition to language comprehension and expression which could negatively impact social interactions, Brinton and Fujiki (2005) suggested that intervention should be designed to address language, academic, and social behavior as a cohesive unit and facilitate growth across associated areas of functioning. Spackman et al. (2005) suggested that children with LI need intervention methods that intertwine language targets and emotional competence skills. Spackman et al. recommended a therapy approach for children with LI that included, “intensive, repeated experiences designed to enhance their comprehension and use of emotion language” (p.142). The efficacy of interventions designed to target pragmatics and social communication is discussed below.

Social Communication Interventions

Research scrutinizing the effectiveness and ideal treatment approach of social communication interventions is still in its infancy. There is a scarcity of empirical research evaluating the efficacy of social communication treatment methods used with children with LI. In 2006, recognizing the lack of empirical support for social communication interventions, the American Speech-Language-Hearing Association (ASHA) convened an ad hoc committee to conduct an evidence-based systematic review of treatment for disorders of language use in social interactions (Gerber, Brice, Capone, Fujiki & Timler, 2012). After a systematic review of 22

electronic databases, the committee found only eight published studies that addressed language use in social contexts for school-age children. Committee members determined that the results of the eight studies provided preliminary support for social communication and pragmatic language intervention, but that further research was needed to provide empirical evidence for the best social communication treatment procedures for children with LI.

After the above-mentioned review was completed in 2012, several additional studies have been reported. Perhaps most notable, Adams, Lockton, Gaile, Earl, and Freed (2012) conducted a randomized controlled trial study of 88 children ages 5;11-10;8 (years;months) with pragmatic and social communication needs to determine the effectiveness of an intensive social communication intervention. Children were randomly assigned to one of two treatment groups. The first group received intervention services as usual targeting speech and language goals. The second group received an intensive social communication intervention aimed at remediation of impairments in semantics and high-level language skills, pragmatic difficulties, social interaction and social cue interpretation. Results of the Adams et al. (2012) study showed that no significant treatment effect was found for the Core Language Standard Score on the Clinical Evaluation of Language Fundamentals-4th edition (CELF-4) (Semel, Wiig, & Secord 2006). However, significant treatment effects were found for blind-rated perceptions of conversational competence; parent-reported measures of pragmatic functioning and social communication; and for teacher's ratings of classroom learning skills. Adams et al. (2012) noted that informal measures such as parent or teacher-reported ratings may ultimately be a better way to measure treatment outcomes for children where measurement of pragmatic and social communication skills remain challenging, and there are many potential measureable outcomes. Researchers also concluded that there is potential for social communication intervention to have a positive effect

in children who have persistent pragmatic and social communication needs, even with a brief period of therapy.

The need for more research regarding the optimal framework and effectiveness of social communication interventions is considerable. This thesis will examine the effectiveness of a literature-based social communication intervention on teacher perceptions of withdrawal in children with LI. The study will use pre and posttreatment ratings of two subtypes of withdrawal: reticence and solitary-passive withdrawal, from the Teacher Behavior Rating Scale (TBRS; Hart & Robinson, 1996) as dependent variables. The following questions were addressed:

1. Do teachers rate children with LI as engaging in less reticent behavior following participation in a social communication intervention focusing on emotion understanding?
2. Do teachers rate children with LI as engaging in less solitary passive withdrawal following participation in a social communication intervention focusing on emotion understanding?

Method

Research Design and Data Collection

This research was part of an ongoing larger study investigating the effectiveness of a social communication intervention for children with LI. The project was approved by the Institutional Review Board (IRB) of Brigham Young University. The project is on-going, and these data were taken from data collected during the winter semester of 2017. For this aspect of the study, the TBRS (TBRS; Hart & Robinson, 1996) was used to provide pre and posttreatment measures of two types of withdrawn behaviors: reticence and solitary-passive withdrawal.

Participants

In order to select potential participants for the study, the school Speech-Language Pathologist (SLP) identified children with social communication deficits who also had LI. To obtain consent, the school SLP contacted the parents of potential participants explaining the purpose of the social communication intervention. Parents who were interested provided written permission for their child to participate. Upon receiving written permission, researchers administered standardizing testing and informal socio-cognitive assessments. Following parental consent and testing, researchers collaborated with the school SLP to make certain that intervention was aligned with current Individualized Education Program (IEP) goals for each child.

Six male children between the ages of 5;8 (years;months) to 11;2 were included in this study. Two of the participants were in kindergarten, two in first grade, and two in fifth grade. Two of the six children had participated in intervention during the previous school year as part of the ongoing social communication study. As noted, all of the participants were receiving speech and language services in the school setting and had been identified with LI based on testing by the school SLP. Inclusion in the study was conditional upon eliminating other categories of impairment such as intellectual disability, neurological impairment, and Autism Spectrum Disorder. This determination was made on the basis of existing school testing by the school psychologist, the child's school placement, and testing completed by the research team. Participants were also required to pass a pure tone 20 dB HL hearing screening administered by the school district audiologist or speech-language pathologist. Testing administered by the research team included the Clinical Evaluation of Language Fundamentals – 5th Edition (CELF-5; Semel, Wiig, & Secord, 2013) to determine each participant's general language level, and the

Children's Communication Checklist-2 (CCC-2; Bishop, 2006) to identify social communication deficits. The results of these standardized measures are exhibited in Table 1. A detailed description of each child who participated in the current study and observations from each participant's speech-language pathologist and classroom teacher follow Table 1.

Table 1

Children's Communication Checklist-2 (CCC-2; Bishop, 2006) and Clinical Evaluation of Language Fundamentals-5 (CELF-5; Semel, Wiig, & Secord, 2013) Percentile Scores

Instruments	Participants					
	JC	WP	JG	DG	PW	KJ
Age (years; months)	5;8	5;9	6;4	7;3	10;11	11;2
CCC-2 ¹ Subtests						
Speech	16	1	<1	25	<1	<1
Syntax	25	<1	2	5	16	<1
Semantics	2	6	<1	5	5	5
Coherence	16	2	2	16	9	37
Initiation	75	10	2	84	50	2
Scripted Language	37	3	9	37	25	50
Context	16	3	5	50	9	16
Nonverbal Communication	1	1	2	37	9	5
Social Relations	5	<1	2	50	5	2
Interests	37	20	25	75	25	50
GCC ² Percentile	12	<1	<1	21	6	3
SIDI ³	3	7	10	19	9	7
CELF-5 ⁴						
Core Language Percentile	2	8	18	<1	6	3

Note. ¹Children's Communication Checklist-2 (CCC-2). ²General Communication Composite. ³Social Interaction Difference Index. ⁴Clinical Evaluation of Language Fundamentals -5 (CELF-5).

JC. JC was a Caucasian male aged 5;8 with a diagnosis of LI. JC had previously attended a special education preschool and was currently enrolled in a mainstream kindergarten classroom with pull-out resource services provided. JC also received speech-language services

on a pull-out basis. His speech and language goals were centered on answering age appropriate what, where, and who questions; producing age appropriate prepositions; and formulating complete sentences to talk about pictures, stories and/or experiences. JC's scores on the CCC-2 suggested deficits on the nonverbal communication and social relations subtests, as well as the structural area of semantics. He produced a core language score on the CELF-5 in the 2nd percentile.

JC's classroom teacher identified social skills as a weakness for JC. The teacher expressed concern that JC was not socially interacting with peers, and often seemed to be in his own world, engaging in parallel play rather than interactive play. The school speech-language pathologist (SLP) also noted that JC had difficulty with social interactions, displaying difficulties with appropriate conversational responses to social engagement by peers. According to the school clinician, JC exhibited deficits in topic maintenance, turn-taking, and social inferencing. In addition, the clinician reported that JC struggled with comprehension of nonverbal social cues in the context of narratives and conversation. Informal emotion understanding probes indicated difficulties with making inferences regarding the emotions a character would experience during a short scenario and identifying emotion on faces.

WP. WP was a Caucasian male aged 5;9 with a diagnosis of LI and social communication deficits. WP had previously attended a special education preschool and was currently enrolled in a mainstream kindergarten class with resource services for reading and math as well as speech language intervention. His communication intervention included language goals and a social-emotional goal to address resolving conflicts with peers. WP's scores on the CCC-2 indicated difficulties with coherence, scripted language, use of context, nonverbal communication and social relations. He scored below the 1st percentile in the area of

social relations. CCC-2 scores also indicated seriously low performance in the structural aspects of language. He produced a CELF-5 core language score in the 8th percentile.

The school SLP reported that WP had difficulties picking up on social cues and interacting appropriately with peers. WP demonstrated deficits in nonverbal aspects of communication, including interpretation of facial expressions and body language. Additionally, WP had difficulty with verbal aspects of conversation, including conversational turn-taking, topic maintenance, and appropriate social behavior. WP's classroom teacher reported that WP displayed impulsivity and a short attention span. WP's teacher also observed that WP required instructions to be repeated multiple times. In addition, the teacher noted that WP's responses to questions or comments were not always appropriate for the situation. Informal emotion understanding probes indicated difficulties with making inferences regarding the emotions a character would experience during a short scenario and identifying emotion on faces.

DG. DG was a Caucasian male aged 7;3 who attended a mainstream 1st grade classroom with daily pull-out resource support, including one hour a day for reading and writing; 30 minutes a day for math; and occupational therapy to address fine motor skills for at least 120 minutes a month. DG also received speech and language services for 120 minutes per month. DG's resource teachers, classroom teacher, and the school speech-language pathologist (SLP) all expressed concern that DG had not progressed in academic, cognitive, or language goals during the school year. According to the school SLP, DG would remember and retain information some days, and the next day would not be able to recall the same information. DG's speech and language goals included following one to two-step directions, being able to ask and answer wh-questions, and to be able to use a complete phrase or sentence appropriately. DG's scores on the CCC-2 indicated difficulties in the structural areas of syntax and semantics. DG reported typical

scores on the interactional subtests of the CCC-2 but the school SLP questioned the accuracy of these scores. DG produced a CELF-5 core language score below the 1st percentile.

The school SLP noted that DG spoke in “soundbites” or single word utterances, and had difficulty formulating a complete phrase or sentence. DG’s clinician also reported that DG displayed socially withdrawn behaviors, and often simply observed interactions rather than engaging. The clinician noted that DG exhibited deficits with social inferencing skills and taking the perspective of others in narratives and conversation. DG struggled to recognize emotions in others, and was unable to interpret nonverbal social cues. DG’s classroom teacher reported that he was not disruptive in class but had difficulty focusing, and struggled socially and emotionally. According to DG’s classroom teacher, DG frequently cried when things were “hard” for him. Informal emotion understanding probes indicated difficulties with making inferences from stories and identifying emotion expressed on faces.

JG. JG was a Caucasian male aged 6;4 with a diagnosis of speech language impairment. JG was identified with early speech delays at age 2;9 by an early childhood intervention program. At age 3, the school assessment center identified JG with significant expressive language delays. JG was homeschooled during his preschool years but received speech services by appointment beginning at age 3. At the time of the study, JG was enrolled in a mainstream public school 1st grade classroom with speech and language services. JG’s scores on the CCC-2 revealed deficits in initiation, scripted language, context, nonverbal communication, and social relations. His scores in the structural areas of speech and language fell below the 1st percentile in speech and semantics and in the 2nd percentile for syntax. JG’s core language score on the CELF-5 was in the 18th percentile.

JG's clinician indicated that he had basic conversational level skills, but also reported difficulty with social inferencing associated with higher-level communication (JG had difficulty with an informal inferencing test administered by the research team). The clinician reported that JG had problems picking up on social cues and nonverbal aspects of communication, including not recognizing when peers were upset or angry. JG also had difficulty recognizing implied social cues not explicitly stated in narratives and conversations. JG's classroom teacher also expressed concern with JG's social behavior and impulsivity. According to the teacher, JG often hit peers when he was frustrated, and was unable to monitor his own inappropriate behavior. In addition, JG had difficulty focusing and needed multiple cues to help him focus his attention.

PW. PW was a Caucasian male aged 10;11 with a diagnosis of LI. The current semester was his second enrolled in the social communication intervention. PW attended a mainstream 5th grade class with pull-out resource services in reading and math (380 minutes weekly). He also received speech-language services with goals centered on language, articulation, and resonance. PW's scores on the CCC-2 in December 2015 indicated deficits in the context, nonverbal communication and social relations subtests. The structural areas of speech and language were also problematic for PW with scores below the 1st percentile for speech, in the 9th percentile for coherence, and the 5th percentile for semantics. PW produced a core language score on the CELF-5 in the 6th percentile.

PW's clinician reported that PW rarely initiated social interactions with others, and responded very minimally when social overtures were made towards him. According to the clinician, PW was extremely passive in his interactions with peers, and often simply observed social situations without engaging. PW's clinician also noted that he had difficulty maintaining conversational topic, initiating conversation, and picking up on social cues. PW also exhibited

trouble with emotional inferencing skills. PW's classroom teacher reported that PW often did not comprehend directions and had difficulty with inattention and impulsivity. His teacher also expressed concern that he did not initiate peer interactions, did not socially engage with peers, and did not seem to have many friends in class. Additionally, PW very rarely expressed emotions, and had difficulty responding appropriately to the emotional displays of other children.

KJ. KJ was a Caucasian male aged 11;2 who qualified for services under the classification of Specific Learning Disability and LI. KJ attended a mainstream 5th grade class with pull-out resource services for reading (240 minutes weekly). The current semester was KJ's second enrolled in the social communication intervention. KJ received speech-language services with goals focused on language and articulation. KJ's scores on the CCC-2 in December 2015 indicated difficulty with initiation, nonverbal communication, and social relations. His scores in the structural areas of speech and language fell below the 6th percentile indicating difficulties with speech, syntax, and semantics. KJ's core language score on the CELF-5 was in the 3rd percentile.

According to KJ's school SLP, KJ had a desire to participate in social interactions, but demonstrated difficulties with turn-taking, topic maintenance, social inferencing, and reading social cues. KJ's conversations were often extremely one-sided, with KJ talking repetitively about things that interested him with no regard for whether the conversational partner was interested in the topic. The clinician also commented that KJ had poor impulse control and tended to dominate conversations with a loud voice. KJ's SLP also commented that KJ exhibited significant difficulty in taking the perspectives of others and inferring social cues within the context of narratives. These deficits made appropriate peer interactions especially difficult for KJ. KJ's classroom teacher reported that he required multiple repetitions of directions and

exhibited difficulty staying on task, impulsivity, and monitoring his own inappropriate behavior. Additionally, KJ's teacher indicated that KJ struggled with pragmatics, including appropriate personal space during social interactions, often standing too close during social interactions.

Procedures

Brigham Young University (BYU) graduate students collected baseline and follow-up data and administered therapy sessions under the direction of the school's SLP. The project was overseen by two university-based doctoral level SLPs with expertise in social communication behaviors in children with LI. Intervention consisted of two 20-30 minute sessions per week using a pull-out model for a total of 20 treatment sessions over the course of 10 weeks. Approaches to treatment and social communication intervention activities were designed to align with current IEP goals for each child (Adams et al., 2012).

Initial testing. In addition to a variety of other baseline measures, each child's classroom teacher completed the TBRS (Hart & Robinson, 1996) both pre and postintervention.

Intervention. Six male participants met individually with a graduate student clinician two times per week for a total of 20 intervention sessions per child. The sessions consisted of combinations of four different elements: story sharing, story enactment, recognition of emotions on picture cards, and journaling. The intervention was based on children's literature books that highlighted character emotions and prosocial behaviors. Books also were chosen based on well-structured language content and storyline. For each book, important emotions and concepts were identified. These included the specific emotion words experienced by characters in the story, the sources of those emotions and prosocial behaviors displayed in the literature. Structural language elements such as complete simple sentence forms and complex sentences with causal connections were modeled in each session, and participants were encouraged to use these

language elements during sessions. All literature and activities were designed to be accessible to children with LI.

Story sharing was comprised of reading and discussing a book with the child, focusing on specific emotions story characters experienced. Emotions and the source of those emotions were labeled and discussed, using complex sentence structure (e.g., “He feels nervous because this is his first day at school and Mama is leaving.”) Parallels to the child’s own life were also drawn (e.g., “How did you feel on your first day of school?” “Can you think of a time you felt nervous?”). While reading the books, the clinician followed a flexible script containing probes about the social situations and emotions experienced by the characters in the story. New emotions that participants may not have been familiar with (e.g., guilty, embarrassed, jealous) were also introduced and discussed.

Story enactment involved using toys, stuffed animals, and other props to enact the story while again focusing on the emotions experienced by the story characters. Participants were given the opportunity to enact each story multiple times as different characters, which allowed each child the opportunity to see the story from a different character’s perspective each time. During the story enactment, the clinician modeled emotion words and focused the child’s attention on the source of each emotion. (e.g., “I feel really sad because I left my favorite stuffed animal in the car.”). Participants were encouraged to use emotion words in their dialogue and to identify why they were experiencing a particular emotion.

The recognition of emotion on picture cards segment centered on identifying different emotional states as displayed by facial expressions. The clinician used this activity throughout intervention at different points to highlight an emotion and give the child more exposure to how a person experiencing that emotion might appear. For example, when discussing the book

Llama, Llama and the Bully Goat (Dewdney, 2013), children were introduced to the concept of being *jealous*, and were then shown multiple pictures of children's facial expressions displaying jealousy. Different degrees of emotions were also discussed while viewing the emotion picture cards (e.g., frustrated vs. angry vs. furious).

At the conclusion of each session, children participated in a journaling activity. Each child was encouraged to write or draw a picture summarizing the story and write about the emotions story characters felt. Journal responses were prompted by the clinician through questions such as, "How did Llama feel when his mama left?" Younger children were encouraged to draw pictures and talk about the story and emotions experienced by the characters, and the clinician acted as scribe. Emotion words used during the session were highlighted again while journaling, and children were encouraged to relate emotions to their own personal experiences.

Follow-up. As mentioned previously, the TBRS (Hart & Robinson, 1996) was administered posttreatment to each child's classroom teacher. A total of 9 items randomly spread among 79 statements were used to measure subtypes of withdrawal.

Instrumentation: The Teacher Behavior Rating Scale (TBRS). The TBRS (Hart & Robinson, 1996) is an informal rating scale that measures a variety of social behaviors in children using teacher ratings. This instrument has been utilized in research for preschool and elementary school-age children with typically developing language skills as well as those with LI (Fujiki et al., 1999; Fujiki et al., 2004; Hart et al., 2004). The TBRS consists of 161 items that measure subtypes of aggressive, withdrawn, and sociable behaviors (Fujiki et al., 1999). For the purpose of the current study, a shorter version consisting of 79 items was used with questions related to aggression, impulsivity, sociability, and withdrawn behaviors. Each item in the TBRS

was evaluated using a three-point scale (0-never observed, 1-sometimes observed, or 2-very often observed). Teacher's ratings of each behavior for participants were then compared to mean scores for typical children of the same age.

Psychometric properties. Hart et al. (2004) detailed the psychometric properties of the TBRS for elementary school-age children using a factor analysis to make sure all items were grouped correctly. Teachers completed questionnaires for 382 school-age children ranging in age from 6;4 to 12;6, ($M = 8;10$, $SD = 1;6$). Questionnaires were then examined for items with (a) relatively little variance, (b) substantial cross-loadings ($>.40$), or (c) low item correlations for factors derived in preliminary analysis. A final principal components analysis produced three reliable factors for withdrawal with eigenvalues greater than 1, accounting for 55% of the item variance. A total of 16 items reflecting the reticence, solitary passive, and solitary active subtypes of withdrawal were selected based on the analyses performed by Hart and colleagues (only reticence and solitary passive subtypes were used in this study).

To measure test-retest reliability for the TBRS, teachers completed the measure twice, approximately four weeks apart, for 94 of the 382 children in the study. This time frame ensured that (a) there were no confounding developmental changes in the children between the first and second assessments and (b) teachers were unlikely to remember their responses given on the first measure. All subscales were found to be temporally reliable with Pearson correlations between the two assessments of .70 for reticence, .76 for solitary-active withdrawal, and .73 for solitary-passive withdrawal (Hart et al., 2004).

Subscales. Two subscales of socially withdrawn behavior (reticence and solitary-passive withdrawal) consisting of five questions targeting solitary-passive behaviors and four questions targeting reticent behaviors were used to measure withdrawal in study participants. The

questions were randomly spread among 79 total questions on the TBRS. The reticence subscale included behaviors such as being reserved around other children, being unoccupied when there is plenty to do, and being fearful in approaching other children. The solitary-passive withdrawal subscale included behaviors such as liking to play or do constructive activities alone, and reading books alone (Hart et al., 2004).

Administration of the TBRS. Each participant's elementary school teacher rated 79 behaviors as observed in the classroom and in other settings in the school environment. Teachers filled out the questionnaire before intervention began (November 2016) and again after completion of the intervention (March 2017). These ratings were used to measure two types of socially withdrawn behavior in the study participants: reticence and solitary-passive withdrawal. Teachers were unaware of which behaviors or questions from the TBRS were being used for research, however, they were informed that the children would be participating in a social communication intervention study. Teachers were given the following written instructions before filling out the TBRS both pre and posttreatment:

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 others you know or have known. Decide how often the child does the things described. If you are not sure about a particular item, use your best judgment based on your knowledge of the child's personality (Hart & Robinson, 1996).

Teachers completed the TBRS before and after intervention in order to compare their pre and posttreatment ratings of socially withdrawn behaviors for the children participating in the study.

Results

Upon collection of these data, five items measuring solitary-passive withdrawal and four items relating to reticence on the TBRS were scored. The mean scores for each subscale were calculated by totaling teacher ratings for each item in the subscale and dividing that total by the number of items. The results for each participant were individually considered. Mean scores (M) and standard deviations (SD) for typical boys (ages 5-8 and 10-13) were taken from past research data using the TBRS, including Fujiki et al. (1999) and Hart et al. (2004). As mentioned previously, all items in the TBRS used a three-point scale (0-never observed, 1-sometimes observed, or 2-very often observed). Higher scores on both the reticence and solitary-passive subscales indicated higher levels of withdrawal.

JC

The results of the pretreatment and posttreatment mean scores for the subscales of withdrawal on the TBRS for JC are presented in Table 2. JC's initial score for reticence (1.5) was more than 3 SD s higher than the mean ($M = .22$), indicating high levels of reticent behavior. Although JC's score for reticence improved to 1.0 posttreatment, this score is still approximately 3 SD above the mean. JC's pretreatment solitary-passive withdrawal rating also was more than 3 SD above the mean, and showed no change when measured posttreatment.

WP

The pretreatment and posttreatment mean scores for WP are found in Table 3. WP's scores remained the same for reticence both pre and posttreatment (.75). This score is

approximately 2 *SD* above the mean for boys ages 5 to 8 years. WP's observed solitary-passive behavior was slightly above the mean pretreatment, and actually increased posttreatment from .6 to 1.0, 1 *SD* above the mean.

Table 2

JC Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	1.5	1.0	.22 (.27)
Solitary-Passive	1.6	1.6	.42 (.41)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 younger typical boys ages 5-8 (Fujiki et al., 1999; Hart et al., 2004).

Table 3

WP Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	0.75	0.75	.22 (.27)
Solitary-Passive	0.6	1.0	.42 (.41)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 younger typical boys ages 5-8 (Fujiki et al., 1999; Hart et al., 2004).

DG

Table 4 displays DG's pretreatment and posttreatment mean scores for the withdrawal subscales of the TBRS. His reticence scores improved slightly from 1.5 to 1.25, and his solitary-passive ratings decreased by 1 *SD* from 1.4 to 1.0. Despite DG's improvement on both

subscales, he scored more than 3 *SD* above the mean for reticence and 1.5 *SD* above the mean for solitary-passive behaviors compared to typical boys his age.

Table 4

DG Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	1.5	1.25	.22 (.27)
Solitary-Passive	1.4	1.0	.42 (.41)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 younger typical boys ages 5-8 (Fujiki et al., 1999; Hart et al., 2004).

JG

Pretreatment and posttreatment mean scores for JG on the withdrawal subscales of the TBRS are presented in Table 5. JG's scores remained exactly the same pre and posttreatment. JG's score for reticence was 1 *SD* above the mean for typical boys his age, and his scores on the solitary-passive subscale were 1.2, placing him approximately 2 *SD* above the mean.

PW

PW's pretreatment and posttreatment mean scores for the withdrawal subscales of the TBRS are presented in Table 6. His reticence ratings improved significantly posttreatment from 1.5 to 1.0, and his solitary-passive ratings improved slightly from 1.2 to 1.0. However, PW's posttreatment ratings still represent scores that are more than 3 *SD* above the mean for both reticence and solitary-passive behaviors for typical boys ages 10-13.

Table 5

JG Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	0.5	0.5	.22 (.27)
Solitary-Passive	1.2	1.2	.42 (.41)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 younger typical boys ages 5-8 (Fujiki et al., 1999; Hart et al., 2004).

Table 6

PW Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	1.5	1.0	.15 (.26)
Solitary-Passive	1.2	1.0	.22 (.3)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 OLDER typical boys ages 10-13 (Fujiki et al., 1999; Hart et al., 2004).

KJ

The pretreatment and posttreatment mean scores for withdrawal for KJ are found in Table 7. KJ's score for reticence increased slightly, but was still within typical mean range for boys his age. His solitary-passive rating improved posttreatment from .6 to .2, representing an improvement from more than 1 *SD* above the mean to within typical mean range.

Table 7

KJ Pretreatment and Posttreatment Mean Scores for Withdrawal Subscales on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pretreatment	Posttreatment	Typical Mean ¹
Reticence	0.0	.25	.15 (.26)
Solitary-Passive	0.6	.20	.22 (.3)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. ¹Mean scores for 38 OLDER typical boys ages 10-13 (Fujiki et al., 1999; Hart et al., 2004).

Discussion

The current study focused on teachers' perceptions of social withdrawal in children with LI before and after a social communication intervention designed to target improving emotion understanding. Emotion understanding involves numerous abilities related to the expression and perception of emotion, including recognizing facial expressions, interpreting prosody in conversation, inferring emotion based on context, and dissembling emotion for social purposes. Research has found that children with LI have difficulty with fundamental emotion understanding skills, which in turn, puts them at risk for social problems (Brinton et al., 2015; Ford & Milosky, 2003). Children with LI are more likely to exhibit social withdrawal, manifested by behaviors such as observing, rather than engaging in, social interactions; being unoccupied even when there is plenty to do; and wanting to interact with others but being fearful of doing so (Coplan & Rubin, 1998; Fujiki et al., 1999).

Six boys with LI, ranging in age from 5;8 to 11;3, participated in the study. All six children had been identified by teachers, a parent, and the school SLP as having social communication deficits. Two of the children, PW and KJ, had participated in a similar

intervention approximately one year previously. The six boys received individual intervention sessions twice a week for 20 sessions. The intervention approach targeted social communication, specifically emotion understanding, by utilizing storybooks to help children learn and practice social-emotional skills. In addition to story sharing, story enactments and journaling were also incorporated into each session to encourage reflection and internalization of emotion understanding. The TBRS was used to measure two subtypes of social withdrawal as observed by the classroom teachers of each participant, both pre and posttreatment.

Individual Findings

Each of the children participating in the study presented with different results and demonstrated unique behaviors, strengths, and weaknesses relating to social communication during the 20-week intervention period. Intervention was individualized to meet the needs of each child. A discussion of each participant follows.

JC. At 5;8, JC was the youngest child participating in the study. JC attended half-day kindergarten, and presented with deficits in both language and social communication. JC specifically demonstrated difficulty with nonverbal communication and social relations on the CCC-2 (CCC-2; Bishop, 2006). JC's teacher ratings for solitary-passive withdrawal on the TBRS were more than 3 *SD* above the mean, and showed no change posttreatment. JC's teacher rating for reticence pretreatment was approximately 5 *SD* above the mean, indicating significant reticent behavior. JC's posttreatment ratings for reticence improved from 1.5 to 1.0, however, this still placed JC at approximately 3 *SD* above the mean on the reticence subscale of the TBRS.

JC was eager to participate in all of the treatment sessions, and his face would "light up" upon entering the room where intervention sessions took place. JC particularly enjoyed the story enactment portion of intervention, and referred to this activity as "putting on a play." JC was

cooperative, engaged, and participated in all treatment activities. It was noted that JC occasionally demonstrated pragmatic behaviors that were atypical, including invading personal space during conversation and veering off topic during story sharing. JC enjoyed relating personal experiences, although sometimes the personal experience did not relate to story content or the current topic. JC was not disruptive and appeared to attend to all stories and activities, however, sometimes he was unable to answer simple comprehension questions about the story and/or characters' emotions that had been presented immediately before asking the question. JC's teacher also reported that JC demonstrated poor concentration in the classroom, and frequently was unable to complete a task the teacher had asked him to do. JC's teacher noted some improvement in his ability to find things to occupy him in social contexts, and in his ability to insert himself into social interactions. However, his teacher also reported that JC still liked to play alone and often engaged in activities at recess or in the classroom by himself.

WP. WP, like JC, was also a kindergarten student who attended school for half of the day. WP's classroom teacher reported that he had difficulty with aggressive behavior and had physically hit another child and thrown things when he had not gotten what he wanted. In addition, WP's teacher reported other problematic social behaviors such as interrupting the conversations of others; being resistant to going along with other children's ideas; telling peers he would not play with them if they did not do what he asked; disturbing ongoing activities; and being overly boisterous in rough and tumble play.

WP's ratings for reticence remained the same pre and posttreatment. It was interesting to note, however, that although the total scores remained the same, some individual items on the reticence subscale were rated differently before and after intervention. For the behavior "Is reserved around other children," WP's teacher rated him a 0 (Never does this behavior) before

treatment and a 1 (Sometimes does this behavior) posttreatment. Although this is a statement designed to measure reticence and lower scores are optimal, in WP's case this number may actually represent an improvement in self-control. Another individual item on the reticent subscale also showed improvement. The pretreatment rating for the behavior, "Is unoccupied even when there is plenty to do" was a 2, reflecting that WP engaged in this behavior very often. Posttreatment ratings improved to a 1, indicating that WP engaged in this behavior less frequently.

WP engaged in all treatment activities but often had difficulty focusing and paying attention for longer periods of time. WP showed positive improvement in his ability to recognize and infer character's emotional states in stories. He also was able to draw parallels to his own personal experiences with prompting and with additional processing time. Although WP's withdrawal ratings remained the same posttreatment on the TBRS, WP's teacher reported that he was no longer engaging in destructive behaviors in the classroom, and had improved in his ability to engage in cooperative play with other children.

DG. DG was a 1st grade student with significant language deficits. His core language score on the CELF-5 was in the 0.1 percentile. DG spent a large amount of time (approximately half of the school day) in the resource classroom. For the current thesis, DG's classroom teacher completed the pretreatment and posttreatment ratings, however, it was noted that because of the amount of time DG spent in another classroom, it may have been beneficial to have the resource teacher complete the TBRS and CCC-2 as well. DG's scores on the CCC-2 reflected higher than expected percentiles given his extreme language difficulties. This may have been partially due to a lack of familiarity with DG due to his spending a significant amount of time in

another classroom, or it may be partially attributed to DG's reticent behaviors – essentially flying “under the radar” in the classroom setting.

DG's reticence and solitary-passive withdrawal ratings both improved posttreatment. Despite improvement on both subscales, he continued to score just under 4 *SD* above the mean for reticence and 1.5 *SD* above the mean for solitary-passive behaviors compared to the norm. DG demonstrated significant deficits in expressive language during intervention, which hindered his ability to participate in all aspects of intervention. He struggled to formulate even simple sentences, and was unable to repeat and/or imitate longer, more complex sentences. DG liked to have the stories read to him and was sometimes willing to answer questions about the character's emotions to the best of his abilities, but often requested that the clinician just read the story rather than ask questions. DG also disliked the journaling aspect of intervention, and required maximum assistance and prompting to complete this portion of treatment. DG also refused to engage in making facial expressions in the mirror by shaking his head “no” or by looking away from the mirror. It was noted that DG demonstrated reticent behavior in the form of being reserved and quiet during one-on-one therapy sessions.

DG's teacher described DG as having a pleasant personality, but also reported that he continued to be reserved very often around other children posttreatment. In addition, she rated the items “stares at other children without interacting with them” and “is fearful in approaching other children” on the TBRS as continuing behaviors for DG after intervention. DG's teacher also expressed concern that he struggled to retain any academic information taught in the classroom.

JG. JG was a 1st grade student whose language and social interactional deficits were reflected in his CELF-5 and CCC-2 scores. JG's scores for both reticence and solitary-passive

withdrawal remained the same both pretreatment and posttreatment for every single item on the withdrawal subscale of the TBRS. JG's reticence score was 1 *SD* above the mean for typical boys his age and 2 *SD* above the norm for solitary-passive behavior.

JG's teacher reported that he had difficulty in social interactions with peers, particularly with conflict. According to JG's teacher, he was unable to control his temper in conflict situations and pushed or hit other children during conflict. JG's teacher also reported that he resisted going along with other children's ideas during play, butted into others conversations or activities, and was generally disruptive and derogatory towards peers in social contexts. Despite these reports of negative social behavior, JG responded well to intervention, engaging in all tasks and activities willingly. JG demonstrated improving competence in his ability to recognize, predict, and infer characters' emotional states based on context and storyline. Likewise, he was also successful at presenting different characters' perspectives during the story enactment portion of treatment. JG was also able to describe negative or positive consequences of emotional reactions displayed in stories with minimum cueing. These behaviors and successes in intervention unfortunately did not transfer to the classroom setting as observed by his teacher.

PW. PW was one of two 5th grade students in the study who had also participated in the same intervention project a year earlier in which he received similar treatment. PW presented with deficits in language and social skills as demonstrated in his CELF-5 and CCC-2 scores. Pretreatment, PW's teacher reported that PW rarely expressed emotion and had very few, if any, friends in class. PW demonstrated an increase in posttreatment scores for both subtypes of withdrawal on the TBRS. His reticence ratings improved by almost 2 *SD*, and his solitary-passive ratings improved slightly from 1.2 to 1.0, which represents a 1 *SD* improvement. Despite improving his scores, PW's posttreatment ratings still represent scores that are more than 3 *SD*

above the norm for reticence and approximately 2.5 *SD* above the mean for solitary-passive behaviors, indicating significant socially withdrawn behaviors.

PW was cooperative during treatment and specifically enjoyed journaling about the emotions characters experienced in stories. PW also enjoyed writing dialogue for the characters in stories with verbal prompts by the clinician (e.g., “How do you think he feels right now?” “What do you think he might say if he is feeling _____?”) PW and the clinician engaged in writing dialogue on sticky notes followed by reading the book again using the dialogue he had written. He improved in his ability to infer character emotions throughout the 20 intervention sessions. However, PW continued to demonstrate difficulty in relating information to personal experiences and expressing emotion, both through facial expressions and prosody.

KJ. KJ was a 5th grade student who had also participated in a similar social communication study the year before. KJ presented with deficits in language, with a core language score on the CELF-5 in the 3rd percentile. KJ also demonstrated social communication deficits, as reported by both his classroom teacher and his mother on the CCC-2. KJ’s scores for reticence both pre and posttreatment were both within normal range for typical boys his age. Additionally, KJ showed improvement of more than 1 *SD* to within typical range for solitary-passive behavior posttreatment.

Before intervention began, KJ’s teacher reported that KJ’s behavior was disruptive and that he had difficulty self-monitoring his own inappropriate behavior. Some of the negative social behaviors KJ’s teacher reported included disturbing ongoing activities, crying easily, interrupting the conversations of others, and hitting, kicking, or pushing peers. KJ appeared to do better in one-on-one settings, and rewards for completing tasks or good behavior worked well to motivate KJ during intervention. He needed verbal encouragement to participate in activities and

often did not want to leave class for treatment for fear of missing out on activities he enjoyed in the classroom. However, KJ was often seen wandering the halls, or sitting in the front office of the school, and reported not wanting to go back to class on several occasions. Similar to PW, KJ enjoyed the story sharing activity where he was able to write dialogue for the characters in the stories. KJ continued to demonstrate difficulty understanding more complex emotions and nuances of emotion (e.g., jealousy, or furious vs. irritated). KJ also would attempt to argue with the clinician if his interpretation of characters' emotions did not agree with what was being presented. Towards the end of the intervention sessions, KJ's social behavior showed improvement, and he was able to infer characters' emotional states more accurately than at the beginning of intervention.

General Implications

The results of this study were generally encouraging. Teachers' ratings of withdrawal improved for four out of the six participants, JC, DG, PW, and KJ. Both PW and JC's ratings for reticent behaviors decreased by 2 *SD*, indicating significant improvement. DG also improved in ratings of reticent behaviors by 1 *SD*. KJ was rated within typical norms for reticence both pre and posttreatment, and JG and WP showed no change for ratings of reticence. Research indicates that reticent behavior, indicative of *shyness*, often results in negative outcomes for children with LI, including difficulty forming friendships, peer rejection and victimization, depression and loneliness, and poor self-esteem (Rubin et al., 2009). Research has found that reticent behaviors are motivated by a fear of rejection and anxiety over engaging in social behaviors (Rubin & Coplan, 2004). Therefore, a decrease in teacher ratings of reticence for four of the boys is promising.

Solitary-passive withdrawal, indicative of unsociability, is motivated by an individual's preference for solitude (Rubin, 1982). Three of the boys showed improvement in ratings for solitary-passive withdrawal. PW, KJ, and DG all improved by 1 *SD* in their ratings on the TBRS. This put KJ within the typical range for solitary-passive behaviors posttreatment. JG and JC remained the same pre and posttreatment for ratings on the solitary-passive withdrawal subscale. Solitary-passive withdrawal is characterized by playing or working alone while engaging in constructive activities. This behavior may be encouraged and even rewarded by parents and teachers, especially in early childhood. However, some researchers have proposed that this subtype of withdrawal merges with reticent behavior as children get older, resulting in adverse social ramifications (Asendorpf, 1993). Coplan and Weeks (2010) examined solitary-passive withdrawal and shyness in first and second graders and found that teachers, mothers, and children themselves rated these two subtypes as distinct and separate behaviors into middle childhood. However, boys who were rated high in unsociability were also likely to have peer difficulties and academic challenges. Additionally, for boys who are also displaying reticent behavior, time spent engaging in solitary-passive behaviors may further decrease the amount of time they spend engaging in social interactions with peers.

As mentioned previously, the intervention was individualized to target unique social behaviors in each child. As expected, this led to substantial variability in the boys' participation in treatment sessions and in the results that were reported posttreatment. Taken as a whole, the results indicate positive effects on social interactions and social communication skills in at least four of the boys who participated, although the degree and depth of the improvements remain to be seen.

Study Limitations and Recommendations

The current study had several limitations that should be recognized. First, although the TBRS is a reliable and valid instrument, it is still prone to the general limitations of rating scales (Merrell, 2008). Teacher ratings are beneficial for many reasons, one of which is the advantage of being able to observe behaviors on a daily basis in social contexts in the classroom and at recess. However, ratings represent general impressions rather than definitive observations of behavior. Moreover, ratings scales are susceptible to various forms of error variance, including source, setting, and temporal variance. Source variance may occur depending upon an individual rater's unique impressions, personal beliefs, and background. Ratings may also be affected by the setting where ratings are taking place. For example, participants may display different behaviors at school and be rated quite differently in a school setting than they would be at home. Temporal variance may affect ratings depending upon how frequently and/or recently the observed behaviors occur. To establish the accuracy of teacher ratings, it would be helpful to have posttreatment data from other sources, including parent ratings, observations in multiple contexts, and other follow-up measures.

Second, the social communication intervention implemented in the current thesis was, to some degree, tailored to the individual participants. Although intervention was structured to include four elements: story sharing, story enactment, identification of facial expressions, and journaling, treatment was also designed to be flexible and unique to each child's needs and therefore no child received the exact same intervention. This aspect of the intervention could also be seen as a strength, in that it provided the opportunity to mold and create specific targets for each child. It is difficult, however, to pinpoint exactly which aspect of intervention had an effect

on increasing or decreasing social withdrawal behaviors, because sessions tended to vary somewhat across individual participants.

Third, the study was conducted in a school setting where the six children were enrolled, which also led to limitations in the intensity with which the intervention was provided. The participants received two sessions per week over the course of 10 weeks, with each session lasting approximately 20-30 minutes. Although this is typical of the amount of treatment time children receive in the school setting, intervention may need to be more intense in order to increase effectiveness, including treatment over a longer time period with longer individual session lengths. Additionally, because research was being conducted in just one location, there were a small number of participants who fit the criteria to qualify for the study. More research needs to be done to determine if the results from this study could be generalized to other children with LI who are especially susceptible to social communication deficits.

Finally, although TBRS scores displayed improvement in four of the boys who participated, it is not possible to conclude that intervention was the primary cause of the improvement. Both intrinsic and extrinsic factors can impact the response children have to treatment and the outcome of intervention. In spite of this, it is important to recognize the positive outcomes that resulted posttreatment. Four of the six boys demonstrated a decrease in at least one area of withdrawal, with two participants (PW and DG) indicating decreases in both reticence and solitary-passive withdrawal. All of the classroom teachers reported noticing a positive change in social behaviors in the classroom, including both of the teachers whose ratings did not change from pre to posttreatment on the TBRS for the withdrawal subscales. Additional analysis of other scales within the TBRS would be beneficial to determine if ratings improved in other areas of social communication. The school SLP also conveyed that she had noticed

improvement in social skills in the six boys who participated. The SLP also noted that she had seen progress in language goals, including narrative abilities, story prediction, the ability to answer wh- questions, the ability to engage in conversation, syntax, and language complexity. It is important to note that the overall impressions of the study were positive, and some of the improvements made in social communication may not be readily apparent by just the teachers' reports of withdrawn behaviors.

Summary

The current study examined the efficacy of a social communication intervention targeting emotion understanding on teacher perceptions of withdrawal in children with LI. The TBRS was used to determine improvement and/or regression in ratings of reticence and solitary passive withdrawal as observed by their classroom teacher. Some improvements were noted in these two subtypes of social withdrawal behaviors on the TBRS for four of the six boys posttreatment. Two boys showed no changes and remained stable in both solitary-passive and reticent behaviors. There was some variability in which subtypes of withdrawal improved as well as the amount of improvement made. Half of the boys demonstrated a decrease in reticent behavior, and half of them demonstrated a decrease in solitary-passive withdrawal. One of the boys was within normal range for reticence before treatment, and remained stable following treatment. The results suggest that the social communication intervention had a positive effect, albeit small in some cases, on social withdrawal behaviors of the participants.

This thesis supplements a larger research study to determine the efficacy of a social communication intervention on various aspects of social communication skills in children with LI. In addition to teacher ratings of withdrawal, other data were collected and will be analyzed to determine social behavior changes resulting from intervention. The synthesis of research data

targeting different aspects of social communication skills will contribute empirical evidence for the efficacy of social communication intervention and help determine future social communication treatment methods for children with LI.

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APPENDIX A: Annotated Bibliography

Adams, C., Lockton, E., Gaile, J., Earl, G., & Freed, J. (2012). Implementation of a manualized communication intervention for school-aged children with pragmatic and social communication needs in a randomized controlled trial: The social communication intervention project. *International Journal of Language & Communication Disorders*, 47(3), 245-256. doi: 10.1111/j.1460-6984.2012.00147.x

Purpose of the Study: This study examined the effectiveness of an intensive manualized social communication intervention project (SCIP) for children with pragmatic language impairment (PLI) with or without features of Autism Spectrum Disorder (ASD). The intervention targeted three areas of social communication development, including language processing, pragmatic skills, and social/emotional understanding.

Method: Eighty-eight children ages 6;0 to 10;11 with a diagnosis of PLI participated in the study. 59 of the children were randomly assigned to a SCIP group and 29 were randomly assigned to a control (treatment-as-usual) group. Both groups received up to 20 sessions of direct intervention from a speech and language therapist working with supervised assistants. The assistants included teachers, parents, and others. The experimental treatment was aimed at targeting impairments in semantics and high-level language skills, pragmatic difficulties, social interaction, and social cue interpretation. Outcomes were measured pre- and post-intervention.

Results: A standardized measure of overall language performance did not show a significant intervention effect for SCIP compared with the treatment-as-usual group. Narrative ability also did not show a significant effect. Significant intervention effects were found for SCIP intervention for overall conversational quality using blind rater perceptions. Significant effects were also found for parent reports of social behavior, social communication, and language skills and teacher ratings of classroom learning skills.

Conclusion: The authors concluded that it is likely that intensive social communication intervention was effective at improving overall conversational quality in 6-11 year olds who have pragmatic and social communication needs. Carefully targeted intervention, even for brief periods of time, may improve social communication.

Relevance to Current Work: This study demonstrated how specific, flexible individualized intervention targeting social communication skills can have an impact on social competence and parent and teacher perceptions of language and learning skills. The current thesis also outlined a social communication intervention that is designed to target social skills and language using flexible components that are individualized to each participant.

Andres-Roqueta, C., Adrian, J., Clemente, R., Villanueva, L. (2016). Social cognition makes an independent contribution to peer relations in children with Specific Language Impairment. *Research in Developmental Disabilities*, 49-50, 277-290. <http://dx.doi.org/10.1016/j.ridd.2015.12.015>

Purpose of the Study: This study examined the relationship between social cognition (SC) of children with Specific Language Impairment (SLI) and their peers' perceptions through nominations of liking or disliking children with SLI. Social cognition behaviors investigated included anticipating speaker/listener beliefs and intentions in order to communicate effectively, and negotiating, solving problems, and engaging in conversations.

Method: Participants included 35 Spanish-speaking children with a diagnosis of SLI and 35 typically developing children. Social cognition tasks related to the ability to understand another person's mental state were used to assess each child's social cognition competence. Points were assigned to each task and a total social competence score was computed for each child reflecting a child's understanding of mental states. Additionally, participants' negative and positive peer-nominations were obtained by asking peers to name the three children they liked the most, and the three children they liked the least. Peer nomination scores were then standardized.

Results: Children with SLI received more disliked nominations from their peers and had lower scores on social cognition tasks compared to typically developing children. Social cognition was a significant factor in disliked nominations within the group with SLI.

Conclusion: Children with language impairment are at risk of having social cognitive problems which impact social communication, and are less likely to be accepted by their peers. Children with low social cognition scores were more likely to be rated as disliked by their peers. Therefore, early social communication intervention is important to improve peer acceptance in children with social communication deficits.

Relevance to Current Work: The authors of this article stressed the importance of implementing intervention programs that do not focus exclusively on language, but instead, include individually designed social cognition targets to prevent further negative effects on social development. The current thesis also implements a social communication intervention intertwined with language targets that is designed to improve social cognition in order to encourage positive social interactions with peers and enhance emotional competence.

Asendorpf, J. B. (1993). *Abnormal shyness in children*. *Journal of Child Psychology and Psychiatry*, 34: 1069–1083. doi:10.1111/j.1469-7610.1993.tb01774.x

Purpose of Work: The purpose of this article was to examine and define the manifestation of three distinct types of solitude in childhood: temperamental shyness, social-evaluative shyness, and unsociability.

Summary: The author attributes low levels of social interaction in children to three causes: shyness, unsociability, and social isolation. The first two causes are a result of the child withdrawing from others, and the last cause is a result of the child being isolated by others. The author further divides *shyness* into two different inhibitory processes. Temperamental shyness manifests as inhibition with strangers and unfamiliar situations. Social-evaluative shyness manifests as abnormal shyness in familiar situations. Both types can have long-term negative effects on the development of internalizing problems and a lack of social acceptance by peers.

Social isolation is linked to social-evaluative shyness (although social isolation involves being excluded from social interaction by others, rather than excluding oneself from social interaction). A third type of solitude, *unsociability*, is unique in that children may not want to participate in social interaction because they prefer to be alone rather than interact with others. These children may not have problems interacting socially when approached by others to engage in social interactions.

Conclusion: The author suggests that each of the three different faces of solitude in childhood should be treated as being unique, with different motivations resulting in different possible social outcomes. Additionally, the author underscores the importance of further research into the three kinds of solitude, including long-term outcomes. When the specific circumstances surrounding a child's shyness are identified, the author suggests clinicians investigate whether the child is experiencing social neglect or rejection, and if intervention is warranted.

Relevance to Current Work: This article examines the different forms of solitude and/or socially withdrawn behaviors demonstrated in childhood, and motivations for these behaviors. The current thesis also examines two distinct types of withdrawal in social situations, including solitary-passive withdrawal, referred to in this article as *unsociability*, and reticence, referred to in this article as *shyness*.

Brinton, B., & Fujiki, M. (2005). Social competence in children with language impairment: making connections. *Seminars in Speech and Language, 26*(3), 151-159. doi: 10.1055/s-2005-917120

Purpose of the Study: The purpose of this article was to study the complex relationship between language impairment (LI) and difficulties with social communication. Factors that may influence social interactions in children with LI were examined, and effective intervention methods that facilitate both language and social competence were discussed.

Methods: Two case studies were considered to highlight the complexity of the relationship between LI and social competence: Joseph, an adolescent with LI, and Cari, a 6-year-old diagnosed with Asperger syndrome (AS). The authors considered numerous factors that could affect social outcomes in children who demonstrate LI. These included the extent and nature of the language impairment, emotional competence, social inferencing skills, and negative social behaviors such as withdrawal.

Results: Children who demonstrate deficits in social and language skills, such as Joseph and Cari, often experience negative social outcomes due to problematic social interactions. These negative social outcomes may lead to exclusion from group work, play, and other peer activities. In addition, poor social experiences can affect academic performance and relationships with others.

Conclusion: The authors concluded that because social communication involves the overlap of social and language behaviors, intervention targets should focus on social communication to enhance both language and social functioning. This will help children with LI

improve social communication behaviors to establish and maintain relationships, improve learning, and enhance quality of life.

Relevance to Current Work: This article emphasized the complex relationship between children with language deficits and social communication skills and the significance of implementing treatments that target both language and social skills in order to establish synergistic connections between behaviors that facilitate positive social communication outcomes.

Brinton, B., Fujiki, M., Hurst, N.Q., Jones, E.R., & Spackman, M. P. (2015). The ability of children with language impairment to dissemble emotions in hypothetical scenarios and natural situations. *Language, Speech, and Hearing Services in Schools, 46*(4), 325-336. doi: 10.1044/2015_LSHSS-14-0096

Purpose of the Study: This study replicated earlier research examining the ability of children with language impairment and their age and gender-matched peers to dissemble emotional reactions in both hypothetical scenarios and more naturalistic contexts.

Method: Twenty-two children with a diagnosis of LI and 22 children with typical language development participated in the study. Methods were based on those used by Brinton et al. (2007), in which children were presented with 10 hypothetical social situations where a character experienced one of five emotions that should be dissembled for an appropriate social interaction. After presenting each scenario, the children were asked questions regarding appropriate social responses. In addition, children were presented with four naturalistic scenarios that might require dissemblance. Three of the 4 scenarios were considered to be of low cost to the child, meaning that dissembling emotions would not affect them personally but may hurt the examiner's feelings. The fourth scenario was considered high cost, in that dissemblance resulted in the child losing a desired prize.

Results: Children with typically developing language skills were more able to dissemble emotions in hypothetical situations. Additionally, in the high-cost naturalistic scenario, typically developing children were more likely to conceal their disappointment than children with LI. Children with LI displayed negative emotion rather than dissembling their emotional reaction more often than their typical peers. The children in the two groups did not differ in the low-cost scenarios.

Conclusion: The ability to dissemble emotions was emerging in both groups of children ages 7-11 years, and dissemblance of emotion for both groups was more nuanced in the naturalistic scenarios. However, results showed that taken as a whole, typically developing children were more likely to dissemble their emotions appropriately than children with LI.

Relevance to Current Work: The ability to dissemble emotion for social benefit is a more sophisticated social skill that children with LI demonstrate difficulty with. Dissembling emotions requires a high level of emotion understanding, which impacts social communication and can have a negative impact on social relationships. The current study uses intervention practices that target language, academic, and social behavior as a cohesive unit.

Brinton, B., Spackman, M. P., Fujiki, M., & Ricks, J. (2007). What should Chris say? The ability of children with specific language impairment to recognize the need to dissemble emotions in social situations. *Journal of Speech, Language, and Hearing Research*, 50(3), 798-811. doi: 10.1044/1092-4388(2007/055)

Purpose of the Study: The purpose of this study was to investigate the ability of children with Specific Language Impairment and their typical peers to dissemble (hide) emotion for social benefit.

Method: Nineteen children with SLI and 19 children with typical language skills participated in the research. Both groups were presented with 10 hypothetical social situations in which a character experienced one of five emotions (happiness, sadness, fear, anger and disgust) that should be dissembled for an appropriate social interaction. For example, in one scenario, the main character “Chris” eats at his favorite uncle’s house and is served a piece of cake that tastes disgusting. After presenting each scenario, the children were asked four questions about the scenario, including a comprehension question (“How did the cake taste?”); an emotion question (“How does Chris feel?”); a dissemblance question (“What should Chris say?”); and a display rule question (“What would Chris’s parents want him/her to do?”).

Results: For all scenarios, both groups of children answered the comprehension questions appropriately, however, typically developing children produced significantly more responses indicating that Chris should dissemble emotion than did the children with SLI.

Conclusion: Researchers concluded that children with SLI did not understand the impact of displaying emotion on relationships in the same way their typical peers did, which in turn, may affect social interactions negatively.

Relevance to Current Work: The current study implements a social communication intervention designed to improve emotion understanding skills, such as dissembling emotions, in children with LI. The ability to dissemble emotions is an important aspect of successful social interactions and the development of positive social relationships.

Coplan, R. J., Rose-Krasnor, L., Weeks, M., Kingsbury, A., Kingsbury, M., & Bullock, A. (2013). Alone is a crowd: Social motivations, social withdrawal, and socioemotional functioning in later childhood. *Developmental Psychology*, 49(5), 861-875. doi:10.1037/a0028861

Purpose of the Study: The purpose of this study was to explore the relationships between social motivations, social withdrawal, and socioemotional functioning in later childhood, and the implications of three different subtypes of social withdrawal: shy-conflicted, unsociable, and avoidant.

Method: Participants in this study included 367 children (179 boys and 188 girls) ages 9-12 years. Data was collected using multiple sources, including assessments of social motivations and social withdrawal, behavioral observations, maternal ratings, and child self-ratings. The

authors tested a conceptual model of direct and indirect pathways linking social approach and avoidance motivations, socially withdrawn behaviors, and difficulty with peer interactions.

Results: Results indicated that both shyness and unsociability correlated with socially withdrawn behaviors and also predicted peer difficulties. All forms of social withdrawal appear to be poorly received by peers in late childhood. However, only shyness demonstrated a direct link to peer difficulties. Moreover, different subtypes of socially withdrawn children displayed different socioemotional profiles, especially with regard to internalization of problems.

Conclusion: The findings in this work present evidence that different subtypes of socially withdrawn behavior result in different patterns of socioemotional functioning in later years. The authors concluded that longitudinal studies need to be conducted to assess social motivations, social withdrawal, and socioemotional functioning over time to determine long-term effects. In addition, the authors recommend that other variables be explored to understand the relationship between causes and effects of social withdrawal.

Relevance to Current Work: This research helps distinguish between multiple forms of social withdrawal in later childhood and adolescence, and links motivating factors with manifestations of withdrawn behavior and consequences. The current thesis also examines two subtypes of withdrawal (shyness and unsociability) in six boys, two of which are of the age researched in this study (11 years).

Coplan, R. J., & Rubin, K. H. (1998). Exploring and assessing nonsocial play in the preschool: The development and validation of the preschool play behavior scale. *Social Development, 7*, 72-91.

Purpose of the Study: The purpose of this work was to develop and validate the Preschool Play Behavior Scale (PPBS), a teacher rating scale designed to evaluate three different forms of young children's nonsocial play behaviors, including solitary-passive behavior, reticent behavior, and solitary-active behavior.

Method: Thirty-nine preschool children participated in the study. Social and nonsocial behaviors were observed and recorded over a three-month period during free play. Children's free play behaviors were coded for social participation using Rubin's Play Observation Scale, and categorized into 5 variables: reticent behavior, solitary-passive behavior, solitary-active behavior, social play, and rough-play. Four months into the preschool year, teachers completed the PPBS to rate the children in the sample.

Results: Teacher ratings of nonsocial behaviors were generally significantly correlated with observations by researchers of the same behaviors. There was also an overall lack of significant intercorrelations among teacher-rated and observed non-corresponding forms of nonsocial behaviors. Results established the psychometric properties of the PPBS, including inter-rater reliability, factor structure, internal consistency, and convergent validity.

Conclusion: The results of this study supported the use of the PPBS as a reliable and valid measure to accompany behavioral observations in the assessment of nonsocial play

behaviors in young children. This study also provided insight into the nature of socially withdrawn behavior within the preschool classroom.

Relevance to Current Work: The current study also uses a teacher rating scale, the Teacher Behavior Rating Scale (TBRS), to assess two types of withdrawn behavior in children with LI: reticence and solitary-passive behavior. Similar to the PPBS, subscales of the TBRS were found to be valid and reliable for reflecting three types of nonsocial behaviors (reticence, solitary-passive, and solitary-active) in children as rated by teachers.

Coplan, R. J., Rubin, K. H., Fox, N. A., Calkins, S. D., & Stewart, S. L. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence, and passive and active-solitude in young children. *Child Development, 65*, 129-137.

Purpose of the Study: This study replicated and extended research concerning the presence of multiple and independent forms of solitude in preschool-age children. The central goal of this research was to investigate the existence of these forms of solitary behavior, and to examine the underlying motivations and behavioral manifestations of each form.

Method: Forty-eight preschool children (20 males and 28 females) participated in the study. The participants were assigned to quartets of unfamiliar gender-matched and age-matched peers. The children were observed engaging in five episodes: unstructured free play, a clean-up task, show-and-tell speeches, a ticket-sorting task, and another episode of unstructured free play. Behaviors during the first and second free play sessions were coded using Rubin's Play Observation Scale in 10-second intervals. During the clean-up session, the proportion of time each child spent off-task-unoccupied was recorded. The speeches were coded for the duration of the entire speech episode and the percentage of time each child spent speaking. The ticket-sorting task was coded for the percentage of time each child spent off-task-unoccupied. The participants' mothers also completed the Colorado Temperament Inventory to assess maternal perceptions of their children's characteristics.

Results: The results of this study replicated attempts to establish the presence of multiple and independent forms of solitude, revealing that social withdrawal has many overlapping meanings. Solitary-active, solitary-passive, and reticent behaviors were not significantly correlated. Children who demonstrated behavioral manifestations of anxiety were more likely to display reticent behaviors but not solitary-passive or solitary active behaviors. This suggests that reticence may be a marker for anxiety in preschool-age children. Reticent behavior was also associated with hovering near social groups. Additionally, reticence during free play was associated with poor performance and displays of wariness in other social situations, whereas solitary-passive and solitary-active play were not.

Conclusion: This study corroborates previous findings demonstrating that there are multifaceted aspects of social withdrawal in childhood. The authors concluded that the subtypes of withdrawal are not significantly correlated, and that there are various underlying mechanisms associated with the three subtypes of withdrawal. Solitude is not a significant criterion for identifying children as socially withdrawn, and the meaning of solitude changes as children grow

older. The authors suggest that further research is needed to examine long-term effects and underlying motivations of the three types of withdrawn behaviors.

Relevance to Current Work: This research identified and characterized three types of withdrawn behavior: solitary-passive, solitary-active, and reticence. Additionally, this study examined possible motivations for these behaviors. The current thesis examines solitary-passive withdrawal and reticent behaviors in children with language impairment using teacher ratings of the behaviors described in this work.

Coplan, R. J., & Weeks, M. (2010). Unsociability in middle childhood. *Merrill-Palmer Quarterly*, 56(2), 105-130.

Purpose of the Study: The purpose of this study was to examine socioemotional adjustment of children who demonstrate the withdrawn behaviors of unsociability and shyness in children ages 6-8 years, and to investigate whether shyness and unsociability are distinct behaviors in middle childhood.

Method: The participants in this study included 186 children (89 boys and 97 girls) in 1st and 2nd grade, ages 6-8 years. The children's mothers completed ratings of child shyness, unsociability, and other indications of child temperament, as well as social goals for their children at the beginning and end of the school year. Participants were interviewed individually using the Loneliness and Social Dissatisfaction Questionnaire for Young Children and the School Liking and Avoidance Scale. Additionally, teachers completed the Child Behavior Scale to assess children's social engagement with peers. The data were then analyzed for correlations.

Results: The results provided empirical data that mothers make reliable and valid distinctions between unsociability and shyness during middle childhood. In addition, these two subtypes of social withdrawal do not merge in middle childhood, as argued by some researchers, but remain distinct. Shyness was associated with a variety of social and emotional difficulties, however, unsociable children appeared to be similar to typical children on socioemotional parameters. The exception to this was that boys rated as unsociable showed evidence of experiencing problems with peer relationships.

Conclusion: Two subtypes of social withdrawal, unsociability and shyness, remain distinct constructs into middle childhood. Children demonstrating unsociable behaviors experienced some difficulties with peer relationships, but did not appear to experience socioemotional difficulties at 6-8 years. Those children who demonstrated shyness were rated by teachers, mothers, and themselves as being more lonely, liking school less, displaying more internalizing problems and experiencing more peer difficulties than their unsociable and typical peers.

Relevance to Current Work: This study is an important contribution to the current thesis, as it provides empirical data that unsociability in boys may lead to problems with social interactions with peers. The current study's participants are six boys with high teacher ratings for both solitary-passive (unsociable) and reticent (shyness) behaviors, four of which are the

same age as this research (6-8 years). This study underscores the ramifications of both subtypes of withdrawn behavior, and the need for more research regarding social withdrawal.

Ford, J. A., & Milosky, L. M. (2003). Inferring emotional reactions in social situations: differences in children with language impairment. *Journal of Speech, Language, and Hearing Research, 46*(1), 21-30.

Purpose of the Study: The purpose of the study was to examine the ability of children with LI and their typical peers to identify emotions as depicted by facial expressions and infer the emotional reactions of characters presented in a story.

Method: Twenty-four Kindergarten children, 12 with LI and 12 typically developing, participated in the study. The children were asked to identify and label the emotions *happy*, *sad*, *surprised*, and *mad* depicted by facial expressions. Additionally, participants were presented with stories and asked to infer the emotions experienced by a character in the stories.

Results: Children in both groups were able to identify the four emotions depicted in facial expressions. However, children with LI were less able to make an accurate social inference regarding a character's emotion when presented in story form. In addition, children with LI made valence errors (identifying an emotion of a different valence, such as substituting mad for happy). Although children in the control group made errors, they did not confused valence.

Conclusion: Researchers concluded that children with LI may experience difficulty with the ability to anticipate and respond to the expression of emotions, which is an integral component in effective social communication. The findings suggest that it is appropriate for clinicians to address social inferencing in therapy, and that it may be necessary to extend treatment beyond simply identifying facial expressions to include making inferences about a person's emotional state.

Relevance to Current Work: This article identified the difficulty children with LI have in making inferences about the emotional state of characters in stories, and suggested that treatment targets incorporate social inferencing goals. The current study utilized a social communication intervention based on children's literature books that highlighted character emotions and prosocial behaviors.

Fujiki, M., Brinton, B., Isaacson, T., & Summers, C. (2001). Social behaviors of children with language impairment on the playground: A pilot study. *Language, Speech, and Hearing Services in Schools, 32*(2), 101-113. doi: 10.1044/0161-1461(2001/008)

Purpose of the Study: The purpose of this study was to compare social behaviors of children with language impairment (LI) and their age-matched typical peers on the school playground during recess.

Method: Eight children with LI ranging in age from 6:1 to 10:7, and 8 typically developing children matching each child with LI in terms of grade level, gender, and age were

observed and videoed during recess for 45 minutes. These videos were then coded in 5-second segments according to the child's behavior during each segment. Children's behaviors were classified into 37 subcategories which were then grouped into six general categories: a) peer interaction, b) adult interaction, c) withdrawal, d) aggression, e) victimization, and f) other.

Results: Children with LI exhibited significantly less time engaged in peer interaction during recess than their typical peers. Children with LI also exhibited significantly more withdrawn behaviors than typical children. No other categories produced significant between group differences.

Conclusion: Children with LI exhibit more withdrawn behaviors than their typical peers at school. This study supports previous social communication studies that used the Teacher Behavior Rating Scale (TBRS) to report the social communication behaviors of children with LI at school. Previous studies using the TBRS also indicated more withdrawn behaviors in children with LI at school.

Relevance to Current Work: Intervention targeting social skills and specific engagement strategies to facilitate social interactions such as the intervention method used in this current thesis may be warranted for children with LI to improve social communication.

Fujiki, M., Brinton, B., Morgan, M., Hart, C. H., (1999). Withdrawn and sociable behavior of children with language impairment. *Language, Speech, and Hearing Services in Schools*, 30, 183-195.

Purpose of the Study: The purpose of this study was to examine the withdrawn and sociable behaviors of children with language impairment (LI) and their typically developing peers.

Method: Participants in this study included 41 children with a diagnosis of Language Impairment and 41 typically developing children. Both groups consisted of male and female children between the ages of 5-8 or 10-13 years. Each child with LI was matched with a typically-developing child by both gender and age. The Teacher Behavior Rating Scale (TBRS, Hart & Robinson, 1996) was used to measure each child's social communication skills. The TBRS was completed by each participant's classroom teacher. The teachers were instructed to complete the TBRS according to their own observations of the student's sociable and withdrawn behaviors.

Results: The TBRS Teacher ratings showed that children with LI were viewed as significantly more reticent than typical peers. Teachers reported that children with LI wanted to engage in social interactions but were too anxious, fearful, or inept to do so. Reticence was displayed by behaviors such as engaging in an off-task activity or a lack of activity. In addition, males with LI displayed higher levels of solitary-active withdrawal than girls with LI and typically developing children of both genders. The children with LI did not significantly differ from their typical peers on solitary-passive withdrawal. For sociable behaviors, children with LI were rated significantly lower than their typical peers in both impulse control/likeability and prosocial behavior.

Conclusion: The study suggests that LI and social interactional skills are linked. Cognitive, emotional, social, and behavioral factors may also play a role in sociable and withdrawn behaviors in social interactions. It is important, however, to account for the correlation between LI and negative social behaviors when planning treatment for children with LI.

Relevance to Current Work: This study suggests that children with LI exhibit deficits in social behaviors compared to their typically developing peers. Problems with social communication may affect current and future social connections, emotion understanding, and peer acceptance. Social communication interventions targeting both language and social skills such as the one proposed in this thesis may be beneficial in improving withdrawn and sociable behaviors in children with LI.

Fujiki, M., Spackman, M. P., Brinton, B., & Hall, A. (2004). The relationship of language and emotion regulation skills to reticence in children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, 47(3), 637-646. doi: 10.1044/1092-4388(2004/049)

Purpose of the Study: This study investigated the correlation between emotion regulation, language ability, and reticence in children with specific language impairment (SLI) and their typical peers.

Method: Forty-three children with SLI and 43 typically developing children from 2 age ranges (5-8 years and 9-12 years) participated in the study. Each child's teacher completed the Emotion Regulation Checklist (ERC) to provide a measure of emotion regulation, and the Teacher Behavior Rating Scale (TBRS) to measure reticent behavior. The Comprehensive Assessment of Spoken Language (CASL) was given to each child to determine language ability. Regression analyses were then utilized to determine the connection between language ability, emotion regulation, and reticence.

Results: Emotion regulation and CASL scores were significant predictors of reticence scores, accounting for 43% of the variance in respondents' reticence scores. Language level and emotion regulation were found to be equally significant in predicting respondents' scores for reticence.

Conclusion: The results of this study indicated that both emotion regulation and language ability predict reticence, which the authors describe as fearful, anxious behavior resulting from the intertwining of language and emotional factors. The findings also contribute evidence that children with a diagnosis of SLI may have deficits in other areas of development as well that may influence social and behavioral outcomes.

Relevance to Current Work: This article provides important empirical evidence that emotion regulation and language ability are indeed linked to reticent behaviors as observed and rated by children's teachers. The current thesis also relies on teacher's ratings of reticence using

the TBRS to determine if ratings change after children participate in intervention designed to enhance emotion regulation and emotional competence skills.

Fujiki, M., Spackman, M. P., Brinton, B., & Illig, T. (2008). Ability of children with language impairment to understand emotion conveyed by prosody in a narrative passage. *International Journal of Language & Communication Disorders, 43*(3), 330-345. doi: 10.1080/13682820701507377

Purpose of the Study: The purpose of this study was to extend the work done in previous research revealing that children with LI have difficulty with emotion understanding. This investigation examined the ability of children with LI to interpret prosodic cues in a context more similar to that encountered during a social interaction.

Method: Nineteen children age 8-10 years with LI and 19 typical age-matched peers participated in this study. Both groups listened to short narrative passages read by actors that expressed the emotions of happiness, anger, sadness, or fear. Participants were then asked to identify the emotion the speaker conveyed.

Results: Children with LI were not as adept at recognizing prosodic cues signaling certain emotions as were their typical peers. Although children with LI were able to recognize the prosodic cues of happiness as well as the control group, they were more prone to confuse negative emotions such as fear and sadness.

Conclusion: This research corroborates past studies indicating that children with LI have difficulty recognizing and interpreting prosodic cues signaling certain emotions. This adds to the evidence that children with LI may benefit from a social communication intervention targeting emotion understanding in addition to language goals.

Relevance to Current Work: This study supplies further evidence that children with LI have difficulty with emotion understanding tasks, including interpreting prosodic cues. Deficits with this aspect of emotion understanding may lead to negative social consequences. These results suggest a need for intervention designed to improve emotion understanding in children with LI. The current thesis involves a social communication intervention that focuses on the development of emotion understanding skills.

Gerber, S., Brice, A., Capone, N., Fujiki, M., & Timler, G. (2012). Language use in social interactions of school-age children with language impairments: An evidence-based systematic review of treatment. *Language, Speech, and Hearing Services in Schools, 43*, 235-249. doi:10.1044/0161-1461(2011/10-0047)

Purpose of the Study: The purpose of this study was to conduct an evidence-based systematic review (EBSR) of the efficacy of treatment for disorders of language use in social interactions. The EBSR focused on communication disorders in school-age children with LI.

Method: The American Speech-Language-Hearing Association (ASHA) convened an ad hoc committee to conduct an evidence-based systematic review of treatment for disorders of

language use in social interactions. The committee was comprised of five professional researchers in the field of speech-language pathology. Researchers conducted a systematic review of 22 electronic databases to search for research regarding social communication treatments in children with LI.

Results: The committee found only eight published studies that addressed language use in social contexts for school-age children. Committee members determined that the results of the eight studies provided preliminary support for social communication and pragmatic language intervention, but that further research was needed to provide empirical evidence for the best social communication treatment procedures for children with LI.

Conclusion: Researchers determined that there is a scarcity of empirical research evaluating social communication treatment methods and the efficacy of treatment procedures designed to improve children's language use in social interactions. Researchers suggested that clinicians should not shy away from social communication intervention, but rather, continue to use their own judgment, knowledge, and expertise in making decisions regarding appropriate treatment for clients.

Relevance to Current Work: This study is extremely important in regards to the current thesis, because it provides evidence that there is a need for more research regarding the optimal framework and effectiveness of social communication interventions. The current thesis examines the effectiveness of a literature-based social communication intervention for children with LI.

Hart, K., Fujiki, M., Brinton, B., & Hart, C. (2004). The relationship between social behavior and severity of language impairment. *Journal of Speech, Language, and Hearing Research, 47*(3), 647-662. doi:10.1044/1092-4388(2004/050)

Purpose of the Study: The purpose of this research was to determine if there was a correlation between the severity of LI and the occurrence of specific social behaviors. The study focused on two subtypes of social behavior: sociability and withdrawal.

Method: A total of 82 children participated in this study, including 41 children with LI and 41 typically developing age and gender matched peers. The Teacher Behavior Rating Scale (TBRS) was given to each participant's teacher to ascertain withdrawn and sociable behaviors. The subtypes of withdrawal that were considered included solitary-passive withdrawal, solitary-active withdrawal, and reticence. The subtypes of sociability that were assessed included likeability and prosocial behavior. Scores for withdrawal and sociability behaviors were compared between the group with LI and the control group using the TBRS. Analyses were then conducted to determine whether children with more severe LI had poorer social profiles than children with less severe LI.

Results: Teachers reported significantly higher levels of withdrawal in children with SLI. Children with SLI demonstrated high levels of both reticence and solitary-passive withdrawal. Solitary-active withdrawal was infrequently reported in both the children with SLI and the control group. Teachers also reported significantly lower scores for children with SLI in both

likeability and prosocial behavior. The severity of LI appeared to be linked to some sociable behaviors but not to most withdrawn behaviors. Children with severe receptive and/or expressive language scores were less prosocial than children with moderate scores.

Conclusion: Children with SLI exhibit higher levels of withdrawn behavior and lower levels of sociable behavior than their typical peers. However, severity of LI was not indicative of higher levels of withdrawal. Severity of LI was an indicator of poorer prosocial behavior. The authors concluded that LI does not exist in isolation, and that social problems in children with LI may stem from multiple sources. Much more research is needed to determine how aspects of emotional competence combine with LI to determine social outcomes.

Relevance to Current Work: This study provides additional insight into the complex connection between LI and social competence. Children with LI demonstrated higher levels of reticence and solitary-passive withdrawal as compared to their typically developing peers. Similar to this study, the current thesis used the TBRS to study two subtypes of withdrawn behaviors.

Horowitz, L., Westlund, K., & Ljungberg, T. (2007). Aggression and withdrawal related behavior within conflict management progression in preschool boys with language impairment. *Child Psychiatry and Human Development*, 38(3), 237-253.

Purpose of the Study: The objective of this study was to determine the relative occurrence and role of non-affiliative behavior (aggression, passive withdrawal and active withdrawal) in preschool age boys with language impairment (LI) during conflict management.

Method: Eleven boys with LI, ages 4-7 years old, and 20 age-matched boys with typically developing language (TL) participated in this research. The group of boys with LI were observed interacting in free play with other children with LI. The control group was observed in interaction with other children with TL. Free play was video recorded and coded and analyzed in sections that included a pre-conflict period, conflict period, post-conflict period, and a succeeding non-conflict period determining whether opponents socially interacted after conflict. Displays of aggression, passive withdrawal, and active withdrawal were identified during each of the periods.

Results: Boys with LI displayed at least one form of withdrawal in conflicts with non-affiliative behavior, significantly more often than boys with TL. In conflicts that individuals displayed at least one form of post-conflict withdrawal, the boys with TL displayed passive withdrawal more often than boys with LI. The boys with LI exhibited overt active withdrawal (leaving the room) in a larger share of overall conflicts. Boys with TL reconciled to a greater extent than the boys with LI after displaying aggression.

Conclusion: The boys with LI demonstrated active withdrawal and left conflict scenes significantly more often than boys with TL. The boys with LI also appeared to have more difficulty coping with aggressive behaviors. Researchers concluded that behavioral interventions must be considered in intervention, and that further naturalistic observation of peer conflict and interaction is needed.

Relevance to Current Work: This study highlights the difficulty children with LI have with social interactions, specifically conflict. Boys with LI demonstrated active withdrawal (leaving the room) during conflict, which led to lower rates of reconciliation. The current thesis examines the roles that social behaviors and emotion understanding play in successful social interactions.

Nelson, L., Hart, C., Evans, C., Coplan, R., Roper, S.O., & Robinson, C. (2009). Behavioral and relational correlates of low self-perceived competence in young children. *Early Childhood Research Quarterly, 24*(3), 350-361. <https://doi.org/10.1016/j.ecresq.2009.06.002>

Purpose of the Study: The purpose of this study was to investigate the link between self-perceptions of preschool children, their teachers' ratings of sociability and withdrawal, and peer ratings of acceptance and rejection.

Method: Participants included 199 children ages 49 to 71 months who were attending two early childhood preschool programs. The study was conducted 6-7 months into the school year to ensure teacher and peer familiarity in order to complete rating and sociometric measures. The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children was used to assess perceived cognitive competence, perceived peer acceptance, perceived physical competence, and perceived maternal acceptance in each of the participants. Peer acceptance and/or rejection were measured by asking peers to place participants' pictures in one of three categories: "children you like to play with a lot"; "children you kind of like to play with"; and "children you don't like to play with very much". Teachers completed the Teacher Behavior Rating Scale (TBRS) to measure subtypes of children's sociable and withdrawn behaviors.

Results: Results of regression analyses showed that solitary-active withdrawal predicted lower self-perceptions in preschoolers. In addition, children who have lower self-perceptions of their abilities tended to display more reticence, solitary-passive withdrawal, and solitary-active behavior than peers with higher self-perceptions.

Conclusion: This study suggests that the three subtypes of withdrawal examined (solitary-passive, reticence, and solitary active) are linked to negative self perceptions as early as four-years-old. All three subtypes may be considered a risk factor in developing positive self perceptions, which in turn, may lead to a lack of positive social interactions and long-term negative social consequences.

Relevance to Current Work: The results of this study demonstrate that even very young children may develop negative self perceptions and display social withdrawal behaviors. The current thesis examines teachers' perceptions of two subtypes of withdrawal, reticence and solitary-passive withdrawal in children with LI, and the effectiveness of intervention to improve social-emotional skills in children.

Rubin, K. H. (1982). Non-social play in preschoolers: Necessary evil? *Child Development, 53*, 651-657.

Purpose of the Study: Children who engage in non-social behaviors may be at risk for future difficulty with social communication and social-cognitive problems. However, according to research, some manifestations of non-social behavior may actually be constructive and positive. The purpose of this study was to identify forms of non-social behaviors which are linked either positively or negatively with social, social-cognitive, and cognitive development.

Method: Participants included fifty-three male and 69 female 4-year-olds who attended preschools or day-care centers. Each child was observed by two observers for a total of 30 minutes during free play time. Behaviors were coded according to social participation categories that included solitary, parallel, and group activities. Other observational categories included unoccupied behavior, onlooker behavior, reading or being read to, rough-and-tumble play, exploration, active conversations with teachers or peers, and transitions. In addition, a sociometric rating scale was used to determine peer ratings of acceptance or rejection. Classroom teachers were given the Behar and Stringfield Preschool Behavior Questionnaire to determine social-competence. Cognitive role-taking skills and social problem-solving skills were also assessed by administering the Preschool Interpersonal Problem-Solving Task and The Social Problem-Solving Task. Finally, the Peabody Picture Vocabulary Test was administered to each child to assess language skills.

Results: Solitary-functional, solitary-dramatic, and parallel-functional (repetitive motor activity) play correlated negatively with social, social-cognitive, and cognitive skills. Other forms of non-social behaviors, including solitary-constructive and onlooker behaviors appeared to have no correlation either positively or negatively. Parallel-constructive play was highly predictive of social and cognitive competence. Unoccupied behavior was positively correlated with teacher ratings of social maladjustment and negatively correlated with peer social conversations.

Conclusion: The results of this study suggest that not all nonsocial behaviors are associated with negative social and cognitive development. Parallel-constructive play for instance, while classified as a nonsocial behavior, was associated with peer popularity and teacher ratings of social competence. Therefore, intervention should be focused on specific nonsocial behaviors that correlate with social and cognitive deficits.

Relevance to Current Work: This study identified some social behaviors in childhood that may lead to negative social outcome, including solitary-functional, solitary-dramatic, and parallel-functional play. The current thesis identifies these behaviors as solitary-active withdrawal. This form of withdrawal does not usually present in children with LI. However, the current research is also examining two socially withdrawn behaviors, solitary-passive withdrawal and reticence, that can impact social communication.

Rubin, K. H., & Asendorpf, J. B. (1993). Social withdrawal, inhibition, and shyness in childhood: Conceptual and definitional issues. In K. H. Rubin & J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 3-15). Hillsdale, NJ: Erlbaum.

Purpose of Work: This chapter examines the many “faces,” potential causal factors, and motivations underlying social withdrawal.

Summary: The term *social withdrawal* is an umbrella term that describes multiple complex forms and variations of unsocial behaviors, specifically in children. *Shyness* is one form of social withdrawal that is characterized by the desire to engage others in interaction, combined with a fear of social rejection. Children who manifest this behavior may observe peer groups from afar or hover along the margins without engaging. This behavior presents most often in novel situations. *Passive-withdrawal* is characterized by low social approach motivation. These children do not necessarily have a high social avoidance motive, but rather, prefer solitude to social activity. These children engage in solitary-constructive behaviors such as playing alone with toys or books. During early childhood, it is not associated with social maladaptation. However, solitary-constructive behaviors in later childhood are associated with anxiety, negative self-perceptions and lack of peer acceptance.

Conclusion: Social withdrawal behavior can be displayed in many different ways and for many different reasons. Although these forms are complex and motivations may be different, all of them may lead to negative self-perceptions and deficits in social competence. The authors conclude that there is a critical need to research whether different forms of solitude are equally predictive of negative social implications not only in childhood, but in adolescence and adulthood.

Relevance to Current Work: This chapter outlines the complex aspects of social withdrawal, including varying motivations, manifestations, and possible social outcomes. The current thesis also explores social withdrawal and considers a social communication intervention designed to mitigate the negative consequences of social withdrawal.

Rubin, K. H., & Coplan, R. J. (2004). Paying attention to and not neglecting social withdrawal and social isolation. *Merrill-Palmer Quarterly*, 50(4), 506-534.

Purpose of Work: This essay discusses past and current research regarding social withdrawal and social isolation, and suggests future directions for research including causes, prevention, and intervention.

Summary: The authors presented a historical review of withdrawal and isolation in social contexts, beginning as early as the 1920s. Social withdrawal has more recently come to the forefront of research regarding its effects on peer relationships and social cognitive skills. The authors presented several definitions and clarification for identifying these separate social behaviors. *Active isolation* refers to children who play alone because of rejection by peers. *Passive withdrawal* refers to children who engage in solitary play by choice. These children are able to engage in social interaction, but opt not to interact with peers because they lack a strong desire to play with others. Another term for this is *unsociability*. Still another form of social withdrawal is *reticence*, motivated by a fear of rejection. During free play with peers, reticent children tend to engage in on-looking behaviors or remain unoccupied even when there is plenty to do.

Conclusion: The authors suggest that future research needs to be considered regarding the risk and protective factors for social withdrawal, including biology, parent-child relationships, early intervention, and culture. The authors also advocate for future prevention and early intervention programs that include a focus not only on teaching social skills, but also emotion understanding, involve familiar and unfamiliar peers, and include a parental component.

Relevance to Current Work: The authors of this essay recommend the implementation of early prevention and intervention for social withdrawal to improve long-term prospects for successful family and peer social relationships. The current thesis examines the effect of a social communication intervention on the demonstration of socially withdrawn behaviors.

Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social Withdrawal in Childhood. *The Annual Review of Psychology*, 60, 141-171. doi: 10.1146/annurev.psych.60.110707.163642

Purpose of Work: The purpose of this article was to clarify definitions, theories, and etiology of social withdrawal; examine the predictors, correlates, and consequences of early childhood and adolescent social withdrawal; and provide a developmental framework for social withdrawal outlining possible implications.

Summary: Withdrawn behavior has historically been referred to by numerous names used interchangeably: shyness, social reticence, passivity, inhibition, rejection, solitude, and isolation. The term *social withdrawal* is an umbrella term that includes social behaviors stemming from varying motivations. The authors presented a review of multiple definitions and motivations behind various types of social withdrawal. The authors also outlined the developmental course of childhood social withdrawal and factors that may influence this course, including biological foundations, parental influence, and behavioral stability. Correlates and consequences of childhood social withdrawal were also presented. Some of the consequences identified included difficulty forming friendships, peer rejection and victimization, depression and loneliness, and negative self-regard. Other implications included anxiety regarding school, academic difficulty, and poor language skills.

Conclusion: The authors concluded that there are multiple types of socially withdrawn behavior, some of which lead to negative outcomes, and some of which may be benign. Reticent behavior, motivated by a fear of social interaction, is one of the strongest correlates and consequences of peer rejection in childhood. However, those who present with withdrawn behaviors in early childhood due to a lack of interest in social interactions may not experience the same negative outcomes. The authors cautioned that if children continue to demonstrate withdrawn behaviors into adolescence and adult years, however, that there may indeed be long-term negative social consequences. The authors also concluded that more research needs to be conducted to assess long-term outcomes of specific forms of social withdrawal, and optimal early intervention methods to counteract negative social consequences.

Relevance to Current Work: This article provided clarity for the predictors, correlates, consequences, framework and social implications of withdrawn behavior in children and adolescents, which often presents in children with LI, and is the focus of the current thesis.

Spackman, M. P., Fujiki, M., & Brinton, B. (2006). Understanding emotions in context: The effects of language impairment on children's ability to infer emotional reactions. *International Journal of Language & Communication Disorders, 41*, 173-188.

Purpose of the Study: This study evaluated the ability of children with LI to infer emotions experienced in specific social situations.

Method: Forty-three children with LI and 43 typical age and gender-matched children were presented with short verbal and visual scenarios in which the main character of the story was expected to feel anger, fear, happiness or sadness. Participants were asked to identify the emotion the character experienced, why the character would feel that way, and to describe how a particular emotion would feel.

Results: Both groups of children were able to identify happiness accurately, followed by sadness, fear, and anger. Typically developing children were significantly more accurate in their identification of emotion than children with LI, and children with LI were less sophisticated in their descriptions of emotions than typical children.

Conclusion: This study adds to evidence that children with LI have difficulty with emotion understanding, including the ability to infer the emotions of others in social contexts. Based on this research and other previous studies regarding deficits in emotional competence in children with LI, clinical interventions should incorporate targets for social communication that focus on emotion understanding.

Relevance to Current Work: This article underscored the connection between deficits in emotion understanding and children with LI and the impact this can have on successful social interactions. An important focus of the current thesis was to improve emotion understanding in children with LI through a social communication intervention that utilized literature rich in emotional and prosocial content.

Spackman, M. P., Fujiki, M., Brinton, B., Nelson, D., & Allen, J. (2005). The ability of children with language impairment to recognize emotion conveyed by facial expression and music. *Communication Disorders Quarterly, 26*, 131-143.

Purpose of the Study: The purpose of this study was to present two separate exercises to assess emotion understanding in children with LI. The first task looked at participant's ability to recognize emotions portrayed by facial expressions. The second task investigated each child's ability to identify emotions conveyed in music.

Method: Participants included 43 children with LI and 43 age-matched children with typically developing language skills. Participants were divided into two age groups: 5 to 8 years or 9 to 12 years. For the first task, Matsumoto and Ekman's collection of 24 standardized photographs of facial expressions of emotion were used. The photos portrayed six different emotions: happiness, sadness, anger, fear, disgust and surprise. Participants were asked to indicate the emotion being shown. For the second study, 12 excerpts of classical music shown in

previous research to convey certain emotions were used. Children were asked to listen to each piece and identify whether it expressed happiness, sadness, fear, or anger. Results were analyzed using a four-way mixed model ANOVA for emotion, gender, language, and age.

Results: Results for the first study, identifying facial expressions, showed that children with LI had significantly more difficulty identifying surprise and disgust than did children with typical language skills. Children with LI identified surprise as fear and disgust as anger more often than the control group. However, children in both groups were able to recognize happiness accurately, as well as anger and sadness. Identification of fear proved to be difficult for both groups. For the second study, identifying emotion through music, both groups of children were successful at identifying happiness. Musical excerpts identified as anger, fear, and sadness had lower levels of successful recognition. There were also a high level of confusion between anger and fear. Older children in each group were more successful at identifying emotions than younger children.

Conclusion: There were no significant differences between the children with LI and typically developing children in their recognition of facial expressions of happiness, sadness, anger and fear. Additionally, children with LI had more difficulty recognizing disgust and surprise, two later developing emotions. There were differences in the way children with LI identified these same emotions portrayed in music. The authors concluded that language and emotion understanding cannot be viewed as independent of one another, and that intervention programs should target a holistic approach to both language, social, and emotional development.

Relevance to Current Work: This study emphasized the difficulty children with LI have with recognizing emotions compared to their typically developing peers, which has implications for long-term social outcomes. The current thesis uses an intervention designed to enhance recognition of emotions as presented in facial expressions and social contexts intertwined with language goals.

St Clair, M. C., Pickles, A., Durkin, K., & Conti-Ramsden, G. (2011). A longitudinal study of behavioral, emotional and social difficulties in individuals with a history of specific language impairment (SLI). *Journal of Communication Disorders*, 44(2), 186-199. doi: <http://dx.doi.org/10.1016/j.jcomdis.2010.09.004>

Purpose of the Study: The purpose of this research was to understand the relationship between specific language impairment (SLI) and behavioral, emotional and social difficulties (BESD).

Method: A longitudinal study was conducted with 234 children ages 6;5 to 7;9 years with a history of SLI from early childhood through adolescence. Researchers examined four domains: two related to behavioral difficulties (hyperactivity and conduct), emotional problems, and difficulty with peer relations. The Strength and Difficulties Questionnaire (SDQ) teacher report version was used to measure BESD. Language and literacy skills were measured at ages 7 and 11, using the Bus Story, The Test of Reception of Grammar, and the pragmatic scale of the Children's Communication Checklist. Results were then analyzed longitudinally for significance between BESD and SLI.

Results: Behavioral difficulties, including both hyperactivity and conduct problems decreased from childhood to adolescence. At age 16, children with SLI also had significantly fewer emotional problems than at 8 years, however, emotional problems still remained above population norms. A significant linear trend in peer relations revealed an increase in social difficulties with peer problems over a nine-year span of time. Difficulty with peer relations was found to be the most developmentally vulnerable area of functioning in participants with SLI.

Conclusion: This longitudinal research provides evidence that social difficulties in children with SLI can carry over through adolescence with long-term negative consequences, and that difficulty with peer relationships is not something children with SLI just “grow out of”. Hence, it is important to address these deficits in early intervention in addition to language goals.

Relevance to Current Work: The findings of the study indicated that children with LI experience difficulty with social relationships from early childhood through adolescence, underscoring the importance of clinical interventions that focus on social and emotional aspects in addition to language targets.

Wadman, R., Durkin, K., & Conti-Ramsden, G. (2008). Self-esteem, shyness, and sociability in adolescents with specific language impairment (SLI). *Journal of Speech, Language, and Hearing Research, 51*, 938-952. doi:10.1044/1092-4388(2008/069)

Purpose of the Study: The purpose of this research was to determine if lower global self-esteem, shyness, and low sociability were correlated with specific language impairment (SLI) in adolescents.

Method: Participants for this study included 54 adolescents ages 16-17 with SLI and 54 adolescents with typical language abilities. Each participant was individually assessed in one session. The Rosenberg Self-Esteem Scale (RSES) and the Cheek and Buss Shyness and Sociability scales were administered by being read aloud to the participants with additional clarification as needed.

Results: Results indicated that the adolescents with SLI presented with significantly lower global self-esteem scores than the group with typical language abilities, but most self-esteem scores were within the typical range. Additionally, the adolescents with SLI had higher shyness scores than the control group. The groups did not differ in their sociability ratings. Regression analysis signified that language ability was not predictive of self-esteem, but shyness was, in fact, a strong predictor of low self esteem. Results indicated that shyness could be a mediating factor in the relationship between SLI and global self-esteem.

Conclusion: The relationship between self-esteem and language ability in adolescents is complex, with shyness mediating the relationship. Language ability was found to have a small direct effect on global self-esteem, compared with the larger mediating effect of shyness. Many adolescents with SLI will present with social difficulties including higher levels of shyness and lower levels of self-esteem. Intervention approaches designed to support social assertiveness and improve social interactions should be considered.

Relevance to Current Work: This research reinforces the fact that social difficulties experienced by children with LI may persist into adolescence. The study also discusses the impact shyness can have on self-esteem. The current thesis examines teachers' perceptions of shyness in children with LI, manifested by reticent behaviors in social situations. This study supplements other research done that supports the idea of early intervention targeting social behaviors that may have a negative long-term impact on social communication.

Westby, C., & Blalock, E. (2005). Assessment of social-emotional status in children with language impairments. *Seminars in Speech and Language, 26*(3), 160-169. doi: 10.1055/s-2005-917121

Purpose of Work: This article discusses evidence that children with specific language impairment (SLI) exhibit social-emotional and behavioral difficulties, and that children with behavioral problems or social deficits are highly likely to have language difficulties or disorders. These deficits may have long-term ramifications, and as such, assessment of children with language deficits should also include evaluation of social-emotional status. The authors examine methods of assessment and the incorporation of assessment results into intervention targets.

Summary: Children's language abilities and social-emotional behaviors cannot be compartmentalized as distinct categories. Rather, effective assessments and interventions for children with LI should take a holistic approach to both linguistic and social-emotional problems. Strategies to assess children's social-emotional needs include rating scales, sociometric measures, formal and informal observations of the child in social settings, and self-report and interview measures. Assessment should involve a variety of methods, respondents (parents, teachers, peers, child) and naturalistic settings. The author argues that intervention goals should include social-emotional status, and documentation of intervention should include changes in social skills.

Conclusion: Children with LI are less reflective of their own emotions and demonstrate difficulty inferring the emotions of others, particularly in social contexts. This can have negative effects on social competence and the ability to engage in social interactions and create meaningful relationships with others. Clinicians should address both language goals and social-emotional goals in assessment and intervention.

Relevance to Current Work: Deficits in social-emotional status have been shown to be a strong correlate with LI. This article established the importance of including social and emotional goals in assessment and intervention of children with LI. The current thesis targeted emotional competence and social goals in addition to language intervention in children with LI as was discussed in this article.

APPENDIX B: Clinical Evaluation of Language Fundamentals-5 (CELF-5)

Clinical Evaluation of Language Fundamentals-5 (CELF-5)

Participant	CELF-5 ¹ Percentile Rank Scores					
	Age	Sentence Comp ²	Word Structure	Formulated Sentences	Recalling Sentences	Core Percentile
JC	5:07	10	27	0.1	0.1	2
WP	5:07	10	18	1	10	8
JG	6:03	30	39	27	1	18
DG	7:01	2	1	0.1	0.1	0.1
	Age	Word Classes	Semantic Relationships	Formulated Sentences	Recalling Sentences	Core Percentile
PW	10:10	6	5	6	10	6
KJ	11:00	10	1	3	3	3

Note. ¹Clinical Evaluation of Language Fundamentals-5 (CELF-5). ²Sentence Comprehension.