All Theses and Dissertations

2015-05-01

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

Allyson Roscher

Brigham Young University

Follow this and additional works at: https://scholarsarchive.byu.edu/etd

Part of the Communication Sciences and Disorders Commons

The Efficacy of a Social Communication Intervention on

Teacher Report of Withdrawal for Children

with Language Impairment

Allyson Roscher

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

Master of Science

Bonnie Brinton, Chair
Martin Fujiki
David L. McPherson

Department of Communication Disorders

Brigham Young University

May 2015

ABSTRACT

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

Allyson Roscher
Department of Communication Disorders, BYU
Master of Science

Recent studies and literature regarding children with language impairment (LI) indicate that these children have difficulty with social communication skills. This study assessed the effect of a social communication intervention on teacher perceptions of withdrawal in six elementary school age participants with LI. The social communication intervention included story sharing, identifying pictures of facial expressions, and journaling to target emotion understanding. The Teacher Behavior Rating Scale (TBRS) was utilized to measure teacher perception of withdrawal. The TBRS examined three subscales of social withdrawal: solitary-active withdrawal, solitary-passive withdrawal, and reticence. Following treatment, teacher ratings of withdrawn behavior decreased for all six participants on some of the subscales. Solitary-active behavior decreased for four of the six participants, solitary-passive behavior decreased for five participants, and reticent behavior decreased for three participants. Teacher ratings of withdrawal for two participants increased on a single subscale, however. These changes suggest positive post-treatment outcomes with regard to withdrawn behavior in children with LI.

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

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

DESCRIPTION OF THESIS CONTENT

This thesis is integrates current journal publication format and traditional thesis format. This includes current university requirements for submission and the requirements for research report submissions to peer reviewed journals in communication disorders. Appendix A includes an annotated bibliography. Appendix B contains the results of the Clinical Evaluation of Language Fundamentals-5 (CELF-5) administered to the participants. Appendix C contains a sample script used in treatment.

Introduction

Language Impairment (LI) has traditionally been recognized as a disorder with deficits in syntax and semantics at the core. Since the 1970s, pragmatic aspects of LI have also been recognized as part of the disorder (Gallagher, 1990). More recently, however, research has demonstrated that many children with LI also struggle with aspects of social and emotional learning that go beyond pragmatics (Brinton & Fujiki, 2013). The term *social communication* has been proposed to encompass the range of abilities that may be involved in LI. Social communication is defined as the "intersection of language and social behaviors observed during peer interactions…that is, the verbal and nonverbal behaviors children display as they approach peers, maintain conversations, and resolve conflicts during peer interactions" (Timler, Olswang, & Coggins, 2005, p. 171). This study is one portion of a larger project exploring the efficacy of an intervention designed to improve social communication in children with LI. This specific study is focused on the effect of the social communication intervention on withdrawal, as perceived by teachers.

Social and Emotional Competence

Social and emotional competence involves a number of abilities and behaviors that are important to development, including the ability to express emotions, the ability to regulate emotions, and the ability to interact within personal relationships (Voegler-Lee & Kupersmidt, 2011). These abilities are intertwined with the acquisition of language and are important in establishing and maintaining positive personal relationships (Brinton & Fujiki, 2014; Stansbury & Zimmerman, 1999). Social and emotional competence allows children to establish and achieve appropriate social goals in a variety of contexts (Weissberg & Cascarino, 2013). In an academic setting, social and emotional competence is important to a child's ability to interact appropriately

with others and form positive relationships and friendships. Social and emotional competence is also fundamental to academic achievement (Brinton & Fujiki, 2013). Aspects of social and emotional competence are important to a student's sense of self-efficacy and motivation to learn (Brinton & Fujiki, 2013; Wigfield & Wentzel, 2007). Social and emotional competence facilitates a child's inclusion in important learning contexts (Brinton & Fujiki, 2013; Brinton, Fujiki, Montague, & Hanton, 2000) as well as the development of literacy skills, especially reading comprehension (Brinton & Fujiki, 2013).

Programs promoting social and emotional learning have been designed to foster social and emotional competence. These programs have recently received considerable attention because of the central role of social and emotional learning in school success. Social and emotional learning programs focus on providing students with the skills required for academic achievement and to later become good citizens and employees. Emphasizing social and emotional learning in schools can also help reduce the frequency of behavior problems such as drug use, bullying, and violence (Weissberg & Cascarino, 2013). Jones, Bouffard, and Weissbourd (2013) emphasized the importance of social and emotional learning with their findings that the most effective learning takes place in the context of supportive relationships which make learning challenging, engaging, and meaningful.

Many specific programs have been designed to improve social and emotional learning. Social and emotional learning is "the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (Collaborative for Social and Emotional Learning, CASEL, 2014). A number of school-wide programs have been

implemented among students in grades K-12. Durlak, Weissber, Dynmnicki, Taylor, & Schellinger (2011) analyzed 213 programs for enhancing social and emotional learning and found that the effective programs were each implemented at a school wide level by school personnel and were supported by the school's administration. These programs resulted in significant improvement of students' social and emotional skills, self-esteem, prosocial behavior and decreases in antisocial behavior, conduct problems and emotional distress (Durlak et al, 2011; Weissberg & Cascarino, 2013). Academic performance also improved, with the mean academic performance effect size of the 213 programs equaling an 11-percentile gain in academic achievement on academic testing. The positive outcomes of these studies reveal that rather than detracting from core academic performance, social and emotional learning enhances academic success (Durlak et al., 2011).

Programs reporting successful outcomes in fostering social and emotional learning share certain characteristics referred to as SAFE (Sequenced, Active, Focused, and Explicit). SAFE procedures were met when a program utilized a hierarchy of steps leading from simple to more complicated behaviors (sequenced), provided the students with instruction about specific objectives and behaviors (explicit), designated a sufficient amount of time and attention to the instruction (focused), and provided the students with opportunities to practice the behaviors (active). When these conditions were met the social, emotional, and academic competence of typically developing children improved (Durlak et al., 2011).

Social and Emotional Competence in Children with Language Impairment

Recent research suggests that language abilities are intertwined with aspects of social and emotional competence in complex and dynamic ways in children with LI (Brinton & Fujiki, 2013; Fujiki, Spackman, Brinton, & Hall, 2004). Many children with LI experience negative

social outcomes associated with their language deficits. Children with LI may have difficulty

forming positive relationships with peers (Fujiki, Brinton, Morgan, & Hart, 1999) and are at risk

for loneliness and victimization at school (Conti-Ramsden & Botting, 2004; Fujiki, Brinton, &

Todd, 1996). For example, these children often present with increased levels of withdrawal

(Fujiki et al., 2004; Horowitz, Westlund, & Ljunbgerg, 2007; Maggio et al., 2014; Redmond &

Rice, 1998), particularly reticence (Fujiki et al., 1999; Hart, Fujiki, Brinton, & Hart, 2004).

Withdrawal is defined as "solitude" (Rubin & Asendorpf, 1993, p. 12), and is divided in to three

specific subtypes. The first is solitary-active withdrawal, which is characterized by "repeated

sensorimotor action with or without objects and/ or….solitary dramatizing" (Coplan, Rubin, Fox,

Calkins, & Stewart, 1994, p. 130). Solitary-active withdrawal has more recently been divided in

to two subtypes, solitary-functional and solitary-pretend play (Nelson, Hart, & Evans, 2008).

These behaviors are relatively rare but highly noticeable when they do occur (Coplan et al.,

1994). A second subtype of withdrawal is reticence, which is characterized by hesitance to

interact with peers. These children demonstrate a desire to join interactions, however they remain

unengaged and observe their peers interact due to a fear of interacting (Fujiki et al., 1999). The

last type of withdrawal is solitary-passive withdrawal. This subtype occurs when children engage

in a constructive activity alone, appearing to prefer solitude (Fujiki et al., 1999).

Fujiki, Brinton, Morgan et al. (1999) compared the presence of withdrawal subtypes in

children with LI as compared to typically developing peers using the Teacher Behavior Rating

Scale (TBRS, Hart & Robinson, 1996), a teacher questionnaire used for assessing levels of

withdrawal, sociability, and other behaviors. The results showed that solitary-active withdrawal

was rare, but teachers reported that the children with LI showed more frequent occurrences of

this behavior. Children with LI also had significantly higher ratings of reticence than their peers,

indicating that these children frequently engaged in reticent behavior. A significant difference between children with LI and typically developing peers was not noted in solitary-passive withdrawal.

These findings were extended by Fujiki, Brinton, Isaacson, and Summers (2001) who observed eight children with LI and their typical peers in playground interactions. Their play was segmented in to 5-second intervals, each of which was then categorized based on the type of interaction the child engaged in. Using these categories the amount of time each child spent in withdrawn behavior was calculated. Solitary-passive withdrawal, which consisted of parallel-constructive play and solitary-constructive play, composed a relatively small amount of time for both children with LI and their peers, indicating a minimal difference between the two groups. However, differences between children with LI and their peers were noted for reticence. Children with LI spent significantly larger amounts of time doing little or observing peers, and children who engaged in reticent behavior engaged in it frequently. Solitary-active behavior was also observed more often among children with LI. These children spent more time engaged in solitary and parallel forms of functional play and pretend/dramatic play.

Hart et al. (2004) investigated the relationship of social behavior, including withdrawal, and the severity of LI. Similar to the previous studies, the results of this study showed that children with LI presented with higher levels of withdrawal, reticent withdrawal in particular. Further analysis revealed that although withdrawal was related to the presence of withdrawal was not related to the severity of LI. Hart and colleagues' findings also supported previous research suggesting that reticence and solitary-passive withdrawal merge into a single type of behavior as children age (Asendorpf, 1991; 1993).

There are a number of factors that may contribute to high rates of withdrawal in children with LI. Language deficits that limit communication are an important factor (Redmond & Rice, 1998), but LI alone does not explain the range and persistence of social problems that many children with LI experience (Hart et al., 2004). Aspects of emotional competence (intelligence), especially poor emotion understanding, may affect social outcomes of children with LI (Fujiki, Brinton, & Clarke, 2002; Fujiki et al., 2004).

Facilitating Social Communication in Children with LI

Although programs to improve social and emotional learning in typically developing children have shown positive outcomes, the picture is not so clear for children with LI. Research studies demonstrating the efficacy of interventions used to facilitate social functioning in children with LI are notably sparse. Gerber et al. (2012) completed an evidence-based systematic review (EBSR) of interventions addressing pragmatic language skills and found that only eight studies met the criteria to be included in the EBSR. The studies were relatively small with regard to number or participants, ranging from 1-20 participants. Treatment goals among the studies included language production and comprehension and some general social communication goals (i.e. emotional understanding and prosody). Of the eight studies, effect sizes could not be calculated for seven of the studies. However, gains were noted by investigator developed measures in each of the studies. The studies were deemed "exploratory," indicating the treatments showed promise of feasibility but required testing under increasingly rigorous and controlled conditions before efficacy could be established.

Despite limited research in this area, a social communication paradigm outlined by Adams (2005) described a method of facilitating social functioning in children with LI. Adams conceptualized social communication to integrate traditional aspects of language with aspects of

social and emotional competence. Within this paradigm, social communication intervention would not primarily focus on isolated behaviors, but rather be based on interactional goals to provide students maximum conversational ability in the most important contexts of their lives (Adams, 2005; Fujiki & Brinton, 2014). Social communication intervention programs may address social adaptation strategies, social flexibility, metapragmatic therapy, and/or language processing (Adams, 2005), depending on the needs of the child (Adams, 2005; Adams et. al., 2012; Fujiki & Brinton, 2014). Adams and colleagues reasoned that social adaptation strategies are an important part of intervention for children with LI because impairment-based intervention cannot be expected to remediate their difficulties completely. Rather, impairment-based therapy must be used in conjunction with the teaching of compensation and adaptation strategies to be maximally effective (Adams, 2005). Social flexibility is taught in social communication intervention to improve the social cognition abilities of students. It focuses heavily on emotion understanding, interpreting social cues, and predicting thoughts (Adams, 2005). Metapragmatic therapy utilizes instruction on the rules and conventions surrounding conversation, as well as practice using these rules, to improve the pragmatic skills of children with social communication disorder. In a social communication intervention, language processing is addressed in the larger communicative context, with the clinician providing models of proper language structure within the context of an activity, such as role play (Adams, 2005; Fujiki & Brinton, 2013). Through focusing on interactional goals, it is possible to address each of these areas simultaneously, allowing the child's social/emotional competence to improve in tandem with their language abilities (Fujiki & Brinton, 2014; Marton, et al. 2004).

Adams, et al. (2012) utilized this social communication framework in the first randomized control trial for an intervention with children with pragmatic language impairment

(PLI) to determine the effect of social communication speech and language intervention in improving language skills, pragmatic ability, and social understanding in children with PLI. The study included 88 participants, ages 6-11, with significant pragmatic and social communication needs as identified by the school speech therapist and low scores on standardized measures of language ability. Of the 88 participants, 59 were randomly assigned to the group receiving the social communication intervention while the other students continued to receive traditional speech-language intervention. Both groups received up to 20, one-hour long sessions no more than three times a week. The social communication intervention was designed to improve semantics, high-level language skills, pragmatic difficulties, social interaction, and social cue interpretation. Upon completing the social communication intervention, no changes were found in structural language abilities of the children. However, positive changes were noted in blind-rated perceptions of conversational competence, parent-report measures of pragmatics and social communication, and teacher ratings of classroom learning skills. Adams et al. concluded that carefully structured intervention can result in improved social and interactional skills in children with LI, even in a brief period of time.

Although Adams et al. (2012)'s work provided valuable information regarding social communication intervention, social communication interventions may include a wide range of methods and procedures. This diversity of procedures necessitates continued investigation of social communication interventions in order to determine their efficacy. The current intervention focused on facilitating emotion understanding, a component of social cognition within a social communication framework. Teacher perceptions of withdrawn behaviors were examined before and after the social communication intervention. Specifically, the study considered whether

teacher perceptions of solitary-passive withdrawal, solitary-active withdrawal, and/or reticence changed following the intervention.

Method

Research Design

This thesis is one portion of a larger study evaluating the efficacy of a social communication intervention for children with LI. A single subject multiple baseline design was used for the study as a whole. The goal of this thesis was to determine the impact of the intervention on withdrawn behavior, as measured through teacher perceptions. The TBRS was used to measure three specific subtypes of withdrawn behavior pre- and post-treatment.

Participants

Six elementary school age children identified with LI participated in this study. The children ranged in age from 6;7 to 11;3 (years; months). Four participants were female and two were male. Of the four girls, three were sisters. Each participant received language intervention in an elementary school setting, and was tested prior to participating in the intervention to confirm a diagnosis of LI. One of the male participants was previously identified as having borderline mild autism spectrum disorder (ASD) (see description below). Previously completed IQ testing was used to document the child's cognitive level. Based on IQ testing scores and information from the educational team, none of the participants met the criteria for intellectual disability. Each child was administered the Clinical Evaluation of Language Fundamentals-5 (CELF-5, Semel, Wiig, & Secord, 2013) to provide a standard measure of language for all participants. To document social communication difficulties, the Children's Communication Checklist-2 (CCC-2, Bishop, 2006) was administered. Participants passed a pure tone hearing

screening completed by the school district audiologist or speech-language pathologist. Each child was enrolled in a mainstream classroom placement with enrollment in special services for LI.

Recruitment for this study was done with the assistance of the school speech-language pathologist and the principal. The school speech-language pathologist selected potential participants from students receiving services for LI and then contacted their parents to determine if they would be interested in having their child participate in the intervention. If the parents reported interest in having their child participate, written permission was obtained and the children's names were provided to researchers. Testing was then administered, and intervention was initiated. The results of these tests are presented in Table 1 (refer to Appendix B for participant's subtest scores for the CELF).

All services provided in conjunction with the intervention were coordinated with the speech and language services that the participants were currently receiving in the school setting. Treatment approaches and activities incorporated each child's IEP goals for social-language intervention to ensure the child's needs were best met (Adams et al., 2012; Fujiki & Brinton, 2013). A detailed description of each participant is provided below.

Jr.S. Jr.S (11;3) was a Caucasian male with an extensive speech and language history. During pregnancy, Jr.S.'s mother actively consumed Oxycodone, Hydrocodone, alcohol, and methamphetamines. According to his adoptive mother, he was 'deaf" until the age of 3;5 when he underwent a myringotomy and tube placement to help reduce the number of ear infections he contracted. Jr.S.'s parents remained concerned about his speech and language development, for which he received special services at his previous school. At the age of 7;9 he was assessed by a speech-language pathologist at a local hospital. He was diagnosed with Childhood Apraxia of Speech, manifest by severe articulation difficulties. At the age of 7;10 Jr.S. was evaluated by an

audiologist who determined his hearing was within normal limits. Concerns were expressed

about possible central auditory processing disorder but the identification of central auditory

processing disorder was contraindicated by deficits in language comprehension and production.

At the time of the current study, intelligibility problems were largely resolved, and Jr.S. was

receiving services from the school speech-language pathologist for receptive and expressive

language deficits and residual speech sound errors. Jr.S.'s CELF-5 score placed him below the

first percentile.

Table 1

Children's Communication Checklist-2 (CCC-2; Bishop, 2006) and Clinical Evaluation of Language Fundamentals-5 (CELF-5; Semel et al., 2003) Scores

	Participants					
	Jr.S.	Al.K.	S.S.	Ad.K.	M.K.	J.S.
CCC-2[1] Subtests						
Speech	3	1	1	1	1	37
Syntax	7	9	0	1	1	2
Semantics	5	5	0	1	2	2
Coherence	5	2	1	16	2	2
Initiation	7	50	0	37	25	16
Scripted Language	7	25	1	37	50	50
Context	3	25	1	16	2	3
Nonverbal Communication	3	16	1	9	1	4
Social Relations	5	16	5	37	1	6
Interests	6	50	1	91	25	11
GCC[2] percentile	2	4	1	2	1	4
SIDI[3]	1	15	5	36	12	7
CELF-5[4] core percentile	<1	8	2	23	14	7

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

Al.K. Al.K. (10;10) was a Caucasian female who was identified with LI in preschool at age 4;10. At the time of diagnosis, Al.K. also presented with a speech sound disorder characterized by several immature phonological processes. At age 6;11 she was reevaluated and velar fronting and cluster reduction were still present in her speech. Cognitive and academic testing at age 8;0 indicated specific learning disabilities and services to address reading deficits were instigated. At the time of the study Al.K. was receiving speech and language services addressing language and speech sound disorders. She also received resource services for reading.

Al.K.'s clinician described her as a child who was able to maintain friendships and participate in social conversations. However, when participating in conversations she had difficulty making inferences and adding novel or additional information to a topic. She also had a difficult time inferring the emotional reactions of others in social situations. Al.K. had a difficult time effectively expressing herself, at least partly due to semantic deficits and immature syntax and morphological modifications.

Al.K. had a difficult time on the nonverbal communication and social relations subtests on the CCC-2. Her scores also indicated difficulty with structural areas of speech, syntax, semantics, and coherence. On the CELF-5 her core score placed her in the 8th percentile.

S.S. S.S. (10;5) was a Caucasian male diagnosed with high functioning autism at age five by his pediatrician. However, his kindergarten teacher reported that she did not feel that this diagnosis was supported by S.S.'s behavior in the classroom. At age eight, S.S. was diagnosed with autism by a neuropsychologist at a children's medical center. However, in November of 2012 S.S. was administered the Gilliam Autism Rating Scale (GARS-2, Gilliam, 2006) and his autism index score was 64, indicating autism was unlikely. His current educational team also felt that a diagnosis of autism was inaccurate.

S.S. was homeschooled prior to age 8;3, when he was enrolled in second grade at a public elementary school. At this time S.S. was identified with LI by the school speech language pathologist. His speech and language services included intervention for speech sound disorders and language. S.S. also received special education services for reading, math, and written language. At age 9;5 he was identified with a specific learning disorder (SLD).

At the time the study began, S.S. was attending a mainstream fourth grade class with resource services for reading and written language. He was receiving speech and language services to address fluency, which consisted primarily of part-word repetitions remediated with fluency shaping techniques, production of increasingly sophisticated grammatical sentences, and appropriate topic manipulation (initiating, commenting, and changing topics). S.S. scored below the 5th percentile on every subtest of the CCC-2 and produced a core language score in the 2nd percentile on the CELF-5.

According to his clinician, S.S. was motivated to interact socially but had difficulty adapting his communication to specific settings. It was also difficult for S.S. to respond appropriately to topics that others introduced. He was somewhat self-aware of his inappropriate behavior and was able to self-monitor, but he frequently appeared to behave impulsively. He also had a difficult time interpreting the facial expressions, voice inflections, and nonverbal responses of his conversational partners,

Ad.K. Ad.K. (8;8) was a Caucasian female diagnosed with LI and SLD as a kindergartner at age 6;4. She received resource services for written language and speech and language services for speech sound disorders and language. At the start of this study she was attending a mainstream 3rd grade class. In addition to resource services for written language, Ad.K. also attended resource for reading. Her scores on the CCC-2, which included a score in the

9th percentile on the nonverbal communication subtest, a score in the 16th percentile for coherence, and a score in the 1st percentile for speech, syntax, and semantics, all indicated a deficit in social communication. Her core score on the CELF-5 was in the 23rd percentile.

Ad.K.'s clinician indicated she was motivated to interact with peers. When conversing with peers, Ad.K was able to remain on topic. However, her participation in conversation varied; at times she was very talkative, and at other times she was reticent. Her clinician also noted that she had limited exposure/knowledge of many topics typical for children her age. Similar to the other participants in this study, Ad.K. had difficulty interpreting, inferring, and/or predicting responses of listener's in situations that might elicit emotion.

M.K. M.K. (7;4) was a Caucasian female diagnosed with LI and SLD while she was a kindergartner, age 5;7. At that time M.K. was enrolled in resource for written language and math and began receiving speech and language services. When the study began, M.K. attended a mainstream second grade class. Special services included self-contained resource (3 hour maximum per day), additional reading services, and speech and language intervention to address both speech sound disorders and language. Her scores on the nonverbal communication and social relations subtest of the CCC-2 indicated deficits and her scores on subtests including structural aspects of speech and language were all below the 2nd percentile. M.K.'s CELF-5 core language score place her in the 14th percentile.

M.K.'s clinician indicated she was reticent and frequently spoke at a low volume in her classroom as well as in speech and language treatment sessions. M.K. rarely initiated verbal interaction. She required extended time to respond to listener bids, and her contributions to conversation were often minimal. M.K. also experienced difficulty identifying and appropriately responding to the emotions of others.

J.S. J.S. (6;7) was a Caucasian female originally diagnosed with developmental delay and attention deficit hyperactivity disorder (ADHD) as a preschooler. She attended a special needs preschool where an evaluation indicated she had notable delays in cognitive ability, social/emotional development, and receptive/expressive language. At the time of this study, J.S. attended a mainstream first grade classroom and received resource services for reading and speech and language services, which addressed both speech sound and language goals. Her CCC-2 scores for nonverbal communication and social relations were both below the 6th percentile, indicating deficits. J.S. scored in the 37th percentile on the structural area of speech, but on the syntax, semantics, and coherence subtests her score was below the 2nd percentile. On the CELF-5 her score placed her in the 7th percentile. J.S.'s clinician reported she had limited attention and had a difficult time staying on topic. She also responded inconsistently to questions and comments, possibly due to poor attention and low vocabulary.

Confidentiality and privacy were maintained throughout the course of the study and upon its conclusion. Only project personnel had access to the data. Data and privacy were protected by storing data in a secure facility.

Intervention Plan

All participants received intervention following the procedures outlined below. Treatment was provided by a graduate student clinician. The intervention study was overseen and coordinated by two doctoral level speech-language pathologists who specialize in clinical research with children. On-site supervision was provided by the school speech-language pathologist.

The intervention program was structured to fit within the children's regular weekly therapy schedule. Children participating in the study received intervention two times per week,

with sessions lasting 20-30 minutes. Most often, each child was seen twice a week for about 20 minutes. Each child received 20 individual treatment sessions. A treatment program was implemented that focused on aspects of social and emotional learning, particularly emotion understanding. Additional concepts included participating in group interactions and other prosocial behaviors. Treatment activities were designed to be accessible to children with limited language abilities and flexible to best meet the needs of each child. A typical intervention session was structured in the following manner. First, for children with articulation goals, a short practice activity was completed to improve correct productions of speech sounds. The remainder of the session was structured around a storybook. Books were selected that presented social and emotional content in an engaging manner. The clinician shared the story with the child, generally following a script emphasizing specific concepts within each story (see Appendix C for a sample script). Using this script as a guideline the clinician highlighted prosocial concepts and emotions experienced by the characters. The clinician asked a number of questions of the child, emphasized social and emotional content, and modeled language forms to express that content. After reading the story the clinician and child enacted the narrative using appropriate props (i.e. stuffed animals). Children were encouraged to identify the thoughts and feelings of characters in response to events in the narrative. Several sessions were required to read and enact each narrative. As the treatment progressed, the story enactments sometimes involved the child creating dialog for the characters, which the clinician wrote in dialogue bubbles. At the conclusion of each session the child created a journal entry about concepts discussed during intervention. Journal entries consisted of the child's drawing and/or dictating entries summarizing the story concepts presented.

As part of the larger study, participants also completed baseline and follow-up probes of various abilities (e.g., labeling emotions). These measures were not included as part of this study.

Treatment fidelity was established through two doctorate level speech-language pathologists reviewing portions of the sessions to ensure that critical components were included.

Outcome Measures

In order to assess the impact of the intervention, the children's level of withdrawn behavior was assessed before and after the intervention. To determine levels of withdrawal, the TBRS was utilized. The TBRS is an informal instrument which uses teacher ratings to measure a variety of social behaviors in children. It has been used to study both typically developing children and children with LI of preschool and elementary school age (Fujiki et al., 1999; Hart et al., 2004). The standard test contains 161-items measuring subtypes of aggressive, withdrawn, and sociable behaviors (Fujiki et al. 1999). For the current study an abbreviated, 79-item version was used. The TBRS was completed by each child's classroom teacher pre- and post-intervention.

Psychometric properties. The psychometric properties of the TBRS for elementary school age children were described in detail in Hart et al. (2004). Items were subject to factor analysis to ensure that test items were grouped appropriately. To summarize, teachers completed questionnaires on 382 school-age children ranging in age from 6;4 to 12;6, ($M = 8;10$, $SD = 1;6$). After dropping several withdrawal items with (a) relatively little variance, (b) substantial cross-loadings ($> .40$), or (c) low item-total correlations for factors derived in preliminary analyses, a final principal components analysis produced three reliable factors for withdrawal with eigen values greater than 1, accounting for 55% of the item variance.

Test-retest reliability was assessed by having teachers complete the measure a second time for the 94 children approximately 4 weeks after the first measure. Having a 1-month separation between measures was long enough to ensure that the teachers were unlikely to remember their previous responses and short enough to exclude confounding developmental changes in the children between the two measures. All subscales were determined to be temporally reliable. Pearson correlations between the two assessment times of .70 for reticence, .76 for solitary-active withdrawal, and 73 for solitary-passive withdrawal were obtained.

Subscales. For the purpose of this study, three subscales of withdrawal (reticence, solitary-passive withdrawal, and solitary-active withdrawal) were used. Within the 79-question test, five questions about each type of withdrawal were interspersed. The reticence subscale consisted of items examining the frequency with which the child exhibited fear in approaching others, watched others play without joining in, and chose unoccupied behavior despite the availability of other opportunities (Asendorpf, 1991; Coplan & Rubin, 1998; Hart et al., 2004).

The solitary-active withdrawal subscale was used to identify children who participated in repetitive sensorimotor action, with or without an object and/or engaged in solitary dramatizing but did not engage with their peers (Coplan et al., 1994; Hart et al., 2004). A sample item on the solitary-active subscale is, "Talks aloud or sings dramatically around peers, but does not interact with them while doing so" (Hart & Robinson, 1996).

The solitary passive withdrawal subscale was used to identify children who appeared to enjoy a solitary activity such as reading a book or building with toys by themselves (Asendorpf, 1991; Coplan & Rubin, 1998; Hart et al., 2004; Rubin, 1982). This type of withdrawal is frequently viewed as being relatively benign by teachers and parents (Coplan & Rubin, 1998). A

sample item on this subscale is "Plays with toys by self rather than with other children" (Hart & Robinson, 1996).

Administration of the TBRS. To reduce rater bias as much as possible, teachers were not informed of the purpose of this study, although they knew the children were enrolled in speech language pathology services. A copy of the TBRS questionnaire is available from the author, Dr. Craig Hart, Brigham Young University. The written instructions given to the teachers were as follows:

> 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, p. 1)

Teachers were given the TBRS and asked to rate each item using a three-point scale comparing the child's current behavior to expected behavior based on typical peers. The teacher rated each behavior as 0- never observed, 1- sometimes observed, or 2- very often observed.

TBRS Analysis. The TBRS was initially administered in December of 2013 for all of the students except Jr.S., and the intervention was implemented shortly thereafter (Guerra, 2014). The TBRS was re-administered for these five participants in December 2014, following the completion of two semesters of intervention. Jr.S. moved to the school in the summer and was initially administered the TBRS in September of 2014 before participating in the intervention.

The TBRS was again administered in December of 2014 following the completion of one semester of intervention. Results were analyzed in two ways. First, results were compared to normative data produced by typically developing children (Fujiki et al., 1999). Second, the results of the initial administration were compared to the latest administration.

Results

Following the completion of the TBRS, test items relating to the three subscales of withdrawal were scored. For each subscale the mean score was calculated by adding the ratings for each item in the subscale and dividing by the total number of items. Mean scores were calculated for both pre- and post-measures, which were compared to determine changes in withdrawal levels in the study participants. A high mean score on a withdrawal subscale was indicative of high levels of the type of withdrawal. Due to the small sample size ($n = 6$) the results for each participant were considered individually. Pre- and post-measures were also compared to expectations (means and standard deviations) for typically developing children reported by Fujiki, Brinton, Morgan et al. (1999). These expectations were for boys, ages 10-13, girls, ages 10-13, and girls, ages 5-8.

Jr. S.

Table 2 presents Jr.S.'s pre- and post-treatment mean scores for each type of withdrawal as measured by the TBRS. Jr.S.'s reticence score remained stable at 1.25, which is over 3 *SDs* above the typical mean for boys ages 10-13. His teacher reported a decrease in solitary-active withdrawal from .25 to .00, the typical mean for Jr.S.'s age and gender matched peers. A marked decrease was noted in Jr.S.'s levels of solitary-passive withdrawal, which decreased from .80 to .40. This score placed Jr.S. within a *SD* of the mean.

Al.K.

Pre- and post-treatment mean scores for the withdrawal subscales of the TBRS for Al.K. are presented in Table 3. Teacher ratings for this participant show a decrease in reticent withdrawal, with her pre-treatment score of .75 decreasing to .50. Although this score decreased, it was still more than 2 *SDs* above the mean for typically developing girls her age. Al.K.'s ratings for solitary-active withdrawal decreased from .50 to .00, which was the mean for typically developing girls her age. Ratings also showed an increase in solitary-passive behavior, with her scores raising from .40 pre-treatment to .60 post-treatment, from just over 1 *SD* from the mean to just above 2 *SDs* from the mean for girls her age.

Table 2

Jr.S. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	1.25	1.25	.03 (.07)
Solitary-Active Withdrawal	.25	.00	.00 (.00)
Solitary-Passive Withdrawal	.80	.40	.18 (.23)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. [1]Mean scores for 11 typical boys ages 10-13 (Fujiki et al., 1999).

S.S.

The results of pre- and post-treatment mean scores on the withdrawal subscales of the TBRS for S.S. are presented in Table 4. Teacher ratings remained stable for reticence, with both pre-and post-treatment ratings of .75, more than three *SDs* above the mean. Ratings for S.S's

solitary-active withdrawal also remained stable at 1.00. Teacher ratings of solitary-passive withdrawal decreased slightly from 1.60 to 1.40. S.S.'s withdrawal scores, those taken both pre- and post-treatment, were all notably higher than the reported means for typical boys ages 10-13.

Table 3

Al.K. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	.75	.50	.12 (.14)
Solitary-Active Withdrawal	.50	.00	.00 (.00)
Solitary-Passive Withdrawal	.40	.60	.20 (.19)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. [1]Mean scores for 10 typical girls ages 10-13 (Fujiki et al., 1999).

Ad.K.

Pre- and post-treatment teacher ratings of Ad.K. on the withdrawal subscale of the TBRS are presented in Table 5. Ratings of Ad.K's reticent withdrawal decreased by more than one *SD* from 1.25 to 1.00. Ad.K.'s level of reticent withdrawal remained significantly (> 3 *SDs*) above the mean, however. Ratings of solitary-active withdrawal decreased from .33, two *SDs* above the mean to .00, the mean for typically developing peers. Ratings of Ad.K.'s solitary-passive withdrawal decreased from .80, more than two *SDs* above the mean, to .20, which is well within one *SD* of the mean for typically developing girls ages 5-8.

Table 4

S.S. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	.75	.75	.03 (.07)
Solitary Active Withdrawal	1.00	1.00	.00 (.00)
Solitary Passive Withdrawal	1.60	1.40	.18 (.23)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. [1]Mean scores for 11 typical boys ages 10-13 (Fujiki et al., 1999).

Table 5

Ad.K. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	1.25	1.00	.14 (.21)
Solitary-Active Withdrawal	.33	.00	.05 (.14)
Solitary-Passive Withdrawal	.80	.20	.18 (.29)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. [1]Mean scores for 8 typical girls ages 5-8 (Fujiki et al., 1999).

M.K.

Pre- and post-TBRS ratings for M.K. on each of the withdrawal subscales are presented in Table 6. Ratings of reticent withdrawal remained constant at 1.75 while and her score for solitary-active withdrawal increased from .75 to 1.25. Ratings for solitary-passive withdrawal,

decreased from 1.40 to 1.20, but her score remained more than three *SDs* above the mean.

M.K.'s levels of withdrawal remained significantly higher than the ratings for her typically

developing peers in all three subtypes.

Table 6

M.K. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the
Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	1.75	1.75	.14 (.21)
Solitary-Active Withdrawal	.75	1.25	.05 (.14)
Solitary-Passive Withdrawal	1.40	1.20	.18 (.29)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses
indicates standard deviation. [1]Mean scores for 8 typical girls ages 5-8 (Fujiki et al., 1999).

J.S.

The pre- and post-treatment mean ratings for the withdrawal subscales of the TBRS for

J.S. are presented in Table 7. Ratings showed significant decreases in all three types of

withdrawal. Teacher ratings for reticence and solitary-passive withdrawal decreased the most,

falling from 1.25 to .25, and 1.40 to .20 respectively. Teacher ratings of solitary-active

withdrawal fell from .50 to .00. When compared to other girls ages 5-8, J.S.'s pre-treatment

ratings were more than three *SDs* above the mean, but her post-treatment ratings were within one

SD of the mean for all three types of withdrawal.

Table 7

J.S. Pre- and Post-Treatment Mean Scores for Withdrawal Subscale on the Teacher Behavior Rating Scale (TBRS)

Subscale	Pre-treatment	Post-treatment	Typical Mean[1]
Reticence	1.25	.25	.14 (.21)
Solitary-Active Withdrawal	.50	.00	.05 (.14)
Solitary-Passive Withdrawal	1.40	.20	.18 (.29)

Note. Possible range: 0 (never observed) to 2 (very often observed). Number in parentheses indicates standard deviation. [1]Mean scores for 8 typical girls ages 5-8 (Fujiki et al., 1999).

Discussion

Children with LI frequently exhibit high levels of withdrawal, particularly reticent withdrawal (Fujiki et al., 1999; Hart et al., 2004). Withdrawn behavior may result in negative social consequences such as peer rejection (Hart et al., 2004, Nelson et al., 2008). The purpose of the current study was to determine the effect of a social communication intervention on withdrawal in six children with LI. Using the TBRS three types of withdrawal were examined, including solitary-active withdrawal, solitary-passive withdrawal, and reticence.

The intervention focused on facilitating emotion understanding through an intervention program involving the sharing and enacting of stories. Pre- and post-treatment teacher ratings were compared to determine if changes in withdrawn behavior were observed.

Individual Participant Findings

Intervention was individualized to meet the needs of each child. Each child's response to the intervention is discussed below. This discussion is followed by a presentation of general conclusions pertaining to the participants as a group.

Jr.S. Jr. S. (11;3) was the oldest participant in the study. He began the intervention later than the other participants because of his move to the school. Initially, Jr.S. was very reserved when participating during intervention, but after several sessions he became more engaged and his performance on therapy tasks improved. As part of the intervention, the clinician tried to help Jr.S. compare the story events and emotions with his own experience. For example, the clinician and Jr.S. would discuss events in his life, feelings the events may elicit, and socially appropriate actions given the circumstances. Jr.S. was quick to identify appropriate social behaviors and demonstrated a basic understanding of how these behaviors related to the basic emotions (happy, sad, mad) that individuals experienced. Occasionally he had a difficult time differentiating between emotions he might experience and emotions others might feel in the same situation. A challenging aspect of intervention for Jr.S. was learning new emotion vocabulary. For example, when Jr.S. was initially presented with the word "embarrassed" within the context of a story, he was unable to recall the word independently without the clinician reintroducing the word many times across several sessions. At times he provided the definition of a word (e.g., "they don't understand what is happening" for the word confused), but he required semantic and phonological cues to produce the word. He also had some difficulty making social and emotional inferences, even within the context of a basic story with recurring events.

Jr.S.'s high levels of all three types of withdrawal were concerning as they suggested isolation from his peers at school. Following the intervention, teacher report of reticence remained stable. Teacher report of solitary-active withdrawal decreased, however, to within expectations for his age. Solitary-passive withdrawal decreased somewhat, although it remained well above expectations. It was encouraging that Jr.S.'s levels of withdrawal showed some positive change following a short program of treatment. In addition, Jr. S.'s mother

independently reported marked improvement in social-interactional behaviors at home, and she requested that the intervention continue.

Al.K. Al.K. (10;10) was the student who demonstrated the strongest skills in terms of identifying the emotions portrayed in the stories. She enjoyed the stories, and she often identified thoughts and feelings of each of the characters in the stories. Despite the fact that she was able to recognize the emotions that story characters experienced, she was often unable to connect those emotions with the sources that elicited them. She required some support to understand and anticipate the causal connections between events and emotions.

It was encouraging that the teacher rating of Al.K.'s reticence decreased significantly (by more than one *SD*), although it still remained high. Even more encouraging, teacher rating of solitary-active withdrawal fell from .50 to .00, placing her within expectations for girls her age. However, Al.K. was the only student whose rating of solitary-passive behavior increased somewhat, suggesting that she spent more time working alone in constructive activities. Overall, the trajectory of decreased reticence and solitary active withdrawal was promising.

S.S. S.S. (10;5) presented with some unusual interactional mannerisms, particularly an inability to interpret social cues, that may have contributed to his earlier diagnosis of mild ASD. As indicated previously, however, his current educational team did not feel that a diagnosis of ASD was warranted. While completing the intervention, S.S. acquired and utilized new emotion words more readily than did the other children. As the intervention progressed his ability to predict future events in the stories improved. He had a difficult time taking the perspectives of different characters in the narratives, however. He also required some prompting to remain on task and to conceptualize socially appropriate resolutions to problems the characters experienced.

S.S. was the only participant to experience no change in reticence and solitary active withdrawal. His ratings for both of these subtypes remained significantly above the means. It was likely that S.S.'s unusual interactional mannerisms, combined with his high levels of withdrawal- particularly solitary-active withdrawal- presented a serious barrier to positive interactions with peers. His rating of solitary-passive withdrawal decreased slightly, however, suggesting that he spent less time playing and working alone. Despite minimal change in his TBRS scores, S.S.'s mother independently observed that she noted marked positive change in his social-interactional behavior at home. She attributed this change to his participation in the intervention, and requested the treatment continue. Assuming that S.S.'s mother's observations were accurate, a longer and/or more intense period of treatment might be required for S.S. to experience decreased levels of withdrawal at school.

Ad.K. Initially, Ad.K. (8;8) demonstrated some understanding of the emotional content of the stories. Her ability to make predictions regarding future events, even within stories with recurring events was limited, however. Throughout intervention she was compliant and responded well to the stories and concepts addressed within the stories. As she worked with the stories, her understanding of emotions in social situations improved, as did her ability to predict events and anticipate emotions.

Teacher report of Ad.K.'s reticence decreased by 1 *SD*, but remained well above the mean for girls her age. Teacher report of both solitary-active and solitary-passive withdrawal decreased sufficiently to be within expectations. The decrease of Ad.K.'s ratings in two of the three subtypes is very encouraging, particularly considering the negative consequences of solitary-active behavior.

M.K. Of the six participants, M.K. (7;4) was the lowest functioning of the children in terms of emotion understanding and expressive language. She was the participant with the highest rating of reticence, and this was reflected in her reserved demeanor in treatment sessions. M.K. required a high level of support to understand the emotional content of the stories. She had difficulty comprehending story plots and understanding expressions of emotion and related emotion cues. M.K. demonstrated a limited grasp of vocabulary, and she acquired new words only after many exposures. The clinician carefully modeled new vocabulary as well as structural forms.

M.K. showed the least amount of positive change following treatment. Only solitary-passive withdrawal decreased slightly, and solitary-active withdrawal increased. It may have been the case that the treatment was too challenging for M.K. M.K.'s clinician felt that she had experienced growth in story comprehension following treatment and suggested that M.K. would likely require a more extended period of treatment to maximize growth.

J.S. J.S. (6;7) presented with the most challenging behavior. Her ability to self-regulate and remain engaged in any task was variable and often limited. This behavioral pattern was evident in all school settings, included speech and language intervention, resource, and her classroom. Unlike other participants in the study, she was the only one to confabulate (e.g., "My family has a pet skunk that we bought from the zoo that we squirt with water so it doesn't spray"). Despite the fact that she seemed to have difficulty attending to treatment activities, when she did attend she showed improvement in her comprehension of the emotional content of the stories. For example, she demonstrated an increased ability to identify emotions, discuss their sources, and recall personal experiences in which she had experienced similar emotions. As her emotion regulation and understanding improved, there was also an increase in her ability to self-

regulate and participate with increased attention during intervention. It was noted that her performance in treatment sessions improved with increased structure in activities and expectations.

At the conclusion of the intervention teacher ratings for all three subtypes were within normal expectations, suggesting a significant improvement. These results were encouraging and suggested that despite her behavioral/attentional issues, J.S. responded well to the intervention program.

General Implications

The intervention program was implemented within the constraints of the school system where the children were enrolled. That is, treatment was provided only two times a week for relatively brief sessions. Nevertheless, for all six participants, some decreases in withdrawal were observed by teachers post-treatment. For two of the children, changes were slight. For four of the children, however, changes of at least a *SD* were reported on at least one subscale. For one of these children, significant improvement was reported for all three types of withdrawal, bringing her scores within expectations.

For all of the children, high levels of reticence were reported before treatment. This finding was reminiscent of previous research (Fujiki et al., 1999; Hart et al., 2004). Reticence was a concern for these children because it is associated with isolation from peers and increased anxiety and social wariness (Coplan et al., 1994). Although three subjects' scores showed no change post-treatment, three participants showed some improvement. J.S. received a score within the expected range. The findings suggest that although reticence was a serious concern for these children, the treatment showed some promise in bringing about some positive change.

Solitary-active withdrawal was a concern for all of the children. This behavior is rare in typically developing children, it draws negative attention from peers, and it is associated with peer rejection (Nelson et al., 2008). Ratings for four participants improved post-treatment to the extent that the scores were within expectations. Of the remaining participants, the score of one child remained stable and the score of another child (M.K.) increased. M.K. was the most involved of the six participants and she had the most difficulty with intervention tasks. It was speculated that she would require increased support to demonstrate significant gains.

All six children showed high levels of solitary-passive withdrawal before treatment. This type of withdrawal consists of solitary-constructive activity and it is not necessarily concerning in and of itself. For these reticent children, however, amounts of time playing or working alone may further limit the time they spend interacting with peers. It was encouraging that the ratings for five of the participants post-treatment suggested that they spent less time alone.

In general, the treatment program was associated with a reduction of withdrawal in the majority of children with LI who participated in this study. As might be expected, there was considerable variability in the children's performance during treatment sessions and in the amount of change that was reported post treatment. This variability underscored the importance of individualizing treatment procedures and activities. All in all, the findings suggested that the treatment showed promise.

Limitations of the Study

The current study had a number of limitations. First, despite being a reliable and valid instrument, the TBRS is subject to the general limitations of rating scales (Merrell, 2003). The use of teacher ratings to obtain data does have several advantages, such as the ability to observe rarely occurring but significant behaviors. However, these ratings represent impressions rather

than concrete observations of behavior. Rating scales are also subject to several types of error variance resulting from an individual rater's unique impressions, the influence of the setting, and the frequency with which the observed behaviors occur. To determine if teacher ratings are an accurate representation of each child's performance, observational data would be helpful.

Second, with the exception of Jr.S., two different teachers completed the initial and final TBRS. The teachers may have had a differing awareness of certain social behaviors, possibly altering the data. The teachers were also informed that the child was participating in an intervention study, which may have predisposed them to see positive changes in the children's behavior. It should be noted, however, that the treatment fit within the schedule of special services that were already established, and teachers were not aware of the specific goals of the study. If rater bias influenced the scores, the TBRS scores as a whole would be affected rather than the single subtype. Additional analysis of other scales within the TBRS might determine if the ratings increased in areas that would not be expected to be influenced by the intervention.

Another limitation of the study is the intensity with which the intervention was provided. Because the study was completed within the school system, it was subject to the time constraints common within the setting; the participants received therapy only two times a week, and the sessions were brief. While this is a clinical reality, it can also be difficult to determine the efficacy of any intervention delivered within such a short period of time.

Finally, it is also important to note that although TBRS scores were associated with improvement following treatment, it is not possible to conclude that the treatment was responsible for this improvement. Although efforts were made to assure that other factors (such as school programming, amount of special services) remained constant, it was not possible to control the influence of all internal and external variables.

Summary

The current study investigated the effect of a social communication intervention on teacher perceptions of withdrawal in six participants with LI. Positive changes were noted in the withdrawal levels of each of the participants, although there was some variability in the specific subtypes of withdrawal which improved as well as the amounts of improvement. Of the six participants, half of them demonstrated a decrease in reticent behavior, and four of them demonstrated a decrease in solitary-active withdrawal, both of which are viewed as the most negative types of withdrawal. This suggests that the social communication intervention positively impacted the social behaviors of the participants.

This study is one portion of a larger project to determine the influence of a social communication intervention on the social communication skills of children with LI. Additional measures will be used to examine other changes in behavior which may result from the intervention. The combination of these data will provide a more detailed picture of the gains resulting from the intervention, which focused primarily on emotion understanding.

References

Adams, C. (2005). Social communication intervention for school-age children: Rationale and

    description. *Seminars in Speech and Language, 25*, 181-188. doi: 10.1055/s-2005-917123

Adams, C., Lockton, E., Freed, J., Gaile, J., Earl, G., & McBean, K. (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 and Communication Disorders,*

    4, 245-256. doi: 10.1111/j.1460-6984.2012.00147.x

Asendorpf, J. (1991). Development of inhibited children's coping with unfamiliarity. *Child*

    Development, 62, 1460-1474. doi:10.2307/1130819

Asendorpf, J. (1993). Beyond temperament: A two-factorial coping model of the development of

    inhibition during childhood. In K.H. Rubin & J.B. Asendorpf (Eds.), *Social withdrawal,*

    inhibition and shyness in childhood (p. 265-289). Hillsdale, NJ: Erlbaum.

Bishop, D. (2006). *Children's Communication Checklist - 2nd ed.* (CCC-2). San Antonio, TX:

    Psychological Corporation.

Brinton, B., & Fujiki, M. (2013). Enhancing social and emotional learning. In D. R. Reutzel

    (Ed.), *Handbook of research-based practice in early education* (p. 238-249). New York,

    NY: Guilford Publications.

Brinton, B., Fujiki, M., Montague, E. C., & Hanton, J. L. (2000). Children with language

    impairment in cooperative work groups: A pilot study. *Language, Speech, and Hearing*

    Services in Schools, 31, 252-264.

Collaborative for Academic, Social, and Emotional Learning (2014). *What is social and emotional learning?* Retrieved from CASEL Online http://www.casel.org/social-and-emotional-learning/

Conti-Ramsden, G., & Botting, N. (2004). Social difficulties and victimization in children with SLI at 11 years of age. *Journal of Speech, Language, and Hearing Research, 47*, 145-161. doi: 10.1044/1092-4388(2004/13)

Coplan, R., Rubin, K., Fox, N., Calkins, S., & Stewart, S. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence and passive and active solitude in young children. *Child Development, 65*, 129-137. doi:10.2307/1131370

Coplan, R., & Rubin, K. (1998). Exploring and assessing nonsocial play in the preschool: The development and validation of the Preschool Play Behavior Scale. *Social Development, 7*, 75-91. doi:10.1111/j.1467-9507

Durlak, J. A., Weissberg, R.P., Dymnicki, A, B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405-432. doi:10.1111/j.1467-8624.2010.01564.x

Fujiki, M., Brinton, B., & Clarke, D. (2002). Emotion regulation in children with specific language impairment. *Language, Speech and Hearing Services in Schools, 33*, 102-111.

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,* 101-113. doi:10.1044/0161-1461(2001/008)

Fujiki, M., Brinton, B., Morgan, M., & Hart, C. (1999). Withdrawn and sociable behavior of children with language impairment. *Language, Speech, & Hearing Services in Schools, 30*, 183-195. doi:10.1044/0161-1461

Fujiki, M., Brinton, B., & Todd, C. M. (1996). Social skills of children with specific language impairment. *Language, Speech, and Hearing Services in Schools, 27,* 195-202.

Fujiki, M., Brinton, B., & Todd, C. M. (1996). Social skills of children with specific language impairment. *Language, Speech, and Hearing Services in Schools, 27,* 195-202.

Fujiki, M., Spackman, M., 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*, 637-646. doi:10.1044/1092-4388(2004/049)

Gallagher, T. (1990). Clinical pragmatics: Expectations and realizations. *Journal of Speech-Language Pathology and Audiology, 14*, 3-6.

Gerber, S., Brice, A., Capone, N., Fujiki, M., & Timler, G. (2012). Children with social communication impairments: An evidence-based practice review. *Language, Speech, & Hearing Services in Schools*, *43*, 235-249. doi: 10.1044/0161-1461(2011/10-0047)

Gilliam, J. (2006). *GARS-2: Gilliam Autism Rating Scale-Second Edition*. Austin, TX: PRO-ED.

Guerra, J. G. S. (2014). The efficacy of social communication intervention on teacher report of sociability for children with language impairment. *All Theses and Dissertations.* Paper 4132. http://scholarsarchive.byu.edu/etd/4132

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*, 647-662. doi:10.1044/1092-4388(2004/050)

Hart, C. H., & Robinson, C. C. (1996). *Teacher Behavior Rating Scale.* Unpublished teacher questionnaire. Brigham Young University.

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,* 237-253. doi: 0.1007/s10578-007-0057-6

Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional-skills vital to learning. *Phi Delta Kappan, 94*, 62-65. doi:10.1177/003172171309400815

Maggio, V., Granana, N. E., Richaudeau, A., Torres, S., Giannotti, A., & Suburo, A. M. (2014). Behavior problems in children with specific language impairment. *Journal of Child Neurology, 29,* 194-202. doi: 10.1177/0883073813509886

Marton, K., Abramoff, B., & Rosenzweig, S. (2005). Social cognition and language in children with specific language impairment (SLI). *Journal of Communication Disorders, 38,* 143-162. doi: 10.1016/j.jcomdis.2004.06.003

Merrell, K.W. (2003). *Behavioral, social, and emotional assessment of children and adolescents (2ⁿᵈ ed.)*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Nelson, L. J., Hart, C. H., & Evans, C. A. (2008). Solitary-functional play and solitary-pretend play: Another look at the construct of solitary active behavior using playground observations. *Social Development, 17*, 812-831. doi: 10.1111/j.1467-507.2008.0047.0.x

Redmond, S., & Rice, M. (1998). The socioemotional behaviors of children with SLI: Social adaptation or social deviance? *Journal of Speech, Language, and Hearing Research, 41*, 688-700. doi:10.1044/jslhr.4103.688

Rubin, K. (1982). Nonsocial play in preschoolers: Necessarily evil? *Child Development, 53*, 651-657. doi:10.1111/1467-8624.ep8588517

Rubin, K., & 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* (p. 3-28). Hillsdale, NJ: Earlbaum.

Semel, E., Wiig, E., & Secord, W. (2013). Clinical Evaluation of Language Fundamentals—5th ed. (CELF-5). Minneapolis, MN: Pearson Assessments.

Stansbury, K., & Zimmermann, L. K. (1999). Relations among child language skills, maternal socializations of emotion regulation, and child behavior problems. *Child Psychiatry and Human Development, 30,* 121–142. doi: 10.1023/A:1021954402840

Timler, G. R., Olswang, L. B., & Coggins, T. E. (2005). Social communication interventions for preschoolers: Targeting peer interactions during peer group entry and cooperative play. *Seminars in Speech and Language, 26*, 170-180. doi: 10.1055/s-2005-917122

Voegler-Lee, M. E., & Kupersmidt, J. B. (2011). Intervening in childhood social development. In P. K. Smith & C. H. Hart (Eds.), *The Wiley-Blackwell handbook of childhood social development 2nd ed*. (p. 605-626). Malden, MA: Blackwell.

Weissberg, R. P. & Cascarino, J. (2013). Academic learning + social-emotional learning = national priority. *Phi Delta Kappan, 95*, 8-13. doi: 10.1177/003172171309500203

Wigfield, A.., & Wentzel, K. R. (2007). Introduction to motivation at school: Interventions that work. *Educational Psychologist, 42*, 191-196.

Appendix A

Annotated Bibliography

Adams, C. (2005). Social communication intervention for school-age children: Rationale and description. *Seminars in Speech and Language 25*, 181-188.

Purpose of the study
     This study outlined the rationale of using social communication intervention with children with social communication problems (SCP). Children with SCP include children with specific language impairment (SLI), high-functioning autism (HFA) and pragmatic language impairment (PLI). The article outlined each of four aspects of social communication (social interaction, social cognition, pragmatics, and language processing) and provided a description of therapy techniques which may be used to strengthen children's skills in each of the areas. A study implementing social communication strategies was briefly described to illustrate this form of intervention.

Summary
     Adams established a framework for treating SCP, which is based on the view that social communication is comprised of social interaction, social cognition, language processing, and pragmatics. Social interaction skills were recognized as an essential within this framework, and in many children with SCP social interaction deficits were the reason social cognition and pragmatic abilities were limited. Social cognition referred to the child's ability to manage and comprehend information from their environment, as well use this information to make inferences. In children with SLI, each of these abilities was notably impaired. Social cognition difficulties were closely related to language processing difficulties. Language processing referred to decoding and encoding of grammatical structures, word meanings and phonological forms, which was difficult for children with SLI. Pragmatics referred to an individual's ability to modify the use of language forms within various contexts, a skill many children with SCP lack. Each of these factors have "a considerable degree of developmental dynamic interdependence".
     Using the above rationale, an intervention was designed to address all four aspects of social communication. The intervention had several focuses, including social adaptation strategies, social flexibility, metapragmatic therapy, and language processing therapy. Adaptation strategies focused on the role of those the child lives and interacts with and their ability to change communicative behaviors to maximize social communication. Social flexibility worked to facilitate the understanding of emotions, help children recognize the emotions of others, and increase understanding and interpretation of social cues to enable the children to predict what others feel. Metapragmatics focused on teaching and practicing rules and conventions for aspects of pragmatics such as turn-taking, topic maintenance, linguistic cohesion, speech acts, and matching style to context. Language processing therapies included traditional methods of treating grammatical comprehension difficulties and included role play, modeling and practice, and promotion of self-monitoring and coping strategies, to name a few.
     The social communication framework was used in therapy with Oliver, an eight year old male with significant impairments in all four aspects of social communication. Following 24 sessions of therapy over an 8 week period, significant gains were noted in the form of increased

recall and formulation of sentences, and modest gains were noted in inferential comprehension and narrative tests. Oliver also had a less dominant style of interaction.

Conclusions
> Additional research is needed to determine the correlation between the various aspects of social communication. Due the difficulties of identifying the relationships of these factors, the author proposes moving towards a more complex interdependent model. Recognizing the interdependence of these elements, interventions can be provided which more accurately match individual's capacities.

Relevance to the current work
> The current study utilizes the social communication framework established by Adams as a foundation for its methods and intervention. This article outlines the social communication framework and elements of a social communication intervention.

Adams, C., Lockton, E., Freed, J., Gaile, J., Gillian, E., McBean, M. N., Green, J., Vail, A., & Law, J. (2012). The social communication intervention project: A randomized controlled trial of the effectiveness of speech and language therapy for school-age children who have pragmatic and social communication problems with or without autism spectrum disorder. *International Journal of Language and Communication Disorders 47,* 233-244.

Purpose of the study
> This study was designed to determine if a manualized social communication speech and language intervention was effective in improving language skills, pragmatic ability, and general social communication skills in children with pragmatic language impairment (PLI). Despite the prevalence of social communication deficits in individuals PLI, specific language impairment (SLI), and high-functioning autism (HF-ASD), little has been done to address these deficits.

Method
> *Participants.* School-based speech and language therapists (SLTs) referred children ages 6 to 10 years 11 months who presented with pragmatic communication problems, had special education needs, used English as the primary language of communication, did not have a current core diagnosis of autism, received ongoing SLT services, lacked severe difficulties in emotional development, behavior needs, unintelligibility, or hearing, and attended a school willing to accommodate intervention and assessment visits. Referred children were then screened with the General Communication Composite (GCC), Children's Communication Checklist-Second Edition (CCC-2; Bishop 2003), and Raven's Coloured Progressive Matrices (RCPM, Raven 1979). Children were included in the study if they scored in the communication impaired range (≤ 58) on the GCC and CCC-2, and scored in $\geq 5^{th}$ percentile on the RCPM.
> *Procedure.* Children were randomly assigned to either the SCIP group or the treatment-as-usual group (TAU) in a 2:1 ratio, with age groups stratified (6;00-8;11 or 9;00-10;11). Assignments were made by a research assistant (RA) blind to treatment, however the schools, families and those providing intervention were not blind to group allocation. Students in the SCIP group received only SCIP treatment, which they received in between 16 and 10 one hour intervention sessions. SCIP was manualized and designed to improve semantics, high-level language skills, pragmatic difficulties, social interaction, and social cue interpretation. Treatment

fidelity was determined by auditing planned versus received sessions and how closely the intervention provided matched the manual interventions. 59 of 88 participants were assigned to the SCIP group, and 29 of 88 participants were TAU. Those in the TAU group, which had 29 participants, continued to receive SLT services.

Pre-intervention (T1), post intervention (T2), and 6 months post-intervention (T3) study participants were administered the CELF-4, with the Core Language Standard Score predetermined to be the primary outcome measure. Secondary outcome measures were also completed, including the Targeted Observation of Pragmatics in Children's Conversations (TOPICC; Adams et al. 2011), which allows the quality of a child's conversation to be rated, a pragmatics rating scale (CCC-PRAG), which consisted of a list of 18 items closely related to SCIP content, the Expression Reception and Recall of Narrative Instrument (ERRNI; Bishop 2004), which measured the ability of a child to interpret, remember and tell a pictured narrative, the Parent-Reported Outcome (PRO), which asked parents to judge their child's current language, social communication, social situations, and peer relationships skills via questionnaire, and a teacher reported outcome (TRO), which allowed teachers to rate if a child's classroom learning skills have improved via questionnaire.

Results

No significant treatment effect was found when SCIP and TAU were compared using a linear regression. At T2 the CCC-PRAG/ AUT and ERRNI both lacked significant results, though PRO did have significant results. At T3 TOPIC, CCC-PRAG, PRO-SC, PRO-SS, and PRO-CLS all showed significant differences between TAU and SCIP.

Conclusions

Although the structural language outcomes measured did not differ between groups, there was a trend in favor of intervention. Children in the SCIP group, however, improved in the observed functional pragmatic ability compared to the TAU group. Some results did not appear until 6 months post intervention, which could point towards the need for children with PLI to have time to consolidate gains. Due to overlap of HF-ASD, PLI, and SLI, it is likely SCIP would be effective for all of these populations.

Relevance to the current work

The current work aimed to assess the effectiveness of a social communication intervention in 6 children with SLI. The study also uses similar measures for outcomes, which allows for comparison of the current study to this study.

Adams, C., Lloyd, J., Aldred, C., & Baxendale, J. (2006). Exploring the effects of communication intervention for developmental pragmatic language impairments: A signal-generation study. *International Journal of Language and Communication Disorders 41,* 41-65.

Purpose of the study

The purpose of this study was to determine if there is a specific signal that speech and language intervention changes pragmatic and language skills in children with pragmatic language impairment (PLI). It also examined methods of detecting the signal and the magnitude of the signal.

Method

Participants. Six children ages 6;0 to 9;11 participated in the study. These children were enrolled in mainstream classrooms, were judged to have a communication disorder by a speech therapist. All participants scored below a 21 on the Autism Diagnostic Interview Revised (ADI-R), earned a pragmatic composite of below 132 on the Children's Communication Checklist (CCC), performed at or above 21st percentile on Raven's Coloured Progressive Matrices, did not have severe intelligibility or expressive language difficulties, and did not have hearing, visual or physical impairments.

Procedure. This study consisted of three, 8 week long portions: pre-therapy assessment, intervention, and post therapy assessment. In the pre-therapy assessment phase, students were administered the Conversation Assessment Task (CAT), which was the primary outcome measure, and two secondary measures, the Assessment of Comprehension and Expressions (ACE) and the Clinical Evaluation of Language Fundamentals (CELF).

In the intervention phase, children received an intervention addressing social cognition, social interaction, and language pragmatics. The interventions were customized to fit each child's specific needs and targeted areas of particular difficulty as identified by the parents. Part of the intervention also included teaching environmental strategies to parents/co-workers to support social communication. Intervention sessions occurred three times a week and lasted approximately one hour.

The post-therapy assessment phase included administering the CAT, the primary outcome measure, every two weeks starting 2 weeks after therapy concluded. Two weeks after therapy ended the secondary outcome measures, the ACE and the CELF, were also administered. As part of the CAT, a conversation between the child and adult occurred. Each of these conversations were transcribed and then analyzed for discourse participation, conversational dominance, loquacity, assertiveness, verbosity, and verbal response. The quality of the child's response was also determined to be either adequate, inadequate, pragmatically inappropriate, or no response. The responses were further grouped as response problems and pragmatic problems.

Results

Individual data points (four from pre-therapy and three from post-therapy) were averaged. To ensure that changes were due to the intervention, rather than variation, gender and age matched peers participated in conversational coding twice. The acceptable amount of variation was calculated and any pre and post therapy measure greater than the amount of variation were considered to determine the effectiveness of the intervention. In general, the mean discourse participation was lower post therapy, and conversational dominance was lower for three of the children. Four children improved in loquacity, and mean verbal responsiveness was lower for five children post therapy. Pragmatically inappropriate responses increased for two children, though this may be the result of the child engaging more. All subjects also showed improvement in standardized scores, with three of five subjects showing improvement on the ACE, which was not statistically significant. Following intervention, three parents reported an improved understanding of their child's needs, and four reported increased individual practice time with their child. The standardized measures were strong signals of change, particularly the Sentence Recall and Formulating Sentences portion of the CELF-R. Two children showed changes in this subtest, and one child showed some improvement.

Conclusions

Each participant benefited from this study, some more than others. The primary outcome measure had mixed success demonstrating change, and could demonstrate changes in pragmatic skills for children at the ceiling of standard language tests. Measures of conversational behaviors were also useful in demonstrating clinically significant changes, however response and pragmatic problem measures were not successful in demonstrating change. Participants demonstrated improvement on standardized language tests. Results were considered preliminary, however, due to the diversity of the population and the variability of some of the measures.

Relevance to the current work

This study defined both PLI and specific language impairment (SLI), and explored which measures are most effective in detecting change. The results were based on implementing a social communication framework similar to that used in the current study.

Asendorpf, J. (1991). Development of inhibited children's coping with unfamiliarity. *Child Development, 62*, 1460-1474. doi:10.2307/1130819

Purpose of the study

This study tested the hypothesis that as children age the association between dispositions of inhibition and social withdrawal increases. Three types of solitude were examined: solitary-passive, solitary-active, and inhibited behavior. The quality and frequency of parallel play and social-interactional activity were also analyzed as a method of coping with unfamiliarity.

Method

A total of 87 children, 46 boys and 41 girls, participated in the study. These children were recruited from the Munich Longitudinal Study on the Genesis of Individual Competencies. Each child participated in three dyadic play sessions with an unfamiliar, same gender peer at ages four, six, and eight. While the children played their parent completed a scale of inhibition in which they rated the child's behavior around strangers. During the first play session, the child's parent was in the room and during the remaining two sessions a well-known female experimenter pretended to read in the room with the children. The adults interacted with the children as little as possible.

The play sessions were divided in to 10-second intervals and coded using the Play Observation Scale (POS) and for social participation as outlined by Parten (1932). This included unoccupied behavior and onlooking, which were aggregated to become inhibited behavior, solitary play, parallel play, conversation, and group play.

Results

Analysis revealed an increase in the correlation between inhibited behavior and solitary passive behavior as well as inhibited behavior and parallel play as the children aged. Parent ratings of inhibition were also positively correlated with inhibited behavior and solitary-passive behavior as the children aged. To further clarify these results, an extreme group analysis was completed with 13 children classified as continuously inhibited and 30 as controls. This analysis revealed that continuously inhibited children spent longer periods of time in inhibited behavior and solitary-passive behavior. As inhibited children aged, the amount of time they engaged in passive solitude increased, but controls did not see the same increase. The inhibited group also

demonstrated a higher variance, which indicated some children engaged in passive solitude for long periods. As the children in the control group aged their periods of social interaction increased, but inhibited children did not see the same increase.

Transitions between solitary and social states were also analyzed, and participants in the control group were more likely to move from a solitary to social state. The analysis revealed that the likelihood an inhibited child would switch from inhibited behavior to passive behavior was the same for an inhibited child and a child in the control group. It was also determined that inhibited children transitioned from solitary-passive to social behavior less often than the controls.

Conclusions

As children age, inhibited behavior becomes increasingly associated with solitary-passive behavior and loses its negative relation to parallel play. Parental judgements of inhibition supported this finding. Inhibited children showed a developmental shift towards longer periods of solitary-passive activity as they aged. In contrast, the analysis of frequency of transitions between solitary and social states revealed that age did not affect the transition probabilities of moving between solitary and social states. Overall, the study points towards a developmental shift in the coping style of an inhibited child when playing with an unfamiliar individual.

Relevance to the current work

This work provided information regarding the presence of different types of withdrawal when children are around unfamiliar individuals. The current work examines levels of withdrawal in children with LI.

Asendorpf, J. (1993). Beyond temperament: A two-factorial coping model of the development of inhibition during childhood. In K.H. Rubin & J.B. Asendorpf (Eds.), *Social withdrawal, inhibition and shyness in childhood* (p. 265-289). Hillsdale, NJ: Erlbaum.

Purpose of the work

This work presented information about inhibited behavior in children with both unfamiliar and familiar adults and children. It also discussed methods of assessing inhibition, the stability of inhibited behavior, specificity, and outlined a two-factorial model for children coping with inhibition.

Summary

Inhibited behavior can result from two primary sources. It can be triggered by interactions with unfamiliar individuals and situations in which children are wary of social evaluation. Prior to grade two, inhibited behavior around strangers was predictive of inhibition in class, but in grade two this was no longer the case. This finding suggests that inhibited behavior around strangers is a static temperamental trait while inhibition due to social evaluation concerns was due to the nature of social relationships. A study which placed children with unfamiliar peers had similar results; between ages five and eight children with high levels of inhibition frequently spent time in passive solitude while normal children became increasingly social. Together, these findings indicate inhibition is not caused by temperamental disposition alone.

In a seven year longitudinal study, inhibition levels toward strangers were assessed yearly through a parental scale and behavioral observation. When an unfamiliar adult or child was

present the most stable and latent measure was the time between the child's first unsolicited utterance to the stranger.

Inhibition levels in children were compared to the inhibition levels of university students to determine if there was continuity in the expression of inhibition around adult strangers. The presence of 17 behaviors was noted in both populations, and a high correlation was found in the items' rank. This indicated that university students and children have similar expressions of inhibition.

Results from these studies also revealed that between the ages of four and eight inhibition towards adults was very stable, while inhibition towards peers was not quite as stable. This could be due to the inhibition exhibited by the peers the children interacted with. These findings indicated that inhibition was an individual characteristic of each child; it was not dependent on the age of the unfamiliar partner. In interactions with peers, results of parent ratings demonstrated that inhibition with adult strangers predicted the child's behavior with peer strangers but was unrelated to the child's behavior with classmates, indicating a child's behavior around strangers reflects social performance, not social competence. Further examination showed that children with normal levels of inhibition learned to cope with unfamiliarity by grade two, while children with high levels of inhibition coped with unfamiliarity with increased levels of withdrawal.

Observations of contact initiations in kindergarteners and teacher ratings of inhibition were collected to examine inhibition levels in children when interacting with familiar individuals. Stability of inhibition over a two period was significantly lower than inhibition with strangers, and in grade two the correlations between kindergarten and grade one ratings were low, indicating a shift in inhibition between grade 1 and grade 2. A decrease in the correlation between inhibition around strangers and inhibition due to social expectations was also noted. Based on classroom observations, a change in inhibition was also noted when a child's peers rejected or ignored them; they became increasingly inhibited.

As a whole, the information discussed in this work point to a two-factorial coping model of inhibition in childhood. This model explained both intra-individual inhibition and differences in inter-individual inhibition. Sources of these differences included the strength of the child's inhibition system, the child's coping style, and the inhibition of others.

Conclusions

This work points to a two-factorial coping model of inhibition. It also suggests that inhibition is not purely based on temperament, but is also the result of various social situations. Inhibition is also highly stable in early childhood and appears in similar forms in university students. Interactions between children and unfamiliar individuals were also consistent, though they did not predict inhibition levels with familiar individuals well.

Relevance to the current work

This work provided foundational information about inhibition in young school age children. Inhibition, referred to in the current work as withdrawal, was a primary outcome measure in the current work.

Brinton, B., & Fujiki, M. (2013). Enhancing social and emotional learning. In D. R. Reutzel (Ed.), *Handbook of research-based practice in early education* (pp. 238-249). New York, NY: Guilford Publications.

Purpose of the work

This chapter discussed the components of social and emotional learning and the importance of social and emotional learning on academic achievement for both typically developing children and children with language impairments. It also outlined the most effective methods of improving the social and emotional learning skills of these students.

Summary

Social and emotional competence, which include expressing and regulating emotions, establishing positive relationships, and solving personal problems, are important skills underlying the academic success of children. Without social and emotional competence, children face obstacles such as decreased motivation resulting from repeated failures in the classroom and exclusion in classroom contexts due to the child's difficulty participating in learning and social activities. These children also have a difficult time acquiring literacy skills as even simple narratives rely heavily upon social and emotional competence.

To enhance social and emotional learning, social and emotional learning programs have been used in classrooms of students ranging from K-12, and have produced positive social, emotional, and academic outcomes. Successful programs were used school-wide, supported by the administration, and were implemented by school personnel. They also followed SAFE procedures, which means they were sequenced using a hierarchy of difficulty, actively involved the students, provided focused time and attention for instruction, and were explicit with behaviors and objectives taught directly to students.

Although these programs have been effective for typically developing children, oucomes are not as clear for children with disabilities. Children with disabilities demonstrate change at a reduced rate compared to typically developing children and are a more diverse population, which could explain the decreased effectiveness of these programs for children with disabilities. These factors may also require that research design be altered for children with disabilities.

Based on this research, the emotional and social development of students may be increased by improving the accessibility of instruction, which can be done by simplifying the language and processing demands placed on children, and increasing the use of emotion talk in the classroom. Teaching children to recognize and respond to the emotions around them and emphasizing positive interactions may also improve a child's emotional and social competence. Effective programs involve a commitment of time and resources.

Conclusions

Social and emotional competence are required for children to succeed in the classroom. When programs to improve social and emotional competence follow SAFE procedures, incorporate practice opportunities, and focus on making implicit information explicit improvement can be seen in social, emotional, and academic abilities.

Relevance to the current work

The current work provides foundational information about social and emotional learning as well as information about how to improve these skills in children with disabilities.

Brinton, B., Fujiki, M., Montague, E. C., & Hanton, J. L. (2000). Children with language impairment in cooperative work groups: A pilot study. *Language, Speech, and Hearing Services in Schools 31,* 252-264.

Purpose of the study

      Children with language impairment (LI) are generally placed in mainstream classrooms, however it can be difficult for these children to access all of the curriculum as a result of their language and social deficits. Researchers have speculated that cooperative learning models may be ideal for children with LI as they provide a positive experience, both socially and academically, for these children. The purpose of this study is to determine the effect of various social profiles of children with LI on their participation in cooperative groups.

Method

      Participants. Six students with LI were identified to participate in the study. Five of the students were female and the other was male. The children with LI were enrolled in a mainstream class, scored one SD or below on a formal language test, had normal hearing, completed a psychological assessment ruling out intellectual disability or developmental delay, and had no history of behavioral, social, or emotional disorder. Each of the students spoke English as their primary language. Forty-eight typically developing (TD) peers also participated in the study. TD peers were the same chronological age as the child with LI, had no history of communication, academic, behavioral, social, or emotional problems, and had normal hearing. Two teachers participated as well, completing the Teacher Behavior Rating Scale (TBRS) regarding each child with LI in their class.

      Procedures. Each child's classroom teacher filled out the TBRS, an unpublished research instrument used to determine social behaviors in children. The TBRS identifies withdrawn, aggressive, distractible, impulsive, and sociable behaviors. Each child with LI participated in four, 20- minute cooperative play interactions with two TD peers. No TD child participated in more than one cooperative group. Prior to the beginning of the first 3 cooperative groups, the children were each assigned a role in the interaction (materials manager, checker, and leader). In the fourth interaction, roles were not assigned. For the purpose of analysis, each session was divided in to 15- second scans. Each scan was then rated as good, fair, or poor interaction. Good interactions were balanced, fair interactions were somewhat balanced, and poor interactions consisted of at least one child withdrawing.

Results

      The first child, Amy, received poor ratings on the TBRS for aggressive, sociable, and withdrawn behavior, as well as victimization, impulsive behavior, and anxious/ distractible behavior. Amy's best interaction was composed of 34% poor scans. Amy was also responsible for almost all poor scans during each of the sessions. Cory received high ratings of aggressive and withdrawn behavior, and in one session was unable to maintain any good interactions- 90% of his interactions were poor. His best session consisted of 27% poor scans. Cory was also responsible for the majority of the poor scans. Millie presented with withdrawn behavior, with a maximum of 89% poor interactions in one session, and 14% poor interactions in her best session. Marie also presented with high levels of withdrawal, and had a maximum of 90% of her interactions were rated as poor, with her best session consisting of 46% poor interactions. Jean and Kristine both presented with relatively typical social profiles, with Jean achieving best interaction receiving 12% poor interactions, with 89% of interactions rated as poor in the worst session. In her best interaction Kristine's interactions were rated as poor 8% of the time. In her worst interaction, only 20% of her interactions were rated as poor.

Conclusions

        The performance of both Amy and Cory, the two children with aggressive and withdrawn social profiles, was predicted by their social behaviors. The interactions of Millie and Marie, the two children with withdrawn social profiles, was dominated largely by their peers. Both Jean and Kristine, the two children with relatively normal social profiles, appreciated the nature of the cooperative group and participated well. It is clear that the social profile of each child was a key factor in the quality of interaction with peers and their inclusion in the activity. For Jean and Kristine, the cooperative group appeared to be an effective setting in which to learn, however the other children require specific intervention in order to acquire social skills.

Relevance to the current work

        The current study investigates the social profiles of children with LI through the TBRS. This study provides information regarding how social profiles affect each child's participation in a group interaction, which may be generalized to performance in a classroom setting as would be seen by the teacher completing the TBRS.

Brinton, B., Robinson, L. A., & Fujiki, M. (2004). Description of a program for social language intervention: "If you can have a conversation you can have a relationship." *Language, Speech, and Hearing Services in Schools 35,* 283-290.

Purpose of the study

        The purpose of this study was to illustrate an individualized treatment program used with an adolescent male with language impairment (LI) to improve his conversation skills.

Method

        Participants. This study focused on one participant, an adolescent male with LI, referred to as Larry. Larry was diagnosed with LI at the age of 4;5 when testing showed a novnverbal IQ within normal limits and a verbal IQ over 2 SDs below the mean. As Larry matured his ability to make social inferences in interactions and his inability to read social situations limited his relationships with peers and Larry had no reciprocal friends. Prior to this intervention, Larry received services focusing on maintaining conversation with parents and family. Treatment was extended to maintaining conversation with peers in this intervention.

        Procedure. The intervention had two portions. In the first portion, Larry viewed video clips from familiar movies and analyzed what the main characters were thinking or feeling to improve his ability to take different perspectives. The clinician also role-played and videotaped events similar to those Larry experienced, and Larry also analyzed these scenarios. The majority of the intervention consisted of "the conversation game", in which Larry and the clinician took turns in conversation in an attempt to achieve a more balanced conversation. At first this was highly structured with both participants drawing topics from a cup, and Larry following explicit strategies for maintaining conversation. As Larry improved in his ability to maintain a conversation, he was able to select topics, and the clinician helped Larry learn to infer what his conversational partner was thinking or feeling using additional strategies. Generalization was assessed by Larry's mother, who assessed the success of Larry's conversation and his use of strategies in the carpool and in interaction with peers and family at home.

Results

After 9 months of examining video clips, Larry successfully interpreted the intents and emotions of characters, and this portion of therapy was concluded. In the beginning of the intervention, Larry dominated the conversation in the conversation game. After three months of therapy, Larry took an average of three turns per topic and received maximum clinician feedback. After 12 months of therapy Larry was able to use all target strategies and maintain conversations using spontaneous topics. At this point, Larry took an average of seven turns per topic and his partner took an average of five turns per topic. He received moderate feedback at this level. Following 24 months of therapy, Larry utilized strategies to respond to the listener's needs and balance the conversation. Minimal feedback from the clinician was required. After six months of intervention, Larry's mother noticed generalization in spontaneous conversation, and these changes appeared in the carpool after nine months of therapy. Twelve months into the intervention, Larry's mother noted his using strategies to initiate or maintain topics.

Conclusions

This intervention provided Larry with some concrete strategies he could use in social situations, and although implementing these strategies required conscious effort from Larry, the difference in Larry's conversation was noted by his family. In addition, Larry's interactions in social settings with peers improved. Larry's success may also be attributed to his motivation to interact with peers, his level of socio-cognitive ability, the continued involvement of his parents, and the individualized nature of the intervention.

Relevance to the current work

This study provides background information and increased insight regarding the clinical profile of children with LI, the importance of individualizing treatment, and various factors which need to be addressed in an intervention study. The current study draws from this information.

Conti-Ramsden, G., & Botting, N. (2004). Social difficulties and victimization in children with SLI at 11 years of age. *Journal of Speech, Language, and Hearing Research, 47*, 145-161. doi: 10.1044/1092-4388(2004/13)

Purpose of the study

The purpose of this study was to examine social and behavioral difficulties in children with SLI, explore developmental patterns of these difficulties, and identify relationships between social difficulties and language difficulties as well as language difficulties and nonverbal cognition.

Method

Participants. This study included 200 children who were selected at age seven while attending mainstream language units in the United Kingdom. While in their final year of primary school (age 11) the children were contacted again. However, it is important to note that at this age most of the participants were no longer attending language units.

Procedure. To assess children's social and behavioral difficulties several measures were used. The Rutter Behavioral Questionnaire (RBQ) was used to obtain information about the child's general behavioral difficulties, the Peer Competence Scale (PCS) was used as a guide of

peer competence as perceived by school teachers, the Strengths and Difficulties Questionnaire (SDQ) was used to examine overall social-behavioral impairment as well and prosocial behaviors, and the "My Life In School" Questionnaire was used to identify levels of victimization. The students' teachers also completed the CCC in order to assess pragmatic language impairment. Tests of cognitive level and language were also administered.

Results

Social and behavioral problems were noted by the RBQ which indicated 64% of the children with language problems experienced these problems. The teacher rated SDQ indicated 34% of children presented with social and behavioral difficulties, which increased to 51% on the self-reported scale. Analysis indicated that at age 11 there was a large degree of variance between Rutter's scores, and the correlation between the PCS and RBQ had decreased. The SDQ also indicated children with SLI did not frequently score themselves as having high levels of hyperactivity (19%), though teacher ratings indicated higher levels of hyperactivity (27%). Emotional difficulties were not present in a significant portion of the participants. Social behavior (including withdrawal) and peer relationships did present significant difficulty for this group. Victimization and bullying were also common for this group, with 36% percent of the children classified as at risk for bullying. Significant differences were noted in the prosocial difficulties experienced by males when compared to females, and fewer conduct problems were noted in females. No significant relationship was found between social and behavioral difficulties and IQ scores, though the CCC pragmatic language score was associated with these difficulties. A significant relationship between comprehension and victimization was found. Data also demonstrated that social and behavior problems increased as these children aged.

Conclusions

Several significant conclusions can be drawn from these results. First, social and behavior problems experienced by children with LI do not decrease over time; they increase. Second, internalized social difficulties pose more of a problem to children with LI than other social behaviors. It is possible that poor social skills lead to poor social interactions, which in turn lead to increased social and behavioral impairment. This study also determined children with LI are at significantly higher risk for bullying and victimization, even at a young age when bullying is less common. Finally, this study points towards an unclear relationship between language impairment and withdrawal, though the data indicate a comorbidity of the two. There is also a noted relationship between anxiety language impairment, though the type of relationship is unknown.

Relevance to the current work

This work outlined the nature of social and behavioral difficulties experienced by children with SLI, the target population of the current work. It also provided insight into the types of difficulties children with LI experienced and social consequences, such as victimization, these children were likely to experience.

Coplan, R., & Rubin, K. (1998). Exploring and Assessing Nonsocial Play in the Preschool: The Development and Validation of the Preschool Play Behavior Scale. *Social Development, 7*, 75-91. doi:10.1111/j.1467-9507

Purpose of the study

This study was separated in to two distinct portions: the first established construct validity of the Preschool Play Behavior Scale (PPBS). The second portion examined internal consistency and factor structure of the PPBS as well as convergent and discriminant validity. The PPBS was designed to assess different forms of nonsocial and social play in preschoolers.

Method

Participants. In the first portion of the study, participants included 23 female and 16 male preschool age children, a total of 39 participants. The second portion of the study included 337 preschool children, 173 males and 164 females.

Procedure. For the first portion of the study each child was observed playing for a total of 20 minutes, consisting of twelve, ten-second intervals over a period of 3 months. Each ten-second interval was coded for social participation (onlooker, parallel etc.) and cognitive quality of play (functional, dramatic etc.) Teachers also completed the PPBS to see how observed behaviors compared to the teacher ratings. In the second portion of the study teachers completed the PPBS and the Preschool Behavior Questionnaire (PBQ) for each child. Parents were also given the Colorado Child Temperament Inventory to complete.

Results

For the first portion of the study correlations between teacher-rated and observed behaviors for reticent, solitary-passive, solitary-active, social, and rough play were all moderate to high; only two of fifteen correlations were not statistically significant. Correlations between non-corresponding, nonsocial behaviors and reticent, solitary-passive, and solitary-active behaviors were not strongly related. Factor and item analysis for the second portion of the study confirmed the theoretical associations assumed between test items. There was some cross-loading between solitary-passive and solitary-passive items. The PPBS had moderate to high stability over a six month period. Gender significantly impacted rough play, but all other subscales were unaffected by gender. Correlations between the PBQ, CCTI, PPBS and nonsocial play types were also calculated; reticent behavior was positively correlated with shyness and emotionality and negatively associated with sociability. Solitary-active behavior was positively associated with activity level and negatively associated with shyness. Rough-play was positively associated with activity level and negatively associated with attention span. Significant correlations were also found between internalizing problems and both solitary-active behavior and solitary-passive behavior.

Conclusions

This study established the PPBS as a valid tool for assessing nonsocial play behaviors in young children. Factor structure, internal consistency, interrater reliability, short-term stability, and convergent and discriminant validity were all reached acceptable levels, indicating the PPBS could be used to determine nonsocial play types in place of timely and costly observations.

Relevance to the current work

This work establishes that well-designed teacher rating scales can successfully identify types of nonsocial play in place of observation. This work provides support for the current work in which a similar teacher rating scale is utilized as a measurement of treatment gains.

Coplan, R., Rubin, K., Fox, N., Calkins, S., & Stewart, S. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence and passive and active solitude in young children. *Child Development, 65*, 129-137. doi:10.2307/1131370

Purpose of the study

This study examined the heterogeneity of the withdrawal subtypes, particularly solitary-passive withdrawal, solitary-active withdrawal, and reticent behavior. It also explored possible psychological causes of each subtype.

Method

Participants. The participants of this study included 20 male and 28 female preschool children. The participants were selected from a larger sample of 61 participants who were participating in a longitudinal study.

Procedure. Each participant was assigned to a quartet of same age, same sex peers. As a quartet they participated in five sequential activities: free play, a clean-up task, show-and-tell speeches in which the child described their last birthday party, a ticket sorting task, and free play. Their behaviors during free play were coded according to their social participation in the play (e.g., solitary play) and the cognitive quality of play (e.g., functional play). Social participation codes were classified as reticent behavior, solitary-active withdrawal, and solitary-passive withdrawal. The amount of time the child engaged in anxious behaviors and/or hovered was also recorded. The children's speeches were coded according to the duration of the speech episode and the percent of time the child spent speaking. The ticket sorting and clean up tasks were both coded based on the amount of unoccupied and off-task behavior. Each child's mother also completed the CCTI to determine the mother's perceptions of characteristics such as shyness, activity level, and emotionality.

Results

First, intercorrelations between indices of solitude were calculated. The results indicated the index of solitude for the first play segment and the index of solitude for the second section were not associated. Analysis of the stability of withdrawal subtypes indicated that each subtype was stable across the play sessions. The correlation between each withdrawal subtype and hovering behavior revealed a significant and positive correlation between reticence and hovering behavior. Anxious children also engaged in reticent behavior more frequently than children with normal levels of anxiety. A comparison between withdrawn behaviors in free play and anxiety during non-free-play sessions revealed that reticent behavior in free play was positively associated with wariness in the non-free-play sessions. The last analysis completed compared maternal ratings to types of withdrawal observed during free play. Maternal ratings of reticence were significantly and positively associated with reticent behavior and ratings of impulsivity were significantly and positively associated with solitary-active behavior.

Conclusions

This study identified multiple forms of withdrawal, namely solitary-active withdrawal, solitary-passive withdrawal, and reticence. It also revealed that children who demonstrate anxiety are more likely to demonstrate reticent behavior. Reticent behavior was also associated with hovering on the edge of social interactions and wariness.

Relevance to the current work

The current work utilized the three solitude subtypes outlined in this study to classify the behavior of children with LI. The relationships between subtypes of solitude and other behaviors (e.g. impulsivity and anxiety) also provided valuable insight in to expected social behaviors and consequences associated with the withdrawal subtypes.

Durlak, J. A., Weissberg, R. P., Dymnicki, A, B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405-432. doi:10.1111/j.1467-8624.2010.01564.x

Purpose of the study

The purpose of this study was to determine the effect of school-based, universal social and emotional learning programs on children's skills, attitudes, behavior, and academic performance in the form of a meta-analysis.

Method

The studies used in this meta-analysis were collected through a search of several databases, the reference lists of relevant articles from the searches, manual searches of 11 journals, and a searche of web sites of organizations focusing on social-emotional learning. All studies were in English, written prior to December 2007, involved students age 5 to 18, included a control group, and provided sufficient information for an effect size to be calculated. A total of 213 studies met this criteria. Intervention format, SAFE practices (sequenced, active, focused, and explicit), and implementation problems served as the independent variables in this study. Dependent variables included six different student outcomes: social and emotional skills, attitudes toward self and others, positive social behaviors, conduct problems, emotional distress, and academic performance.

Analysis of the studies was completed by determining the index of effect using Hedge's *g*. When effect sizes were calculated, positive values were considered favorable, with higher scores indicating a greater effect. For each study examined, and effect size was calculated for each of the six student outcomes. A *Q* statistic was also utilized to determine the significance of the heterogeneity of a group of effect sizes, and an I^2 statistic was used to determine the degree of heterogeneity between the studies.

Results

The *Q* value and mean effect size of the study as a whole were both significant. Effect sizes for each of the six outcome measures were also significant. For studies which included follow-up data, the follow-up mean effect sizes remained significant. Results showed that student academic performance improved significantly only when school personnel implemented the intervention. The I^2 statistic results found that when the data was examined according to the six student outcomes within-group heterogeneity was low and between-group heterogeneity was high. When the studies were further divided based on SAFE practices and implementation problems group variability remained low and heterogeneity differences between groups were high, indicating a good fit for the data. This data also demonstrated that the intervention format used affected outcomes and multi-component programs were not as effective as single component programs.

Conclusions

        Overall, the results of this meta-analysis were encouraging; the mean effect size translated to an 11 percentile difference in academic achievement, and significant gains were noted in social emotional competencies and students' attitudes. Prosocial behaviors increased while conduct and internalizing problems decreased. The results also indicated it is possible for teachers and other school personnel to successfully implement social and emotional learning programs. Previous research demonstrating social and emotional learning programs are valuable methods of enhancing the students' connection to school and classroom behavior was supported by the results of this study. Positive student outcomes were also directly related to the ability of a program to be both well-designed and well-conducted.

Relevance to the current work

        The current work utilized a social communication intervention to address social and emotional learning deficits in students with LI. This work provided background information about social and emotional learning and supported the design of the current work.

Fujiki, M., & Brinton, B. (2014). Social communication intervention for children with language impairment. In R. McCauley, M. E. Rey, & R. Gillam (Eds.), *Treatment of language disorders, 2nd Ed.* Baltimore: Brookes Publishing.

Purpose of the work

        This chapter provided information about social communication and social communication disorders and outlined a social communication approach to intervention for children with LI.

Summary

        Social communication deficits are often manifest in children with language impairment (LI) who have a difficult time perceiving, understanding, and inferring their own and other's emotions in addition to difficulties understanding structural components of language. Social communication has four main components, which are often overlapping: pragmatics, social cognition, social interaction, and language processing. Pragmatics is generally viewed as behaviors which have social significance, though this term is notably difficult to describe. Social cognition refers to behaviors which enable individuals to interpret and express meaning, consider different perspectives, and make inferences. This includes theory of mind and the interpretation of utterances. Social interaction refers to the ability of a child to communicate to establish and maintain social connections with other people, which includes early developing intersubjectivity. Language processing refers to production and comprehension of the structural and lexical aspects of language. A social communication approach aims to facilitate communication in all important contexts of the child's life, and must address deficits in each of these components to be maximally effective.

        The chapter reviewed available research concerning social communication interventions (SCI). The majority of studies demonstrating the efficacy of SCI are controlled studies without randomization using a single subject designs. It was concluded that the most effective SCIs are individualized and geared to the needs of the child. When structuring a SCI for a child, the child's needs are determined by noting important partners and contexts, and the child's social interaction, language processing, pragmatics and social cognition abilities are each assessed. An

individualized SCI also takes in to account the child's strengths, utilizing them to bolster social communication. It also involves making the most of available resources, as in a clinical setting there are often limitations.

In a SCI direct, face-to-face intervention with a speech-language pathologist is essential, while still maintaining access to authentic interactions important to the child. Previous SCIs have demonstrated positive outcomes with 10-20 weeks of school based interventions 2 times a week. However, it is unclear how much time is required to maximize learning for this population. Goals for SCIs should be useful and attainable, focusing on authentic communicative behaviors, and other deficits affecting social communication. The intervention itself follows a "plan, do, review" format. In the "plan" portion behaviors are first taught, modeled, and practiced. The "do" portion consists of the child participating in an activity/ interaction in which they can utilize the behaviors they have been taught. The reviewing phase consists of the clinician and child reflecting on the activity, which is generally accomplished through something like a journal entry.

A case study using SCI was completed with Connor, a 6-year-old boy diagnosed with LI. Treatment focused on helping Connor access peer interactions and improving his ability to play and cooperate in these interactions. Within the intervention, careful modeling of language processing targets was incorporated into the activities. Despite a relatively short length of intervention, Connor made encouraging gains. At the conclusion of the intervention Connor showed an increase in cooperative work and a decrease in withdrawal when playing with two other typical peers.

Conclusions

There is still a need for additional research to determine the effectiveness of SCI, however the results of completed studies are promising. Because of the widespread nature of social communication disorders among children with ASD and LI, a SCI could aid many children.

Relevance to the current work

The current chapter described a social communication approach to intervention for children with LI. This chapter also provided helpful information regarding the components of social communication.

Fujiki, M., Brinton, B., & Clarke, D. (2002). Emotion regulation in children with specific language impairment. *Language, Speech and Hearing Services in Schools, 33*, 102-111.

Purpose of the study

Following extensive research studies, it is widely acknowledged that children with language impairment present with increased difficulty participating in peer interactions. Studies investigating the social interaction of these students have revealed that teachers consistently rate students with language impairment as being more withdrawn than their peers and that these students have reduced contact with peers. The cause of this withdrawal is unclear, and though a child's mastery of language will have an impact on the child's social success, the severity of language impairment does not consistently predict the social abilities of these children. The purpose of this study is to determine if emotion regulation is a key variable impacting the social behavior of children with SLI. Emotion regulation, which is defined as "the extrinsic and

intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals", is responsible for helping children interpret and respond to their environment. The authors speculate that if a child does not possess age appropriate emotion regulation their social interactions would be altered compared to peers.

Method

Participants. A total of 82 students, 41 with SLI and 41 typically developing peers, participated in this study. The children with SLI were divided into 2 age groups, with the young group ranging from 6 to 9 years of age the older group ages ranging from 10 to 13 years old. The IQ of each child was obtained either from school district testing or through the administration of the WISC-III to ensure language impairment was not caused by intellectual disability. Each student with SLI was diagnosed by the school speech-language pathologist and performed at least one standard deviation below the mean on the CELF-R. All students in the study also had normal hearing and had no formal diagnosis of an emotional or behavioral disorder. Each child with SLI was matched with a typically developing peer of the same gender and age who was also in the same classroom. 35 teachers also participated in the study, 29 of whom rated on 1 student with SLI and their typically developing pair and 6 teachers rated 2 students with SLI and their peer.

Assessment Instruments. The Emotion Regulation Checklist (Shields & Cicchetti, 1997; 1998) was completed by each teacher with regard to the behavior of the child with SLI and the typically developing peer. This 24-item checklist examines both positive and negative aspects of emotion regulation including lability, flexibility, valence, intensity, and situational appropriateness of emotions. Scores for the ERC as a whole and for each of the subscales obtained by averaging the teacher's scores of applicable questions.

Results

A 2x2 ANOVA of gender (male-female) and group (SLI-typical) in which the ERC score was the dependent variable was completed, and found significant main effects for both gender and group. Analysis revealed that females produced higher overall scores than males, and typical children produced higher scores than the typical group. When mean scores of age groups were compared, older children also had notably lower scores than younger children with SLI. Overall emotion regulation was also correlated with CELF-R scores. All correlations were relatively weak.

Conclusions

The study revealed that emotion regulation does pose a problem for children with SLI, and it is possible that emotion regulation is related to specific social behaviors and patterns commonly seen in children with SLI in the school setting. Based on teacher report, girls had increased emotion regulation skills compared to boys, and children with SLI have a difficult time with behaviors found in the emotion regulation portion of the ERC. These results warrant further investigation in the effect of poor emotion regulation skills on social functioning of children with SLI.

Relevance to the current work

The focus of the current work is to determine if a narrative based social communication intervention administered to children with language impairment in 18-20 sessions will have any impact on the withdrawal and sociability of these students. The student's level of withdrawal is determined by teacher report. Each teacher will complete the Teacher Behavior Rating Scale (TBRS) pre and post intervention to determine if the child's level of withdrawal has changed as a result of the intervention. The intervention also includes components to strengthen emotion regulation in children with language impairment, which has been speculated to be a key component in the child's social abilities.

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,* 101-113.

Purpose of the study

This study examined children with language impairment (LI) in their playground interactions with peers in an attempt to evaluate the social behaviors in an authentic school context. Research has consistently revealed that children with LI have higher levels of reticence and solitary withdrawal as well as poorer social skills than their peers. These studies, however were usually conducted in highly structured contexts. The authors deemed it important to investigate interactions of children with LI on the playground where adult direction was limited.

Method

Participants. Eight children with LI and age matched peers were included in this study. Participants with LI were enrolled in a regular education class, received a score of at least one SD below the mean on the Test of Language Development-2, Primary, or on the Clinical Evaluation of Language Fundamentals-Revised, completed a psychological assessment to rule out intellectual or developmental disability, and had no history of social, behavioral, or emotional problems. Of the eight children, seven were female and one was male. Five children were in the same first grade class, with the other three children in second, fourth and fifth grades. Typically developing peers were matched by gender, grade level, and chronological age.

Procedures. Several minutes before recess, a functioning transmitter and microphone was placed on one of the study participants in the first grade class, and one dummy transmitter and microphone was fitted to a random student in the classroom. Children in the upper grades had the microphone and transmitter placed out of sight to avoid extra attention. The children were then free to play during recess, and two investigators remained positioned 15 to 30 meters from the children being filmed. 45 minutes of film were utilized and divided in to 5 second intervals. Each 5 second interval was then coded using 37 categories grouped in to six general categories (peer interaction, adult interaction, withdrawal, aggression, victimization, and other) for each child for analysis purposes. Each film segment was transcribed with 88% point to point agreement on 11% of the data.

Results

The amount of time each child spent in a given category of interaction was converted to a percentage, and group differences were calculated using an arc sine square root transformation followed by an analyses of variance (ANOVA). All children spent the largest amount of time in

the peer interaction. A significant difference between groups was found with children with LI spending 54% of their time in this category as compared to 80% for TD peers. A significant difference was also found for withdrawal levels in both groups (42% for children with LI, 17% for TD peers). Thirty percent of the difference for both of these categories could be attributed to group. The data were further analyzed and each segment was labeled with a specific type of behavior. It was determined that the largest difference in behavior was in the rough and tumble play category, in which TD children had higher levels than children with LI. The type and presence of withdrawal among both groups was also analyzed. Relatively small amounts of time were spent in solitary-passive withdrawal, but children with LI spent significantly more time engaged in reticent and solitary-active behavior.

Conclusions

Children with LI spent significantly more time engaged in withdrawal than their peers. It is possible some children with LI were engaged in solitary-active withdrawal because they lacked a full understanding of social tasks. It was also speculated that an inability to control aggressive behaviors led these children to avoid rough and tumble plays with TD peers. It was interesting to note that children with LI did not choose activities in which language comprehension and production were less demanding. This finding suggests poor social competence of children with LI in naturalistic interactions within the school context.

Relevance to the current work

This study showed levels of withdrawal are indeed a problem for children with LI, and the hope is that intervention may reduce these levels. In the current study, levels of withdrawal in children with LI will be noted before and after a social communication intervention to see if a difference is noted following intervention.

Fujiki, M., Brinton, B., McCleave, C. P., Anderson, V. W., & Chamberlain, J. P. (2013). A social communication intervention to increase validating comments by children with language impairment. *Language, Speech, and Hearing Services in Schools, 44,* 3-19.

Purpose of the study

To determine the effectiveness of a social communication intervention in increasing the production of validating comments in school age children with language impairment. A literature review from 1975 to June 2008 revealed only 8 intervention studies were conducted with school age children, ages 6- 11, who had language impairment (LI).

Method

Participants. Participants included four children with LI, each of whom were enrolled in a mainstream classroom, performed at least 1 SD below the mean on a standardized language test, had typical vision and hearing, and did not have intellectual disability, behavioral disorder, or autism spectrum disorder as a primary diagnosis. Participant AA, a female age 7; 0, presented with high levels of proactive and reactive aggressive behavior as well as reticence and solitary active withdrawal. MD, a female age 6;4 was noted to have high levels of withdrawn behavior, including reticence and solitary withdrawal. Participant CS, a male age 6;5 produced high levels of proactive and reactive aggressive behavior, as well as solitary passive withdrawal. Participant JH, a female age 9;4 was found to have high levels of both reticent and solitary passive

withdrawal and could be reactively aggressive. Several typically developing (TD) children from a mainstream classroom with typical academic performance and no enrollment in special services who were the same grade level and gender as the child with LI were also included during baseline and follow-up procedures.

Procedures. Pre and post intervention measures of social competence, including a peer acceptance measure in which each child ranked how much they like to play with peers on a 3 point scale and friendship measures which involved having each child write their 3 best friends, were completed. Teachers also completed the Teacher Behavior Rating Scale (TBRS), a rating scale with strong psychometric properties from a large normative sample which measure a child's prosocial behaviors and impulse control/ likeability. The children with LI participated in three 20-minute baseline and follow-up cooperative learning task with two TD peers. The cooperative learning task was analyzed for production of validating comments (compliments, comments of consolation, offers to help, social acknowledgments, and positive comments on the actions of others) as well as negative comments (aggressive statements, denial to access of resources, exclusion or termination, moral disapproval, verbal disputes and complaints). Intervention consisted of 30 minutes of group instruction- 15 minutes interacting with two TD peers, and 15 minutes reviewing a video tape of peer interaction during which the clinician discussed the participant's use of target behaviors. Use of validating comments was tracked for TD peers as well, reflecting natural social behavior of a TD child.

Results

Participant AA consistently produced more validating comments during intervention than during baseline sessions, more validating comments in follow-up than baseline data, and reduced the number of negative comments used. Participant MD produced the same number of validating comments in baseline and intervention, less during follow-up, and saw no change in negative comment production. Participant CS presented with a modest increase in validating comments during intervention and follow-up sessions, and minimal decrease in negative comment production. JH maintained a high rate of production of validating comments throughout, and saw no change in negative comment production. JH was the only participant with a noticeable improvement on the TBRS following intervention.

Conclusions

Three of the children showed an increase in validating comments during intervention sessions as well as increased variety in the type of comment made. Despite the increase in validating comments, and in some cases the reduction of negative comments, three of the children did not see an improvement in peer acceptance measures and one saw a decline. One possible factor influencing these results is the short duration of intervention. The authors also speculate each child requires additional support to make progress with regard to social interactions.

Relevance to the current work

The current work is also a social communication intervention study and though the intervention method is different, similar measures (TBRS) are used in both studies. Information about withdrawal and sociability provide some background for the current study.

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

This study examined the extent to which withdrawn and sociable behaviors were found in children with language impairment (LI) as compared with typically developing (TD) peers. Withdrawn behaviors included solitary-active withdrawal, reticence, and solitary-passive withdrawal. Sociability included prosocial behaviors and likeability. The effect of gender and age was also examined.

Method

Participants. The study included a total of 82 participants, 41 of whom had LI, and 41 of whom were age-matched TD peers of the children with LI. Children included in the LI group received a score at least 1 SD below the mean on a standard language test, were enrolled in a mainstream classroom, lacked a diagnosis of emotional or behavioral disorders, had normal hearing, and did not have intellectual disability or developmental disorder based on psychometric evaluation. Children were also grouped by age in to two groups, a group of children 5-8 and a group of children 10-13. TD peers were selected randomly from a list age and gender matched classmates with typical academic performance.

Procedures. Following identification of the study participants, each child's classroom teacher completed the Teacher Behavior Rating Scale (TBRS), a scale which effectively captures subtypes of withdrawn, and sociable behavior. A teacher rating scale was selected as the assessment instrument in this study because teachers observe and interact with children for long periods of time and see critical behavior incidents. Teacher ratings are also far more efficient than observations. Psychometric properties of the TBRS for school-age children were obtained, and it was determined the TBRS was reliable and adequately separated the types of withdrawal.

Results

Five 2x2 ANOVAs were completed, with each withdrawn subtype and both subtypes of sociability serving as dependent variables. An ANOVA revealed a significant main effect for gender for solitary-active withdrawal and a significant interaction between group and gender. A significant main effect was also found of group for reticence. No other main effects or interactions were found for reticence. An ANOVA found significant main effects for solitary-passive withdrawal, with no other significant main effects or interactions noted. A significant main effect was present for group with impulse control/ likeability, as well as for prosocial behavior. A comparison between solitary-passive withdrawal and sociability was then completed, which found that solitary-passive withdrawal was not significantly correlated with prosocial behavior and was negatively correlated with impulse control/likeability. The mean scores of children with LI and TD peers revealed children with high levels of solitary-passive withdrawal also demonstrated poor sociability scores. General patterns of performance were also examined, and showed that significantly more children with LI performed poorly on four or five of the measures of social behavior.

Conclusions

        Based on the results of this study, solitary-passive withdrawal and reticence did not merge to become a single construct as speculated by some authors, and the greatest difference between TD children and children with LI was the amount of reticent behavior observed. This was a cause for concern, as reticence may elicit some negative attention and is linked to impulsivity, aggression, and peer rejection.

Relevance to the current work

        The current work focused on levels of withdrawal in children with LI, and the study conducted above provided valuable insights in to the nature of withdrawal as well as its manifestations in the behavior of 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,* 637-647.

Purpose of the study

        The first goal of the study was to examine differences in language, emotion regulation, and reticence between typically developing (TD) children and children with language impairment (LI). The second research purpose of this study was to determine the extent to which deficits in language and emotion regulation ability predict reticence in children with language impairment (LI).

Method

        Participants. A total of 86 children participated in this study. Forty-three children had LI, and 43 children were TD peers of the children with LI. The children with LI (5-8 years old or 9-12 years old) had an IQ above 80 ruling out intellectual disability, were diagnosed with LI by their school speech-language pathologist, scored at least one SD below the mean on a formal language measure, had unremarkable audiological status, and lacked a diagnosis of emotional or behavioral disorder. TD peers were randomly selected from a list of age and gender matched peers from the same classroom with no academic, behavioral, or communication deficits. Forty-two teachers also participated in the study by completing the Emotion Regulation Checklist (ERC) and the Teacher Behavior Rating Scale (TBRS) about each child participant.

        Procedure. Each child was administered the Comprehensive Assessment of Spoken Language (CASL), which includes subtests examining four aspects of language: lexical/ semantic, syntactic, supralinguistic, and pragmatic. The core composite score was utilized for the purposes of analysis. To determine each child's emotion regulation abilities, the child's teacher completed the ERC, which identifies both positive and negative aspects of emotion regulation. The TBRS was utilized to determine each child's levels of reticence.

Results

        A two-way multivariate analysis was completed to determine if the four Age x Language groups differed in measures of reticence, emotion regulation, and language (as measured by CASL composite scores). A significant main effect was found for language group. No other significant effects were found. Follow-up univariate tests were conducted, and significant language group main effects were found for reticence, CASL composite scores, and emotion regulation. A regression analysis was then completed, which determined that CASL composite

scores and emotion regulation were both significant predictors of reticence scores, accounting for 43% of variance in the participant's scores. Analysis of predictive power was then completed, which revealed that language level and emotion regulation were equally powerful predictors of reticence scores. Finally, analysis was completed to determine the two predictor scales differentially predicted reticence scores. No significant effects were noted, proving that Age x Language groups did not differ in the same way CASL and emotion regulation scores predicted reticence.

Conclusions

This study supported previous findings that children with LI have difficulty with language and emotion understanding, in addition to increased reticence, when compared with TD peers. The study results also showed that together, language and emotion regulation serve as powerful predictors of reticence in both TD children and children with LI. Based on these findings, it is probable that LI is not an isolated deficit but a rather a condition with several complex factors. This study also supported previous research showing LI cannot be fully understood without also examining emotional and social behavior.

Relevance to the current work

The current work focuses on levels of withdrawal in children with LI following a social communication intervention which focuses on several aspects of social communication, including emotion regulation. This study provides foundational information regarding language, emotion regulation, and reticence in children with LI and in TD peers.

Fujiki, M., Brinton, B., & Todd, C. M. (1996). Social skills of children with specific language impairment. *Language, Speech, and Hearing Services in Schools, 27,* 195-202.

Purpose of the study

This study sought to determine if there were differences in children with language impairment (LI) and typically developing (TD) peers with regard to general social skills, the number of peers the students interact with, and their satisfaction with social relationships.

Method

Participants. A total of 38 children between ages 8 and 12 participated in the study. Half of the students had LI and qualified for participation by scoring 80 or above on a nonverbal or performance IQ test, were diagnosed with LI using a formal language production/ comprehension measure, were placed in a mainstream classroom, enrolled in speech services, lacked hearing problems, and did not have a diagnosis of emotional or behavioral disorders. The remaining half were randomly selected age and gender matched peers of the child with LI. These students had normal academic performance, were not enrolled in special services, and had normal hearing.

Procedure. Each child's teacher completed the Social Skills Rating System- Teacher Form to assess the social skills and problem behaviors noted in each child. Social skills tested included cooperation, assertion, and self-control. The problem behaviors examined included externalizing and internalizing problems as well as hyperactivity. Each child also participated in an informal task in which they were shown 10 common activities and asked to identify children

they completed these activities with. The children in the study completed The William's and Asher Loneliness Questionnaire to determine their feelings of social satisfaction and loneliness.

Results

A t-test analysis was completed, revealing that TD children received significantly higher scores on the social skills portion of the SSRS-T and a significantly lower score on the problem behavior portion than children with LI. On the picture task, the average number of peer contacts for children with LI was 9.68 as compared to 12.95 for TD children, a statistically significant difference. Analysis of the questionnaire results were also statistically significant, with children with LI presenting with more loneliness than TD peers.

Conclusions

The findings of this study indicated that children with LI have decreased social skills and increased problem behaviors when compared to TD peers. They are also less satisfied with their peer relationships and have less contact with peers. These findings support previous research and show that there is a relationship between language, behavior, and social difficulties.

Relevance to the current work

This work provides background information about children with LI and their interactions in addition to addressing the relationship between language and social difficulties through a social communication intervention. The current work also examines the social interactions of children with LI through a teacher rating scale.

Gallagher, T. (1990). Clinical pragmatics: Expectations and realizations. *Journal of Speech-Language Pathology and Audiology, 14*, 3-6.

Purpose of the work

This study outlined pragmatic language models, the impact they had on the way language disorders are viewed, and both expected and realized changes that resulted from use of pragmatic language models.

Summary

Pragmatic language models characterize communicative competence, which is composed of language structural knowledge, prepositional knowledge, and conversational knowledge. This model started appearing in clinical literature as early as the 1970's. The model gained acceptance due the attention it received in language developmental literature, previous frustration with syntactic/semantic characterization of language difficulties, which failed to identify the depth and range of communication problems seen by speech therapists, and previous perceptions of a language disorder as a type of socially defined disability.

Pragmatic research regarding the impact of contextual variables on language use, the study of discourse specific phenomena, and studies of communicative intentions using a speech act analysis system influenced pragmatic language models, which in turn shaped clinical practice. First, the concept of a communication disorder expanded, widening the criteria for adults and children to receive services. It also impacted spontaneous language sampling procedures used during assessment by encouraging clinicians to obtain information about the client prior to language sampling to help individualize the language sample and to collect a

language sample in more than one context. This model also shaped the type of analysis performed once the language sample was obtained, increasing the number of behaviors observed. Sociometric scales, social interview scales, and other more informal ways of measuring peer acceptance were also adopted and used to identify, assess, and treat language and pragmatic difficulties.

Intervention approaches also changed. Clinicians often manipulated therapy contexts in such a way that needs, desires, and consequences of communication became feedback mechanisms. An increase in the use of routines, scripts, and formulaic utterances also occurred. Incorporation of memorized sequences into clinical practice as a method of achieving productive use and as a compensatory strategy was also a shift due to the pragmatic language model.

Adopting the pragmatic language model, however, did not resolve all difficulties with diagnosing and treating children with pragmatic and language disorders. First, pragmatic developmental norms, pragmatic skill profiles, and tests of pragmatic skills remained scarce. There is notable gap between the demand from pragmatic treatment materials and their ease of access. This may have been due to the less concrete nature of the pragmatic language model. It may also have been because of the inherently individualistic nature of pragmatic theories.

Conclusions

While pragmatic language models have significantly impacted clinical practice, there are still questions, such as what the relationship is between language disorders and interactional difficulties, which remain unanswered under this model. However pragmatic language models are an improvement compared to generative theories.

Relevance to the current work

This work provides information about the pragmatic language model currently accepted as well as information about past beliefs regarding language impairment.

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.

Purpose of the study

The purpose of this study was to complete an evidence-based systematic review (EBSR) of treatments developed for the purpose of addressing pragmatic language skills clinically. Within this EBSR, the effects of 11 independent variables (i.e. positive behavioral support, parent treatment programs, milieu teaching treatments, etc.) on treatment were examined.

Method

An extensive search of 22 electronic databases was conducted to find articles which met the following criteria: (a) were published in a peer reviewed journal from 1975 to June 2008, (b) were written in English, and (c) contained original data pertaining to one or more of the clinical questions. 14 studies were tentatively accepted, and following review by all members of the ASHA committee, two additional studies were included and 8 studies were excluded. The level of evidence provided in each study was then determined, with a point being administered for

study protocol, blinding, random allocation, treatment fidelity, significance, practical significance, and intention to treat.

Results
      A total of eight articles identifying the parameters for inclusion were included for further review. Only three of 11 variables were examined in these articles, which consisted of two "case studies", two "case series" studies, one group comparison, two single-subject design studies, and one pretest-posttest group design. Five of eight studies provided an adequate description allowing treatment to be replicated, and the number of participants in each study ranged from 1-20. Treatment goals varied, with both production and comprehension goals addressed. Some broad social communication goals (i.e. emotion understanding and prosody) were also noted. Of the eight studies examined, effect sizes could not be calculated for seven of the eight studies, though gains were noted by investigator-developed measures in each of the studies.

Conclusions
      There is a startling lack of literature regarding treatments to address pragmatic language skills, which makes it difficult for practicing clinicians to use evidence-based practice when working with clients with pragmatic language deficits. Further research is needed to replicate the findings of these studies, as well as research including larger sample sizes and a more homogeneous population. This study also raises questions about what constitutes good treatment research, particularly with regard to language use and social interaction. Future research should also focus on identifying what pragmatic practice is included in the scope of a speech-language pathologist, which methods best identify children with pragmatic difficulties, how pragmatic treatment can be conceptualized, and how progress is best documented.

Relevance to the current work
      The current study is a social communication intervention considers previously conducted social communication interventions. This EBSR provides information about all of these studies in a single article.

Guerra, J. G. S. (2014). The efficacy of social communication intervention on teacher report of sociability for children with language impairment. *All Theses and Dissertations.* Paper 4132. http://scholarsarchive.byu.edu/etd/4132

Purpose of the study
      The purpose of this study was to determine the effect of a social communication intervention on levels of social withdrawal in children with LI, as perceived by teachers.

Method
      Participants. This study included 5 participants ranging in age from six to ten. Four participants were female and one was male. All participants were diagnosed with LI and currently receiving language intervention. They also had IQ scores within normal limits and normal hearing.
      Procedure. Each participant received 20 intervention sessions ranging in length from 20-30 minutes. The focus of the sessions was emotion understanding. Stories requiring emotion understanding were read to the children and the clinician highlighted emotions characters

experienced and their sources. The clinician and child then enacted the story with appropriate props. Emotion picture cards were also utilized in various game formats, and a journal entry was completed at the end of the session in which the child and clinician documented the concepts discussed in the session. The primary outcome measure of the study was withdrawal. To measure withdrawal levels each child's teacher completed the TBRS prior to the child beginning intervention. At the conclusion of the intervention, teachers completed the TBRS again and the differences between the two scores were calculated to determine if withdrawal levels improved.

Results
　　Of the five participants, four participants demonstrated improved reticence ratings and the other remained stable. Solitary-active withdrawal ratings improved for three participants, remained stable for one participant and increased for one participant. Solitary-passive behavior ratings improved for three of the participants and remained stable for the other two. Overall, ten out of fifteen withdrawal subscales improved.

Conclusions
　　Positive improvements in withdrawal ratings were noted following the social communication intervention. Additional research is needed to confirm the intervention positively impacts withdrawal levels in children with LI, though these findings are promising.

Relevance to the current work
　　The current work continues the research which began in this study, utilizing the same social communication intervention, the same children as participants, and the children's initial TBRS scores.

Hart, K. I., Fujiki, M., Brinton, B., & Hart, C. H. (2004). The relationship between social behavior and severity of language impairment. *Journal of Speech, Language, and Hearing Research, 47,* 647-662.

Purpose of the study
　　The aim of this study was to determine the relationship between the severity of LI and social behaviors including withdrawal and sociability in an attempt to provide additional information regarding the relationship between LI and social competence.

Method
　　Participants. The study included 41 children with LI and 41 children with typically developing (TD) language. Two age groups were established, with the first group ranging from age 6-9 and the second from age 10-13. The children with LI had IQs in the normal range, were receiving speech-language pathology services for LI, scored at least 1 SD below the mean on the Clinical Evaluation of Language Fundamentals-Revised (CELF-R), had normal audiological status, and lacked a diagnosis of emotional and behavioral disorder. The TD peers were randomly selected from a list of same age and same gender peers in the same class as the child with LI. A total of 35 teachers were involved in rating the social behaviors of the children participating.
　　Procedures. Each child participant's classroom teacher completed the Teacher Behavior Rating Scale (TBRS) regarding their social behaviors. The TBRS is a 161-item rating scale

composed of two questionnaires with 16 items focusing on withdrawn behaviors and 13 items focusing on sociable behaviors. Although the TBRS is not nationally normed, test-retest reliability and construct validity were established and statistical analyses showed teachers discriminated well between withdrawn and sociable subtypes using the TBRS. Based on CELF-R scores, the children with LI were grouped in to moderate and severe groups. Children receiving a total language score (TLS) below 71 on the CELF-R, below 70 as an expressive score (ES) of the CELF-R and below 78 as a receptive score (RS) of CELF-R composed the severe group. The other children were in the moderate group.

Results

Two 3-way MANOVAs were completed to determine individual and interactive contributions of group, gender, and age to withdrawal and sociability. A MANOVA analysis of withdrawn behavior revealed a multivariate main effect for group, and univariate analysis found a significant main effect of group for reticence and solitary-passive withdrawal. A MANOVA analysis of sociable behavior also revealed a significant main effect for group. Univariate analysis found significant main effects of group for likeability and prosocial behavior, and a significant main effect of gender for prosocial behavior. The data were then analyzed to determine the relationship between severity of LI and social profiles. No significant group effect was noted for withdrawn behavior in the ES or TLS groups, though for RS a two-way Group x Gender interaction as well as an interaction between gender and group for solitary-active withdrawal were found to be significant. Analysis of sociable behavior revealed no significant TLS multivariate effects, significant multivariate main effects for gender and group for the RS, and significant multivariate main effects for ES. Univariate analysis showed significant main effects for likeability and prosocial behavior in the RS group, and for prosocial behavior but not for likeability in the ES group.

Conclusions

Higher levels of withdrawal, particularly reticent withdrawal, were found in children with LI compared to TD peers. This withdrawal was not mediated by strong sociable behaviors. These findings support previously completed research. Severity of LI appeared to be related to several sociable behaviors, but was minimally related to withdrawn behaviors. Severity was most closely related to prosocial behaviors, likely because many prosocial behaviors rely heavily on language.

Relevance to the current work

The current work utilized the TBRS to compare changes in withdrawn behavior of children with LI following participation in a social communication. This study provided valuable information regarding the presence of withdrawal in children with LI.

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,* 237-253.

Purpose of the study

The purpose of this study is to determine the relationship between non-affliliative conflict management strategies including aggression, passive withdrawal, and active withdrawal with regard to the likelihood of post-conflict reconciliation in boys with language impairment (LI).

Method

     Participants. A total of 31 preschool males, age 4-7, participated in the study. 11 participants had LI and 20 were considered typically developing (TD) peers. The boys with LI each attended a specialized language preschool for children with language disabilities. Specific test scores were unavailable, though standards for enrollment in the preschool closely paralleled those for the diagnosis of LI. TD peers were found through registered nurses administering standard assessments in child welfare centers of the Swedish social system. No language or related social difficulties were detected.

     Procedures. Stationary film equipment was placed in several rooms in each preschool with participating students and was started by educators during periods of free play. Conflicts were not provoked, nor were daily routines altered. The number of children present at any given time was fluid. Only conflicts between study participants and opponents age 4-7 (regardless of gender) were included in the statistical analysis.

Results

     An Analysis of Variance (ANOVA) was used to compare the groups and type of behavior, including repeated measures for within group analysis. Chronological age served as a dependent variable. There was a significant difference in the presence of withdrawn behavior in boys with LI as compared to TD peers. A significant main effect was also found in the increased ability of TD peers to reconcile following conflicts without withdrawal as compared to children with LI. Reconciliation rates were significantly higher in TL conflicts involving passive withdrawal than in LI conflicts with active withdrawal. Other comparisons between groups and within groups did not achieve statistical significance, though they were close.

Conclusions

     Boys with LI exhibited withdrawal in conflict management strategies at a higher rate than TD peers, and they also had lower reconciliation rates than TD peers. Post-conflict aggression exchanged in LI conflict was also more non-reciprocal and nonverbal than the aggression seen in TD boys. This study confirmed previous findings that children with LI are increasingly withdrawn compared to peers, and that the behavior profile of children with LI may not include aggression. Children with LI were also found to have more difficulty coping with aggressive management strategies.

Relevance to the current work

     The current work uses withdrawal as a measure of the success of a social communication intervention, and this article provides insight in to the effects of withdrawal on the behavior of children with LI as compared to TD children.

Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional-skills vital to learning. *Phi Delta Kappan, 94* (8), 62-65. doi:10.1177/003172171309400815

Purpose of the work

     This work provided information about the importance of social and emotional learning in schools, both for the teachers and the students. It also suggested promising interventions and ways of building social and emotional learning into daily activities.

Summary

In the school system, social and emotional competence was a key component for both teachers and students. It influenced classroom management, teacher-student relationships, the effectiveness of teachers' instruction, and even teacher burnout. Social and emotional competence included three areas of focus: emotional processes, social/interpersonal skills, and cognitive regulation. Social and emotional learning programs generally focus on the children, however this work argued that the social and emotional competence of teachers is equally, if not more, important. A teacher's social and emotional competence directly impacted the quality of teacher-student relationships, the model of social and emotional competence provided to children in the class, and the way in which a teacher organized and managed their classroom. This work also emphasized the importance of creating a supportive, stress free environment. When adults were stressed, their interactions with children became increasingly conflictual, they provided a poor model of emotion regulation, and cognitive regulation processes are impacted, disrupting attention, memory, and problem solving abilities. This pointed to a need for managing teacher stress for social and emotional learning programs to be successful.

To help support the development of teachers' social and emotional learning and stress management, several interventions were designed including emotion-focused training, relationship-building interventions, and interventions addressing mindfulness and stress reduction. Teachers were also encouraged to develop routines to guide their use of social and emotional skills and remind them of these skills. While these programs were helpful, it was important for teachers to make social and emotional learning a core part of all school work. This was done by building emotional awareness, incorporating reflection components into activities, managing stress, and creating an environment of continuous improvement.

Conclusions

Although interventions that focused on children were important, it was also important to train teachers to improve their social and emotional learning. This was largely because of the frequency of interactions between teachers and children and the model teachers provided to the children in their classroom.

Relevance to the current work

The current work addressed social and emotional learning in children with LI. This study stressed the importance of social and emotional competence in teachers as well.

Maggio, V., Granana, N. E., Richaudeau, A., Torres, S., Giannotti, A., & Suburo, A. M. (2014). Behavior problems in children with specific language impairment. *Journal of Child Neurology, 29,* 194-202.

Purpose of the study

The purpose of this study is to determine if a significant portion of children with language impairment (LI) also presented with behavior problems. The type of LI (expressive or mixed expressive-receptive) was also compared to the frequencies and types of behavioral problems.

Method

The study included 114 children identified with specific language impairment. Participants included children from a local clinic and speech-language pathologist's private practice. Each of the children were diagnosed with LI following administration of several standardized tests, including a nonverbal intelligence quotient test to rule out developmental delay and the Receptive One Word Picture Vocabulary Test to determine the level of each child's expressive and receptive language. Impairments were classified as either expressive or mixed expressive- receptive. The children's behavioral/ emotional problems were also assessed using the Child Behavior Checklist (CBC). The children ranged in age from 2.1 to 7.9 years old, and were placed in one of three age groups: 2-3, 4-5, and 6-7. Less school-aged children were identified, and there was a predominance of boys. The results of the CBC were utilized to determine the frequency with which children with LI also experienced behavior problems.

Results

The CBC revealed that approximately half of the participants in the study displayed behavior problems. This proportion was noted in all age groups and in both types of impairment. The same prevalence of males with LI was also noted in both types of impairment. Of the behavior problems noted, 80% of preschoolers demonstrated difficulty with internalizing problems, with 65% of internalizing problems taking the form of withdrawal. Externalizing problems were found in 57% of the preschool children. In school-age children, internalizing problems were also most frequently found, with 50% of the group demonstrating anxiety/ depression.

Conclusions

For many of the children in this study, behavior problems were associated with communication difficulties. The results of this study support previous research that LI may be associated with internalizing and externalizing behaviors. The study also confirmed that withdrawal is frequently noted in young children with LI and anxious/ depressed behavior is frequently noted in older children.

Relevance to the current work

The current work involved assessing behavior problems, such as withdrawal, in school-age children with LI. This study provided some insights in to the presence of behavior problems among children with LI as well as providing some additional information regarding the population of children with LI.

Marton, K., Abramoff, B., & Rosenzweig, S. (2005). Social cognition and language in children with specific language impairment (SLI). *Journal of Communication Disorders, 38,* 143- 162.

Purpose of the study

The study examined the social pragmatics, social self-esteem, and language skills of children with specific language impairment (SLI) from multiple perspectives. It also examined the relationship between each of these characteristics. There is a strong relationship between social competence and language competence, though it is unclear if language or social competence is the root cause, if either is. It is clear that language deficits do not account for all

social difficulties experienced by children with specific language impairment (SLI), leading many scholars to speculate social pragmatics may contribute to these social difficulties. Social competence includes several areas including social self-esteem and social knowledge, with self-esteem being the primary focus of this study.

Method

Participants. Two groups of 19 children (ten boys, nine girls) participated in this study. The students ranged in age from 7.00 to 10.0 year. One group of children consisted of children diagnosed with SLI by a certified speech therapist. Participants in this group also scored at least 1.5 S.D. below average on the Clinical Evaluation of Language Fundamentals-Revised, demonstrated IQ within normal limits, spoke English as their primary language, and were enrolled in mainstream education. The second group included age-matched peers of children with SLI who had typical language development (TLD). One parent of each child (the mother in most cases) and 22 English and/or classroom teachers participated in the study as well.

Procedures. The children in both groups were presented 23 hypothetical scenarios within seven different contexts. Pictures illustrating each scenario were provided to aid the children in visualizing each scenario. Upon the scenario presentation, questions which required the implementation of negotiation strategy were asked. Responses were scored based on pragmatic and linguistic accuracy using a points system. Each child also completed the Culture Free Self-Esteem Inventory (Battle, 1992), which consisted of 20 yes/no questions, to assess the child's academic and social self-esteem. This test was scored using the test protocol. One parent and the child's teacher each filled out a questionnaire which targeted 5 different areas of social and language competence. Questionnaires were scored using a 4 point scale.

Results

Mixed model ANOVAs were used to analyze differences between groups and within group variables. A mixed model ANOVA of group x language area revealed significant differences, showing children with SLI performed more poorly than children with TLD. The main effect for language areas was also significant. No group x language area interaction was found. When analyzing the data gathered about self-esteem, a priori analyses revealed significant differences between academic and social self-esteem in children with SLI. Significant group differences were noted for social, but not academic self-esteem. A two-way ANOVA (group x self-esteem) was close to statistical significance, though not statistically significant. The relationship between social pragmatic skills and self-esteem was negative in several participants when a qualitative analysis was performed. The SLI and TLD groups were significantly different on the parent and teacher questionnaire portion of the study. There was also a significant group x categories interaction on the parent questionnaire.

Conclusions

Both children with SLI and TLD children had poorer pragmatic skills than language skills, though those with SLI had more pronounced difficulties. It was also determined that children with SLI use more nonverbal coping strategies and had more difficulty recognizing the perspective and needs of other individuals. Although there were no differences in the academic self-esteem of children with SLI and TLD, children with SLI had decreased social self-esteem. Interestingly, children with the worst scores on the hypothetical scenarios task had the highest social self-esteem, showing significant social cognition deficits in children with SLI. Overall,

children with SLI were found to have a difficult time with social pragmatic behaviors, including negotiation, conflict resolution, and peer interaction. In peer interactions, students with SLI used increased nonverbal strategies compared to TD peers, one of which was passive/ withdrawn reactions.

Relevance to the current work

The current work examined the withdrawal of children with SLI following social communication intervention. This study outlined some factors in the behavior of children with SLI regarding social pragmatic skills and self-esteem.

Nelson, L. J., Hart, C. H., & Evans, C. A. (2008). Solitary-functional play and solitary-pretend play: Another look at the construct of solitary active behavior using playground observations. *Social Development, 17*, 812-831. doi: 10.1111/j.1467-507.2008.0047.0.x

Purpose of the study

The purpose of this study was to determine if there is a relationship between solitary-functional and solitary-pretend behaviors and indicators of social adjustment/maladjustment.

Method

Participants. A total of 357 preschool-age children (189 male, 168 female) participated in this study. The children were recruited from a university preschool and a head start program. Most of the children were from white, middle class families.

Procedure. The children were observed on the playground in 10 five-second intervals over several weeks resulting in a total of nine minutes of scans observation. Each interval was then coded with the child's predominant type of play (e.g., solitary-functional play, solitary-pretend play etc.) and maladaptive behavior (e.g., proactive aggression bullying, proactive instrumental aggression etc.)

Teachers also completed the TBRS, a scale used to assess forms of withdrawal and behaviors indicating maladjustment, because teachers saw behaviors not captured during the observation periods. The children in each class also participated in a peer sociometric rating task in which they decided if they liked to play with other children a lot, a little bit, or not very much.

Results

The results of *t* tests showed a significant difference in solitary-pretend play for males and females, and a correlational analysis found no relation between solitary-pretend and solitary-functional play. A hierarchal regression analysis found that gender was positively related to teacher-rated proactive aggression bullying, proactive instrumental aggression, physical aggression, instrumental aggression, venting, social behavior, cooperative rough and tumble play, and peer acceptance. Gender also accounted for a statistically significant amount of variance. Reactive aggression bullying was positively predicted by solitary-pretend play and negatively predicted by solitary-functional play. Solitary-pretend play also positively predicted instrumental aggression, victimization, active exclusion, and venting. Solitary-functional play negatively predicted assertiveness, social play, rough and tumble play, and peer acceptance.

Conclusions

This study found that solitary-functional and solitary-pretend play were not related and that solitary-functional play was positively associated with solitary-passive and reticent behavior while solitary-pretend play did not. This leads to the conclusion that solitary-functional and solitary-pretend play should not be aggregated to form the solitary-active withdrawal construct. The study also revealed that children with high levels of solitary-pretend play have a difficult time with peer relationships and are often excluded and victimized.

Relevance to the current work

The current work utilized the TBRS, which is used in this study, to measure withdrawal levels in children with LI. This study also provided valuable information about the solitary-active withdrawal construct, which is used as a measure of treatment effectiveness in the current study.

Redmond, S., & Rice, M. (1998). The socioemotional behaviors of children with SLI: Social adaptation or social deviance? *Journal of Speech, Language, and Hearing Research, 41*, 688-700. doi:10.1044/jslhr.4103.688

Purpose of the study

The purpose of this study was to outline two conceptual models, the Social Adaptation Model (SAM) and the Social Deviance Model (SDM) and determine which model best fits the relationship between socioemotional behavior and LI. The SAM viewed language differences between children with LI and their peers as the result of an interaction between language limitation, the social context and biases associated with limited verbal proficiency. The SDM viewed LI as a manifestation of underlying socioemotional traits.

Method

Participants. The study included 37 participants who were selected from participants in a longitudinal study. Of the participants, 17 were children with SLI and 20 were age-matched peers. In the group with SLI, six participants were female and 11 were boys.

Procedure. To measure the child's levels of socioemotional disturbance each child's parent completed the Child Behavior Checklist (CBL) and their teacher completed the Teacher Report Form (TRF). This was done at the age of six and again at the age of seven.

Results

A univariate ANOVA found that *T* score values for the SLI group were higher than *T* score values for age-matched peers, though mean ratings of *T* scores for both groups were within normal limits. Significant group effects were also found for withdrawal, social problems, attention problems, and internalizing scales. Group x respondent effects were significant for social problem and internalizing scales. Teacher ratings also indicated that children with LI had significantly more problem behaviors than parental ratings. A chi square analysis found that teacher ratings distinguished between children with LI and their peers more effectively than parent ratings. It also revealed poor reliability and stability in the identification of LI, even within a year time period. Significant respondent x round effects were also found for externalizing and social problem scales.

Conclusions

The results of this study indicate that children with LI were more like their typically developing peers than children with psychiatric problems and socioemotional problems were minimally associated with LI. The results of the study also suggested that the stability of ratings was poor and that teachers, not parents, rated the children as having increased behavior problems. The authors concluded that the findings supported the SAM in explaining the relationship between LI and socioemotional behavior. Based on this conclusion, treatment for LI should focus first on language skills, then focus on socioemotional competence as a secondary goal. Changing stereotypes associated with LI is also an important priority under this model.

Relevance to the current work

This study outlined important findings about the nature of LI and its treatment implications and provided foundational information for the current social communication intervention which focused on emotion understanding and was provided to children with LI.

Rubin, K. (1982). Nonsocial play in preschoolers: Necessarily evil? *Child Development, 53*, 651-657. doi:10.1111/1467-8624.ep8588517

Purpose of the study

The purpose of this study was to determine the correlation between social, social-cognitive, and cognitive competence and forms of nonsocial play identified in preschool children.

Method

Participants. The study's participants included 53 males and 29 females, all of whom were four years old. Participants attended preschools or day-care centers and were from lower middle class to upper middle class socioeconomic backgrounds.

Procedure. Each participant was observed during free play for six 10-second intervals over a period of 30 days for a total of 30 minutes of observation. These observations were coded using a checklist of cognitive play behaviors which included functional-sensorimotor play, dramatic play, and constructive play. Their play was also categorized using social participation categories which included solitary play, parallel play, and group play. A measure of sociometric popularity was obtained using a rating scale developed by Asher, Singleton, Tinsley, and Hymel (1979). Social-competence was determined by two of the child's classroom teachers who completed the Preschool Behavior Questionnaire (PBQ). The child's social problem solving abilities were measured using and the Preschool Interpersonal Problem-Solving (PIPS) test and the Social Problem-Solving Task (SPST) in which the child was provided a scenario with a social and asked to generate a solution. Impersonal problem solving abilities were also measured through Smith and Dutton's (1979) lure retrieval procedure.

Results

Solitary-functional play correlated negatively with the proportion of positive social interactions as well as the total number of interactions and peer conversations. A negative correlation was also found between solitary-functional play and the number of social overtures received by peers and sociometric ratings. Solitary-constructive play was negatively correlated with the number of social overtures received and the number of conversations held. Solitary-

dramatic play was negatively correlated with the number of positive peer interactions, the total number of interactions and perspective taking ability in the SPST. It was positively correlated to teacher ratings of social maladjustment. Parallel-constructive behavior was positively correlated with both sociometric ratings and problem-solving abilities. Parallel-dramatic play was associated with teacher rating of social maladjustment and was negatively correlated with positive social exchanges. The last type of behavior examined, unoccupied behavior, was negatively correlated with age, the number of peer conversations, and teacher ratings of maladjustment.

Conclusions

The type of nonsocial play the child engaged in was an indicator of social, social cognitive, and cognitive competence. Based on these results, preschool children who exhibit a large amount of solitary-functional play are considered "at risk". Solitary-constructive play was considered benign as it did not carry the same negative social impacts as solitary-functional play. Excessive solitary-dramatic play indicated poor social, social-cognitive, and cognitive competence. Children who engaged frequenlty in parallel-constructive behavior were good problem solvers and were well liked by peers. While parallel-dramatic play was not seen as desirable by teachers, this play was generally dependent upon the fantasy objects and play participants, indicating it may be appropriate in this setting. The data for unoccupied behavior indicate this behavior is relatively benign.

Relevance to the current work

The current work measured the social behaviors outlined in this study before and after a social communication intervention was provided to children with LI.

Stansbury, K., & Zimmermann, L. K. (1999). Relations among child language skills, maternal socializations of emotion regulation, and child behavior problems. *Child Psychiatry and Human Development, 30,* 121–142. doi: 10.1023/A:1021954402840

Purpose of the study

The purpose of this study was to determine the relationship between language delay and the ensuing risk for behavior problems. It also examined the emotion regulation strategies the child's mother used and the child's subsequent ability to use these strategies independently.

Method

Participants. This study included 78 mother-child pairs from the Los Angeles area. The children were preschool age, and the majority of mothers had a college education and were living with their spouse.

Procedure. A measure of each child's internalizing and externalizing problems was obtained by having the child's mother complete Achenbach's Child Behavior Checklist for Children. The Reynell Developmental Language Scale was used to obtain a measure of the child's expressive and receptive language abilities. The mother-child pair was placed in a room where they experienced two mildly frustrating situations. In the first situation the experimenter demonstrated the use of desirable toy, but removed part of the toy before the child could use it, requesting that the toys be cleaned up in two minutes. The child was also given a piece of candy and told they could only eat it if their mother agreed; the mothers were all told to deny the

child's request. All of the mother-child interactions were coded using the Functional Dyadic Emotion Regulation coding system, which included self-comforting/comforting, instrumental regulation, cognitive regulation, and distraction.

Results

Following ANOVA analysis, a main effect of expressive language on maternal use of comforting category was found. Significant interactions were found between the child's verbal comprehension and expressive language skills, the mother's use of distraction and physical comforting, and the diversity and number of emotion regulation strategies used by the mother. Mothers of children with receptive and expressive language scores that were both low or both high used less distraction to help their children regulate their emotions, and physical comforting was used more frequently by mothers of children with higher expressive language. Mothers of children with high verbal comprehension used fewer strategies, and mothers of children with high verbal comprehension but low verbal expression used more emotion regulation strategies.

A significant main effect was also found between verbal comprehension and the number of times mothers made demands without providing an explanation. Mothers of children with low verbal comprehension provided fewer reasons for their demands. These mothers used less distraction and cognitive strategies and more instrumental strategies.

Conclusions

This study suggested that child language abilities and the use of emotion regulation strategies by mothers are connected. If a child has low comprehension abilities negative situations are harder to resolve, resulting in mothers employing a variety of strategies to resolve the situation. Mothers of children with higher expressive language than comprehension also put forward more emotional regulation strategies.

Relevance to the current work

This work provides information about the relationship between language abilities and emotional regulation, providing foundational information for the current work in which an intervention focused on emotional regulation to children with LI was provided.

Stanton-Chapman, T. L., Denning, C. B., Jamison, K. R. (2012). Communication skill building in young children with and without disabilities in a preschool classroom. *The Journal of Special Education, 46,* 78-93.

Purpose of the study

This study investigated the effect of a social communication intervention focusing on peer-directed initiations and responses on the turn taking skills of children with and without disabilities. Within the context of the study, the ability of children to maintain gains in the classroom and the social validity of the findings were also examined. The social communication intervention utilized sociodramatic play as a method of promoting positive peer interactions and recognized that children with social communication disorders likely required explicit, structured, and intensive instruction to overcome obstacles including language deficits and poor peer relations.

Method

　　Participants. All 18 children in a preschool were screened to determine eligibility to participate in this study. Children were included if they were age 3, 4, or 5, received a score at least 1 SD below the mean on the Preschool Language Scale- Fourth Edition (PLS-4), were determined to have clinical levels of problem behavior by teachers, and were considered at risk for language delays, problem behavior, or poor social skills. Eight children met this criteria and were included in the study; four of these children had individualized education plans (IEPs). The children with IEPs were placed in a dyad with a child with a child who did not have an IEP.

　　Procedures. Baseline data were collected across five, 10-minute sessions in which each dyad played using five dramatic play themes, which were also used during intervention sessions. Intervention sessions were 20-25 minutes long, and were structured using a "plan-do review" sequence (Hohmand & Weikart, 2002). In the planning portion, the children were read a storybook matching the theme, received instruction regarding target words, and were assigned a role. The children also reviewed social communication strategies (initiating, responding, using names, and turn taking) and briefly practiced utilizing these strategies. In the play portion, the children played with the culturally appropriate, thematic toys while an interventionist recorded data on the use of vocabulary and social communication strategies. If the children were not interacting well, a hierarchy of prompts was used to encourage positive social interaction. In the review portion, the interventionist reviewed thematic roles, vocabulary use, and use of social communication strategies with the children. Follow-up sessions included observations of target children playing with the thematic toys previously used and interacting with peers in their classroom. The Peer Language and Behavior Code (PLBC) was also used to determine the nature of the children's verbal and nonverbal interactions. Social validity was determined by playing two randomly selected intervention tapes to three preschool teachers with master's degrees. The teachers rated each of the intervention tapes using a questionnaire regarding the acceptability of portions on intervention.

Results

　　Children in three dyads showed immediate increases in initiations receiving an immediate peer response. The fourth dyad showed an increasing trend in initiations. Although the data in two dyads were highly variable, all data points were above baseline levels. Using percentage of nonoverlapping data (PND) calculations, it was determined the social communication intervention was highly effective for all participants. Initiations which did not receive an immediate peer response showed no change from baseline to intervention sessions. It was also determined that the effects of the intervention did not generalize to the classroom during the second follow-up session. Using the scores from teacher questionnaires, the intervention was determined to be socially valid.

Conclusions

　　All participants showed an increase in initiations with an immediate peer response, demonstrating the viability of instruction of social communication skills to be provided concurrent to regular instruction rather than sequentially. Children without IEPs also benefited from this intervention, suggesting it is appropriate for all children to be taught social communication skills in order to improve social interactions. A systematic technique which incorporated several domains was found to be an effective way of teaching social communication skills.

Relevance to the current work

The current work is a social communication intervention geared towards improving the interactions of children with LI. The study uses a "plan-do-review" format, similar the format used in the current study.

Stanton-Chapman, T. L., Kaiser, A. P., & Wolery, M. (2006). Building social communication skills in head start children using storybooks: The effects of prompting on social interactions. *Journal of Early Intervention, 28,* 197-212.

Purpose of the study

This study compared the use of positive verbalizations, social pragmatic strategies, and targeted language forms during the play of children with language impairment (LI) following an intervention including prompts and an intervention without prompts. The effectiveness of the interventions was determined and the results were compared to determine if prompting is important for a successful intervention.

Method

Participants. Four children participated in this study. Each child was between 4;0 and 4;11, scored at least 1.5 SD below the normative mean on the total language score of the Preschool Language Scale-3 (PLS-3), and/or demonstrated clinical levels of problem behaviors on the Child Behavior Checklist. Four typically developing peers were also included and paired with a child with LI.

Procedure. An alternating treatments design was used to allow for comparison between the prompt and no prompt conditions of the study. Baseline data were collected to allow for comparison of the two conditions. Baseline measures included observations of the child playing with toys similar to those found in the intervention phase. The intervention had three portions: a plan portion, a play portion, and a review portion. In the plan portion the children were read a storybook, introduced to the pertinent toys and roles, and taught social pragmatic strategies. Each child was also assigned a role and with the help of the interventionist planned their play. The children then played with the thematic materials for 10 minutes. In the no prompt condition, the children played while the interventionist watched, and in the prompt condition the interventionist prompted the children when they were close to each other but not talking. Prompts were delivered using an outlined hierarchy. Following the play portion of the session, the interventionist reviewed the children's roles and use of specific language forms and pragmatic strategies. The sessions were then transcribed and coded using the Peer Language and Behavior Code for analysis.

Results

Three children showed no difference in positive verbalizations during both the prompt and no prompt condition, and one child produced an increase of positive verbalizations given prompts. Three of the children showed an increase in the number of positive verbalizations in play and in the use of pragmatic strategies from baseline to intervention. The other child did not produce an increase in either area. All children increased in their production of specific language forms, with two of the children using the specific language forms more frequently in the prompted intervention and two children showing no difference between the two.

Conclusions

The study indicated no difference between the prompt and no prompt conditions of this intervention. These findings differed from those of previously completed research, which showed that prompting improves social skills. This may be explained by the structure of the intervention, which was strong enough to change behavior even without prompts. The intervention resulted overall positive changes in social and language skills.

Relevance to the current work

The current work is a social communication intervention which is also based on the use of scripted narratives and uses the "plan, play, review" format. This study provides valuable information pertaining to the nature of social communication interventions.

Timler, G. R., Olswang, L. B., & Coggins, T. E. (2005). "Do I know what I need to do?" A social communication intervention for children with complex clinical profiles. *Language, Speech, and Hearing Services in Schools, 36,* 73-85.

Purpose of the study

This study explored the clinical viability of using an untested intervention in addressing the complex needs of a child with significant social communication deficits. The feasibility of the intervention and the success of measures used to show change were both examined.

Method

Participants. This study had only one participant, Paula, a 9 year old girl with fetal alcohol syndrome (FASD) and severe social communication problems secondary to this diagnosis. Paula's scores on the Wechsler intelligence Scale for Children-III (WISC-III) were borderline, and in the low average to average range on the Comprehensive Assessment of Neuropsychological Development of Children. Her language scores on the Clinical Evaluation of Language Fundamentals- Third Edition (CELF-3) were in the low average range. On the parent-completed SSRS, Paula had significantly fewer social skills and more problem behaviors than peers. In conversation with an adult, Paula also changed topics abruptly, provided inadequate information to the listener, and demonstrated poor pragmatic skills. During the social communication intervention Paula worked with a boy and a girl peer, both of whom also had a diagnosis of FASD.

Procedure. Paula was seen individually for two, 1-hour long sessions a week for two weeks, and participated in three 2-hour long sessions a week for a period of 4 weeks. In the intervention, Paula and two peers were provided social scripts including both adult and child roles, a checklist outlining a method for resolving social conflicts, and clinician modeling. The group was given 3-5 social scripts per session. Role play of each script continued until the children resolved the conflict. Paula was introduced to the checklist used in the group phase during her individual sessions and practiced role play with the clinician. Data on mental state verb use, strategies for obtaining a social goal, and appropriate consequences to actions were obtained using the checklist. False belief task probes and six follow-up questions to each task were also administered weekly for 3 weeks prior to intervention, during intervention, and for two weeks post intervention as a measure of change. The number of mental state verbs used was tracked during the false belief task probes as well.

Results

An increase in mental state verb use was not noted, though changes in length and complexity of utterance in response to the justification questions was noted. Paula's ability to generate multiple strategies when approaching a social interaction also increased from two to four between the first and last group session. Paula did require some prompting to identify these strategies.

Conclusions

The intervention was judged as feasible based on Paula's interest and enthusiasm regarding the study, increased linguistic complexity in answers to questions, and increased implementation of socially appropriate strategies. However, Paula's success was largely due to use of the checklist when prompted by the clinician. Paula did not independently use the checklist, indicating a need to target generalization in future studies.

Relevance to the current work

This study documents intervention efforts in a child with social communication deficits and addresses the effectiveness of the measures used to determine change in this population. The current study is a social communication intervention, and the sensitivity of the measures, some of which are used in the current study as well, will affect the outcome of the study.

Voegler-Lee, M. E., & Kupersmidt, J. B. (2011). Intervening in childhood social development. In P.K. Smith & C.H. Hart (Eds.), *The Wiley-Blackwell handbook of childhood social development* (2nd ed., pp. 605-626). Malden, MA: Blackwell.

Purpose of the work

This work provided information about interventions designed to promote social and emotional development in children from preschool age to age 11. It also discussed why social and emotional learning are important parts of the overall functioning of children and outlined three common intervention approaches to improve social and emotional competence.

Summary

Social and emotional competence include the ability to express and regulate emotions, establish positive peer relationships and problem solve in social situations. Social and emotional competence was divided in to five different areas: self-awareness, social awareness, self-management, relationship skills, and responsible decision making. Children who learned skills in these areas were more engaged in learning and were more motivated to learn; they also performed better academically and did not have as many problematic behaviors. It was important for children to begin learning these skills as early as possible because they provided the foundation for future social interactions which became increasingly complex as the child aged.

Effective intervention programs focusing on social and emotional learning which were examined in this work shared certain characteristics; they were validated in randomized control trials, implemented in the school setting, and were universal in nature, meaning they targeted all children with the purpose of prevention. Though there was some variation between these programs, they all focused on developing building blocks of social and emotional learning, such as cooperation and self-control.

Intervention was provided in three ways: direct instruction, teacher training, and parent education. Direct instruction occurred when a regular education teacher provided instruction to the class as a whole. This instruction followed SAFE principles. It was sequenced, included active learning, focused on providing adequate time for children to learn the skill, and utilized explicit goals. Group discussions, teacher modeling of new skills and role playing scenarios are also forms of direct instruction. Also, a key component of direct instruction was presenting children with opportunities in which they transferred their knowledge of these skills to real scenarios. The content taught in direct instruction focused on improving emotional knowledge and empathy, emotion regulation, and social problem solving.

Teacher training consisted of providing information about the theory and practice of using a social and emotional intervention program in their classroom. Professional development programs were also utilized in which teachers' behaviors, knowledge, beliefs and attitudes were the focus. These teacher trainings focused on building positive relationships with children and families, creating engaging and supportive environments, teach social and emotional skills, and creating individual interventions for children with the most problematic behaviors.

Parent training was similar to teacher training. Parents were also given visual reminders of effective methods of praise and taught ways to enhance their child's communication skills. Effective and appropriate discipline strategies were also taught to parents.

The most effective programs were implemented in the school environment, included staff participation and used individualized goals which met the students' needs. The teachers were also a key component in the effectiveness of the intervention. Motivated teachers who believed they could implement the program and successfully provided quality intervention in the appropriate quantity saw the best results. However, these programs were less effective with children with impaired communication abilities, indicating additional support was needed for these children.

Conclusions

Programs focusing on social and emotional learning play an important role in the success of children both academically and socially, and a need for increased use of these programs is indicated by the positive outcomes of these programs. Additional research is required to determine how social and emotional skills can be taught effectively to children with limited communication abilities.

Relevance to the current work

The current work utilized principles outlined in this work to provide social and emotional intervention to children with LI.

Weissberg, R. P., & Cascarino, J. (2013). Academic learning + social-emotional learning = national priority. *Phi Delta Kappan, 95*, 8-13. doi: 10.1177/003172171309500203

Purpose of the work

This work outlined the components of social and emotional learning and the importance of emphasizing social and emotional learning in schools in conjunction with academic learning.

Summary

Social and emotional learning refers to the way in which children and adults learn and apply knowledge, skills, and attitudes to emotion understanding and management, goal setting and achievement, the ability to empathize with others, the ability to establish and maintain positive relationships, and the ability to make responsible choices. These skills are critical for students to develop to become a good citizen, and a good worker; they teach students to succeed in a complex, globalized era.

Social and emotional learning is divided in to five main areas: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. By focusing on these areas, students' academic performance, social behaviors, and peer relationships improve. Specifically, social skills, positive self-image, academic achievement, mental health and prosocial behavior improve while antisocial behavior and substance abuse decreases.

To improve social and emotional learning, educators should teach, model, and facilitate the use of social and emotional skills by making them a part of the daily routine/classroom expectations and establishing a safe, engaging environment in which the students can learn. Social and emotional learning can be taught in conjunction with the common core.

Conclusions

It is important for educators to adjust their teaching styles to incorporate social and emotional learning because of the positive social and academic outcomes associated with programs emphasizing social and emotional competence.

Relevance to the current work

This work provided foundational information about social and emotional learning, which is targeted in the current social communication intervention.

Wigfield, A., & Wentzel, K. R. (2007). Introduction to motivation at school: Interventions that work. *Educational Psychologist, 42*, 191-196.

Purpose of the work

The purpose of this work was to examine interventions emphasizing motivation and discuss the importance of focusing on social aspects of motivation in intervention.

Summary

In recent years, motivation received increasing attention for several reasons. First, research made it clear that there was a relationship between motivation and achievement in all areas of life, including academics. This was likely because motivated students felt more confident when faced with academic challenges, persevered against challenges, and believed they would succeed. These students also tended to be more engaged in their learning. Research also showed that both academic and social goals were important for students to succeed academically, with social goals serving as the motivation for students to engage in the classroom and develop positive relationships with both peers and teachers.

A second reason for an increase in attention to motivation was the increasing evidence that social and academic functioning were directly impacted by a student's motivation. As mentioned above, a child's social goals, such as behaving cooperatively and responsibly,

impacted the child's ability to engage in classroom learning, thereby impacting the academic skills of the child.

A third reason motivation and its intervention became a more prominent topic was that researchers gained a greater understanding of ways in which teachers and other educator can influence students' motivation. Research suggested that as teachers emphasize hard work, improvement, and persistence instead of ability children's attributions for their performance are more positive.

Studies examining the outcomes of motivation interventions were outlined, and the results indicated promoting positive social interactions and relationships was an effective way of improving academic motivation and achievement. Each of the works in which interventions were implemented also had five themes, including the importance of the intervention efforts being guided by a theoretical framework, the need for interventions to be specifically developed when used with ethnic minorities, the role of positive social and emotional relationships between children, their teachers and their peers in motivating children to achieve academically, design and measurement issues pertaining to evaluating interventions, and the importance of interventions being tailored to specific developmental periods.

Conclusions

Motivation and social and emotional learning were both important components of a child's academic success and success in social situations within the classroom. When children had appropriate social goals, they were more motivated to learn. Interventions were also outlined which improved motivation and positively impacted students' academic achievement.

Relevance to the current work

In the current work a social communication intervention was implemented to improve social and emotional learning in children with LI. This study emphasized the importance of considering motivation in designing such interventions.

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
J.S.	5:11	25	9	9	2	7
M.K.	6;8	1	1	1	2	14
Ad.K.	7:11	25	16	50	25	23
	Age	Word Classes	Semantic Relationships	Formulated Sentences	Recalling Sentences	Core
S.S.	9;7	16	2	1	2	2
Al.K.	10;1	16	5	9	16	8
Jr. S.	11;3	.4	2	1	.4	.2

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

Appendix C

Sample Story Book and Script

Llama Llama and the Bully Goat
by Anna Dewdney

Concepts to stress

1. Emotions experienced
2. Reflecting on how one feels in situations where there is risk
3. Emotions experienced when something negative happens
4. What constitutes cooperative play
5. It is fun to do things with others--cooperation
6. Prosocial behavior: thinking about how someone else feels—respect for others
7. Strategies when experiencing aggression from others
8. Forgiveness
9. Structural: complete simple sentence forms, complex sentences with causal connections (but, if, so, because)

Introduction

We are going to read a book about Little Llama. In this book, Little Llama has a problem with one of the kids in his class. Think about how Little Llama feels. Think about how the other kids feel. Let's see what Little Llama does about the problem.

Note: Repeat the emphasis as appropriate on feelings as the story telling proceeds, eg. "Let's think about how these kids feel? Tell me how they feel."

Title Page

Look at picture on cover

I wonder what this book is about?

What do you think? (Let child look at cover.)

Now let's look at it together.

Little LLama is going to have some problems in this book. Let's see how Llama feels about it. Let's see what Little Llama does to solve the problems,

Page 1-2

Read (feel free to read the words in the book or to tell what is happening according to what engages the child more)

Look at what is happening here. Where is Little Llama today?

What are these kids doing?

Are they having fun?

How do they feel?

They feel happy because it is fun to work together.

Look at this kid. His name is Gilroy Goat.

Look at Gilroy Goat's face. How does Gilroy feel?

Do the other kids feel sad or mad? Gilroy Goat feels different than the other kids do.

The other kids are happy but Gilroy Goat does not feel happy.

Why do you think Gilroy feels sad/mad?

What do you think is going on with Gilroy? (possible sources for his discontent)

Page 3-4

read

What are all the kids doing?

Look at Little Llama, what is he doing? How does he feel about it?

(Point out the faces—discuss how the other kids feel)

Are these kids having fun? Why are they having fun. (Stress it is fun to do things together.)

Wait, look at Gilroy. Is Gilroy Goat singing? How does Gilroy feel?

Gilroy Goat is not singing with the other kids. Hmmm. I wonder how he feels about signing with the other kids.

Page 5 (cover page 6)

Read

What is going on here?

What is Little Llama doing?

What is Gilroy Goat doing?
Gilroy Goat is pointing and making fun of Little Llama

How would that make Little Llama feel?

If Gilroy Goat makes fun of Little Llama, Little Llama will feel sad.

Page 6

Read

What is going on here.

Gilroy Goat is pointing and making fun of the other kids.

How does Little Llama feel?

Gilroy Goat is making fun of Little Llama, so Little Llama feels sad.

How about the other kids? How do they feel? (Look at the cat—emphasize surprise—bad surprise—startled, shocked)

Why do you think that Gilroy Goat is making fun of the other kids?

Gilroy is acting mean, isn't he? Why do you think he is doing that? (This is just speculation—let the child know that we don't really know—no logical source of his negative emotion.)

Page 7 (cover 8)

Read

What Little Llama doing? (singing)

What is Gilroy Goat doing?   (Making fun of Little Llama)

How does Little Llama feel when Gilroy makes fun of him? (surprise—bad surpise, not happy surprise, shocked, startled)

Has anyone ever made fun of you? How did you feel when someone made fun of you? (Share a personal example-model complex form "When my brother made fun of me, I felt sad –for older kids you can introduce other words like embarrassed, humiliated)

But Little Llama keeps singing. Then what does Gilroy Goat do? (calls him a bad name)

How does Little Llama feel when Gilroy Goat calls him a bad name?

Little Llama is sad when Gilroy calls him a bad name.

Has anyone ever called you a bad name? How did you feel? (share an example if appropriate)

Page 8

Read

What is happening here?

What does the teacher say? How do you think the teacher feels?

The teacher wants Gilroy to stop being mean.

Why does the teacher want Gilroy to stop being mean? (When Gilroy is mean, the other kids feel sad.)

Page 9-10

Read

What are the kids doing (talk about different play groups)?

How do they feel?

Are they having fun?

They are playing together. They are taking turns and playing together. They are cooperating. It is fun to cooperate when you are playing.

Oooh, look at Gilroy. How does Gilroy feel?

Why do you think Gilroy feels, mad (grumpy, mean, etc.)?

What do you think he will do?

Page 11-12

Read

Oh, what does Gilroy do here?

(Look at each play group)

Play group 1, (Gilroy stand in Fuzzy's way). What is Gilroy doing?

What does Little Llama ask? (Do you want to play)

Little Llama is being nice to Gilroy. Little Llama is being friendly.

But what does Gilroy do? (bleats and kicks sand)

How does Little Llama feel when Gilroy kicks sand on him?

(repeat with other play group scenes)

How do the kids feel when Gilroy is so mean?

The kids feel (sad/mad/scared) when Gilroy is mean.

Is Gilroy cooperating? (No!)

Page 13-14

Read

Oh my goodness, look at Gilroy Goat!

What is he doing? (Discuss each picture)

How does he feel? (Mad, mean, grumpy, etc.)

Why is he acting so mean? (We don't really know.)

Have you every seen anyone act like this? How did it make you feel?

Page 15-16

Read

What is a bully? (Someone who is mean just to me mean—someone who likes to be mean—someone who is mean to others)

Look at Little Llama and Nelly. How do they feel? (Scared)

Little Llama and Nelly feel scared because Gilroy is so mean.

What do you think they will do?

What would you do?

 Page 17-18

Read

What does Little Llama do?

Little Llama tells Gilroy to stop being mean.

Look at Nelly and Little Llama. How do they feel? (mad/determined [define])

If someone is a bully, what could you do? (Tell them to stop, then tell someone who can help.)

Page 19-20

Read

Look at Gilroy Goat. What is he doing? (yelling, throwing sand, etc.)

What do Little Llama and Nellie do?

Look at their faces (p. 19). How do they feel?

Look at this page (20). What do they do?

Why do Little Llama and Nellie tell their teacher that Gilroy is being mean?

They tell their teacher because they are mad and scared of Gilroy.

They tell their teacher because they need help.

What do you think will happen?

Page 21 (cover 22)

Read

What does Gilroy do? (fusses, frowns, pouts)

What does the teacher do?

What do you think the teacher says to Gilroy?

How do you think Gilroy feels? Why?

Page 22

Read

What happens here?

Why is the teacher sitting by Gilroy. (She is sitting by Gilroy to make sure he stays in time out.)

How do you think Gilroy feels?

Have you ever been in time out? How did you feel?

Page 23-24

Read

What happens here?

The teacher gives Gilroy another chance to be nice.

How do Little Llama and Nellie feel about that?

Is Little Llama ready to give Gilroy another chance? (Little Llama is ready to share with Gilroy.)

Nellie and Little Llama are playing with Gilroy.

Look at their faces. Do you think that Little Llama and Nellie are still mad at Gilroy?

Do you think that Little Llama and Nellie are still scared of Gilroy?

Little Llama and Nellie forgive Gilroy.

How does Gilroy feel?

Is Gilroy cooperating now? Nellie and Little Llama are happy because Gilroy is cooperating.

Gilroy is not being a bully now.

Page 25-26

Read

What is happening now?

How do the kids feel? Why?

What about Gilroy?

Gilroy feels happy because he is singing with the other kids.

Gilroy is not being a bully now.

Page 27 (cover 28)

Read.

What is happening now?

How does Little Llama feel?

How do Gilroy and Nellie feel?

Page 28

Read.

How does Little Llama feel?

How does Gilroy feel?

Little Llama and Gilroy are happy because they are friends now.

Gilroy is being nice now, so Little Llama forgives him. Little Llama forgives Gilroy for being mean.

What do you think Gilroy will do tomorrow?

Friends are nice to each other. Friends are not mean to each other.

I hope that Gilroy is nice again tomorrow.

Summary

Think about happened in this book? What problem did Little Llama have? How did he feel about that? What did Little Llama do about Gilroy Goat?

What does "cooperate" mean? (Define) Friends cooperate with each other. It is fun when kids cooperate to play together.

If someone is a bully, what could you do? (e.g., Tell them to stop, then tell someone who can help.)