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The Influence of Language Production, Comprehension, and Pragmatic Judgment  
on Solitary-Passive Withdrawal in Children

by

Rachel Johnston

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

Master of Science

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## ABSTRACT

### The Influence of Language Production, Comprehension, and Pragmatic Judgment on Solitary-Passive Withdrawal in Children

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Master of Science

Previous studies examining withdrawal in children with *language impairment* (LI) have found that these children are more socially withdrawn than their typically developing peers. It seems reasonable to assume that a causal relationship exists between language deficits and withdrawal. However, there is growing evidence that different subtypes of withdrawal have varying social consequences and language may not be closely linked to each subtype. In the present study, subtests from the *Comprehensive Assessment of Spoken Language* (CASL; Carrow-Woolfolk, 1999) were used to evaluate specific language skills and the *Teacher Behavior Rating Scale* (TBRS; Hart & Robinson, 1996) was used to evaluate solitary-passive withdrawal behaviors of 34 children with LI and 34 children with typically developing language. These children were matched for age (ranging from 6;11 to 11;0) and gender. No significant difference in solitary-withdrawn behavior was found between groups of children with language impairment and children with typically developing language. There was also no significant relationship between the amount of solitary-passive withdrawal and the CASL subtest scores. The results suggest that low language ability may not be directly related to solitary-passive withdrawal. Rather, the relationship between language ability and solitary-passive withdrawal is complex and is likely influenced by other factors.

Keywords: withdrawal, solitary-passive withdrawal, language impairment

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## Introduction

One common characteristic of children with *language impairment* (LI) is their difficulty with social interaction. For example, these individuals are usually poorly accepted by peers and tend to lack meaningful friendships. Children with LI also struggle to access on-going interactions appropriately, which is a fundamental skill needed for meeting new people and developing relationships (e.g., Conti-Ramsden & Durkin, 2007; Craig & Washington, 1993; Fujiki, Brinton, Hart, & Fitzgerald, 1999). These children frequently demonstrate social withdrawal, which is one factor that impacts their ability to have successful interactions. For example, Conti-Ramsden and Botting (2004) found that children with *specific language impairment* (SLI)<sup>1</sup> were less popular were more likely to be victimized than their peers, according to teacher ratings. These findings were consistent with the teacher ratings reported by Fujiki, Brinton, Morgan, and Hart (1999) which showed that children with LI were more withdrawn than their peers with typically developing language.

Psychologists have divided social withdrawal into several different subtypes (see Asendorpf, 1991; Coplan & Rubin, 1998; Coplan, Rubin, Fox, Calkins, & Stewart, 1994; Harrist, Zaia, Bates, Dodge, & Pettit, 1997; Nelson, 1998; Rubin, 1982; Rubin & Asendorpf, 1993; Younger & Daniels, 1992). *Solitary-passive withdrawal* is the subtype of interest in this study. Solitary-passive withdrawal refers to the exploration of objects during a constructive activity while playing alone (e.g., building a sand castle, creating artwork; Coplan & Rubin, 1998; Rubin,

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<sup>1</sup> The terms specific language impairment (SLI) and language impairment (LI) are used as synonyms referring to children with language problems in the face of relatively typical growth in other areas of development. In cases in which authors used one term or the other, the authors' original terminology is retained.



1982). Children who demonstrate solitary-passive withdrawal seem to prefer solitude over socialization.

The different subtypes of social withdrawal have varying social consequences—some more severe than others. Solitary-passive withdrawal in early childhood is typically not concerning to parents and teachers; as a matter of fact, teachers may see it in a positive light as a child engages in constructive activity without misbehaving or disrupting other students (Rubin, 1982). However, the risks of solitary-passive withdrawal continue to be a subject of debate among researchers. Some have argued that if a child spends a considerable amount of time playing alone he or she is missing out on crucial social experiences. Furthermore, research suggests that solitary-passive withdrawal and reticence gradually merge (Asendorpf, 1991; Asendorpf, 1993; Coplan et al., 1994; Hart, Fujiki, Brinton, & Hart, 2004). In some cases, this merging may seem to be constructive. Children who display reticence, a relatively negative type of withdrawal, may eventually display a high frequency of solitary constructive behaviors. For example, Coplan and Rubin (1998) found that with increasing age, children who are reticent learned to cope with their fear and uncertainty in social situations by turning to secluded constructive play. This means that children who are seen as reticent in mid-late childhood are likely to also exhibit solitary-passive withdrawal.

The fact that solitary-passive withdrawal merges with reticence can also be problematic. Perhaps children who are reticent in mid-late childhood are likely to resort to solitary-passive withdrawal because of peer rejection; they are left with no other social options. In early childhood and middle school, reticence is associated with anxiety in novel social situations, social maladjustment, peer rejection, and negative emotionality leading to self-doubt (Asendorpf, 1991; Coplan et al, 1994; Coplan & Rubin, 1998; Hart et al., 2000; Rubin, 1982; Rubin, Coplan,

Fox, & Calkins, 1995). It has repeatedly been shown that reticent behavior is viewed negatively by teachers, parents, and peers (Coplan & Rubin, 1998; Hart, Yang, Nelson, Robinson, Olsen, & Nelson, 2000; Nelson, 1998). If children who display solitary-passive withdrawal become more reticent this can have negative consequences. For example, Coplan et al. (1994) argued that reticence and solitary-passive withdrawal become “a single behavioral index of wariness, fearfulness, and social anxiety in the middle and later years of childhood” (pp. 136). This withdrawn behavior and lack of peer acceptance can lead to serious difficulties in later life including elevated rates of mental illness, school drop-out, and criminal behavior (Parker & Asher, 1987).

Although all children display some withdrawn behaviors, children with LI tend to be significantly more withdrawn than their peers (Fujiki, Brinton, Morgan & Hart, 1999; Hart et al., 2004). In looking for the source of withdrawn behavior in children with LI, the most obvious reason is problematic language skills. Some researchers have hypothesized that children who do not have sufficient language abilities have difficulty talking with peers and therefore spend less time engaged in interaction. Social interaction may prove challenging for them because, they have trouble expressing themselves clearly. For example, Redmond and Rice (1998) have argued that children with LI adapt to their deficits by avoiding social interactions in which their linguistic weaknesses will be highlighted. After these children have several unsuccessful interactions with peers, they may consciously avoid social situations altogether. Redmond and Rice reason that if these children were to improve their language abilities, they would be more likely to participate appropriately in situations which demand verbal communication and be less likely to withdraw.

Although the link between withdrawal and language ability seems reasonable, documentation of this relationship has been elusive. Neither Fujiki et al. (1999) nor Botting and Conti-Ramsden (2008) found a correlation between severity of LI and severity of withdrawn behavior. One reason that it has been difficult to establish a relationship between withdrawal and language is the possibility that not all aspects of language impact withdrawal uniformly. Previous studies have generally used a composite score to represent language ability. However, it is possible that a specific aspect of language is more influential than others and using the composite score would mask this information. If children with LI are indeed withdrawing from their peers because they lack the language skills necessary to succeed, a clear relationship between decreased language performance and increased withdrawal would be expected.

The following study examines the extent to which solitary-passive withdrawal is related to three specific areas of language as measured by standardized testing: comprehension, production, and pragmatics. This question is examined by considering the extent to which solitary-passive withdrawal is related to the syntactic construction, paragraph comprehension, and pragmatic judgment subtests of the *Comprehensive Assessment of Spoken Language* (CASL).

## Literature Review

This review includes a definition of the three main subtypes of social withdrawal (reticence, solitary-active and solitary-passive). The remainder of the review is focused on solitary-passive withdrawal in children with typically developing language and in children with LI, including the benefits and the risks associated with this subtype of withdrawal.

### *Types of Social Withdrawal*

In the social psychology literature, withdrawal is a general term that has been applied to a wide range of behaviors. For example, Rubin, Burgess, and Coplan (2002) note that terms such as social withdrawal, isolation, shyness, and inhibition have historically been used interchangeably. Recognizing the considerable variability within the broad domain of social withdrawal, researchers have attempted to define specific subtypes of withdrawn behavior. Commonly identified subtypes of withdrawal include reticence, solitary-passive withdrawal, and solitary-active withdrawal (e.g., Coplan & Rubin, 1998; Coplan et al., 1994; Harrist, Waia, Bates, Dodge, & Pettit, 1997; Nelson, 1998; Rubin & Asendorpf, 1993; Younger & Daniels, 1992). Each of these subtypes is discussed below, although this investigation focuses specifically on solitary-passive withdrawal.

#### *Reticence*

The type of withdrawal that has received the most attention in the social psychology literature is reticence. It has also been referred to as “passive anxious” withdrawal (Harrist et al., 1997). Reticent behavior includes prolonged looking at peer(s) without joining in the play and/or being unoccupied with another task or activity (Asendorpf, 1991; Coplan et al., 1994; Nelson, 1998). A child who is reticent may look longingly at a group of children playing together, but will not attempt to join the play. He or she may stand by and observe an activity, but not get directly involved with the play partners. There is abundant evidence suggesting that reticent

behavior has negative social effects such as peer rejection (Hart et al., 1998). Reticence is associated with wariness in new situations, anxiety, and emotion dysregulation (Coplan et al., 1994; Nelson, 1998).

#### *Solitary-Active Withdrawal*

Rubin and Asendorpf (1993) describe solitary-active withdrawal as behavior that causes a child to be isolated by peers. Traditionally, this subtype has been characterized by two behaviors: repeated sensorimotor actions and/or solitary dramatization in the presence of peers (Coplan et al., 1994; Rubin, 1982). Because several studies failed to find an association between these two characteristic behaviors (Coplan & Rubin, 1998; Hart et al., 2000), this type of withdrawal has been split into two different subtypes: solitary-functional play (sensorimotor actions with or without objects) and solitary-dramatic or pretend play in close proximity to peers (Nelson, Hart, & Evans, 2008). Both subtypes of solitary-active withdrawal are associated with social maladjustment and lack of peer acceptance (Hart et al., 2000; Rubin, 1982).

#### *Solitary-Passive Withdrawal*

Solitary-passive withdrawal is a subtype of withdrawal that is referred to by many names throughout the literature. It has been labeled as “passive isolation” (Rubin & Mills, 1988), “passive solitude” (Rubin, Hymel, & Mills, 1989), “passive withdrawal” (Rubin & Asendorpf, 1993), and “unsociable behavior” (Harrist et al., 1997). This behavior consists of constructive activity by oneself and/or exploring something alone (Asendorpf, 1993; Coplan et al., 1994; Rubin, 1982). Sometimes children who frequently display solitary-passive withdrawal are described as being object-oriented (Asendorpf, 1990; Rubin, 1982). These children voluntarily remove themselves from their peer group (as opposed to being isolated by their peers) and seem to lack motivation to engage in play with others. Initially, it was believed that solitary-passive withdrawal was a “benign” subtype (Rubin, 1982), but further investigation has suggested that

this type of withdrawal may lead to internalizing problems (e.g., anxiety and depression) in mid-late childhood (Rubin & Mills, 1988; Younger & Daniels, 1992).

### *Profiles of Solitary-Passive Withdrawal Based on Language Ability*

All three subtypes of withdrawn behavior have important implications for social adjustment. The remainder of the review focuses on solitary-passive withdrawal, which is the focus of the present investigation.

### *Children with Typically Developing Language*

Researchers have long been interested in knowing if withdrawn behaviors in childhood are detrimental to a child's long-term well-being. For example, does early withdrawal cause the child to miss critical experiences that are important to social and emotional development? How do peers react when a child plays alone frequently? There is a significant amount of literature that outlines the negative impact of both solitary-active withdrawal (Hart et al., 2000; Rubin, 1982; Rubin & Clarke, 1983) and reticence in childhood (Coplan & Rubin, 1998; Harrist et al., 1997; Rubin, 1982). Solitary-passive withdrawal, on the other hand, is the only one of the three subtypes that has been associated with both positive and negative outcomes.

*Benefits of Solitary-Passive Withdrawal.* This subtype of withdrawal in young children is generally viewed by parents and teachers as harmless and may be reinforced (Rubin, 1982). Since the child is participating in a constructive activity and is not misbehaving or disturbing others, solitary-passive withdrawal is not only accepted but may be encouraged (Coplan et al., 1994).

In early childhood, solitary-passive withdrawal is positively associated with good problem solving skills, task persistence, and peer popularity. For example, Rubin (1982) observed 142 four-year-olds for 30 days and coded their behavior into the three subtypes of withdrawal. He also collected ratings from peers that indicated positive, negative, or neutral

popularity for each child as well as obtaining teacher ratings of maladjustment. To measure their problem-solving abilities, Rubin assessed each child by presenting them with both object-oriented and people-oriented scenarios to manage. Rubin concluded that solitary-constructive nonsocial activity was harmless and parallel-constructive play was predictive of competence. He found that young children who often play by themselves performed well on both social and non-social problem-solving tasks. The nonsocial activity Rubin observed turned out to be positively associated with peer popularity and teacher ratings of social competence. These outcomes may be related to the age of the subjects. Teachers and peers do not view the solitary play of an older child (e.g., a child in fifth grade) as typical, but may not consider it unusual for a younger child (e.g., a child in first grade) to choose to play alone (Younger & Daniels, 1992).

Other studies show that although children who demonstrate solitary-passive withdrawal may suffer social consequences (e.g., peer rejection, externalizing or internalizing problems), those consequences may not be as negative as those associated with solitary-active withdrawal or reticence. Rubin et al. (1995) used maternal ratings and laboratory observation to assess the emotion regulation of children who frequently played alone:

Children who were low in social interaction, but good emotion regulators appeared to suffer no ill effects of their lack of social behavior. When playing alone, they were productive engagers in constructive and exploratory activity. They did not display anxious behaviors in the peer group, and they were not rated by parents as having socioemotional difficulties of any sort. (p. 59)

In other words, good emotion regulation seemed to mitigate the effects of solitary-passive withdrawal. On the other hand, Rubin et al. found that reticent children who did not regulate

emotion well in interaction demonstrated externalizing behaviors according to parent, teacher, and self-report.

Coplan and Rubin (1998) stated that solitary-passive withdrawal was not associated with concurrent indices of maladaptation among preschool-aged children. In other words, this type of withdrawal was not associated with variables that potentially cause maladjustment (e.g., shyness, negative emotionality, internalizing, and externalizing problems). These findings were consistent with Rubin (1982) and Coplan et al. (1994). One explanation for this is that solitary-passive withdrawal may be representing social disinterest (Coplan et al., 1994), rather than an inability to successfully socialize due to other problems.

*Risks of Solitary-Passive Withdrawal.* Although much of the literature supports the idea that solitary-passive withdrawal may not be harmful, some researchers have found results that disagree with this conclusion (Rubin & Mills, 1988; Rubin et al., 1989). For example, Coplan and Rubin (1998) collected information from teachers about externalizing and internalizing problems in 337 preschoolers using the Preschool Play Behavior Scale (PPBS) and the Preschool Behavior Questionnaire (PBQ). Their analysis showed that displaying solitary-passive withdrawal was moderately but significantly associated with teacher-rated internalizing problems. Similarly, Rubin et al. (1989) conducted a longitudinal study of 111 kindergarteners' withdrawal patterns and subsequent internalizing problems (i.e., self-perception of competence, feeling of general self-worth, loneliness, depression). They also found significant relations between passive social withdrawal in kindergarten and second grade and subsequent internalizing problems in the fourth and fifth grade. Rubin and Mills (1988) examined the peer and teacher assessments of second graders and fifth graders and concluded that indices of passive isolation in second grade tended to predict depression and loneliness by fifth grade.



In most cases, the studies which show negative outcomes of solitary-passive withdrawal investigated older children (mid to late childhood). As children enter mid-childhood, solitary-passive withdrawal is viewed negatively by peers. Younger and Daniels (1992) asked 88 children in first, third, and fifth grade to nominate a few of their peers for items on the Revised Class Play (RCP) in order to identify children perceived by their peers to be withdrawn or aggressive. They also interviewed each of the participants to determine their reasons for the nominations. The results indicated that solitary-passive withdrawal was viewed negatively by peers in both early and middle childhood. Younger and Daniels concluded that although somewhat accepted at a younger age, frequently playing alone is considered significantly more deviant from social behavioral norms by middle childhood.

A number of researchers have proposed that solitary-passive withdrawal tends to merge with reticence over time (Asendorpf, 1991; Asendorpf, 1993; Coplan et al., 1994; Hart et al., 2004). This is problematic because, as previously mentioned reticence is strongly associated with various forms of social maladjustment, peer rejection, and other negative outcomes (Fujiki et al., 1999; Nelson, 1998; Younger & Daniels, 1992).

When investigating the risks of solitary-passive withdrawal, it is important to consider the motivation behind the behavior. Asendorf (1990) speculated that children who display solitary-passive withdrawal have a low approach motive (the motivation to play with peers) and not necessarily a high avoidance motive (motivation to avoid peers). He argued that they withdraw not in an effort to avoid peer interaction, rather they simply lack the desire to interact and are content with being alone. Kim, Rapee, Oh, and Moon (2008) recently concluded that the motivations for social withdrawal determined the risk status for adjustment in young adulthood. They administered various self-report questionnaires (e.g., Social Withdrawal Frequency Scale

for Adolescents, Beck Depression Inventory) to Australian university students who were between the ages of 17-25 years. Kim et al. found that shy and unsociable individuals were at the greatest risk for later social anxiety and lowered self-concepts. They also stated that of all the variables associated with social withdrawal that were examined, the frequency of withdrawal had the strongest correlation to loneliness later in life. In other words, the amount of time that an individual spends alone in a social setting is a strong predictor of loneliness. This finding would suggest that considerable time spent alone, regardless of what the child was doing, would be a negative predictor.

*Gender Differences.* Because some studies have indicated that gender may play a role in the outcomes of solitary-passive withdrawal, the differences in gender groups are worth examination. Nelson, Rubin, and Fox (2005) found that indeed, the social difficulties that result from frequent engagement in solitary-passive withdrawal are more pronounced for boys than girls. Fujiki et al. (1999) found that according to teachers' ratings, boys displayed more solitary-passive withdrawal than girls and the differences were even more pronounced in male children with LI. Coplan, Molina, Lagace-Seguin, and Wichmann (2001) concluded that solitary-passive withdrawal is more likely to have negative consequences for boys than for girls. When examining the outcome for the girls, Coplan and his colleagues did not find solitary-passive withdrawal to be related to any indices of maladjustment, but actually found it to be positively associated with several indices of positive adjustment in girls (i.e., higher social competence, fewer internalizing problems, and greater academic achievement). For boys, however, Coplan et al. discovered that solitary-passive withdrawal was positively correlated with adjustment difficulties (e.g., internalizing problems) and negatively associated with social competence. Nelson et al. (2005) found that although four-year-old boys who often displayed solitary-passive

withdrawal did not seem to experience negative consequences in early childhood, they did experience negative self-perceptions by age seven.

### *Children with Language Impairment*

Over the past decade, it has been shown that children with LI are prone to have social and behavioral issues. In 1997, Conti-Ramsden and colleagues studied a group of 242 children with SLI. Over the past decade, they have re-examined 200 of the children from the original group at age seven and eleven to investigate the long-term social and behavioral outcomes of children with SLI. Conti-Ramsden and Botting (2004) analyzed the social difficulties of this group of children with LI at 11 years of age. They found that conduct difficulties, hyperactivity, and emotional problems were not common. The most prevalent social difficulties were more internalized behaviors such as social withdrawal, lack of friendship, and poor social initiation. This study supported other studies that have found that children with LI show more withdrawn behavior, less interacting time, fewer friendships, and lower popularity (Brinton & Fujiki, 1999; Redmond and Rice, 1998).

Controlling for behavioral characteristics known to influence peer relations (i.e., problematic behavior, prosocial behavior), Conti-Ramsden and Durkin (2007) examined friendship quality of 16-year-olds with typically developing language and individuals of the same age with a history of SLI. They found that the typically developing young people almost always enjoyed good friendship relations, but participants with SLI were significantly more likely to exhibit poorer quality of friendships. Ninety-two percent of the language-typical adolescents reported non-intimate social relationships in the normal range compared to 54% of the adolescents with SLI. All of the teens with typically developing language reported having one or more friends with whom they shared interests, but only 61% of the teens with SLI reported such. While 98% in the group with typically developing language reported having one

or more relationships involving sharing and seeking contact, 64% in the group of participants with SLI had this level of quality of friendship. It is also interesting to note that the results for the group with SLI were quite heterogeneous, with a range of scores of 0 to 14. In contrast, the scores for the other group had a narrow spread of 0 to 4. This suggests that social success is highly variable among individuals with SLI; some individuals with SLI still manage to do well socially, but most struggle considerably.

Kim et al. (2008) reported that individuals who are shy and unsociable may be at the greatest risk for social anxiety, low self-perceptions, and feelings of loneliness as they age. This is a great concern for children with LI in particular, because it is known that they display higher rates of withdrawal than their peers. Using the Child Behavior Checklist and the Teacher's Report Form, Redmond and Rice (1998) examined 17 children with SLI and 20 children with typical language development. Teachers rated the children with SLI as having more social and internalizing behavioral problems than their typical peers. It is interesting to note that the parents did not observe these difficulties in their ratings. This could indicate that the more language-intensive school context produced more withdrawn behavior than the more supportive home context. An alternative explanation is that teachers spend time with a greater number of children than parents. This larger pool for comparison might allow the teachers to recognize unusual behavior more clearly.

In recognition of the fact that there are different types of withdrawal, a number of investigations have examined subtypes rather than a global construct. Fujiki et al. (1999) used the Teacher Behavior Rating Scale (TBRS; Hart & Robinson, 1996) to compare the amount and subtype of withdrawal displayed by children with LI and their peers with typical language development, according to teacher observations. Out of 41 participants with LI, 26 of the

children with LI (63%) were rated as having some withdrawal and sociability problems in two or more categories. Of the 41 children with typical language development, only 2 were rated this low (5%). Furthermore, 25 of the children with typically developing language were not rated as having a problem in any category (61%). Only 8 of the children with LI were rated as not having any problems (20%). Reticeance was the most commonly reported withdrawal subtype among the children with LI and was also associated with the greatest difference between the two groups (children with LI and children with typically developing language). Overall, solitary-active withdrawal was somewhat rare with only 16 of the 82 total participants (20%) demonstrating these behaviors. Nearly all of the children who were rated high in this category were from the group with LI, however. According to teachers, almost all children with LI who displayed reticeance or solitary-active withdrawal also had limited sociable behaviors, including those not directly related to language ability. This could be due to the fact that these children are simply not spending as much time in rich social learning contexts. While spending time alone they may be missing opportunities to develop crucial social skills and as a result decreasing their chances of becoming socially competent. Fujiki and colleagues found that solitary-passive withdrawal was also associated with limited sociable behavior, although the association was not as strong as that with limited sociable behavior and the other withdrawal subtype groups (i.e., reticeance and solitary-active withdrawal). A few of the males with typical language development in their study who were rated high in solitary-passive withdrawal did not have low levels of sociability nor did they demonstrate other subtypes of withdrawal. However, almost all of the children with LI who showed high levels of solitary-passive withdrawal demonstrated other subtypes of withdrawal as well as poor ratings for impulse control/likability and/or prosocial subtypes.

Another way the relationship between LI and social competence can be studied is by considering how the severity of LI affects social outcomes. Hart et al. (2004) used the TBRS to look specifically at each of the three subtypes of withdrawal and two subtypes of sociable behaviors (prosocial, impulse control/likeability). They compared a group of participants with less severe SLI to a group with more severe SLI. There seemed to be no relationship between severity and withdrawal with one exception: the girls who had more severe receptive problems demonstrated more solitary-passive withdrawal than girls who had less severe language problems. Children with more severe expressive problems demonstrated poorer prosocial behavior than children with less severe expressive problems, but there was no difference in impulse control/likeability.

The relationship between language and social withdrawal has important implications for the social adjustment of children with LI. Although the exact nature of the relationship is unknown, there is reason to suspect that it is complex. This study takes a closer look at the language component to see if specific aspects of language are associated with withdrawal. Specifically, the analysis examines comprehension, production and pragmatics and their relationship to solitary-passive withdrawal.

## Method

Data for this study was taken from a database that was part of a larger ongoing research project conducted by Martin Fujiki and Bonnie Brinton. The following section describes the participants, the assessment instruments used to measure language ability and amount of solitary-passive withdrawal exhibited by each participant, the procedure used to collect the data, and the statistical methods used for analysis.

### *Participants*

Sixty-eight children (34 with LI and 34 typically developing) were selected for this study because they met the following qualifications: IQ score was above 75, scores for all 3 relevant CASL subtests and also TBRS score for solitary-passive withdrawal had been recorded, and a peer in the same classroom within seven months of chronological age also met the previously listed qualifications.

The sample was collected from children enrolled in regular elementary classrooms in three local school districts. All of the children with LI were matched with children of the same gender who had typically developing language. Classroom teachers identified all of the children with typical language who were within seven months of age (either older or younger) of each child with LI, so they would also be matched for chronological age. Each of the children with typically developing language attended the same classrooms as their matched pair in the group of participants with LI. Every participant spoke English as his or her primary language. All of the participants passed a pure-tone audiometric screening at 20 dB HL, administered by the school audiologist or SLP. Standardized IQ and language tests were used to ensure that participants were appropriately grouped. The overall mean percentage of families below the poverty line for the block groups surrounding each school from which children were sampled was 3.58% ( $SD = 3.45$ ; U.S. Census Bureau, 2008).

*Children with Language Impairment.* Thirty-four children with LI were sampled, ranging in age from 6;11 to 10;1. Thirty-one of the children were Caucasian, one was Mexican-American, and two were of an undetermined racial background. All of the children were referred from speech-language pathologists and had been receiving services for language problems. The participants were identified with LI based on a score more than one *SD* below the mean on a standardized language test administered within one year of when the data were collected. The Test of Language Development (TOLD-2: P; Newcomer & Hammill, 1988) and the Comprehensive Assessment of Spoken Language (CASL; Carrow-Woolfolk, 1999) were used for this purpose. The CASL was also administered to each participant at the time the data were gathered. The Universal Nonverbal Intelligence Test (UNIT; Bracken & McCallum, 2003) was also administered to all participants to provide a consistent measure of cognitive ability and to ensure proper group assignment. An IQ of 75 was used to eliminate the diagnosis of intellectual disability. The mean IQ of the group with LI was 94.7 (*SD* = 9.9). The mean CASL composite score of the group with LI was 77.7 (*SD* = 7.9).

*Children with Typically Developing Language.* There were 34 participants with typical language development who ranged in age from 7;1 to 11;0 years old. There were 30 Caucasian children and four Mexican-American children. Children were considered to be typically developing on the basis of school records, teacher judgment, and school placement (no special services). Permission slips were sent home with each of those recommended participants. The final participants were randomly selected from the children who returned signed permission slips. The CASL and UNIT were also administered. The mean IQ of the group with typical language development was 104.6 (*SD* = 9.7). The mean CASL composite score of the typical group was 102.7 (*SD* = 10.3).



### *Assessment Instruments*

The following measures were used in data collection. The CASL (Carrow-Woolfolk, 1999), a standardized language test, was administered to each child. This test is normed for individuals from age 3 to 21 years. According to the test's author, the CASL is designed to provide an in-depth evaluation of oral language processing systems, the knowledge and use of words and grammar, the ability to use language for high-level cognitive tasks, and the knowledge and use of language in communicative contexts (Carrow-Woolfolk, 1999).

The CASL has 15 subtests. Each subtest is suited for a certain age group so no child would complete all 15 subtests. The subtest scores for each age group combine to create a core composite standard score. The children tested in this database (age group 7-11 years) took five subtests: antonyms, syntax construction, paragraph comprehension, nonliteral language, and pragmatic judgment. For the purposes of this study, only the subtests that assessed syntactic construction (production), paragraph comprehension (comprehension), and pragmatic judgment (pragmatics) were analyzed. It was recognized that there were limitations to using the CASL subtest scores to represent a child's language ability in each of these three areas. These limitations are elaborated upon in the Discussion section.

The TBRS (Hart & Robinson, 1996) is an informal questionnaire (available from C. Hart at Brigham Young University) that is completed by each participant's teacher to provide a measure of the child's social functioning. The TBRS has been used to measure behavioral subtypes of preschoolers and elementary school-age children in various countries, including Russia, China, and the United States (e.g., C. H. Hart et al., 2000). This measure has also been used in previous studies of children with LI (i.e., Brinton, Fujiki, Montague, & Hanton, 2000; Fujiki et al., 1999; Fujiki et al., 2004; Hart et al., 2004).

The psychometric properties of the TBRS were described in Fujiki et al. (1999). The items on the TBRS measure subtypes of anxious, aggressive, withdrawn and sociable behavior as they have been identified in the literature on social competence. A factor analysis was performed by Hart et al. (2004) that supported the grouping of items within the behavioral subtypes measuring withdrawal.

Two versions of the TBRS were used in this study; one version contained 161 items and a shortened version contained 70. The teachers rated each of the items on the TBRS as a 0 (child never does this behavior), 1 (child sometimes does this behavior), or 2 (child very often does this behavior). For this study, only items focusing on solitary-passive withdrawal were examined (e.g., builds things by self rather than with other children, likes to play alone, plays with toys by self rather than with other children, reads books alone away from peers). However, it is of note that the test-retest reliability assessment showed that all subscales were temporally reliable. The following Pearson correlations between Time 1 and Time 2 were obtained for the three scales measures subtypes of withdrawal: .70 for reticence, .76 for solitary-active withdrawal, .73 for solitary-passive withdrawal (Fujiki et al., 1999). Interrater reliability was not assessed because each child was evaluated by his or her primary teacher who was considered to have the most exposure to the child and be most familiar with him or her (Hart et al., 2004).

### *Procedure*

A graduate student in Communication Disorders administered the CASL to each participant in the school setting. All tests were administered and scored using guidelines provided in the test manual. Each classroom teacher completed the TBRS for one child with LI and a typically developing matched peer. The items measuring withdrawn behavior were randomly dispersed throughout the TBRS so the breakdown of the specific subtypes of behavior was not apparent. The mean score for each participant was determined by calculating the mean

scores of the ratings associated with items associated with solitary-passive withdrawal. The teachers knew which children were receiving intervention for LI, but they did not know the purpose of the TBRS or the rationale of studies for which the data were collected. After the questionnaires were filled out and mailed to the researchers, the participating teachers were given \$10 per student as a thank-you. The analysis included comparing ratings and test scores of each group to see if the results were consistent with previous findings of behavior of solitary-passive withdrawal (Fujiki et al., 1999; Fujiki, Spackman, Brinton, & Hall, 2004; Hart et al., 2004).

### *Statistical Analyses*

To see if the group with LI displayed more solitary-passive withdrawal than their peers with typical language development, t-tests on group differences with relevant variables were performed. A multiple regression analysis was conducted to determine how much of the variance in solitary-passive withdrawal scores could be explained by comprehension skills (as measured by the paragraph comprehension subtest on the CASL), production skills (as measured by the syntax construction subtest), and pragmatic skills (as measured by the pragmatic judgment subtest). A similar analysis was performed for both groups (children with LI and children with typical language development). Gender was analyzed because previous research showed significant gender differences in children with LI.

## Results

The findings of this study include the differences of language ability and amount of solitary-passive withdrawal between groups of children with LI and children with typically developing language, differences between gender groups, and the links between language and solitary-passive withdrawal.

### *Language Group Differences*

Results for the three CASL subtest scores and solitary-passive withdrawal as measured by the TBRS are presented in Table 1. To examine the differences in language ability and ratings of solitary-passive withdrawal between the group with LI and the group with typical language development, t-tests for independent samples were used to compare CASL subtests and TBRS scores. As expected, there was a significant difference between the children with LI and children with typically developing language on the CASL subtests (syntax construction  $t(66) = -8.06$ ,  $p = .000$ ; paragraph comprehension  $t(66) = -5.383$ ,  $p = .000$ ; pragmatic judgment  $t(66) = -7.781$ ,  $p = .000$ ). The results of the TBRS indicated that the groups did not differ on solitary-passive withdrawal ( $t(66) = 1.338$ ,  $p = .186$ ).

### *Gender Differences*

T-tests were used to compare CASL subtests and TBRS scores to examine the difference between males and females within each of the language groups (children with LI and children with typical language). See table 1 for results of gender-specific analysis. It was not surprising that among the males, there was a significant difference between children with LI and children with typical language for all three subtests (syntax construction  $t(38) = -6.274$ ,  $p = .000$ ; paragraph comprehension  $t(38) = -3.444$ ,  $p = .000$ ; pragmatic judgment  $t(38) = -4.942$ ,  $p = .000$ ). However, it was interesting to note that there was no significant difference in solitary-passive withdrawal as measured by TBRS scores among the males,  $t(38) = 1.894$ ,  $p = .066$ . It is

Table 1

*CASL Subtest Scores and Teacher Behavior Ratings of Solitary-Passive Withdrawal for Groups with Language Impairment (LI) and Typically Developing Language (TYP)*

Participant group	Syntactic construction	Paragraph comprehension	Pragmatic judgment	Solitary-passive withdrawal
<b>LI</b>				
Male				
<i>M</i>	77.90	92.10	73.25	.64
<i>SD</i>	13.86	11.73	15.03	.32
Female				
<i>M</i>	77.35	90.64	73.14	.58
<i>SD</i>	9.99	9.88	7.39	.30
Combined				
<i>M</i>	77.68	91.50	73.21	.62
<i>SD</i>	9.97	14.06	10.21	.38
<b>TYP</b>				
Male				
<i>M</i>	102.05	104.15	94.50	.41
<i>SD</i>	13.86	11.73	15.03	.32
Female				
<i>M</i>	100.71	109.21	98.50	.61
<i>SD</i>	14.82	13.16	12.04	.42
Combined				
<i>M</i>	101.50	106.24	96.15	.49
<i>SD</i>	14.06	12.41	13.83	.38

notable that although there was not a statistically significant difference, the difference in solitary-passive withdrawal approached significance. Similar findings occurred for the females. There was a significant difference between groups for all three subtests among the females (syntax construction  $t(26) = -4.888, p = .000$ ; paragraph comprehension  $t(26) = -4.220, p = .000$ ; pragmatic judgment  $t(26) = -6.712, p = .000$ ). Again, there was no significant difference in solitary-passive withdrawal as measured by TBRS scores among the females ( $t(26) = -.203, p = .840$ ), although the results in this case are more convincing of the idea that gender (specifically being female) was not related to solitary-passive withdrawal.

In the t-tests comparing the scores of males and females within the group of participants with LI, there was no significant difference between male and female groups for any of the three subtests (syntax construction  $t(32) = -.154, p = .879$ ; paragraph comprehension  $t(32) = -.411, p = .683$ ; pragmatic judgment  $t(32) = -.030, p = .977$ ). There also was no significant difference in the occurrence of solitary-passive withdrawal between male and female groups among the participants with LI ( $t(32) = -.402, p = .690$ ). Within the group of participants with typically developing language, there was also no significant difference between male and female groups for any of the three subtests (syntax construction  $t(32) = -.269, p = .790$ ; paragraph comprehension  $t(32) = 1.178, p = .248$ ; pragmatic judgment  $t(32) = .826, p = .415$ ). There also was no significant difference in the occurrence of solitary-passive withdrawal between male and female groups among the language participants with typical language development ( $t(32) = 1.582, p = .124$ ).

### *Links Between Language and Solitary-Passive Withdrawal*

Initial regression analysis was conducted to determine the degree to which the solitary-passive withdrawal of the participants in each language group was related to CASL subtest scores.

*Children with Language Impairment.* The regression equation combining the three CASL subtest scores indicated they were not significantly related to solitary-passive withdrawal,  $F(3,30) = .165, p = .919$ . The multiple correlation coefficient was .016, indicating that approximately 1.6% of the variance of the TBRS scores for solitary-passive withdrawal in the sample of participants with LI can be accounted for by the linear combination of the CASL subtest scores.

*Children with Typically Developing Language.* The regression equation combining the three CASL subtest scores indicated they were not significant predictors of solitary-passive withdrawal,  $F(3,30) = 1.42, p = .256$ . The multiple correlation coefficient was .124, indicating that approximately 1.2% of the variance of the TBRS scores for solitary-passive withdrawal in the sample of participants with typical language development can be accounted for by the linear combination of the CASL subtest scores.

## Discussion

The objective of this study was to obtain a clearer understanding of the complex relationship between solitary-passive withdrawal and LI. Analyses were conducted to determine if children with LI were more likely to display solitary-passive withdrawal than peers with typical language, and also to determine if this type of withdrawal was associated with specific aspects of language ability. Some studies (e.g., Fujiki et al., 1999) have failed to find a relationship between language and withdrawal, but this may have been because composite scores were used as a measure of overall language ability as measured by standardized testing. It was reasoned that specific language skills might influence the degree of withdrawal more than others. Specific subtests of the CASL were used to examine the extent to which production, comprehension and pragmatic judgment explained solitary-passive withdrawal in children.

### *Summary of Results*

The results of this investigation suggest that children with LI do not engage in this particular type of withdrawal any more often than do typically developing children. This finding is interesting in light of speculation that children with LI recognize that they are poor communicators and withdrawal from situations that have heavy linguistic demands (Redmond & Rice, 1998). It might be hypothesized that if these children were adapting to their poor communication skills, they might turn to positive activities that do not require high levels of language skills. It might also be assumed that children with more severe LI might frequently encounter social situations in which they feel uncomfortable and might therefore retreat to solitary activity more often than children with less severe LI. Neither of these ideas, however, was supported by the data from the current investigation.

In the analysis reported in this study, solitary-passive withdrawal was not predicted by language production, comprehension or pragmatics (as measured by the CASL subtest scores).



None of the specific language abilities had a stronger relationship to solitary-passive withdrawal than the others; none of them had a significant relationship to the amount of solitary-passive withdrawn behavior displayed. In this regard it was notable that the results did not differ for a subtest on which children with LI were relatively successful (paragraph comprehension) and a subtest on which they had a good deal of difficulty (pragmatic judgment). Based on these results, it seems that language skills are not related to solitary-passive withdrawal.

### *Construct of Withdrawal*

Another conclusion that can be drawn from this study concerns the way researchers have approached the construct of withdrawal. The finding that children with LI perform much like their peers with typical language development on solitary-passive withdrawal illustrates the importance of examining social withdrawal behavior within its various subtypes (reticence, solitary-passive, and solitary-active). Some researchers who have looked at the population with LI have focused on more general view of withdrawal, lumping several different subtypes together. This should be taken into consideration when reviewing their results (Conti-Ramsden & Botting, 2004; Conti-Ramsden & Durkin, 2007; Redmond & Rice, 1998).

Studies that have considered reticence, solitary-active withdrawal and solitary-passive withdrawal as three separate constructs of withdrawal produced some consistent outcomes as well as some variable outcomes. It has been consistently shown that reticence occurs more frequently in children with LI than their peers with typically developing language (e.g., Fujiki et al., 1999; Hart et al., 2004). Findings have not been so clear for solitary-active and solitary-passive withdrawal. In general, solitary-active withdrawal is observed less frequently than the other two subtypes, so irregular findings may be simply due to the infrequent occurrence of the behavior. The investigation of language and solitary-passive withdrawal has also led to contradictory outcomes. Consistent with the findings of Fujiki et al. (1999), the results of this

study showed that the participants with LI were not rated as showing more solitary-passive withdrawal than typical language learners. These findings differed from those of Hart et al. (2004) who found children in the group with LI to be significantly more withdrawn when specifically considering solitary-passive withdrawal. Current findings may be inconsistent with Hart et al. simply because of differences in the sample characteristics. Differences might also stem from the methods of analysis used. For example, Hart et al. used latent factor scores in their analysis instead of raw scores, which were used in the current study. It is of note, however, that the current study replicated Fujiki et al. and supports the finding that children with LI do not display higher levels of solitary-passive withdrawal than their typically developing peers.

#### *Factors that may Influence Solitary-Passive Withdrawal*

It is evident that the relationship between language and withdrawal is complex and dependent upon many factors in addition to language. Researchers seeking to find the cause of social withdrawal have considered the influence of overall sociability—in other words, how well the child gets along with others, how often he overreacts when something goes wrong, whether or not he seeks to comfort others even when there is no external reward, how frequently he extends himself to others and seeks friendship. These positive sociable behaviors are likely to dilute any negative effects of solitary-passive withdrawal.

Another factor that could influence a child's tendency to withdraw is emotion understanding (Denham, von Salisch, Olthof, Kochanoff, & Caverly, 2002). Emotion understanding includes the identification of basic emotional expressions, emotion language and the self-generated causes for basic emotions. A child who does not have good emotion understanding may often unknowingly offend others by acting insensitively. This can lead to frequent peer rejection, after which the child may at some point turn to constructive solitary activities to keep himself occupied.

Although emotion understanding is an important factor, emotion regulation, or the ability to control one's emotions and use self-control when an undesirable task is at hand, can also influence a child's social successes (Gross, 1998). A child with language deficits who also struggles with emotion regulation is likely to have even more difficulty getting along with others, which may result in more time spent alone. On the other hand, a child with language deficits who has good emotion regulation may have more success in maintaining friendships and compensating for weaknesses in language.

Finally, a child may engage in solitary-passive withdrawn behavior because that child prefers to be alone. Although socially competent, the child may chose to spend a significant amount of time engaged in constructive play apart from others. Personality and temperament can impact the amount of social interaction a child prefers. However, it should be noted that because social skills are learned during interaction, the amount of time spent alone may prove costly, depending upon what percentage of the child's time is involved and if the withdrawal persists over time. The child may miss crucial opportunities to mature socially through rich social experiences.

#### *Gender Differences in Children Who Display Solitary-Passive Withdrawal*

It should be noted that the difference in solitary-passive withdrawal did approach significance when gender and language group was considered; in other words, although the outcome of the analysis was not statistically significant, it represented a notable trend. Further analysis was not conducted because the sample size was too small for a meaningful analysis. Perhaps a larger sample size would have shown a significant difference between genders as many previous studies have done. For example, although Fujiki et al. (1999) found no difference in amount of solitary-passive withdrawal between children with LI and those with typical language, they did find more solitary-passive withdrawal in boys than in girls. Nelson et al.

(2005) supported the idea that solitary-passive withdrawal is “benign” for girls, but not for boys. In their study, they found no association between self-perception and solitary-passive withdrawal for girls. For boys, they found both positive and negative outcomes. Coplan et al. (2001) questioned the notion that solitary-passive withdrawal is a “benign” form of nonsocial play during early childhood because they found different outcomes for boys than for girls in kindergarten. In their study, the boys’ solitary-passive play was negatively associated with teacher-rated academic achievement and social competence. Also, the boys’ ratings were more positively associated with internalizing problems than the girls’ ratings. They speculated that these differences could be a result of societal expectations. The teachers may have rated withdrawal more negatively for boys because of beliefs that it is less suitable for boys to withdrawn than for girls to be withdrawn. For boys, it is viewed as being isolated or secluded, whereas for girls it is seen as being timid and quiet. In this study, however, there was not a significant difference between boys and girls in the teachers’ ratings of solitary-passive withdrawal, which does not support their argument.

### *Limitations*

It should be noted that although the CASL is widely used to measure language ability, it comes with some limitations. In this study, the subtest scores were used as measures of language comprehension, language production, and pragmatics. Although language performance cannot be completely separated into three areas of production, comprehension, and pragmatics, these subtests have undergone rigorous examination and are considered to be a sensible measure of these language abilities. Although naturalistic observation would be another way to evaluate these specific language skills, using the CASL was more efficient and less context-dependent. Thus, although not without limitations, the CASL subtest scores were reasonable choices for measuring the language abilities in question.

### *Future Research*

Future research is needed to examine how well comprehension, production, and pragmatics predict other subtypes of social withdrawal such as reticence and solitary-active withdrawal. It may be that although there is not a strong relationship between solitary-passive withdrawal and language ability, there may be a correlation between the other subtypes and language ability. It is not unreasonable that other types of withdrawn behavior might be impacted differently, particularly if specific aspects of language ability are studied.

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