

# Specific language impairment and self-efficacy in adolescents

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## **Abstract**

### Introduction

The human species is the only species known to date with the ability to communicate using speech sounds and words. One of the earliest theories for child language acquisition was provided by B. F. Skinner: that children understand language through behavioral reinforcement. As an example, if a child tells their mother “ cookie”, the mother gives the child a smile and gives their child the cookie, thus showing positive reinforcement (Skinner, 1957). Subsequently, Noam Chomsky suggested the Universal Grammar Theory. This theory claims that all grammatical categories such as nouns and verbs promote language development in children (Chomsky, 1965). For example, a child’s ability to form a sentence combining words from the verb and noun categories is innate.

In recent years, the discovery for the main cause of Specific Language Impairment (SLI) has been taken on by a number of developmental psychologists. Specific Language Impairment was once believed to have been caused by inadequate parenting skills, temporary hearing loss, and slight damage to the brain at birth (Bishop, 2006). With language being such a large component in developmental processes in young children and adolescents, deficiencies from SLI are known to be in association with disorders in other areas of development such as self-efficacy. Previous studies have shown that there is a direct association between language ability in adolescence and self-esteem in young adulthood (Durkin et al.,

2017). Although this present study is focused on Specific Language Impairment in adolescents, social complications are associated with SLI through the whole of childhood, adolescence, and for some, young adulthood (Fujiki, Brinton, & Todd, 1996). The purpose of this present study is to examine the relationship of SLI in teenagers aged 13 and their levels of self-efficacy, which is to be measured using the General Self-Efficacy Scale (GSES).

## Literature Review

### Specific Language Impairment

Specific Language Impairment (SLI) is a developmental disorder involving significant language difficulties in the absence of hearing loss, clear neurological impairment, and low cognitive functioning (Bishop, 1997). As presented in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, in order for an individual to have SLI, they would have to fit the following criteria: persistent difficulties in the acquisition and use of language across modalities (i. e., spoken, written, sign language, or other) due to deficits in comprehension or production. Across research, Specific Language Impairment was believed to have been caused due to gene mutation, brain damage, or even passed along through family members. However, Dorothy Bishop (2006) found that there is no single cause that could account for all cases of SLI. Nevertheless, deficiencies within Specific Language Impairment are known to be linked with other areas of development such as social skills and self-efficacy, as well as Autism Spectrum Disorder.

## Self-Esteem

Self-esteem is the amount of self-respect or self-confidence an individual has. In a study done by Wadman, Durkin, and Conti-Ramsden (2008) to determine if lower global self-esteem, shyness, and low sociability are consequences linked with SLI in adolescence, it was found that the SLI group had significantly lower global self-esteem scores than the group with typical language abilities. The researchers compared 54 adolescents with typical language abilities with 54 adolescents aged 16 to 17 with SLI using the Rosenberg Self-Esteem Scale (Rosenberg, 1975). The two groups were also compared using the Cheek and Buss Shyness and Sociability scales (Cheek & Buss, 1981). Because of the symptoms of SLI, the data collectors took great care in confirming that the participants understood what was being asked on the scales as well as the response options. The researchers suggest that future studies implicate clinical work with adolescents with language impairment and to approach this topic in support of assertiveness, rather than generalized social skills training (Wadman, Durkin et al., 2008).

A theoretical framework provided by Redmond and Rice (1998) is a guide for developmental relationship between language ability and socioemotional behaviors. Of the two models, one suggests that individuals with Specific Language Impairment have unscathed psychosocial mechanisms but develop negative adaptive social behaviors, such as isolating themselves, as a consequence of language difficulties in social situations. Further, language impairment is likely followed by socioemotional problems. This model is called the Social Adaptation Model (SAM). The second model, Social

Deviance Model (SDM) holds that in addition to children with language impairment, children with Specific Language Impairment also have comorbid deficiencies because of a concealed impaired psychosocial mechanism. In this model, children with SLI display shyness or deviant behaviors. These behaviors co-occur with language deficiencies but there is no correlation because language problems in an individual could have different levels of deficit in different domains. Of the two models, support was found only for the Social Adaptation Model and not for the Social Deviance Model (Redmond & Rice, 1998). In a longitudinal but small study, parents and teachers of children with Specific Language Impairment were asked to rate the children's socioemotional functioning and results showed a significant difference. Additionally, there was also very little congruity found between the teachers and parents ratings after a year interval. The results from this study suggest that socioemotional development is undoubtedly developmental rather than a constant that emerges at an early age (Redmond & Rice, 1998).

### SLI and Autism Spectrum Disorder

Traditionally, Specific Language Impairment (SLI) and Autism Spectrum Disorder (ASD) are diagnosed exclusively from one another. However, research indicates the two disorders overlap, due partially to the belief that one disorder causes the other. Numerous studies across the field of psychology indicate that there is an association between SLI and autism. In a study done by Bartak, Cox, and Rutter (1975) many children with ASD are poor at both structural and functional aspects of communication. These authors compared children with severe receptive SLI and children with

autism. Similarities were documented for the two groups on language milestones and measures of language structure. Although one symptom of autism is poor functional communication, Kjelgaard and Tager-Flusberg (2001) found that it is not always an area of impairment on language tests. The results of their study provide support that SLI and ASD tend to overlap. Because there is hearth of literature on Specific Language Impairment and its relationship to Autism Spectrum Disorder, this study aims to explore adolescents with SLI without the presence of ASD. Previous studies have shown that there is a direct association between language ability in adolescence and self-esteem in young adulthood (Durkin et al., 2015). This present study aims to examine the relationship of SLI in teenagers aged 13 and their levels of self-efficacy, which is to be measured using the General Self-Efficacy Scale (GSES).

## Method

### Design

The present study was designed to avoid selection effect to achieve proper randomization. Overlooking selection effect could cause the expected results of this study to not be representative of the target population.

### Participants

Two groups of children were matched for age in order to avoid selection effect. Our participants consisted of 20 children with Specific Language Impairment (SLI) without Autism Spectrum Disorder, aged 13 years old; and

20 children also aged 13 years old with Typical Development. Participants with SLI were recruited by random sampling. Specifically, posting flyers in the Center for Childhood Communication at the Children's Hospital of Philadelphia (CHOP). The ages of children examined at CHOP range from birth through adolescence.

Participants with typical development were recruited using the same method used when recruiting children with SLI, with the exception of posting the flyers in Roberto Clemente Middle School in North Philadelphia. The flyers in both locations consisted of the same information: a brief overview of the study, contact information (email address and phone number), and the location of where the study would be taking place, which was a classroom lent by the principal of Roberto Clemente Middle School. Furthermore, it was included that participants of the study would receive a monetary reward of \$10. Recruitment was performed on a first-come first-serve basis, thus once all 40 spots were filled, the recruitment process had to close. The parent(s) and/or guardian(s) were given Institutional Review Board forms as well as consent forms although there were no intentions to use any equipment that could cause any form of harm to the participants.

### Instruments

Every child was required to participate in speech, motor, and language evaluations. Further, the Childhood Autism Rating Scale, 2<sup>nd</sup> Edition (CARS-2) was used as exclusion criteria to ensure that no child had any symptoms

of autism (Schopler, 1986). This scale was administered to also ensure valid results, as invalid results would lack generalizability.

## Procedure

Four assessments in total were given to both children in the SLI group and children in the typical development group in the first stage of the study. The Boston Naming Test (Kaplan, Goodglass, & Weintraub, 1983) was used to measure the participants' vocabulary among challenging word retrieval. Two assessments within the Illinois Test for Psycholinguistic Abilities (ITPA) specifically to assess auditory reception and grammatical completion were also administered (Kirk, Kirk, & McCarthy, 1968). Finally, a Test for Rapid Serial Naming of pictures was given to both groups of participants. Extra clarification on instructions was provided where necessary.

Participants of both the typical development group and the specific language impairment group were given a task in which they were instructed to complete a set of three words with a fourth word that held a relation to the other words listed. For example, if a given set of words were "cream, winter, and cold", the fourth word would be "ice" as it has relation to the three listed words. For each set of words, there was only one right answer. All participants were informed that this task is used to measure intelligence in adolescents, regardless of developmental deficiencies. This was a timed task. Only 2 minutes were allotted to each participant. There were 10 items on the task and items were the same for each participant. Once more, extra clarification was provided when necessary. Upon finishing the task,



participants were informed that their performance on the word set completion task were to be graded. They were not told that their performance would be graded before starting the task.

Immediately after grading and collecting the word set completion task, all of the participants then evaluated their levels of self-esteem on the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965). The participants were allowed as much time necessary to finish their self-evaluation. Self-esteem was rated on a range of 10-40; ten and below being the lowest, forty and above being the highest. After completing the Rosenberg Self-Esteem Scale, the participants were informed that the word set completion task was in fact not an assessment used to measure the intelligence of adolescents and that the task was designed to be extremely challenging. Thus, if a participant only had one of the ten items on the assessment correct, it is nothing to be concerned about. The participants were only told that the word set completion task was used to measure intelligence to see if it would have any effect on how they viewed themselves while filling out the Rosenberg Self-Esteem Scale and after having completed the very challenging task.

## Discussion

### Expected Results

The Specific Language Impairment group is expected to have significantly lower scores than that of the typical development group. Similar results were presented in Conti-Ramsden's study which found that a significant difference exists for a digit recall task between children with with SLI and a control

group. The expected results from the word-set completion tasks should demonstrate similarities in children with SLI group and typical development group for levels of self-esteem and word-set completion tasks. The SLI group is expected to have significantly lower rates on the self-esteem scale.

However, it is also expected that both the SLI group and the typical development group will not have significantly different performance scores for the word-set completion task as the task was deliberately designed to be challenging.

### Limitations

While the study did aim to explore the differences in levels of self-esteem in individuals with specific language impairment, there was no further steps taken to observe its effects. This present study only had participants rate their self-esteem after a series of tests and tasks.

### Future Directions

It is recommended that future studies measure self-esteem and its effects on individuals with specific language impairment as it could contribute to enhanced interventions among not just those with specific language impairment but also those with any language deficit.

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