

Critical Review:
Is there a link between language skills and anxiety in children or adolescents with communication impairments?

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This study presents a critical review of the relationship between language skills and the presence of anxiety in children and/or adolescents with communication impairments. In particular, this review addresses the question as it pertains to Selective Mutism (SM) and Developmental Language Disorder (DLD), previously known as Specific Language Impairment (SLI). An electronic literature search yielded four non-randomized control trials which fulfilled selection criteria. Overall, the research indicates a link between language skills and anxiety in this population, and it should remain an important consideration for Speech-Language Pathologists who work in this area.

Introduction

Children with communication struggles are more likely to suffer from anxiety disorders, with language skills in particular being a source of concern (Voci et al., 2006). Two language related disorders that have been specifically linked to anxiety are selective mutism (SM) and developmental language disorder (DLD), formally known as specific language impairment (SLI).

Selective Mutism is characteristically defined as the “persistent failure to speak in specific social situations in which speech is typically expected (eg., at school, with playmates), despite speaking in other situations” (Sharp et al., 2007). Children with SM may have no difficulty speaking with their parents or siblings at home, however they may be unable to speak at school, or when they are in a public setting. As of the publication of the DSM-5, SM is classified as an anxiety disorder (American Psychiatric Association, 2013).

Specific Language Impairment refers to individuals with “significant language impairments, but no clear cognitive, physical, or neurological cause underlying the impairment” (Wadman et al., 2011). More recently, the terminology has been changed to Developmental Language Disorder, but for the purposes of this review, this disorder will be referred to as SLI.

Objectives

The primary objective of this paper is to critically evaluate existing literature regarding the impact of anxiety on language skills in children and adolescents with communication impairments. The secondary objective is to provide recommendations for clinical practice.

Methods

Search Strategy

Articles were found using the online databases PubMed, Scopus, and PsychINFO (Proquest) with the following search terms:

(child OR adolescent) AND (selective mutism OR specific language impairment) AND (social anxiety OR shyness OR comorbidity)

Selection Criteria

Articles selected for this review were required to include children or adolescents under the age of 18 with diagnosed SM or SLI that reported the connection between these communication impairments and anxiety.

Data Collection

The results of the literature search yielded four studies that met the selection criteria. All four studies were non-randomized control trials. The results of this search will be discussed below, first those pertaining to Selective Mutism, and then those concerning Specific Language Impairment.

Results

Selective Mutism

Manassis et al. (2007) sought to determine whether children with SM, anxiety disorders, or a group of controls could be differentiated by social anxiety, oral language, or working memory, of which only the initial factor is relevant to this review and thus will be the only aspect discussed at this time. Additionally, the authors hoped to discover whether these factors could predict mutism severity.

This study was comprised of 101 children aged 6-10. Participants met the inclusion criteria if they were diagnosed with SM using the Anxiety Disorders Interview Schedule (ADIS). Interviewers were all certified child and adolescent psychiatrists or psychologists trained in ADIS interviewing techniques. Mutism was required to have been present for at least one month, without coinciding with the first week of school. Children in the anxiety group were required to have had a primary diagnosis of an anxiety disorder according to ADIS, excluding SM, and children from the control group were required to be free of any diagnosis of anxiety disorder identified in the other two groups.

Outcome measures included: language, nonverbal word memory, and anxiety. Statistical analyses of all measurements were appropriately completed. Of the children with SM, 27 (61%) met criteria for social phobia, and parents reported these children suffered from more severe anxiety than parents of children without social phobia. Additionally, the authors found there was a high correlation between poor visual memory (eg., facial memory) and child-reported social anxiety.

Strengths of this study included the use of child interviews where possible, and ensuring all participants had questionnaire measures gathered by two informants. Weaknesses included small sample size (particularly within the control group), age differences, underrepresentation of boys in the study, and the exclusion of children whose first language was not English as a result of questionnaire availability.

Overall, this study provides suggestive evidence that children with SM are more likely to suffer from more severe social anxiety than children without SM.

Starke (2018) aimed to study the development of SM as a result of anxiety, language skills, and parental cultural adaptation. The study population included 30 preschool children (15 bilingual, 15 monolingual), of which 18 presented with mute behaviour and the remaining 12 comprised a control sample.

Assessment procedures included parent interview, direct assessment of the child, and the administration of a teacher questionnaire. Outcome measures included anxiety, receptive language, and verbal behaviour. Statistical analyses were appropriately completed.

The authors found the most significant relationship between anxiety and mute behaviour, especially in public and familial settings. Additionally, it was found that the children who spoke the least in social settings (ie., exhibited lower levels of verbal behaviour) also had the highest levels of anxiety.

Strengths of this study include that it is longitudinal in nature and that the results were extensively analyzed. The major weakness of this study is the small sample size, and the variability found as a result of the heterogeneity between groups.

Overall, this study provides equivocal to suggestive evidence. While limitations are present, the findings align with other current research regarding the relationship between anxiety and SM (Cohen et al, 2008).

Specific Language Impairment

Wadman et al. (2008) studied self esteem, shyness, and sociability differences in adolescents with and without SLI, as well as assessing how linguistic variables, shyness, and sociability are associated with self-esteem. Each of these measures have been shown to have a connection to the aforementioned measure of anxiety. Low self-esteem has been associated with feelings of loneliness and anxiety in teens (Rosenberg, 1965), and shyness has similarly been associated with low global self-esteem in children and teens (Crozier, 1995; Lawrence & Bennett, 1992). Finally, individuals with low sociability have been shown to initiate and respond to conversation less than individuals who have higher sociability (Buss, 1980).

In total, 104 participants aged 16-17 took part in the study, of which 54 comprised an experimental SLI group and the remaining 54 comprised a control group. Self-report of global self-esteem was measured, along with measures of shyness and sociability. Appropriate statistical analyses were conducted across all measures.

Results found a significant difference in global mean self-esteem scores between the SLI and control groups, whereby the SLI group scored much lower on the scale. Interestingly, both groups still scored within the norm for self-esteem scores, so the authors noted that although SLI adolescents may be at risk of suffering from lower self-esteem than their non-SLI peers, it does not necessarily mean that they will suffer from abnormally low self-esteem overall. Shyness scores were also significantly higher in adolescents with SLI, but both groups scored high on the sociability scale. This indicated that despite anxiety and shyness, SLI adolescents still wanted to interact socially. The authors discovered that core language ability significantly predicted shyness, indicating that shyness may be an individual's response to poor language ability coupled with high social demands.

Limitations in this study include a reliance on self-report measures and not controlling for ADHD concurrency in

SLI individuals, although the two disorders are known to cooccur (Beitchman et al., 1986). Overall, this study is suggestive that adolescents with SLI are likely to have higher instances of shyness and lower self-esteem than their non-SLI peers.

Wadman et al. (2011) define social stress as “the feelings of discomfort or anxiety that individuals may experience in social situations” (p. 421). This particular study aimed to provide information on the level of social stress in adolescents with SLI in comparison to their non-SLI peers, as well as the relationship between social stress and language and social variables.

In total, 56 adolescents between the ages of 11-15 participated in this study, of which half comprised an experimental SLI group and half comprised a control group.

Outcome measures included core language abilities, expressive language abilities, receptive language abilities, performance IQ, word reading ability, social stress, social skills, and social acceptance. Appropriate statistical analyses were completed for all measures.

Adolescents with SLI were found to have significantly higher social stress than adolescents with typical language. Additionally, higher levels of social stress were found to be associated with decreased scores in positive social skills and perceived social acceptance, as well as decreased expressive language abilities.

As in the previous article, the main limitation of this study is the use of self-reporting for data collection. This study is suggestive, and adds to the body of research that indicates that adolescents with language impairments may be more likely than their typically developing peers to experience more stress or anxiety in social situations.

Discussion

Overall, the findings from these studies indicate that a link exists between anxiety and language ability in children/adolescents with communication impairments – in particular, within the Selective Mutism and Specific Language Impairment populations. However, in an effort to strengthen the findings presented in this review, it is recommended that further research be conducted with larger sample sizes, more homogeneous groups, and if possible, less reliance on self-report measures for data collection.

Clinical Implications

The major implications of this research pertain to the treatment of this population in therapy. First, when

counseling parents of children who have communication impairments, Speech-Language Pathologists should consider explaining the potential comorbidity with anxiety or social stress. They may also be able to help refer the child to a psychologist if the parent feels it would be beneficial for anxiety management.

Additionally, this relationship should be kept in mind while conducting therapy. Children with these diagnoses may require a different approach to therapy than a child who does not suffer from increased anxiety. The expectations for this population should therefore be adjusted appropriately, be it that therapy is conducted in a location that the child is more comfortable in, with a parent or sibling present, or otherwise.

Overall, the impact of the relationship between anxiety/social stress and language skills in children and adolescents with communication impairments should remain an important consideration for Speech-Language Pathologists who work with this population.

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