



# Co-occurring disorders in children who stutter

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## Abstract

This study used a mail survey to determine the (a) percentage of children who stutter with co-occurring non-speech disorders, speech disorders, and language disorders, and (b) frequency, length of sessions, and type of treatment services provided for children who stutter with co-occurring disorders. Respondents from a nationwide sample included 1184 speech–language pathologists (SLPs). Of the 2628 children who stuttered, 62.8% had other co-occurring speech disorders, language disorders, or non-speech–language disorders. Articulation disorders (33.5%) and phonology disorders (12.7%) were the most frequently reported co-occurring speech disorders. Only 34.3% of the children who stuttered had co-occurring non-speech–language disorders. Of those children with co-occurring non-speech–language disorders, learning disabilities (15.2%), literacy disorders (8.2%), and attention deficit disorders (ADD) (5.9%) were the most frequently reported. Chi-square analyses revealed that males were more likely to exhibit co-occurring speech disorders than females, especially articulation and phonology. Co-occurring non-speech–language disorders were also significantly higher in males than females. Treatment decisions by SLPs are also discussed.

**Learning outcomes:** As a result of this activity, the participant should: (1) have a better understanding of the co-occurring speech disorders, language disorders, and non-speech disorders in children who stutter; (2) identify the speech disorders, language disorders, and non-speech disorders with the highest frequency of occurrence in children who stutter; and (3) be aware of the subgroups of children with co-occurring disorders and their potential impact on assessment and treatment.

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## 1. Introduction

Clinicians and researchers working with individuals who stutter are all too aware of the fact that co-occurring speech and language disorders often complicate problem conceptualization, participant selection, methodological concerns, and therapy planning (Blood & Seider, 1981; Bloodstein, 1995; Conture, 2001; Conture, Louko, & Edwards, 1993; Nippold, 1990; Shapiro, 1999; St. Louis, Ruscello, & Lundeen, 1992). Studies examining co-occurring stuttering and other speech, language, and non-speech and language disorders have attempted to clarify the nature of stuttering in children and adults, the type and frequency of co-occurring speech, language and non-speech–language disorders, and provide support for reported subgroups in the heterogeneous population of individuals who stutter (Conture, 2001; Nippold, 1990; Schwartz & Conture, 1988; Watkins & Yairi, 1997; Yairi, 1990; Yairi & Ambrose, 1992, 1999).

Recently, Arndt and Healey (2001) conducted a study to determine the number of children who stuttered with co-occurring language disorders and phonological disorders. They concluded, based on the survey data from 241 speech–language pathologists (SLPs) from 10 states in the United States, that 56% of the 467 children who stuttered had verified fluency disorders only, while 44% (205) had verified fluency and concomitant phonological and/or language disorders. They also obtained information about treatment decisions for children who stutter with co-occurring language and phonological disorders. According to the authors, the majority of SLPs reported using a “blended treatment” approach for these co-occurring disorders, which was defined as treating both disorders simultaneously within the therapy program. Their results provide important additional information about the relationships among fluency, language, and phonology disorders and SLPs’ treatment choices.

The presence of co-occurring non-speech disorders such as those affecting learning, attention, reading and auditory processing may also influence decisions about treatment hierarchies for children who stutter (Conture, 2001; Manning, 2002). A number of older studies have reported on the frequency of these co-occurring non-speech–language disorders, but few studies have conducted systematic investigations in school-age children who stutter. For example, Heltman and Peacher (1943) reported that of the 102 children with spastic paralysis that they examined, 3.9% exhibited stuttering disorders. Similarly, Anderson, Hood, and Sellers (1988) reported the presence of subtle central auditory processing disorders (CAPD) in children who stutter. Nippold and Schwarz (1990) reported conflicting findings in a review of the literature on the frequency of co-occurring reading disorders in children who stutter. However, the frequency of occurrence, the number and type of disorders, and the treatment choices for children with co-occurring non-speech–language disorders has not been studied in a nationwide sample. Determining the frequency of occurrence of disorders in children who stutter could enhance our information about subgroups in children who stutter.

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