

Does changing parent verbal interaction style increase fluency in children who stutter?

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The current paper is a critical review of six studies that examine the fluency facilitating effects of changing parent verbal interaction style when speaking with their children who stutter. Study designs include nonrandomized clinical trials, within groups, pre-posttest studies, and a single subject n-of-1 design. Overall, evidence gathered from this review is inconclusive. Recommendations for further research and clinical practice are provided.

Introduction

Stuttering is a speech and language disorder that affects the forward flow of speech. It can often begin in the preschool years (ASHA, 2007). Early intervention is vital, and once a child is seen by a professional, several recommendations are often made to the parents to modify their speech in order to create a more fluency-facilitating model for their child (Bernstein Ratner, 2004). Parents are often involved in their child's stuttering treatment, as they can be very influential in determining the course of very early stuttering patterns (Bernstein Ratner, 2004). As Cooper and Cooper (2000) stated, parent counselling is the critical factor in helping the preschool stutterer.

In 1973, Van Riper concluded that disfluent speech in a child who stutters often follows speech from a parent or sibling that is too difficult for the child to follow. Therefore, recommendations are often made for parents to decrease their rate of speech and to simplify their language. However, research has been inconsistent on the use and effectiveness of recommendations made to parents to modify their speech in order to create stutter-free speech in their children. Also, a child's language development can be hindered if their parents are consistently using less complex syntactic and semantic language structures (Miles Bernstein Ratner, 2007). In addition, focusing treatment on parental input variables can increase a parent's feeling of guilt over their child's disorder (Bernstein Ratner, 2004). For these reasons, it is important that the clinical effectiveness of modifications to parental input is firmly established. This paper examined whether or not changing parental verbal interaction styles is associated with an increase in fluency in children who stutter.

Objectives

The primary objective of this review was to provide a critical evaluation of the existing research regarding the outcomes that will result from changing parent verbal

interaction style with their children who stutter. The secondary objective of this review was to provide clinicians with evidence-based information to help guide the recommendations they give to families in order to create a home environment that encourages fluent speech.

Methods

Search Strategy Computerized databases, including PubMed, Proquest and Medline, were searched using the following search strategy

(stuttering) OR (disfluency) OR (fluency disorders) AND (parents) OR (mothers) OR (fathers) OR (interaction)

The search was limited to articles written in English.

Selection Criteria Studies selected for review were required to investigate the outcome of manipulating any parental verbal or nonverbal behaviour when interacting with their children who stutter in order to improve their fluency. The search was limited to children with no observable speech or language impairments, other than stuttering, and their parents.

Nonrandomized Clinical Trials

Miles and Bernstein Ratner (1980) compared language use of mothers with preschool children who stuttered and a matched control group. Mother-child interactions were recorded while two observers made on-line tallies

the pre-training sessions, mothers were instructed to talk to their child the way they normally do. Training included modeling a slow speech rate and directing mothers to insert pauses at phrase and sentence boundaries, and between groups of 4 words. They were also instructed to increase their turn-switching pause duration in conversational exchanges. Visual prompts were provided if needed as a cue to slow down speech rate.

For the mothers, analysis of group data using appropriate paired t-tests revealed significant ($p < .05$) pre- versus post-training differences for overall articulatory speaking rate and turn-switching pause duration. For the children, analysis of group data

Bernstein Ratner (1987), parental language complexity is unrelated to developmental stuttering.

The lack of evidence in support of advice that parents of CWS simplify their speech is useful for language development. Research has shown that growth in language development is stimulated when parents use language that is at a slightly higher level than their children's language.

There are several complications in studying the fluency-enhancing effects of changing parental verbal interaction styles in the parents of children who stutter. Compared to other speech and language disorder populations, the population of children who stutter is relatively small. Furthermore, clinicians should be cognizant of the heterogeneity of this population. Not all children experience the same types of stutters (i.e., mild word repetitions, to tense blocks accompanied with facial tension) or stutter to the same severity as other children. Therefore, modifications to parent's speech may be beneficial for some children, but not others. Also, the nature of the treatment designs included in this review did not allow for random allocation of participants into treatment groups or for the use of blinding in either the researchers, participants or both. In addition, there is an inherent difficulty in comparing data within and between the studies included in this review, as all studies did not measure fluency in a standardized manner (i.e., using percent syllables stuttered as a measure of fluency). Based on the Oxford Centre for Evidence-based Medicine Levels of Evidence, the study designs included in this review fall into level two and level three categories.

Savelkoul, E.M., Zebrowski, P.M., Feldstein, S., Cole-Harding, S. (1998). Coordinated interpersonal timing in the conversations of children who stutter and their mothers and fathers. *Journal of Fluency Disorders*, 23, 1-12.

Stephenson-Opal, D., Bernstein Ratner, N. (1998). Maternal speech rate modification and childhood stuttering. *Journal of Fluency Disorders*, 23, 1-12.

Van Riper, C. (1975). *Stuttering and its treatment* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Zebrowski, P.M., Weiss, A.L., Savelkoul, E.M., Hammer, C.S. (1998). The effect of maternal rate reduction on the stuttering, speech rates and linguistic productions of children who stutter: Evidence from individual dyads. *Journal of Fluency Disorders*, 23, 1-12.