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Speech disfluency and autism in schools: Identifying needs and providing support to SLPs

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Abstract

In recent years, there has been a gradually increasing body of literature documenting patterns of disfluency in samples of children on the autism spectrum (see Scaler Scott, Tetnowski, Flaitz, & Yaruss, 2014, for review). This study discusses the results of two surveys. The first survey, discussing 395 students, demonstrates the identification of students with autism and disfluency among school-based speech-language pathologists (SLPs) in three areas of the United States of America. This increased documentation suggests growing concern about treatment methods for disfluencies within this population. The second part of this study discusses a pilot training conducted with one school district in the United States. SLPs were surveyed regarding their knowledge and confidence level in identifying and working with fluency disorders in students with autism. The survey was conducted before and after a training seminar on fluency disorders in children with autism. Three months after training, the SLPs in that district were resurveyed to determine the numbers of cases identified and their comfort level with identifying, evaluating, and treating disfluencies. Despite increases in comfort following training, participants indicated that they were less than comfortable with procedures of referral and treatment. Implications for future SLP training will be discussed.

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1. Introduction

In recent years, there has been a gradually increasing body of literature documenting patterns of disfluency in samples of children on the autism spectrum (see Scaler Scott, Tetnowski, Flaitz, & Yaruss, 2014 for review). This increased documentation suggests growing concern about treatment methods for disfluencies within this population.

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The questions to be answered are whether or not school-based speech-language pathologists (SLPs) are identifying fluency disorders in their students on the autism spectrum, and if so whether or not these student are being treated for fluency disorders. Given the multiple challenges presented by students with autism spectrums disorders (ASDs), it is tempting to say that treating fluency disorders is not a treatment priority in such cases. The question is whether SLPs are not treating because they are not aware a problem exists, are unaware of how to treat the problem, and/or other reasons.

1.1. Aims of study

The purposes of this study was to: 1) determine the percentage of students with ASDs and disfluency currently being identified by a sample of school-based SLPs in the United States of America (USA); 2) outline the specific concerns of the school-based SLP in identifying, evaluating, and treating children on the autism spectrum with fluency disorders. In describing these concerns, the following outcomes of a survey and training project will be discussed: 1) the frequency with which school-based SLPs identified fluency disorders in students on their caseloads with ASDs before training; 2) any changes that occurred in comfort levels within the areas of identification, evaluation, and treatment of students with ASDs and disfluencies following training.

2. Survey Part I

2.1 Survey Part I Methods

A survey was sent to several school districts in the southern, northern and central regions of the United States (U.S.). The survey asked about the number of students on the SLPs' caseloads identified with ASDs and disfluencies. Given that some students with ASDs are initially diagnosed only with Attention Deficit Hyperactivity Disorder (ADHD), SLPs were also asked to identify students on their caseloads with ADHD and disfluencies. In the southern U.S., 93 responses were received, discussing 250 students. Thirty-two responses were received from the northern and central U.S., discussing 145 students.

2.2 Survey Part I Findings

Out of 250 students with some type of fluency disorder in the southern U.S., 13 (5%) were also noted to have ASDs. Out of the 145 students from the northern and central U.S., eight percent of students were identified as having stuttering and ASDs, and 2% were identified as having cluttering and ASDs. Stuttering and ADHD was identified by these SLPs as 6% of the caseload and cluttering and ADHD as 1% of the caseload.

The survey also asked SLPs to describe the types of disfluencies seen among their students with ASDs. Stuttering-like, non-stuttering like, and atypical disfluencies were often noted by the SLPs completing the survey. Specific descriptions identified by the SLPs included what they referred to as "typical stuttering" (i.e., repetitions, blocks, prolongations). Other types of disfluencies were described as word-final disfluencies (e.g., "car-ar, speech-eech, mother-other"), "audible gasps mid-word," "adds /er/ to most words—totally even beat," "breathing mid-word...choppy even stress of syllables and words," "phrase repetitions in echolalic fashion." One participant described a speech pattern as "sometimes produces echo patterns at the ends of words/sentences," but identified this more as a social skill issue rather than a disfluency. One participant described that one of their students exhibited, "atypical disfluencies characterized by mid-word pausing," and that their student's speech was "previously characterized by deletion of 25% of words in sentences."

3. Survey Part II

2.1 Survey Part II Methods

A more focused survey was sent to 101 SLPs in a school district in northern Texas. The survey was administered prior to training on ASDs and fluency disorders. The second survey was conducted before and after a training seminar on fluency disorders in children with autism. The training program involved the following four core components: 1) identifying disfluencies by type; 2) pattern analysis to determine target treatment area(s);

3) developing goals based upon pattern analysis; 4) developing treatment methods based upon autism spectrum profile. Three months after training, the SLPs in that district were resurveyed to determine numbers of cases identified and comfort level with identifying, evaluating, and treating students with ASDs and disfluencies. Comfort level choices were as follows: “very uncomfortable,” “uncomfortable,” “somewhat comfortable,” “comfortable,” “very comfortable.” The survey looked at the following areas:

- Percentage of students with ASD on caseload
- Percentage of students on caseload with disfluencies and ASDs
- Comfort level with knowing when to refer a student with ASD for a fluency evaluation
- Comfort level with having skills to conduct an assessment on disfluencies of student with ASD
- Comfort level with understanding nature of disfluencies observed in children with ASD
- Comfort level with knowledge of current research regarding disfluencies in children with ASDs
- Comfort level with knowledge of Individuals with Disabilities Education Act (IDEA) eligibility requirements for children with ASD and disfluencies
- Comfort level with writing Individualized Education Plan (IEP) goals for students with disfluencies and ASDs
- Comfort level with choosing techniques to treat disfluencies in children with ASD and disfluencies
- Comfort level with ability to help students achieve generalization of learned techniques

2.2 Survey Part II Findings

Results were compared pre and post training regarding: 1) percentage of fluency cases on the autism spectrum identified; and 2) clinician confidence in identifying, assessing, and treating students with ASDs and disfluencies. Percentage of cases identified remained relatively stable before and after training. Percentage of SLPs reporting each percentage of students with ASDs and disfluencies were calculated before and after training. Results are displayed in Table 1.

Percentage of students with ASDs on caseload	0-5	6-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Percentage of SLPs reporting before training	55	10	17	5	3	6	N/A	N/A	N/A	2	2
Percentage of SLPs reporting after training	57	15	15	6	3	N/A	N/A	3	N/A	N/A	N/A

Table 1. Percentage of SLPs reporting students on caseload with ASDs and disfluencies before and after training

Changes were noted in comfort levels for all areas before and after training, either by an increase in the percentage of SLPs who were “somewhat comfortable” or greater after post testing, or with the majority of respondents increasing from “uncomfortable” or “somewhat comfortable” to “somewhat comfortable” or “comfortable”. Greatest changes were noted in comfort levels for knowledge of current research, knowledge of IDEA eligibility criteria, writing IEP goals and objectives, choosing treatment techniques, and ability to help students achieve generalization of skills. Results are displayed in Table 2.

Comfort Level	Majority Response (% respondents) PRE-TRAINING	Majority Response (% respondents) POST TRAINING
Knowing when to pursue an evaluation	Somewhat comfortable (45%)	Somewhat comfortable (55%)
Assessment Skills	Somewhat comfortable (37%)	Somewhat comfortable (61%)
Understanding of disfluencies	Somewhat comfortable (46%)	Somewhat comfortable (52%)
Knowledge of current research	Uncomfortable (63%)	Somewhat comfortable (42%)
Knowledge of IDEA eligibility criteria	Uncomfortable (60%)	Somewhat comfortable (36%)
Writing IEP goals and objectives	Uncomfortable/Somewhat comfortable (37%/37%)	Somewhat comfortable/Comfortable (42%/39%)
Choosing treatment techniques	Somewhat comfortable (39%)	Comfortable (42%)
Ability to help student achieve generalization of skills	Uncomfortable/Somewhat comfortable (39%/39%)	Somewhat Comfortable/Comfortable (45%/33%)

Table 2. Comfort levels of SLPs before and after training

4. Discussion

SLPs in this study identified disfluencies in their students with ASDs, indicating that this issue is found in school children with ASDs in different parts of the United States. The SLPs participating in these surveys also indicated that they were less than comfortable in knowing what to do about the disfluencies in their students. This lack of comfort possibly leads to less focus on evaluating and treating fluency issues and more focus on the additional communication issues in students with ASDs. After just a short training session, comfort level with how to assess and treat the disfluencies in this population improved. Further training in all areas is clearly needed to possibly improve comfort status across all areas to “comfortable” and “very comfortable”. The improvement obtained from a short education session alone suggests that increased training of SLPs has the potential for significant improvement in comfort levels across all areas. Increased comfort should result in improved quality of care in treating students with ASDs and disfluencies. Mentorship of SLPs in the schools by those experienced with working with disfluencies in ASDs would likely also be beneficial.

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