

Tutorial

Eligibility and Speech Sound Disorders: Assessment of Social Impact

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Purpose: The purpose of this article is to discuss the social impact of speech sound disorders for children, specifically in the public school system, and to examine different methods of social impact assessment for speech-language therapy services using 3 hypothetical cases.

Method: This article presents 3 common cases seen by school-based speech-language pathologists and discusses the types of assessments that may be conducted for each child's needs. One child has errors on many sounds, 1 child has errors on only /r/, and 1 child produces strident sounds with a lateral lisp.

Results: As these are hypothetical cases, possibilities are discussed for each case. Similarities and differences exist

among the 3 cases in terms of assessing the social impact of their speech sound disorder; however, each child could qualify for services based on social impact assessments.

Conclusion: Social impact assessments are an important portion of a speech sound evaluation; however, they are often overlooked. Emphasis is placed on articulation assessments and/or commonly accepted developmental norms. The determination of social impact supplies a more complete picture for making eligibility decisions for children with speech sound disorders and may lead to more meaningful treatment methods for the student.

Speech-language pathologists (SLPs) are tasked with determining whether a child who makes speech errors has a speech sound disorder (SSD). In addition to the diagnosis of an SSD, SLPs who are based in public schools must determine whether the SSD negatively impacts the child's access to education, which may include impacts in academics or social communication. Often, the diagnosis of an SSD is straightforward because the child's scores on standardized assessments indicate the production of speech sounds is below the expected range for his or her age. This diagnosis is often rooted in the type of errors made and whether they are age and gender appropriate for the child. However, these standardized scores are often based on a one-time snapshot of the child's communicative performance and do not paint a complete picture of how the diagnosis of an SSD impacts the child's educational experience. Indeed, the Individuals With Disabilities Education Act (IDEA) of 2004 (Sec. 300.304 (b)) requires eligibility decisions to include multiple sources of data in determining qualification

for services. Focusing solely on the child's articulation of speech sounds often neglects the broader facets of communication, such as social impact of the communication disorder.

Eligibility for Services

In determining eligibility for services under IDEA, the diagnostic team must consider multiple sources of data to conclude whether a child is eligible for speech services, and these sources should include information beyond academic functioning, namely, "academic information." Multiple letters requesting clarification of the term "academic information" have confirmed that access to education is not limited to academic performance alone but may include other aspects as well. In a 1980 clarification letter, Dublinske (1980) reiterated that social-emotional status can be used as a basis for eligibility for services. Additional letters and articles written in 2002 reaffirmed that academic performance (i.e., class grades) is not the only factor that should be considered in making eligibility decisions (Dublinske, 2002; Posny, 2002). These letters underscore the importance of assessing social impact in the evaluation of a child's communication impairment under federal law. Individual states often have their own guidelines that include assessment of all aspects of a child's participation in the academic setting. For example, the guidelines for the state of Colorado (Sec 2.08 (9) (b)) state that social interactions

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are a part of the eligibility process. These guidelines state, “Criteria for a Speech or Language Impairment that prevents a child from receiving reasonable educational benefit from regular education shall include...(Sec 2.08 (9) (b) (i)) Interference with oral and/or written communication in academic and *social interactions* in his/her primary language.”

Team-Based Assessment

In conducting an assessment for SSD, SLPs often collect data about the child’s production of speech sounds in order to make a diagnosis. Then, the SLP must draw upon multiple sources of information to determine whether a child is eligible for services under IDEA. To gather these sources of data, the use of a team-based evaluation approach is necessary. Team members may include parents, teachers, and other providers such as occupational therapists, psychologists, social workers, and special education teachers. Team members are included depending upon the individual needs of the child. Through using an evaluation team, the SLP can more readily gather data needed for determining eligibility for services and can integrate multiple perspectives about the child as a whole. For example, parents can provide important information about the child’s communication at home, and that evidence may converge with the classroom teacher’s observations about the child’s communication at school. Collaborating in the gathering and sharing of information not only reduces the burden on the SLP but also provides a complete picture of the child’s status and needs.

Social Impact

The social impact of an SSD includes the child’s perceptions, feelings, and attitudes about how others view his or her communication, as well as the perceptions, feelings, and attitudes held by those who interact with the child. These perceptions may limit children’s access to typical social interactions in the school setting, which, in turn, may limit the child’s participation in the educational setting. Researchers have consistently found that having a communication disorder results in long-term negative academic outcomes (Lewis & Freebairn, 1992; Sices, Taylor, Freebairn, Hansen, & Lewis, 2007) and social interactions (McCormack, Harrison, McLeod, & McAllister, 2011; McCormack, McLeod, McAllister, & Harrison, 2009). Negative academic outcomes and social interactions may lead to a reduction in quality of life through adulthood (Feeney, Desha, Ziviani, & Nicholson, 2012).

Assessing social impact of an SSD is complex, because each child’s judgment about his or her speech is highly individualized and not necessarily tied to the level of severity of the SSD (e.g., intelligibility, number of errors). In fact, even the awareness of having a speech difference may vary from child to child. For example, Lyons and Roulstone (2018) found that most school-age children are aware that communication is difficult for them and that children report social difficulties such as bullying. This often results in having difficulty in making friends. On the other hand, McCormack,

McLeod, McAllister, and Harrison (2010) found that some children with SSD perceive their communication difficulty as being an issue with the listener, not with their own speech production. McLeod, Daniel, and Barr (2013) found that parents reported negative effects associated with their children’s SSD. These effects were context dependent and were minimized with familiar speakers (e.g., siblings; McLeod et al., 2013). McLeod and colleagues found that some children with SSD reported a preference for activities that did not rely on or, in some cases, did not include verbal communication, such as art and sports. These findings suggest that social impact is a function of the child’s own perception of the SSD, as well as the perception of others, and impacts preference for participation in activities.

Educators may underestimate the academic ability of children with communication disorders (Ebert & Prelock, 1994; Overby, Carrell, & Bernthal, 2007); this underestimation was not a conscious judgment on the part of the teachers and was not related to any aspect of the child, other than the fact that he or she had a communication disorder. The variability from child to child and communication contexts demonstrates that a comprehensive evaluation of children’s social participation is necessary to fully understand the communication needs of children with SSDs. This information will assist SLPs when making eligibility determinations.

Assessment Methods and Tools for Social Impact of SSD

The assessment of social impact should be discussed among all members of the evaluation team and is required under federal law. There are many methods for assessing the social impact of communication disorders, but some may provide more insight into how the child is affected than others. Most social impact evaluations query individuals of the evaluation team, including the child themselves, parents and/or caregivers, teachers, peers, and other providers. However, many of these assessments involve “checking a box” to indicate, in a binary way, whether a social impact exists. This lack of detail does not provide enough information about the presence of a social impact nor the degree of the impact on the student’s participation in social contexts. Because of these variable factors and results that are based on individuals’ attitudes, interpreting the results of social impact assessments should be thorough, include multiple informants, and address multiple contexts and communicative partners. This involves communication and data collection among the members of the evaluation team as well as consultation with the child. Using social impact assessments as a deciding factor for access to services is especially important in cases where scores on standardized tests result in borderline scores.

The type of social impact assessment used can be aligned with the child’s age and disposition. For example, younger children (ages 3–5 years) may be less aware or less self-conscious of their speech errors than an older

child because their typically developing peers are likely producing age-appropriate speech errors as well. For these children who seem unaware or unbothered by their speech, an interview with the children or an observation of play in the classroom setting may be informative. Conversely, older children with SSD have been producing speech errors for longer and may be more self-conscious and less willing to discuss the social impact of their speech. For these children, indirect methods of assessment (e.g., interview of those close to the child or classroom observation) may be more appropriate than a direct interview of the child about his or her communication. The following sections detail the possible methods for the assessment of social impact in children with SSD.

Questionnaires

A common method for evaluating social impact of SSDs for children is to administer a written questionnaire. A questionnaire is a way to conduct a social impact evaluation and is completed by parents, teachers, the SLP, and/or the child. The level of information may be enhanced by querying multiple individuals who are in contact with the child to examine contextual effects. These questionnaires are typically simple for participants to complete and allow for comparison across multiple children, if they are standardized. Questionnaires are also simple to compile and analyze and require less time to complete than other methods. However, these questionnaires often solicit binary responses (e.g., “Does the child have positive social interactions? Yes or no?”). This type of response does not provide enough depth to draw meaningful conclusions and does not provide the opportunity for further explanation.

Clinicians can develop their own questionnaires to suit their needs or add more questions to the case history questionnaires already in use. Many readily available case history questionnaires ask about socioemotional development. These types of questionnaires can be found within the field of communication disorders and in other fields, such as psychiatry. One example of a questionnaire for socioemotional development is the Strengths and Difficulties Questionnaire (Goodman, 1997). This questionnaire provides one form that parents and teachers, or others, may complete regarding the child’s socioemotional development. This questionnaire has been used to explore social impacts of communication disorders for children with specific language impairment (Joffe & Black, 2012) and has been translated into numerous languages (see <https://sdqinfo.org/>). This questionnaire provides normative data and differing forms for different age groups. Individuals who interact with the child are asked to respond with a 3-point scale to statements such as “often seems worried” and “rather solitary and prefers to play alone.” These statements provide more detailed information about the child’s social well-being, which can be followed up on during the interview and used for treatment planning.

Interview

One of the simplest ways to determine whether a social impact exists for a particular child is to ask the child and those who interact with the child on a daily basis. As previously discussed, the child’s age and personality are considered when deciding to use this direct method with the child. Many researchers use interviews to evaluate the social impact of SSD because it provides a means to gather individualized information without requiring responses that are not relevant to the student (Ireland & Conrad, 2016). For example, structured interviews not only are a useful way to determine whether a social impact exists but also can provide information about *how* the child’s speech errors impact his or her communication. In addition, the structured aspect of this type of interview ensures consistency from child to child and ensures that the same types of prompts occur across multiple situations and environments. These interviews help SLPs to evaluate whether children are aware of their speech errors, whether they harbor negative feelings about their communication, and in what contexts they may be more or less affected by their SSD. Perhaps, one of the most important aspects of interviewing a child is that it provides a way for the clinician to hear the child’s own interpretation of his or her communication disorder in his or her own words. Following the students’ level of awareness of their SSD directs treatment planning, enhancing the SLPs’ ability to provide meaningful incentives and individually tailor treatment.

There are many ways to approach a structured interview. The Speech Participation and Activity Assessment of Children (SPAA-C; McLeod, 2004) was designed to align with the International Classification of Functioning, Disability and Health, a classification system for health conditions developed by the World Health Organization. The International Classification of Functioning, Disability and Health aims to assess the impact of a condition on the individual’s body structures and functions on his or her activity and participation and includes examining environmental and personal factors that may impact treatment (World Health Organization, 2007). The SPAA-C is freely available in five languages (see <http://www.csu.edu.au/research/multilingual-speech/spaa-c>) and contains a list of questions that may be asked of children and/or other important individuals in the child’s life. These questions are open-ended and are not exclusively tied to the child’s speech errors until the end of the interview protocol. This allows the child to acclimate to the interview process and allows the interviewer to gather information before asking potentially difficult or personal questions. This tool also contains a visual scale for children to mark their self-perceptions of their speech and communication and to rate their preference of communication activities and partners. This tool has been used in many studies regarding SSD and social impact, which support its use as a source of qualitative and quantitative information on the social impact of SSD (e.g., Baker & McLeod, 2011; Barr, McLeod, & Daniel, 2008; Daniel & McLeod, 2017; McLeod et al., 2013).

Observation

Another comprehensive method for investigating the social impact of SSD is through examining the child's social interactions and behaviors in the classroom setting and during open socialization times such as recess or lunch. One challenge associated with collecting observational data is that the child may interact differently with others in different contexts. Therefore, conducting an observation over several contexts is preferred but poses challenges in terms of time demands. Another difficulty with observational data is that it can be different, dependent on the communication partner, and observing children outside the school setting (i.e., with siblings or grandparents) is not generally possible. Previous studies have shown that children with SSD often feel more comfortable with familiar communication partners, such as siblings, and with adults (McCormack et al., 2010; McLeod et al., 2013). Therefore, each of these contexts can be observed to determine whether there are differences between the two. If it is not possible to conduct these observations with diverse partners, these individuals can still participate on the evaluation team through completion of questionnaires or through their contributions through discussion or interview.

A structured method may be one way to mitigate the subjectivity of these observations. Structured observations, much like structured interviews, are planned prior to the evaluation. Many different methods for structured observation include coding behaviors and marking communication attempts and partners. One method for a structured observation is the Social Interactive Communication Scale (SICS; Rice, Sell, & Hadley, 1990). This method, developed for language interactions and productions in the preschool setting, can be used to collect important data across different ages, social contexts, and communication disorders. The SICS provides a rapid real-time method for recording context, communication partners, number of conversational initiations and turns, and repetitions. This information provides a measurable baseline of the child's conversational participation (e.g., how many times does the child repeat himself or herself, number of conversational turns). This observation procedure was compared with informant rating scales for observational data and revealed that observational data do not correlate highly with rating forms overall (McCabe & Marshall, 2006). McCabe and Marshall (2006) suggested that rating scales are often broader in their definition of behaviors and are influenced by the informant, and differences in training among informants and observers may influence the difference between observational data and rating scales. Nevertheless, the authors confirmed that using multiple sources of information to converge upon a diagnosis is important. Another form of structured observation is the Social Communication Coding System, which provides clinicians with the means to note the duration, activity, and frequency of occurrence of verbal and nonverbal communication in the social context (Olswang, Coggins, & Svensson, 2007). The information provided by observational data assists in diagnosis and treatment planning and should be compared with other sources to examine convergent and divergent themes.

Converging Data

Questionnaires, interviews, and observations, and preferably a combination of these, can provide important information about the social impact of an SSD on the child's access of and participation in the educational curriculum. These methods provide meaningful data that determine a child's eligibility for speech therapy services in conjunction with speech sound assessments. The remainder of this article will illustrate the type of social impacts that may be observed in three hypothetical cases. Each case presents a 6-year-old with late-acquired speech sound errors. This profile was chosen because a surface interpretation of the standardized assessment results and/or using only articulation assessment results would not immediately qualify some of these children for services due to their age and the type of errors and the impact of the SSD must be established. Although late-acquired errors are common in young children, it is ultimately the evaluation team's responsibility to determine the impact of these errors on the child's communication, including his or her social participation. Because multiple sources of information are required from the evaluation team in order to determine eligibility, the primary focus of the discussion of these cases is on the socioemotional results. Thus, each brief case description is followed by recommendations and rationales for the type of social impact assessment(s) that may be pursued.

Case 1: "Sam"

Sam is a 6-year-old who presents with an SSD at a severity level that qualifies him for speech-language therapy services. His errors are on the sounds /ŋ, s, z, r/, which correlate with a standard score of 62 and a percentile rank of 1 on the Arizona Articulation and Phonology Scale—Fourth Edition (Arizona-4; Fudala, 2017). Therefore, social impact may not be viewed as being of heightened importance for this child because his SSD is severe. Academic impacts are expected as a result of reduced intelligibility and potential literacy impacts. However, for this child, the social impact of his SSD may be even more severe than for a child with fewer errors, because we expect intelligibility to be greatly lessened and, as a result, negative social interactions to be increased. These negative interactions may be in the form of misunderstandings with peers, bullying, or social isolation. Therefore, conducting assessments will provide a complete picture of the impact the SSD has on Sam's social communication.

Because the severity level is heightened for this child, multiple assessments of social impact are recommended. First, a questionnaire could be administered to the classroom teacher and the parents of the child. This will provide insight into whether there is an obvious social impact. Second, the child may be interviewed about preferred activities and communication partners. Because the intelligibility level is expected to be lower, the child may be more self-conscious about his communication. The focus of the interview is on

identifying preferred activities and communication partners to inform the observation. For example, if the child indicates that recess is a nonpreferred activity, whereas art is a preferred activity, the SLP could conduct observations during each of these times to determine the level of communication that occurs during each and the quality and quantity of these interactions. Using a structured observation system, such as the SICS or Social Communication Coding System, the SLP will determine whether there is a difference in the amount of communicative attempts and may illuminate whether the child is being included by his peers in each of these activities. If a difference is found, then a social impact may be identified. The data from the questionnaire, interview, and observation may additionally serve as baseline data for future treatment planning and progress monitoring.

Case 2: “Kimi”

The child in Case 2, Kimi, presents with a single sound error—/r/. The results of the Arizona-4 indicate that she would not qualify for services based on standardized scores alone. Her standard score was 85, placing the child at the 16th percentile. According to these test data, she would not qualify for speech services based on speech sound errors but, by some, may be considered a borderline case, which may require services. Therefore, a comprehensive measurement of social interactions (in addition to academic impacts as provided by the team) is necessary to determine whether this child’s speech error impacts her participation in the general education classroom.

For this child, assessment of her social communication includes both direct and indirect measures of assessment. First, parents, teachers, and the child may be interviewed using a structured tool (such as the SPAA-C) to determine the types of activities the child enjoys and the types of interactions the child has at home and at school. For example, for this child, if the parents and teachers describe Kimi as “shy” or “plays alone,” then we could identify that Kimi is reducing her interactions with peers as a result of her SSD. Based on the interview findings, an observation may be conducted—especially in group play conditions, like lunch or recess, to determine whether Kimi is being excluded from group social activities. If possible, conducting an observation at home and at school will provide information about the difference between these two contexts. It may be difficult to conduct an observation in the home setting, so the parent/guardian informant on the evaluation team will play a critical role in determining this difference. It is likely that Kimi is more comfortable at home with family members and communicates more in this context. By varying the context of the observation, the SLP can take into account the differences in the child’s level of comfort and may see differences in the number of interactions with peers. For example, if Kimi is observed to be withdrawn at school but much more interactive in other communication contexts (e.g., at home or when conversing with adults rather than peers), a social impact may be indicated. Kimi’s reduced access to typical social interactions would qualify her for eligibility to speech-language services. These

findings should be discussed among the members of the evaluation team to determine whether eligibility for services is warranted in the face of academic and social impacts.

Case 3: “Ricky”

Ricky is a 6-year-old who produced errors on the sounds /s z ʃ ʒ dʒ/. Each of these sibilant sounds was produced with a lateral distortion. The results of the Arizona-4 indicated he would qualify for services with a standard score of 78 and a percentile ranking of 7. This case is very similar to Case 1 in that multiple sounds are impacted, so the question of eligibility is much more clear-cut than that of Case 2 on its surface. Despite this obvious establishment of a disability, the evaluation team must collect data on the academic and social impacts that this child may face. This collaborative gathering of information will assist in determining eligibility as well as future treatment planning and progress monitoring. Despite similarities with Case 1, this case is unique because these sounds are not produced with the substitution of one sound for another. Rather, the sounds are produced with a lateralization of the tongue, which is not developmentally appropriate. This distortion adds another layer of importance in examining the social impact of the disorder.

The children in Cases 1 and 2 were likely to have their intelligibility impacted as a result of their speech sound errors. This was the root issue that drove the importance of the social impact evaluation for these children. In this case, however, the issue may not be the child’s intelligibility but rather that the child sounds “different” than other children. Therefore, the social impact may not be rooted in the child’s frustration at having to repeat themselves due to reduced intelligibility, but rather speech acceptability. The social impact of this type of SSD may be rooted more in the child’s own self-identity about his communication. Therefore, the social assessment for Case 3 will be different for this child than those in previous cases.

For this case, the interview process is likely to be the most informative when examining the social impact of this child’s SSD because the child may not openly participate in social situations at school. For example, in conducting an interview with teachers, the SLP may discover that this child is being excluded from social groups for “sounding different” or does not generally speak up in class unless prompted. The relationships between this child and others in the classroom are important to establish. Interviewing parents and, potentially, siblings as part of the evaluation team would reveal any differences between his behavior and relationships at home versus those reported at school by those members of the team based in the school setting. If the child does not appear to be responding fully to questions about communication in the classroom, a written scale may be more effective. The SPAA-C may be used in written form as a questionnaire and may provide insight into the child’s emotions and attitudes about his speech. The written form of the SPAA-C allows for selection of different “faces” in response to a prompt, which allows this tool to be used for children who

may not be fully literate. This self-consciousness may be better reflected in this form and may provide more insight into observations than an oral interview. Observations may be conducted to confirm the findings of the interview and to examine the extent to which the child participates in communication throughout the school day. With these results, the evaluation team may make a determination of the type of services required to permit full access to education.

Conclusion

This article presents the importance of assessing the social impact of SSDs, along with methods of doing so. These methods were discussed across three cases that represent common dilemmas for SLPs when diagnosing SSD and making subsequent decisions about a child's eligibility for services. The types of assessments discussed herein provide guidance and highlight factors in need of consideration when assessing social impact for eligibility under IDEA. Through questionnaires (verbal or written), interviews, and observations, SLPs can gather sufficient information to determine how the child's communication disorder holistically impacts his or her access to education and his or her quality of life.

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