Viewpoint

The Intersection of Reading and Speaking Difficulties: Current Knowledge and Recommendations for Supporting Adult Literacy Learners Who Stutter

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Author Note

Abstract

Adult literacy learners vary widely in their demographic characteristics and academic skill levels. However, much less is known about their speech skills. This article focuses on an understudied group among adult literacy learners: those with speech difficulties, specifically stuttering. It begins by describing general background information on stuttering, then briefly presents findings related to prevalence and reading skills in a study that explored adult literacy learners and stuttering. This article also provides recommendations for working with learners who stutter. These recommendations emphasize the importance of screening for both reading and speaking difficulties and adopting a holistic approach to better accommodate the complex needs of this overlooked population.

Keywords: adult literacy, stuttering, reading, instruction

Background

 Adult educators are used to adult literacy learners who avoid reading out loud in class. They might sit at the back of the class, eyes averted, and a body posture shouting, "Please don't call on me." Over time, these learners typically start to feel more comfortable and gradually become more willing to read out loud. However, occasionally, some learners never become more comfortable participating in class. There are many potential reasons for this; one reason that is not often discussed in the field is speech difficulties. This article focuses on a specific speech difficulty: stuttering. If you are an instructor, you may have noticed that you have or

have had a learner who exhibits verbal responses that are typically shorter or less complex, or contain false starts (beginning a sentence/word but then abandoning it for another). Additionally, they may often talk around a word or use substitutions, even if the substituted word is less accurate or appropriate in the context. The learner may also show noticeable difficulties when speaking, including frequent speech disruptions and high levels of physical tension. Sometimes, these speech disruptions and physical tension are accompanied by unexpected movements, such as frowning or head movements. Learners who stutter may exhibit these behaviors, which cannot be explained by their proficiency in the English language.

In this article, we share recommendations for working with learners who stutter. First, we will provide a brief overview of stuttering before sharing findings from a study that we conducted with adult literacy learners who stutter. In the following sections, "stuttering" will refer to the condition of stuttering, while "moments of stuttering" will describe the speech disruptions or symptoms characteristic of the condition.

What is Stuttering?

Approximately 1% of the general population stutters (Bloodstein et al., 2021), totaling over 3 million people in the U.S. and over 70 million worldwide. Stuttering may be more common in some groups, such as those with reading difficulties. For example, roughly one-third of adults with dyslexia report stuttering as children (Elsherif et al., 2021). Although the exact cause of stuttering is unknown, experts agree that it is due to a mix of factors, including genetics (Drayna & Kang, 2011). Individuals with family members who stutter are more likely to stutter themselves (Darmody et al., 2022). Stuttering typically manifests around three years old, affecting more boys than girls (Yairi & Ambrose, 1992).

Stuttering involves specific speech disruptions or disfluencies (Bloodstein et al., 2021). During moments of stuttering, the speaker may repeat the initial syllable/sound of a word (part-word repetitions; e.g., "y-y-you"), stretch or hold a sound (prolongations; e.g., "ssssssstart"), or struggle to initiate a sound (blocks; e.g., "—yeah"; Ambrose & Yairi, 1999). Moments of stuttering can be accompanied by physical tension or struggle (e.g., eye

blinking, frowning; Guitar, 2019), especially when the stuttering is severe. It is important to mention that other types of disfluencies, such as interjections (e.g., "uhm"), phrase revisions and repetitions (e.g., "a class—in my class"), word revisions (e.g., "reading—learning"), and pauses, are common in people who do not stutter and are not indicative of stuttering (Ambrose & Yairi, 1999).

The effects of stuttering go beyond its impact on communication. People who stutter, particularly those with more severe stuttering, are less likely to complete high school or attend college (O'Brian et al., 2011; Rees & Sabia, 2014). Many adults who stutter believe that stuttering reduces their employability, career advancement, and job performance (Klein & Hood, 2004; Klompas & Ross, 2004). Adults who stutter are more likely to be underemployed or unemployed, hold lower-status jobs, and earn less than adults who do not stutter (Gerlach et al., 2018; McAllister et al., 2012). Additionally, stuttering can lead to anxiety, especially in social situations (Craig & Tran, 2014).

Under the Americans with Disabilities Act (ADA) and its amendment, the ADA Amendments Act (ADAAA), disability is recognized as a physical or mental impairment that significantly restricts everyday activities, a documented history of such a condition, or being viewed as having such a condition (Americans with Disabilities Act, 1990). The ADA offers protection against discrimination based on disability, including communication-related conditions, such as stuttering (Gilman, 2012; Seitz & Choo, 2022). However, perceptions of stuttering as a disability vary widely among people who stutter (Bricker-Katz et al., 2010). Where some consider their stuttering as a disability, others do not share this view (Bailey et al., 2015; Constantino et al., 2022).

Our Study

We analyzed audio recordings of 120 adult literacy learners to identify speech patterns indicative of stuttering. Audio recordings to capture the learners' positive and negative reading experiences were collected in a quiet space at the learners' program location. Recordings varied in length depending on what the learners' chose to share, ranging between one minute to over 13 minutes in length. Learners were between 17 to 70 years old and enrolled in adult

literacy classes targeting the third- to eighth-grade reading levels. The learners consisted of 70 women (58.33%), 49 men (40.83%), and one learner who did not identify their gender. All learners identified as Black or African American and were part of a study to examine dialect use. Most learners (about 70%) did not complete high school. For more information about our study, please read Choo et al. (2023). The study revealed three notable findings. First, the percentage of individuals who stutter was higher in the learners who participated in our study than in the general population. Stuttering was determined by the presence of 3% or higher of stuttering-like disfluencies, following the guidelines by Ambrose and Yairi (1999). These disfluencies include part-word repetitions, prolongations, and blocks (see the "What is Stuttering?" section for examples). Second, there were no significant differences in reading abilities between learners who do and do not stutter. However, the third finding was that learners who stutter showed fewer significant correlations between different component reading skills than learners who do not stutter, for example, between passage comprehension and phonological elision skills. These findings are discussed in more detail below.

Higher Proportion of Stuttering in Adult Literacy Learners

We found that about 18% of learners in our study met the criterion for stuttering, which is a significantly higher percentage than the general population (Choo et al., 2023). This aligns with past research reporting a high frequency of reading problems among people who stutter and a genetic link between stuttering and reading difficulties (Ajdacic-Gross et al., 2018; Chen et al., 2014). About 8% of children who stutter have reading difficulties (Blood et al., 2003). Notably, they are five times more likely than children who do not stutter to have reading difficulties (Ajdacic-Gross et al., 2018). Moreover, the same genetic mutations associated with stuttering are also associated with an increased risk for dyslexia (Chen et al., 2014). These studies tell us that the co-occurrence of reading difficulties and stuttering is not uncommon.

No Differences in Standardized Reading Test Scores Between Learners Who Do and Do Not Stutter

The learners in our study (Choo et al., 2023) who do and do not stutter showed no differences in their standardized test scores measuring reading fluency, reading comprehension, decoding, expressive language, and phonological awareness[1]. This was true even for tests that required speaking, such as naming pictured objects and reading aloud printed words or simple sentences. In other words, in our study, standardized reading assessments cannot distinguish between learners who do and do not stutter.

Lower Correlations Between Reading Abilities in Learners Who Stutter

Two skills are positively correlated when performance in one skill is similar to performance in another. Conversely, a negative correlation indicates an inverse pattern: lower performance in one skill is associated with higher performance in the other. A statistically significant correlation, whether positive or negative, suggests that this relationship is unlikely to have occurred by chance. It also indicates a high degree of confidence that the correlation is substantive.

In our study, learners who stutter showed more negative and fewer significant correlations between reading and reading-related skills than learners who do not stutter (Choo et al., 2023). For instance, there was a significant, positive correlation between reading comprehension and reading fluency among learners who do not stutter, but this correlation was not observed in learners who stutter. For learners who stutter, this correlation was not significant and in the opposite direction (i.e., a negative correlation). This finding was unexpected given the established relationship between reading comprehension and reading fluency (Klauda & Guthrie, 2008). These atypical connections suggest that learners who stutter have greater difficulty integrating different skills necessary for effective reading.

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1   The tests consisted of the Comprehensive Test of Phonological Processing, including Blending Words, Elision, and Phoneme Isolation subtests (Wagner et al., 2013); the Test of Silent Contextual Reading Fluency (Hammill et al., 2006); the Test of Silent Word Reading Fluency (Mather et al., 2004); the Test of Word Reading Efficiency Phonemic Decoding Efficiency and Sight Word Efficiency (Torgesen et al., 2012); and the Woodcock-Johnson III Normative Update, including Letter-Word Identification, Passage Comprehension, Picture Vocabulary, Reading Fluency, and Word Attack subtests (Woodcock et al., 2007).

Recommendations for Working With Learners Who Stutter

The complex profile of learners who stutter presents unique challenges for instructors. In the sections below, we list recommendations for working with this group.

Identifying stuttering It may be difficult for instructors to recognize stuttering, especially in mild cases. However, if you notice a learner who, compared to others, displays any of the following behaviors, it may warrant further attention:

- They provide short and simple verbal responses that do not match the context. For example, when asked to describe their reading experiences, the learner may respond with, "It was okay," without elaboration even when more details are expected or appropriate.

- They begin a sentence or word but then abandon it for another. For instance, the learner may start to say, "I bor-bor," but switches to, "I went to the library."

- They talk around a word or use word substitutions, even if the substituted word is less accurate or appropriate in the context. Instead of saying, "I know how to use the computer," the learner may say, "I know how to type on the machine."

- They show frequent speech disruptions and high levels of physical tension, sometimes accompanied by unexpected movements during moments of stuttering. For example, the learner may appear stuck and struggle to get their words out. During these moments, they may also nod, close their eyes, blink, or frown.

Once you feel that the learner may be comfortable with you bringing up the topic, gently initiate a conversation about their speech difficulties. Depending on the learner, an example of a way to start the conversation could be, "I notice that you seem more comfortable with writing activities rather than talking in class. Would it be okay if we talk about why that might be?" This could be followed by questions such as, "Do you find it difficult sometimes to say the words you want to say?" or, "Would you like to be put in touch with someone whose job is to help people feel more comfortable with speaking?" It is critical that learners dictate how far this conversation goes. If it is clear that the learner does not want to discuss their

oral communication, the instructor should not further continue the conversation. Similarly, if the learner does not want a referral, the instructor should reply that if, at a later point, the learner ever changes their mind, they should feel free to ask the instructor for the referral.

The American Speech-Language-Hearing Association (2024b) offers a directory of certified speech-language pathologists through the ASHA ProFind platform. Users can search for a service provider based on various criteria, such as location and expertise. Medical insurance plans, including Medicaid and Medicare, may cover speech therapy if the service is deemed necessary by the individual's physician, although the extent of coverage varies (American Speech-Language-Hearing Association, 2024a). Additionally, some organizations, including colleges and universities with speech-language pathology clinics that serve as training facilities, may provide free services or a sliding fee scale for services.

Interacting With People Who Stutter

It is important to be patient and avoid interrupting or speaking over people who stutter, especially during moments of stuttering. While it might seem helpful to finish their sentence, doing so can make the speaker feel rushed, potentially worsening their stuttering. A lack of awareness of stuttering may lead to inappropriate reactions when the speaker stutters, such as imitation or laughing. Therefore, instructors should be alert to these behaviors and be prepared to educate others about stuttering.

Using Person-First Language

Using person-first language, like "person who stutters" instead of "stutterer," helps avoid stigmatizing individuals. Although some people who stutter may prefer to use identity-first language and refer to themselves as "stutterer," it is still considered best practice to use person-first language.

Modifying Reading Tests

Speaking difficulties related to stuttering may be mistaken as reading problems. Reading tests requiring extensive speaking may be difficult for learners who stutter, especially those with severe stuttering. Assessments that reduce the need to verbalize responses can minimize

these issues. Further, instances where reading and speaking difficulties cannot be clearly distinguished should be excluded from assessments.

Managing Timed Assessments

Timed assessments that require speaking or reading out loud can exacerbate stress and moments of stuttering. Learners who stutter may take longer to respond, as moments of stuttering consume more time. Thus, selecting tests without time constraints may be necessary for assessments involving overt reading or spoken responses.

Integrating Skills

Research suggests that learners who stutter face challenges integrating the skills necessary for effective reading. While the optimal strategy to enhance the consolidation of these skills remains unknown, instructors should be mindful of the potential challenges faced by learners who stutter.

Managing Anxiety Levels

People who stutter may have heightened anxiety about speaking. Reading difficulties may worsen this anxiety, affecting their performance on reading assessments. Recognizing this anxiety is important in creating supportive learning environments for learners who stutter.

Conclusion

Support for learners who stutter starts with recognizing the unique, compounded challenges of reading and speaking difficulties. An integrated approach combining specialized instruction and speech therapy could be beneficial for this group. Nonetheless, more research is needed to fully understand the complex needs of learners who stutter. This knowledge will be foundational to developing optimal, comprehensive guidelines for evaluating, instructing, and working with this group.

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