Executive Functioning Skills in Bilingual School-Aged Children with Autism

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Background

- Many children in the United States are exposed to two or more languages from an early age. Parents of bilingual children often have important questions about benefits and negatives of early bilingualism, and how to best support their language acquisition at home and academic development as they enroll in school [1].
- Many educators and clinicians fear that dual-language exposure could contribute to additional challenges and delays in language development.
- Several researchers have found areas in which bilingual children with autism outperform their monolingual peers. Many past researchers concluded that due to the shift-tasking capabilities, bilingual children demonstrate an advantage in executive function skills. Others completed similar research and concluded that they did not see a difference between bilinguals and monolinguals with autism.
- This particular interest sparks the question of whether bilingualism impacts a child's executive functioning skills when comparing typically developing children versus children with an autism spectrum disorder (ASD).

Clinical Scenario

- Joanna is a bilingual speech-language pathologist (SLP), at an elementary school, who is fluent in both English and Polish.
- Her client, Adam, is an eight-year-old male attending second grade. Adam is currently a relatively balanced bilingual and with a diagnosis of ASD.
- Adam receives services due to an expressive language disorder based on his difficulty with initiating conversations and producing questions and comments throughout a reciprocal conversation, answering complex wh-questions (e.g., why, how) and comprehending narrative text and discourse.

Clinical Question

Joanna examines the evidenced-based literature to answer specific research questions such as:

1) Does bilingualism impact a child's executive functioning (EF) skills when comparing typically developing children versus children with an autism spectrum disorder?

2) What are ways that a speech-language pathologist can provide counseling to parents with bilingual children diagnosed with autism spectrum disorder?

Literature Review

- Joanna's goal was to provide appropriate services to improve Adam's conversational skills, answering wh-questions, and narrative structure.
- First, she examined how bilingual children with ASD perform in narrative structure as compared to their monolingual peers. She established that bilingual children with ASD exhibit higher scores than their monolingual peers with ASD in both narrative microstructure and macrostructure [6]. Joanna discovered that narratives can be targeted in L1 and L2 to increase Adam's skills and generalization.
- She also reviewed literature that examined bilingual and monolingual school-aged children with autism and their EF skills with various measures (e.g., Conflict tasks/Reverse Categorization Task, Shape Stroop Task, Flanker Task, The Comprehensive Executive Function Inventory).
- Joanna recognized that bilingual children with ASD had enhanced visual attention, working memory, monitoring, and updating skills in the specified measures.
- Research also suggested if the bilingual advantage extends to ASD, bilingual children with ASD performed better on set-shifting tasks relative to monolingual children with ASD, who do not need to coordinate two linguistic systems [3].
- She found that bilingual children with autism demonstrate an advantage in EFs as compared to monolinguals with autism [1,3,4,5,6].

Evidence-Based Decision

- After reviewing the literature, Joanna was confident to provide bilingual speech-language therapy while supporting the student's EF skills in therapy sessions to enhance accuracy with receptive and expressive language goals.
- Based on the evidence and Adam's individual needs, Joanna decided to provide speech and language services in both Polish and English.
- Joanna will alternate using languages during therapy services depending on the specific goals and consideration of which skills are likely to transfer and which are specific to each language.

Discussion

- Bilingual children demonstrate with an advantage in executive functioning when compared to their monolingual peers.
- This specific finding was also proved to be significant with children with an autism spectrum disorder and typically developing children.
- For this case scenario student, the bilingual SLP provided speech therapy in both languages to support his entire linguistic repertoire.
- Through the use of modifications and visual aids, Adam increased his receptive and expressive language due to increased executive functioning skills.

Limitations

- It is important to note that each child has a unique bilingual language learning environment, so the intervention plan described for this clinical scenario may not be optimal for each student.
- Also, some research studies did not highlight the severity of autism for their participants. This information may be important as well due to the fact that not every child will present with similar executive function skills.

Clinical Implications

- As evidenced by previous research, bilingual children with autism demonstrate greater skills in executive functions.
- Bilingualism does not hinder language development in children with the diagnosis of autism spectrum disorder.
- Similar to Joanna, bilingual clinicians may support both languages when providing treatment to bilingual students.
- It is also important to note that monolingual clinicians can still support their bilingual caseload by advocating for therapy sessions in the students' L1 and L2 as well as providing additional counseling for parents and other professionals.

References

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